



BANGLADESH WATER DEVELOPMENT BOARD

PROJECT COMPLETION REPORT (PCR) OF GORAI RIVER RESTORATION PROJECT (PHASE-II) DURING THE YEAR 2009-2017.

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Government of the People's Republic of Bangladesh
Ministry of Planning
Implementation Monitoring and Evaluation Division

PROJECT COMPLETION REPORT : IMED 04/2003 (Revised)

A. PROJECT DESCRIPTION :

01. Name of the Project : Gorai River Restoration Project (Phase-II).
02. Administrative Ministry/Division : Ministry of Water Resources.
03. Executing Agency : Bangladesh Water Development Board.
04. Location of the Project : Kushtia.

05. **Objective of the Project** : The main objective of the project is to prevent environmental degradation in the Southwest region, especially around Khulna, the coastal belt and in the Sundarban by undertaking restoration of the Gorai River and hence ensuring fresh water flow in the wet season and augmenting those flows during the dry season. The most prominent ecological and environmental services to be restored include reduction of surface water salinity to threshold of 1ppt at Khulna. The reduction of salinity in the impacted zone of the Sundarban to less than 20 ppt within the river systems in order to protect the ecological functioning and associated threats to biodiversity within the Sundarban Reserved Forest. Maintenance of a resource utilization profile for the Sundarban Reserved Forest. Increasing dry season flow to enable fish migration and production from the river and associated waterways. Waste assimilation and the need to dilute pollution hotspots such as those around Khulna and Mongla area. Navigation services of the river. River and riparian zone biodiversity and aesthetics. Enhanced groundwater and surface water supply. Increased quality of domestic water supply.

06. **Estimated Cost**

:

(In lakh Taka)

	Original	Latest Revised
(a) Total	94214.55	65496.31
(b) Taka	94214.55	65496.31
(c) Foreign Currency	-	-
(d) Project Aid	-	-
(e) RPA	-	-

07. **Date of Approval** :

PCP	PP
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- (a) Original : 05.11.2009.
- (b) Latest Revised : 05.10.2016.
(2nd Revise)



08. Implementation Period :

	Date of Commencement	Date of Completion
(a) Original	November'2009	June'2013
1 st Re-appropriation.	November'2009	June'2014
1 st Revision.	November'2009	June'2017
(b) Latest Revised	November'2009	June'2017
2 nd Revised.	November'2009	June'2017
(c) Actual	November'2009	June'2017

09. Financing Arrangement (Source-wise) :

9.1 Status of Loan/Grant

a) Foreign Financing : N/A.

Source (s)	Currency as per Agreement	Amount in US \$ (Million)	Nature (Loan/Grant/ supplier's/ credit)	Date of Agreement	Date of Effective-ness	Date of Closing	Original	Revised
1	2	3	4	5	6	7	8	

b) GOB :

Total amount	Loan	Grant	Cash Foreign Exchange
1	2	3	4
65496.31	-	65496.31	-

9.2 Utilization of Project Aid : (Source wise) N/A.

Source (s)	Total Amount	Actual Expenditure	Unutilized Amount
In US \$	In Local	In US \$	In Local
2	3	4	5
Currency	Currency	Currency	Currency
1	6	7	

9.3 Re-imbursible Project Aid (RPA): N/A.

R P A Amount		Amount Spent	Amount Claimed	Amount Re-imbursed	Remarks
As per PP	As per Agreement				
1	2	3	4	5	6

(In lakh Taka)

B. IMPLEMENTATION POSITION

01. Implementation Period :

Implementation Period as per PP		Actual Implementation period	Time Over-run (% of original implementation period)	Remarks
Original	Latest Revised			
1	2	3	4	5
November'2009 to June'2013	November'2009 to June'2017	November'2009 to June'2017	209.09%	Required to implement maintenance dredging to continue sweet water flow for preventing salinity intrusion in the coastal Khulna region and to protect enviromental degradation of mangrove forest Sundarban.

02. Cost of the Project :

Description	Estimated Cost		Actual expenditure	Cost over-run (% of original cost)	Remarks
	Original	Latest revised			
1	2	3	4	5	6
TOTAL	94214.55	65496.31	64318.45	(-) 31.73%	The Project has been completed on 31.75% less than original DPP due to some Study & structural (Capital) works were not required as per field condition & for Project interest. (Viz; The construction of Flow Divider at the Source of Gorai, Ganges-Gorai Gude Bundh, Planfrom Study, & Temporary Protective work for vulnerable areas etc.)
TAKA	94214.55	65496.31	64318.45		
PA	-	-	-		

03. Project Personnel : Project work has been implemented by existing manpower of BWDB.

Sanctioned strength as per PP	Manpower employed during execution	Status of the existing manpower		Existing manpower for O & M	Others	Employed Manpower
		Manpower requirement for O&M as per pp	Manpower for O & M			
1	2	3	4	5	Male	Female
Officer (s)	-	-	-	-	-	-
Staff(s)	-	-	-	-	-	-
Total :	-	-	-	-	-	-

04. Training of Project Personnel (Foreign/Local) :

Field of		Provision as per PP		Actual		Remarks
Training /Study tour/workshop/Seminar etc.	Number of person	Man - months	Number of person	Man - months		
1	2	3	4	5	6	
a. Foreign	15 Person Engineer, Economist, Sociologist	1 month (15mm)	15 Person Engineer, Economist, Sociologist	0.50 month (7.50 mm)	The training has been completed at The Netherlands' Training Institute of dredging (TID) & UNESCO-IHE's River System Management.	
b. Local	15 Person Engineer	2 month (30mm)	12 Person (10 Engineer + 2 Admin)	0.40 month (4.80 mm)	-do-	
	N/A					

05. Component-wise Progress (As per latest approved PP) :

(In lakh Taka)

Sl. No.	Items of work	Unit	Target (as per PP)		Actual Progress		Reasons for deviation (±)
			Financial	Physical (Quantity)	Financial	Physical (Quantity)	
1	2	3	4	5	6	7	8
(a) Revenue Component							
1	Bathymetric survey for pre-work and post-work measurement	item	900.00	100% (1 item)	862.61	100% (1 item)	
2	Morphological Mathematical Modeling for Planning, Design, Monitoring, Quality Control & Impact Assessment of Dredging	item	750.00	100% (1 item)	749.54	100% (1 item)	
3	Fee for Environment Clearance	L/S	1.00	100% (L/S)	1.00	100% (L/S)	
4	Environment Flow (E-Flow) Assessment	item	150.00	100% (1 item)	149.38	100% (1 item)	
5	Environmental Impact Assessment (EIA) and Social Impact Assessment (SIA)	item	125.00	100% (1 item)	-	-	Not required
6	Procurement Specialist	mm	4.95	100% (5mm)	4.95	100% (5mm)	
7	Training	item	297.34	100% (1 item)	297.34	100% (1 item)	
8	Office rent	month	15.00	60 month	14.00	60 month	
9	Other Tax	L/S	1.50	L/S	1.23	L/S	
10	Postal charges	L/S	0.25	L/S	0.16	L/S	
11	Telephone	L/S	1.00	L/S	0.85	L/S	
12	Intercom System	L/S	2.98	L/S	2.98	L/S	
13	Registration	L/S	3.00	L/S	1.99	L/S	
14	Water	L/S	0.50	L/S	0.14	L/S	
15	Electricity	L/S	0.75	L/S	0.49	L/S	
16	Gas & fuel	L/S	15.00	L/S	7.95	L/S	
17	Petrol, lubricants for vehicle	L/S	15.00	L/S	14.30	L/S	
18	Insurance/Bank charges	L/S	22.10	L/S	22.08	L/S	
19	Stationeries, seal & stamps	L/S	12.00	L/S	11.86	L/S	
20	Publication & Notice	L/S	10.00	L/S	9.98	L/S	
21	Seminar & conference	L/S	5.00	L/S	0.00	L/S	Not required

No.	Sl.	Items of work	Unit	Financial	Physical	Actual Progress	Physical	Reasons for deviation (±)
1	2	3	4	5	6	7	8	
		a) Revenue Total		2395.87		2214.75		
		(b) Capital Component						
22		Labour	L/S	10.00	L/S	10.00	L/S	
23		Honarium for TOC & TEC	L/S	3.00	L/S	2.23	L/S	
24		Mid Term Evaluation	L/S	10.00	L/S	9.96	L/S	
25		Computer Accessories	L/S	6.50	L/S	5.74	L/S	
26		Other expenses	L/S	6.00	L/S	6.00	L/S	
27		Maintenance of Vehicles	L/S	13.00	L/S	13.00	L/S	
28		Equipment & Accesories	L/S	15.00	L/S	14.99	L/S	
		a) Revenue Total		2395.87		2214.75		
		(b) Capital Component						
		Acquisition of Assets						
		Purchase of Vehicles:						
1	i) Jeep-2nos	L/S	100%					
2	ii) Pickup-1 no	L/S	100%					
3	iii) Motor Cycle-2nos	L/S	100%					
4	Purchase of Dredger with Accessories	L/S	100%	25777.46	25777.46	100%		
5	Purchase of Machineries & Equipments	L/S	100%	20.23	20.23	100%		
6	Purchase of Furniture	L/S	100%	16.17	16.17	100%		
	Sub-Total (Acquisition of Assets)			25913.62	-	25913.62	-	
	Construction of Works:							
	Initial priority dredging for removal of silt from the offake of Gorai River, (FY 2009-10):							
1	a) By BWDB own Dredgers	cum	100%	972.00	972.00	100%		
b) By other local outsourcing (private owned dredger)	cum	100%	2.15	261.28	261.28	100%		
2	Capital dredging (by International outsourcing) (FY 2010-11)	cum	100%	11954.70	11954.70	100%		

Sl. No.	Items of work	Unit	Target (as per PP)		Actual Progress		Reasons for deviation (±)
			Financial	Physical (Quantity)	Financial	Physical (Quantity)	
1	2	3	4	5	6	7	8
3	Maintenance Dredging International outsourcing 3 rd year (FY 2011-12)	cum	8350.59	78.60 lac cum	8350.59	100% (78.60 lac cum)	
4	Maintenance dredging by BWDB Dredger procured under the Project, 4 th Year (FY 2012-13)	cum	1873.15	17.00 lac cum	1873.15	100% (17.00 lac cum)	
5	Maintenance dredging by BWDB Dredger procured under the Project, 5 th Year (FY 2013-14)	cum	2899.80	23.00 lac cum	2899.80	100% (23.00 lac cum)	
6	Maintenance dredging by BWDB Dredger procured under the Project, 6 th Year (FY 2014-15)	cum	1186.07	11.86 lac cum	1186.07	100% (11.86 lac cum)	
7	Maintenance dredging by BWDB Dredger procured under the Project, 7 th Year (FY 2015-16)	cum	1064.47	10.34 lac cum	1064.47	100% (10.34 lakh cum)	
8	Maintenance dredging by BWDB Dredger procured under the Project, 8 th Year (FY 2016-17)	cum	2675.92	26.00 lac cum	2675.66	100% (26.00 lakh cum)	
	Sub-Total for Dredging		31237.98		31237.72		
	Structures :						
1	Temporary protective work for vulnerable areas (3110m)	m	792.00	3110m	-	-	Not required as per field condition
2	Protective work in Ganges (720m)	m	2876.97	720m	2873.03	100% (720m)	
3	Protective work in Gorai (857m)	m	2079.87	857m	2079.33	100% (857m)	
	Sub-Total for Structure		5748.84		4952.36		
	b) Sub-total (Capital)		62900.44		62103.70		
	Total (a+b)		65296.31		64318.45		
	Price Contingency	litem	200.00		-		
	Grand Total (a+b)		65496.31	100%	64318.45	100%	

06. Information regarding Project Director (s) :

Name & Designation with pay Scale.	Full time	Part time	Responsible for more than one project	Date of		Remarks
				Joining	Transfer	
1	2	3	4	5	6	7
Md. Abdul Baten	Full time	-	-	06.08.2009	07.08.2013	
Super-in-tending Engineer						
M. Monjurul Haque	-do-	-	-	07.08.2013	26.11.2013	
Super-in-tending Engineer						
Md. Sydur Rahman	-do-	-	-	26.11.2013	01.12.2013	Additional Charge
Additional Chief						
Md. Abdul kudus	-do-	-	-	01.12.2013	15.12.2013	Additional Charge during Foreign training period of Md. Sydur Rahman
Super-in-tending Engineer						
Md. Sydur Rahman	-do-	-	-	15.12.2013	12.01.2014	Additional Charge
Super-in-tending Engineer						
Md. Najir Ahmed	-do-	-	-	12.01.2014	27.11.2014	
Super-in-tending Engineer						
K.M. Humann Kabir	-do-	-	-	27.11.2014	17.02.2015	
Super-in-tending Engineer						
Md. Kudrat Ali	-do-	-	-	17.02.2015	11.06.2015	
Super-in-tending Engineer						
Md. Kudrat Ali	-do-	-	-	12.06.2015	29.11.2015	Additional Charge
Additional Chief						
Md. Kamalur Rahman	-	Part	-	29.11.2015	09.12.2015	Additional Charge
Talukder						
Super-in-tending Engineer						
Rezaul Mustafa	-do-	-	-	09.12.2015	25.01.2016	
Super-in-tending Engineer						
Md. Abdul Mannan	-do-	-	-	25.01.2016	05.03.2016	
Khan						
Super-in-tending Engineer						
Md. Abdul Mannan	-do-	-	-	06.03.2016	18.04.2016	Additional Charge
Khan						
Additional Chief						
Super-in-tending Engineer						
Md. Moniruzzaman	-do-	-	-	18.04.2016	30.06.2017	
Super-in-tending Engineer						

07. Procurement of Transport (in Nos.) :

Type of transport	Number as per P.P.	Procured with date	Transferred to Transport Pool with date	Transferred to O & M with date	Condemned /damaged with date	Remarks
1	2	3	4	5	6	7
Jeep	2 Nos.	2 Nos. Dt. 13.05.10	1 No. Dt.11.08.11	-	-	
Pick-up	1 No.	1 No. Dt.30.06.10	-	1 No. Dt.19.11.2012 Kustia O&M Division, BWDB, Kustia.	-	

08. Procurement of Goods, Works and Consultancy Services:

08.1 Goods & Works of the Project costing above Tk. 200.00 lakh. and Consultancy above Tk. 100.00 lakh :

Description of procurement (goods/works /consultancy) as per bid document	Tender/Bid/Proposal Cost (in crore Taka)		Tender/Bid/Proposal		Date of completion of works/services and supply of goods	
	As per PP	Contracted value	Invitation date	Contract signing/ L.C opening date	As per contract	Actual
1	2	3	4	5	6	7
Training	297.34	297.34				
1.Bathymetric survey for pre-work and post-work measurement of Gorai river retroration project (phase-II)	900.00					
1) 2009-2010 to 2012-2013		377.00		06.05.2010	30.06.2013	30.06.2013
2) 2013-2014		135.11		02.06.2015	30.06.2014	30.06.2014
3) 2014-2015 to 2016-2017		348.50		14.06.2015	30.06.2017	30.06.2017
Total = 860.61						
2. Morphological Mathematical Modeling for Planning, Design, Monitoring, Quality Control & Impact Assessment of Dredging of Gorai river retroration project (phase-II)	750.00					
1) 2009-2010 to 2012-2013		332.79		20.09.2010	30.06.2013	30.06.2013
2) 2013-2014		115.48		30.04.2014	30.06.2014	30.06.2014
3) 2014-2015 to 2016-2017		301.27		14.06.2015	30.06.2017	30.06.2017
Total = 749.54						
3.Environment Flow (E-Flow) Assessment	150.00	149.50	02.06.2016	29.06.2016	28.06.2017	28.06.2017
4) Purchase of 2-Set Dredger with Accessories	25777.46	25777.46	24.05.2010	06.12.2010	30.09.2012	30.09.2012 Received 29.06.2015

Tk. & Doller in Lakh

Description of procurement (goods/works /consultancy) as per bid document	Tender/Bid/Proposal Cost (in crore Taka)		Tender/Bid/Proposal		Date of completion of works/services and supply of goods	
	As per PP	Contracted value	Invitation date	Contract signing/ L.C opening date	As per contract	Actual
1	2	3	4	5	6	7
Initial priority dredging for removal of silt from the offake of Gorai River, 1 st Year (FY 2009-10):						
a) By BWDB own Dredgers	(2 nd Revised) 972.00 (Original) 2122.50	972.00	Performed by BWDB own Dredgers	17.09.2009	-	30.05.2010
b) By other local outsourcing (private owned dredger)	(2 nd Revised) 261.28 (Original) 707.50	261.28	-	06.04.2010	-	06.06.2010
Capital dredging (by International outsourcing) Agency: China Harbour Engineering 2 nd year (FY 2010-2011)	(2 nd Revised) 11954.70 (Original) 15810.00	295.90 lac US\$	25.05.2010	20.09.2010		
Maintenance dredging by Agency: China Harbour Engineering.	(2 nd Revised) 8350.59 (Recast) 8379.00					21.04.2012
Maintenance dredging by BWDB Dredger procured under the Project, 4 th Year (FY 2012-13)	(2 nd Revised) 1873.15 (Recast) 4811.00	1873.15	Performed by BWDB own Dredgers	-	-	30.06.2013
Maintenance dredging by BWDB Dredger procured under the Project, 5 th Year (FY 2013-14)	(2 nd Revised) 2899.80 (Recast) 3254.50	2899.80	-do-	-	-	30.06.2014
Maintenance dredging by BWDB Dredger procured under the Project, 6 th Year (FY 2014-15)	(2 nd Revised) 1186.07 (Recast) 2300.00	2300.00	-do-	22.10.2014	31.01.2015	09.04.2015
Maintenance dredging by BWDB Dredger procured under the Project, 7 th Year (FY 2015-16)	(2 nd Revised) 1064.47 (Recast) 2369.00	2366.93	-do-	27.12.2015	31.01.2016	31.03.2016
Maintenance dredging by BWDB Dredger procured under the Project, 8 th Year (FY 2016-17)	(2 nd Revised) 2675.92 (Recast) 2415.00	2675.66	-do-	29.09.2016	31.01.2017	31.03.2017
Protective work in Ganges (720m)	(2 nd Revised) 2876.97 (Recast) 2138.40	2876.97	-do-	24.10.2016	25.10.2016	25.06.2017
Protective work in Gorai (857m)	(2 nd Revised) 2079.87 (Recast) 1602.59	2079.87	-do-	24.10.2016	25.10.2016	25.06.2017

8.2 Use of Project Consultant (s) (Foreign/Local) :

Name of the Field	Approved man month		Actual man month utilised	Remarks
	As per PP	As per contract		
1	2	3	4	5
a. Foreign	-	-	-	-
b. Local (Procurement Specialist)	5 man month	5 man month	5 man month	

09. Construction/Erection/Installation Tools & Equipment :

Description of items	Quantity (as per PP)	Quantity procured with date	Transferred to O & M with date	Disposed off as per rule with date	Balance	Remarks
1	2	3	4	5	6	7
Purchase of Dredger with Accessories	2 Nos.	2 Nos. Dt. 6.12.2010 to Dt.30.09.2012	2 Nos. Dt.18.08.2016	-	-	Handed over to Directorate of dredger BWDB.

C. FINANCIAL AND PHYSICAL PROGRAMME :

01. (a) Original and revised schedule as per PP :

(In lakh Taka)

Financial Year	Financial provision & physical target as per original PP				Financial provision & physical target as per latest revised PP			
	Total	Taka	P.A.	Physical %	Total	Taka	P.A.	Physical %
1	2	3	4	5	6	7	8	9
2009-10	24137.61	24137.61	-	25.62%	1284.60	1284.60	-	1.96%
2010-11	33173.95	33173.95	-	35.21%	10034.80	10034.80	-	15.32%
2011-12	21076.35	21076.35	-	22.37%	14103.89	14103.89	-	21.53%
2012-13	15826.64	15826.64	-	16.80%	22040.05	22040.05	-	33.65%
2013-14	0.00	0.00	-	0.00	2998.18	2998.18	-	4.58%
2014-15	0.00	0.00	-	0.00	4520.98	4520.98	-	6.90%
2015-16	0.00	0.00	-	0.00	1239.30	1239.30	-	1.89%
2016-17	0.00	0.00	-	0.00	9274.51	9274.51	-	14.16%
Total	94214.55	94214.55	-	100%	65496.31	65496.31	-	100.00%

(In lakh Taka)

Financial Year	Revised Allocation & target			Taka release	Expenditure & physical progress		
	Total	Taka	P.A.		Total	Taka	P.A.
1	2	3	4	5	6	7	8
2009-10	1284.60	1284.60	-	1.96%	1300.00	1284.60	1.96%
2010-11	10034.80	10034.80	-	15.32%	10044.00	10034.80	15.32%
2011-12	14103.89	14103.89	-	21.53%	14115.00	14103.89	21.53%
2012-13	22040.05	22040.05	-	33.65%	23000.00	22040.05	33.65%
2013-14	2998.18	2998.18	-	4.58%	3000.00	2998.18	4.58%
2014-15	4520.98	4520.98	-	6.90%	4659.00	4520.98	6.90%
2015-16	1239.30	1239.30	-	1.89%	3000.00	1239.30	1.89%
2016-17	9274.51	9274.51	-	14.16%	8158.00	8096.65	14.16%
Total	65496.31	65496.31	-	100.00%	-	64318.45	100.00%

D. ACHIEVEMENT OF OBJECTIVES OF THE PROJECT :

Objectives as per PP	Actual achievement	Reasons for shortfall, if any
Reduction of surface water salinity.	Reduce the surface water salinity to threshold of 1ppt at Khulna.	
	The reduction of salinity in the impacted zone of the Sundarban to less than 20 ppt within the river systems in order to protect the ecological functioning and associated threats to biodiversity within the Sundarban Reserved Forest.	
After capital dredging, Maintenance dredging by BWDB under the Project, (FY 2011-17) in required length as recommended by IWM.	Increasing dry season flow to enable fish migration and production from the river and associated waterways.	
	Waste assimilation and the dilute pollution hotspots such as those around Khulna and Mongla.	
	Enhanced navigation services of the river.	
	River and riparian zone biodiversity and aesthetics.	
	Enhanced groundwater and surface water supply and increased quality of domestic water supply	

E. BENEFIT ANALYSIS

01. Annual Out-put:

Items of out-put	Unit	Estimated quantity expected at full capacity	actual quantity of out-put during the 1st year of operation at full capacity (or during, real production for newly completed project).
(a) Forest product from Sundarban	Lac	Annual income from the increased forest product will be Tk. 5450.00 lac in 6 th year and Tk. 197730.00 lac in 21 th year after the implementation of the Project.	As the project has been completed just two months back, actual out-put can not be quantified without completion of 1 st year. Also to ensure benefit from the project each year maintenance dredging is must run this project, & BWDB is taking necessary steps to restare maintenance dredging activities after this project by taking 3 rd phase or by other name of the project.
(b) Agriculture	Lac	Annual production in agriculture sector will be Tk. 4870.00 lac.	
(c) Fisheries	Lac	Annual income from the fisheries output will be Tk. 290.00 lac.	
(d) Rural and urban drinking water supply	Lac	Reducing the supply cost, annual economic achievement will be Tk. 180.00 lac.	
(e) Industrial water supply	Lac	Annual cost for the water supply and maintenance of the equipments will be reduced by Tk. 500.00 lac.	
(f) Navigation	Lac	Annual saving by reducing the transportation cost by Tk. 97.00 lac.	
(g) Land erosion and accretion	Lac	Annual income from the land price for the reduced erosion and increased accretion will be Tk. 100.00 lac.	



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0.2. Auditing during and after Implementation:

2.1. Internal Audit: N/A.

Period of Audit	Date of submission of Audit Report	Major findings/ objections	Whether objections resolved or not.
1	2	3	4

2.2. External Audit:

Audit period	Date of submission of Audit Report	Major findings/ objections	Whether objections resolved or not.
২০০৯-২০১২	পুনঃ দাখিল ১৯.০৬.২০১৭	অনু-০১/২০০৯-২০১২ : আন্তর্জাতিক দরপত্রে চাহিদাকৃত যোগ্যতার স্বপক্ষে পেশকৃত সনদ পূর্ব বা উত্তর যাচাই ছাড়াই এবং জয়েন্ট ভেঞ্চার এগ্রিমেন্ট ও পাওয়ার অব এটর্নী নোটারী পাবলিক কর্তৃক প্রমানীকৃত না হওয়া সত্ত্বেও তা গ্রহণের মাধ্যমে অনিয়মিতভাবে ২৩৯,৫৮,০০,০০০ টাকায় দরপত্র গ্রহণ, চুক্তিপত্র সম্পাদন ও অর্থ পরিশোধ করা হয়েছে।	নিষ্পত্তি হয় নি।
- এ -	পুনঃ দাখিল ১৭.০৭.২০১৭	অনু-০২/২০০৯-২০১২ : চুক্তি অনুযায়ী ইন্সুরেন্স প্রিমিয়ামের উপর ভ্যাট বাবদ আদায়যোগ্য ১৯,৭৬,৫১৪ টাকা আদায় না করায় সরকার রাজস্ব আয় হতে বঞ্চিত হয়েছে।	নিষ্পত্তি হয় নি।
- এ -	পুনঃ দাখিল ১৯.০৬.২০১৭	অনু-০৩/২০০৯-২০১২ : জিওবি প্রকল্পের ব্যাংক হিসাব হতে অর্জিত সুদ বাবদ প্রাপ্ত ২৫,৪৩,৪৯৯.০০ টাকা সরকারী কোষাগারে জমা করা হয়নি।	নিষ্পত্তি হয় নি।
- এ -	পুনঃ দাখিল ১৯.০৬.২০১৭	অনু-০৪/২০০৯-২০১২ : ঠিকাদার/ঠিকাদারী প্রতিষ্ঠানের নিকট হতে ভ্যাট বাবদ ১৪,৫৬,২০৪ টাকা কম কর্তন করা হয়েছে; যা আদায়যোগ্য।	নিষ্পত্তি হয় নি।
- এ -	পুনঃ দাখিল ১৯.০৬.২০১৭	অনু-০৬/২০০৯-২০১২ : ঠিকাদারের নিকট হতে কর্তনকৃত ভ্যাট যথাসময়ে সরকারী কোষাগারে জমা না করায় সুদ বাবদ আদায়যোগ্য ৬,২৮,৪৩৯ টাকা আদায় করা হয়নি এবং কর্তনকৃত অবশিষ্ট ৩,৯৪,৫৩,৫৫৫ টাকা সরকারী কোষাগারে জমার কোন প্রমাণক ও অর্থের সমর্থনে কোন সিটি আর পাওয়া যায়নি।	নিষ্পত্তি হয় নি।
২০১২-২০১৩	০৪.০৯.২০১৪	অনু : ০১/২০১২-১৩ : উদ্ধর্তন কর্তৃপক্ষের অনুমোদন ব্যতিরেকে ২০১২-২০১৩ অর্থ বছরে এডিপি বরাদ্দ হইতে বিগত বছরের বকেয়া বিল বাবদ ৬৮,৮৪,২৭,০০০ টাকা বিধি বহির্ভূতভাবে ঠিকাদারকে পরিশোধ করা হইয়াছে।	নিষ্পত্তি হয় নি।
- এ -	২১.১২.২০১৪	অনু : ০২/২০১২-১৩ : বাংলাদেশের অভ্যন্তরে মালামাল ক্রয়ের ক্ষেত্রে চুক্তিপত্রের (Irrevocable) L/C মাধ্যমে পরিশোধের বিষয় উল্লেখ থাকায় ব্যাংক চার্জ বাবদ পরিশোধিত সরকারের ১৮.০০ লক্ষ টাকা আর্থিক ক্ষতি।	নিষ্পত্তি হয় নি।
- এ -	পুনঃ দাখিল ০৫.০৬.২০১৫	অনু : ০৩/২০১২-২০১৩ : জিওবি প্রকল্পের ব্যাংক হিসাব হতে অর্জিত সুদ বাবদ প্রাপ্ত ২১,২৩,৮৪৫ টাকা সরকারী কোষাগারে জমা করা হয়নি।	নিষ্পত্তি হয় নি।
- এ -	২১.১২.২০১৪	অনু : ০৪/২০১২-২০১৩ : Institute of Water Modelling ঠিকাদার প্রতিষ্ঠান বিল থেকে আয়কর বাবদ ৩,২৮,০০০ টাকা কর্তন করা হয় নাই।	নিষ্পত্তি হয় নি।

Audit period	Date of submission of Audit Report	Major findings/ objections	Whether objections resolved or not.
-	2020-2021	1. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	2. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	3. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	4. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	5. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	6. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	7. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	8. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	9. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	10. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	11. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	12. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	13. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	14. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	15. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	16. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	17. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	18. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	19. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-
-	2020-2021	20. The company has not provided any details regarding the audit of the company's financial statements for the year 2020-2021.	-

G. DESCRIPTIVE REPORT

1. General Observations/Remarks of the Project on Gorai River Restoration Project (Phase-II).

1.1 : Background:

After commissioning of Farakka Barrage by India in the year 1975, the dry season Ganges flow has been reduced and the socio-economic and environmental impacts on the Ganges Dependent Area (GDA) has been experienced as follows:

- Accelerating siltation processes in Ganges-Gorai basin and subsequent closure of the Gorai off-take since 1988;
- Upstream salinity intrusion with negative environmental impacts;
- Acute shortage of fresh water flow in dry season limits the prospect of irrigation development;
- Impact on bio-diversity, specially in largest mangrove forest, Sundarban;
- Limited potential of groundwater development; and
- The surface water salinity around Khulna is increased.

FAP-4 Study: A study was carried out on the Gorai Augmentation in 1994 to address the above issues. The study recommended for dredging of the Gorai off-take with ancillary structures following the objectives as:

- To prevent the environmental degradation in the GDA of South-west region, coastal belt and the Sundarban by undertaking the restoration of the Gorai River; and
- Ensuring fresh water flows in the wet season and augmenting dry season flows;

Gorai River Restoration Project (GRRP):

After signing of the Ganges Water Treaty in 1996, the Government of Bangladesh (GoB) had undertaken the Gorai River Restoration Project (GRRP) with the assistance of Netherlands and Belgium. The Gorai River had been dredged starting from off-take to 20km during the successive 3-years: 1998, 1999 & 2000 under a Pilot Priority Works (PPW). The maintenance dredging was discontinued just after the completion of the project in 2000.

Feasibility Study by DHV-Haskoning & Associates in 2001:

The Feasibility Study (FS) and Detailed Engineering Design of GRRP were prepared by the Main Consultant (DHV-Haskoning & Associates). The study outlined 8 options, out of 8 options they recommended the Option A1R would be the best suited. This option would guide more water into the Gorai during lean season, while excluding sediment during monsoon season and thus economizing maintenance dredging.

Components of Option A1R:

- Flow divider at the off-take in the Ganges;
- Ganges-Gorai guide bund;
- River training work along the Gorai (between Talbaria & Gorai Railway Bridge and restructuring of RTW at Kumarkhali); and
- Dredging of clay-layer just downstream of Gorai off-take and in the Gorai River.

Expected Benefits (Outlined):

- Reducing the further environmental degradation by controlling the salt water intrusion;
- Increase fresh water supplies for industrial purposes;
- Increase irrigation water for agriculture;
- Improve ground water;
- Health/potable water supply;
- Reduced pollution control;
- Improve fishing sector;
- Forestry preservation & development; and
- Improve navigation facilities.

Gorai River Restoration Project (Phase-II):

Considering the degradation of Gorai river flow due to massive siltation after dredging of river in 1998-1999, a committee is formed March 2009 by BWDB for technical study in the light of the study carried out by DHV-HASKONING & Associates, 2001. On the basis of the technical study a DPP has been submitted in May, 2009 with an investment cost of Tk. 157018.40 lakh. Project period was planned for 10 years in which Capital dredging 2 years and Maintenance dredging 8 years. Further, a decision was taken on 6th May 2009 in the office of the honourable Prime Minister mentioning "taking up Gorai Restoration project immediately and completing necessary studies and reports and project preparatory work without delay".

In MOWR, a meeting was held in 15th July, 2009, where a decision was taken to include 6 Nos highly powerful heavy duty dredgers instead of 3 Nos low capacity dredgers in the DPP. On that basis, DPP was recast and re-submitted to MOWR in July, 2009. The DPP cost was 259615.40 lakh. Project period was planned for 10 years in which for Capital dredging 2 years and Maintenance dredging 8 years. The major components were as follows:-

- Capital dredging (1st yr & 2nd yr maintenance) – 70875.00 lakh
- Maintenance dredging (3rd to 5th yrs) – 23095.00 lakh
- Maintenance dredging (6th to 10th yrs) – 25659.00 lakh
- Flow divider – 15000.00 lakh
- Guide Bundh – 12000.00 lakh

The DPP was re submitted accordingly on 25th August, 2009, a meeting was held in the office of the Honourable Prime Minister regarding irrigation and navigability of rivers. In the meeting Gorai River restoration project was discussed. On the basis of that discussion the DPP which already been submitted is re-visited. After re-visit, the project has been formulated as – Project Period is 5 years of which capital dredging 2 years and maintenance 3 years.

34.00 lakh cum) & 5th year (23.00 lakh cum) were made in this Option. This maintenance dredging was planned to execute by BWDB after procurement of new dredger proposed in this project. Two major components “ flow divider” & “Ganges-Gorai Guide Bundh” with their indicative cost were also incorporated in this Option. The total cost of Project was estimated at 119623.35 lakh taka.

The option-1 was not considered as acceptable as major capital dredging was planned to be started in the 2nd year by international outsourcing.

The option-2 was also not accepted as the main capital dredging was scheduled for 2nd year with provision for starting Initial Priority dredging of 7 lakh cum by BWDB's own dredgers.

The option-3 was considered more acceptable with provision for dredging of 20 lakh cum (15 lakh cum by BWDB's own dredgers and 5 lakh cum by local outsourcing) in the 1st year and explore the possibility of engaging any international dredging company for starting the major capital dredging from the 1st year. It may be mentioned here that the instruction of the present government to BWDB is to start this nationally important project, specially the dredging works as far as practicable in the dry season of 2009-10.

According to the direction/guidance of the meeting a follow up meeting was held in the office chamber of Chief Planning, BWDB on 05.09.2009 with the President of the dredger association of Bangladesh. After detail discussion in the meeting, the volume to be dredged was decided about 5.00 lakh cubic meter which will be procured by local outsourcing.

The DPP has been constituted as follows:

1. The dredging plan
2. Procurement
3. PMU set-up
4. Activity-
 - a. During dredging Follow up maintenance dredging after 5 years has to be continued.

The dredging volume to be programmed for the 1st year is only 20.00 lakh cum due to time constrain for procurement. But the total capital dredging of 30 km length has also been planned in the 1st year with the availability of dredgers from outsourcing. Next a follow up meeting was held on 05.09.2009 with President, Dredger Association of Bangladesh.

Recommendation Made in the Project Evaluation Report of IMED

The following key recommendation have been made in the Project Evaluation Report by IMED for the completed Projects (Gorai River Re-excavation Project) of BWDB included in ADP for 2002-03 :

01. Considering the Technicality and sustainability and ensuring the foreign aid the proposed Gorai River Restoration Project should be implemented for the interest of Environmental and socio-economic development.. Moreover the structures of this project should be selected in such a way that this structure will supplement the future Ganges Barrage Project.
02. To maintain the flow of Gorai River it is required to make necessary arrangement to continue the essential maintenance dredging from the revenue budget.



Three options of project cost have been outlined for discussion in the meeting held on 03.09.09.

The three options were discussed in the meeting held in the conference room of Ministry of Water Resources. The meeting was presided over by the Honourable Minister, MoWR along with the Honourable Minister, Ministry of Planning and the state Minister for Water Resources. Among the three options, the Option No.3 was accepted with some modification/alteration as proposed and the project has to be formulated by GoB financing. It is mentioned that the president of dredger Association of Bangladesh was present in the meeting.

In the meeting 3 option for preparing DPP by BWDB were discussed.

In option-1, under the head Acquisition of Assets, provision for purchase of 4 nos. Jeep, 1 no. Pickup, 10 nos. Motor Cycle and 2 sets of dredger were provided. Under the head of Construction Works, Capital Dredging of 113.22 lakh cum and maintenance dredging @ 40% of capital dredge volume, i.e. total 158.51 lakh cum was planned to execute in the 1st & 2nd year by international outsourcing. Accordingly estimated maintenance dredging for the next three years (3rd year 33.97 lakh cum, 4th & 5th Year 45.30 lakh cum) were incorporated in this Option. This maintenance dredging was planned to execute by BWDB after procurement of new dredger proposed in this project. Two major components "flow divider" & "Ganges-Gorai Guide Bundh" with their indicative cost were also incorporated in this Option. The Cost of the Project was estimated at 119005.85 lakh Taka.

In Option-2, same provision for acquisition of assets was proposed as that of Option-1. In Construction works 7.00 lakh cum of Capital dredging was planned to execute with the BWDB owned dredgers in the 1st year. Remaining volume of Capital dredging together with the 3rd year's maintenance dredging totaling 162.23 lakh cum were planned to execute by international outsourcing. For the next two years maintenance dredging volume were estimated for 35.91 lakh cum for 4th year and 23.94 lakh cum for 5th year. This maintenance dredging was planned to execute by BWDB after procurement of new dredger proposed in this project. Two major components "flow divider" & "Ganges-Gorai Guide Bundh" with their indicative cost were also incorporated in this Option. The total cost of the project was estimated at 118221.57 lakh taka.

In Option-3, under the head "Acquisition of Assst", provision for 2 nos. Jeep, 1 no. Pickup & 5 nos. Motor Cycle together with 2 sets of Dredgers were made to reduce the cost of project. In construction works provision were made to execute 15.00 lakh cum dredging by BWDB, 5.00 lakh cum by local outsourcing in the 1st year. Remaining volume of Capital dredging (113.22-20)=93.22 lakh cum and 60% of 1st year dredging, i.e total 105.00 lakh cum was planned to execute by international outsourcing in the 2nd year. Considering the large volume of estimated maintenance dredging (50% of Capital dredging=57.00 lakh cum) in the 3rd year, it was planned to execute the works by international outsourcing also. Accordingly provision for estimated volume of maintenance dredging for 4th year (

03. It is necessary to evaluate the actual Economical and environmental achievement that have been derived from the dredging of Gorai River.

In the DPP five years plan have been outlined. Within two years 2 (two) nos. of high powered dredgers can be procured. After procurement, the maintenance dredging can be continued with these two new dredgers under Directorate of Dredger.

Objectives & Targets:

The main objective of the project is to prevent environmental degradation in the Southwest region, especially around Khulna, the coastal belt and in the Sundarban, by undertaking restoration of the Gorai River and hence ensuring fresh water flow in the wet season and augmenting those flows during the dry season.

The most prominent ecological and environmental services to be restored include.

- Reduction of surface water salinity to threshold of 1ppt at Khulna.
- The reduction of salinity in the impacted zone of the Sundarban to less than 20 ppt within the river systems in order to protect the ecological functioning and associated threats to biodiversity within the Sundarban Reserved Forest.
- Maintenance of a resource utilization profile for the Sundarban Reserved Forest.
- Increasing dry season flow to enable fish migration and production from the river and associated waterways.
- Waste assimilation and the need to dilute pollution hotspots such as those around Khulna and Mongla.
- Navigation services of the river.
- River and riparian zone biodiversity and aesthetics.
- Enhanced groundwater and surface water supply.
- Increased quality of domestic water supply.

Project revision with reasons

DPP costing Tk.157018.40 lakh was discussed in the DPP rationalization/review meeting held on 28.06.2009 in the Ministry of Water Resources.

Again a meeting was held on 03.09.09 in MoWR on submitted DPP. The Option No.-3 was approved & Accordingly DPP is recast and submitted with the costing of Tk. 119572.83 lakh.

DPP costing Tk. 119572.83 lakh was discussed in the DPP Rationalization/Review meeting held on 10.09.2009 in the Ministry of Water Resources. Accordingly, DPP costing Tk. 119242.88 lakh has been recast as per decision of the said meeting.

Further a meeting of Project Evaluation Committee (PEC) on the submitted DPP was held on 11.10.2009 in the Planning Commission. As per decision of the said meeting the DPP was re-cast with the cost of Tk. 118334.56 lakh and submitted to the MoWR. Meanwhile IMED have prepared a cost rationalization report on 02/11/2009 wherein the Project Implementation Period has been reduced from 5 years to 4 years and unit rate of dredging items has been reduced substantially. (BWDB and Local



outsourcing rate from TK147.00 to TK. 141.50, Capital dredging by International outsourcing from TK.290 to TK. 170.00, maintenance dredging by International outsourcing from TK. 290.00 to TK.147.00, maintenance dredging by BWDB from TK. 147.00 to TK. 141.50). The rates of dredging in previously submitted DPP were estimated on the basis of analysis considering the present market price. The DPP costing stand TK. 9421.55 lakh & re-cast as per recommendation of the said report. These reductions in project implementation period and unit rate of dredging require revision of the DPP as per proposal.

Proposal for 2nd Re-appropriation :-

The estimated cost of the a) protective work in Ganges and b) protective work in Gorai according to approved design drawing and prevailing market price are higher than the allocation against the components of the RDPP. And it was proposed & approved the re-appropriate additional cost of protective work form other components of the RDPP.

Finally during 2016-17 the Gorai River Restoration Project (Phase-II) (2nd Revised) has been approved in amounting to TK. 654.9631 (Six hundred fifty four crore nintysix lakh thryone thousand) only. Vide Planning commission memo no. 20.358.014.01.05.427.2009/192(1) dt. 05.10.2016 & Water Resorce Ministry, Planning section-1, Bangladesh Secretariate, Dhaka's memo no. 42.00.0000.039.014.17.12(Part-2)-349 dt. 10.10.2016. Project has been complete accordingly.

Future Target/Task: To safe from degradation of environmental and ecological bad effect in the area of Southwest region, especially around Khulna, the costal belt and in the Sundarban area. Every year must need to dredge in consultant recommended required length of Gorai River.

2. Rationale of the project in respect of Concept, Design, Location and Timing.

Due to implementation of the Barrage in Farakka, the flow of the Ganges River started to decline subsequently. As a result of the reduction of flow in the Ganges, flow through the Gorai started to reduce and the offtake got deposited hindering the passage of flow from the Ganges to the Gorai River. The Gorai river flow remain closed due to offtake siltation during 5(five) month of dry period. To safe the said area from degradation of environmental and ecological effect in the Southwest region, especially around Khulna, and the costal belt and the Sundarban area. It has been need to dredging the Gorai River to wards down stream in required length to continuing fresh water flow in every year. The implementation of the project was very essential to reduce degradation of environmental and ecological effect in the Southwest region, especially around Khulna, and the costal belt and the Sundarban area.

3. Brief description on planning and financing of the project and its applicability.

◆ Project Identification

Division	District	Upa-zila
Khulna	Kushitia	Kushitia Sadar, Kumarkhali, Khoksha.

◆ **Project Preparation**

Due to implementation of the Barrage in Farakka, the flow of the Ganges River started to decline subsequently. As a result of the reduction of flow in the Ganges, flow through the Gorai started to reduce and the offtake got deposited hindering the passage of flow from the Ganges to the Gorai River. The Gorai river flow remain closed due to offtake siltation during 5(five) month of dry period. To safe the said area from degradation of environmental and ecological effect in the Southwest region, especially around Khulna, and the costal belt and the Sundarban area.

◆ **Appraisal**

Considering the degradation of Gorai river flow due to massive siltation after dredging of river in 1998-1999, a committee is formed March 2009 by BWDB for technical study in the light of the study carried out by DHV-HASKONING & Associates, 2001.

- ◆ **Credit Negotiation:** Not Applicable.
- ◆ **Credit Agreement:** Not Applicable.
- ◆ **Credit Effectiveness:** Not Applicable.

- ◆ **Loan Disbursement:** Not Applicable.
- ◆ **Loan Conditionalities:** Not Applicable.

◆ **Project Approval.**

The project was approved on 05.11.2019 & revision was approved on 05.10.2016.

- ◆ **Others (if any) :** Nill.

4. Analysis of the Post-Implementation situation and result of the project :

4.1 Whether the beneficiaries of the project have clear knowledge about the Target/ Objectives of the project.

Yes.

4.2 Programme for use of created-facilities of the project

The stack holders are directly taking advantages of the created facilities of the project.

4.3 O & M programme of the project.

A new DPP has been submitted to the Ministry of Warter Ressources named "Gorai River Dredging and bank protection Project" to take up maintenance dredging and O&M works.

4.4 Impact of the project -

4.4.1 Direct

- Reduce of surface water salinity to threshold of 1ppt at Khulna.
- The reduce of salinity in the impacted zone of the Sundarban to less than 20 ppt within the river systems in order to protect the ecological functioning and associated threats to biodiversity within the Sundarban Reserved Forest.
- Increasing dry season flow to enable fish migration and production from the river and associated waterways.



- Waste assimilation and the need to dilute pollution hotspots such as those around Khulna and Mongla.
- Enhanced navigation services of the river.
- Enhanced groundwater and surface water supply.
- Increased quality of domestic water supply.

4.4.2 Indirect

- Safety of human livelihood and properties.
- Improvement of socio-economic condition.

4.5 Transfer of Technology and Institutional Building through the project

Not Applicable.

4.6 Employment generation through the project.

A large number of skilled/unskilled workers were employed during construction period.

4.7 Possibility of Self employment

There are possibilities of self employment as existing commercial, industrial and business centres are protected from river bank erosion & the environmental degradation.

4.8 Possibility of women-employment opportunity

Yes, there is possibility of women-employment through the project benefited area enhanced.

4.9 Women's participation in development

Yes.

4.10 Probable Impact on Socio-Economic activity.

By the implementation of the project reduce the surface water salinity, as a result socio-economic balance in the locality is enhanced.

4.11 Impact on environment

Environmental enhancement is achieved through the implementation of the project.

4.12 Sustainability of the project

The project is sustainable but requires maintenance dredging every year to be run.

4.13 Contribution to poverty alleviation/reduction

- By the implementation of the project reduce the surface water salinity huge public and private properties, agricultural product saved & generated employment for skilled/unskilled in agriculture and industrial sectors. Increasing dry season flow to enable fish migration and production from the river and associated waterways. Also better employment access in business sector & navigation sector is enhanced.
- Natural security against river bank erosion is restored.

4.14 Opinion of the public representatives, local elite, local administration, teachers, religious leaders, women's representatives etc.

Positive remarks regarding the project.

4.15 Contribution of Micro-credit programmes and Comments on overlapping with any NGO activities.

Not Applicable.

5. Problems encountered during Implementation (with duration & steps taken to remove those)

5.1	Project Management	5.12	Project aid disbursement and re-imbursment
5.2	Project Director	5.13	Mission of the development partners.
5.3	Land Acquisition	5.14	Time & Cost Over-run
5.4	Procurement	5.15	Project Supervision/Inspection
5.5	Consultancy	5.16	Delay in Decision
5.6	Contractor	5.17	Transport
5.7	Manpower	5.18	Training
5.8	law & Order	5.19	Approval
5.9	Natural calamity	5.20	Others.
5.10	Project financing, allocation and Release.		
5.11	Design formulation/approval		

No problems encountered during implementation of the project regarding the above facts.

6 : Remarks & Recommendations of the Project Director :

The Ganges Depended Area (GDA) is principally fed by the Gorai River and its distributaries. The main fresh water source is the river Ganges. The Gorai is one of the main distributaries for fresh water flow in the south-west regions of Bangladesh. There is about 40 million people living in the area and the world's largest mangrove forest, the Sundarbans (also shared with India) is situated along the coast line of both Bangladesh India. The fresh water shortage during the dry season has lead to river sedimentation and increased salinity of the surface water, siols and groundwater; It is in turn affecting rural and urban water supplies, crop and fish production, and the fragile mangrove ecosystems. In order to restore the Gorai river and to ensure substantial amount of fresh water flow towards the south-west region of Bangladesh, Bangladesh Water Development Board (BWDB) had taken up a project for dredging the Gorai river from its offtake up to 30km downstream under a project titled The Gorai River Restorations Project (Phase-II) which are located at Division Khulna, District Kushtia, Upa-zila Kushtia Sadar, Kumarkhali and Khoksha.

The project was initiated in 2009-10 for Initial Priority Dredging by mobilizing BWDB owned dredger and private owned local dredger. In the 2nd year of the project FY 2010-11, the Capital dredging has been done by Chian Harbour Engineering Co. Ltd (CHEC) and maintenance dredging during 2011-12 has been also done by them. BWDB has procure 2 dredgers having higher production capacity under the project. these dredgers are continuing the dredging from 2012-13 till to date.

Due to implementation of the Barrage in Farakka, the flow of the Ganges River started to decline subsequently. As a result of the reduction of flow in the Ganges, flow through the Gorai started to reduce and the offtake got deposited hindering the passage of flow from the Ganges to the Gorai River. The Gorai river flow remain closed due to offtake siltation during 5(five) month of dry period. To save the said area from degradation of environmental and ecological effect in the Southwest region, especially around Khulna, and the costal belt and the Sundarban area. It has been need to dredging the Gorai River to wards down stream in required length to continuing fresh water flow in every year.

Recommendation: As per final Report of Environmental Flow Assessment (E-flow), Morphological-Mathematical Modeling & Bathymetric survey to resist ecological and environmental degradation in the Southwest region, especially around the Khulna, the coastal belt and in the Sundarban, every year a certain length of Gorai river dredging is highly recommended until Ganges Barrage/water management project. Presently a new DPP has been submitted to the Ministry of Water Resources named "Gorai River Dredging and bank protection Project" to take up maintenance dredging according to study. Early approval of that project is highly required to run maintenance dredging of Gorai river.

[Signature]
23.08.2017

Signature and seal of the Project Director/Manager

(Md. Moniruzzaman)
Superintending Engineer (C.C./Project Director)
Gorai River Restoration Project (Phase-II)
PWDB, Dhaka

Date : 23.08.2017

7. Remarks/Comments of Agency Head

The project was formulated with the aim of ensuring water flow in Gorai river during dry seasons and thus minimizing salinity effect on the downstream area of Gorai river. Already Gorai river has been re-created two times through two different projects. Studies and recent experience show that each year maintenance dredging on the Gorai channel is pre-requisite for sustainability of project benefits. Hence, earliest approval of proposed DPP is must for continuing maintenance dredging on Gorai river.

[Signature]
23.08.2017

Signature and Seal

(Md. Mahfuzur Rahman)
Director General
BWDB, Dhaka.

8. Remarks/Comments of the officer in-charge of the Ministry/Division

Signature and Seal

Date :

বাংলাদেশ পানি উন্নয়ন বোর্ড



পানি সম্পদ মন্ত্রণালয়ে অনুষ্ঠিত "গড়াই নদী পুনরুদ্ধার প্রকল্প (২য় পর্যায়)" এর সংশোধিত ডিপিপি'র উপর যাচাই/পর্যালোচনা সভার সিদ্ধান্তের প্রেক্ষিতে সরজমিনে প্রকল্প এলাকা পরিদর্শন পূর্বক প্রকল্প সংশোধনের যৌক্তিকতা নিরূপণ এবং ব্যয় যৌক্তিকীকরণ করার জন্য গঠিত কমিটির প্রতিবেদন।



ডিসেম্বর, ২০১০

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পানি সম্পদ মন্ত্রণালয়ে অনুষ্ঠিত "গড়াই নদী পুনরুদ্ধার প্রকল্প (২য় পর্যায়)" এর সংশোধিত ডিপিপি'র উপর যাচাই সভার সিদ্ধান্তের প্রেক্ষিতে সরজমিনে প্রকল্প এলাকা পরিদর্শন পূর্বক প্রকল্প সংশোধনের যৌক্তিকতা নিরূপণ এবং ব্যয় যৌক্তিকীকরণ করার জন্য বোর্ড কর্তৃক গঠিত কমিটির প্রতিবেদনঃ

১.০ ভূমিকা : গড়াই নদী পুনরুদ্ধার প্রকল্পের (২য় পর্যায়) এর সংশোধিত ডিপিপি'র উপর গত ৩০-০৪-২০১৩খ্রিঃ তারিখে পানি সম্পদ মন্ত্রণালয়ের সিনিয়র সচিব মহোদয়ের সভাপতিত্বে একটি যাচাই/পর্যালোচনা সভা অনুষ্ঠিত হয়। উক্ত সভার সিদ্ধান্ত নং- ৪.১ মোতাবেক পাউবোর্ড সচিবালয়ের স্মারক নং-৩৭৮-পাউবো/সচি/পশ্চিম রিজিওন/শাখা-১ তারিখঃ ১০-০৬-২০১৩ খ্রিঃ বরাতে (সংযুক্তি-১) "গড়াই নদী পুনরুদ্ধার প্রকল্প (২য় পর্যায়)" এর সংশোধিত ডিপিপি'র উপর সরজমিনে প্রকল্প এলাকা পরিদর্শন পূর্বক প্রকল্প সংশোধনের যৌক্তিকতা নিরূপণ এবং ব্যয় যৌক্তিকীকরণ করার লক্ষ্যে একটি কমিটি গঠন করা হয় এবং পানি সম্পদ মন্ত্রণালয়ের স্মারক নং-৪২.০০.০০০.০৩৯.০১৪.১৭.১২-১৮৮ তারিখঃ ১৬-০৭-২০১৩ খ্রিঃ (সংযুক্তি-২) এর মাধ্যমে মন্ত্রণালয়ের প্রতিনিধি মনোনয়ন প্রদান করা হয়। ৫(পাঁচ) সদস্য বিশিষ্ট কমিটির সদস্যগণ নিম্নরূপঃ

- ১। জনাব মোঃ আব্দুল মান্নান, অতিরিক্ত মহাপরিচালক (পরিকল্পনা), বাপাউবো, ঢাকা। - আহ্বায়ক
- ২। জনাব যতি দাস কুন্ড, প্রধান প্রকৌশলী, নকসা, বাপাউবো, ঢাকা। - সদস্য
- ৩। জনাব মোঃ কুদরত আলী, তত্ত্বাবধায়ক প্রকৌশলী, নকসা সার্কেল-৫, বাপাউবো, ঢাকা। - সদস্য-সচিব
- ৪। জনাব প্রদীপ কুমার মহোদয়, উপ-প্রধান, পানি সম্পদ মন্ত্রণালয়, ঢাকা। - সদস্য
- ৫। জনাব মোঃ শাহজাহান সিরাজ, নির্বাহী প্রকৌশলী, প্রধান পরিকল্পনা দপ্তর, বাপাউবো, ঢাকা। - সদস্য

১.২ কমিটির কার্য পরিধিঃ

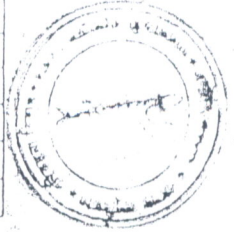
- (ক) কমিটি সরজমিনে প্রকল্প এলাকা পরিদর্শন পূর্বক "গড়াই নদী পুনরুদ্ধার প্রকল্প (২য় পর্যায়)" সংশোধনের যৌক্তিকতা নিরূপণসহ ব্যয় যৌক্তিকীকরণ করবে।
- (খ) কমিটি প্রকল্প এলাকা সরজমিনে পরিদর্শন ও কারিগরী দিক পর্যালোচনা পূর্বক তাদের মতামত ও সুপারিশ সম্বলিত প্রতিবেদন ২ (দুই) প্রহে আপগামী ১৫ (পনের) কার্যদিবসের মধ্যে অতিরিক্ত মহাপরিচালক (পশ্চিম রিজিওন), বাপাউবো'র মহোদয় বরাবরে দাখিল করবে।

২.০ প্রকল্পের পটভূমিকা এবং বর্তমান অবস্থাঃ

২.১ গড়াই নদী পুনরুদ্ধার প্রকল্পের (২য় পর্যায়) ডিপিপি গত ০৫-১১-০৯ খ্রিঃ তারিখে অনুষ্ঠিত একনেক সভায় অনুমোদিত হয়। ১৮-১১-২০০৯ খ্রিঃ তারিখে সরকারের পরিকল্পনা বিভাগের সরকারী আদেশ (জিও) এবং ২৫-১১-২০০৯ খ্রিঃ তারিখে পানি সম্পদ মন্ত্রণালয়ের প্রশাসনিক আদেশ জারী করা হয়। অনুমোদিত ডিপিপি অনুযায়ী ৪ বছর মেয়াদী প্রকল্পের কাজ ২০০৯-১০ অর্থ বছরে শুরু এবং ২০১২-১৩ অর্থ বছরে শেষ হওয়ার জন্য নির্ধারিত ছিল। ইতোমধ্যে পানি সম্পদ মন্ত্রণালয়ের স্মারক নং ৪২.০০.০০০০.০৩৯.০১৪.১৭.১২-২১১ তারিখঃ ১৬-০৭-২০১৩ (২০১৩-১৪ অর্থ বছর) পর্যন্ত বৃদ্ধি করা হয়েছে (সংযুক্তি-৩)।

২.২ অনুমোদিত ডিপিপি অনুযায়ী মূল প্রকল্পের প্রাকল্পিত ব্যয় ছিল ৯৪২৪৪.৫৫ লক্ষ টাকা। প্রকল্পের বাস্তব কাজ ২০০৯-১০ অর্থ বছরে শুরু করা হয়েছে এবং ২০১২-১৩ অর্থ বছর শেষে ডিপিপিভুক্ত প্রধান প্রধান কাজের মধ্যে (ক) ২০০৯-১০ অর্থ বছরে প্রাথমিক অগ্রাধিকার ড্রেজিং, (খ) ২০১০-১১ অর্থবছরে ক্যাপিটাল ড্রেজিং, (গ) ২০১১-১২ অর্থবছরে ২য় বছরের মেইটেনেন্স ড্রেজিং ও (ঘ) ২০১২-১৩ অর্থবছরে ৩য় বছরের মেইটেনেন্স ড্রেজিং সম্পন্ন হয়েছে এবং এসব কাজের অনুকূলে বিল পরিশোধ করা হয়েছে। উল্লেখ্যযোগ্য অন্য কাজের মধ্যে ২ সেট ড্রেজার ও আনুষঙ্গিক সরঞ্জামাদি তৈরী ও সরবরাহ কার্য সম্পন্ন হলেও সম্পূর্ণ অর্থ পরিশোধ করা সম্ভব হয়নি। প্রকল্পের পরামর্শিক হিসেবে Institute of Water Modelling (IWM) মাধ্যমে দুটি কাজ (১) Bathymetric survey for pre and post work measurement এবং (২) Mathematical Modelling এর মাধ্যমে dredging alignment and spoil area নির্ধারণ কাজ চলমান রয়েছে। এছাড়া Gorai offtake structures and river Training works শীর্ষক প্রকল্পের বিশ্ব ব্যাংকের সহায়তা প্রাপ্তির আধাঙ্গের প্রেক্ষিতে মূল ডিপিপি-তে (Indicative Cost) হিসেবে ডেম-ডিভাইডার এর জন্য ১৫০০০.০০ লক্ষ টাকা এবং গড়াই গাইড বাঁধ এর জন্য ১২০০০.০০ লক্ষ টাকার সংস্থান আছে।

No	Area (Shown in the map)	Location
1	Spoil dumping area-D-1	Chainage 390m to 880m = 760m, Left Bank
2	Spoil dumping area-D-2	Chainage 600m to 2390m = 1670m, Right Bank
3	Spoil dumping area-D-3	Chainage 2200m to 4500m = 1770m, Left Bank
4	Spoil dumping area-D-4	Chainage 4920m to 1120m = 5930m, Left Bank
5	Spoil dumping area-D-5	Chainage 11520m to 14860m = 3190m, Left Bank



A). Spoil Dumping Area:

[illegible][illegible][illegible]

: ይህም ምንጩ ከግብይት 0'0

[illegible][illegible]

2008 වසරේදී මෙම ප්‍රදේශයේ පවතින ප්‍රධාන ව්‍යාපාරික ක්ෂේත්‍රය වන්නේ කෘෂිකර්මයයි. මෙම ක්ෂේත්‍රයේ පවතින ප්‍රධාන ව්‍යාපාරික ක්ෂේත්‍රය වන්නේ කෘෂිකර්මයයි. මෙම ක්ෂේත්‍රයේ පවතින ප්‍රධාන ව්‍යාපාරික ක්ෂේත්‍රය වන්නේ කෘෂිකර්මයයි.

1 (8-ആവൃത്തി)

ഒരു പക്ഷെ 1992 മുതൽ 1993 വരെ വർഷം കഴിഞ്ഞു. 1992-93-ൽ 1993-94-ൽ 1994-95-ൽ 1995-96-ൽ 1996-97-ൽ 1997-98-ൽ 1998-99-ൽ 1999-00-ൽ 2000-01-ൽ 2001-02-ൽ 2002-03-ൽ 2003-04-ൽ 2004-05-ൽ 2005-06-ൽ 2006-07-ൽ 2007-08-ൽ 2008-09-ൽ 2009-10-ൽ 2010-11-ൽ 2011-12-ൽ 2012-13-ൽ 2013-14-ൽ 2014-15-ൽ 2015-16-ൽ 2016-17-ൽ 2017-18-ൽ 2018-19-ൽ 2019-20-ൽ 2020-21-ൽ 2021-22-ൽ 2022-23-ൽ 2023-24-ൽ 2024-25-ൽ 2025-26-ൽ 2026-27-ൽ 2027-28-ൽ 2028-29-ൽ 2029-30-ൽ 2030-31-ൽ 2031-32-ൽ 2032-33-ൽ 2033-34-ൽ 2034-35-ൽ 2035-36-ൽ 2036-37-ൽ 2037-38-ൽ 2038-39-ൽ 2039-40-ൽ 2040-41-ൽ 2041-42-ൽ 2042-43-ൽ 2043-44-ൽ 2044-45-ൽ 2045-46-ൽ 2046-47-ൽ 2047-48-ൽ 2048-49-ൽ 2049-50-ൽ 2050-51-ൽ 2051-52-ൽ 2052-53-ൽ 2053-54-ൽ 2054-55-ൽ 2055-56-ൽ 2056-57-ൽ 2057-58-ൽ 2058-59-ൽ 2059-60-ൽ 2060-61-ൽ 2061-62-ൽ 2062-63-ൽ 2063-64-ൽ 2064-65-ൽ 2065-66-ൽ 2066-67-ൽ 2067-68-ൽ 2068-69-ൽ 2069-70-ൽ 2070-71-ൽ 2071-72-ൽ 2072-73-ൽ 2073-74-ൽ 2074-75-ൽ 2075-76-ൽ 2076-77-ൽ 2077-78-ൽ 2078-79-ൽ 2079-80-ൽ 2080-81-ൽ 2081-82-ൽ 2082-83-ൽ 2083-84-ൽ 2084-85-ൽ 2085-86-ൽ 2086-87-ൽ 2087-88-ൽ 2088-89-ൽ 2089-90-ൽ 2090-91-ൽ 2091-92-ൽ 2092-93-ൽ 2093-94-ൽ 2094-95-ൽ 2095-96-ൽ 2096-97-ൽ 2097-98-ൽ 2098-99-ൽ 2099-00-ൽ 2100-01-ൽ 2101-02-ൽ 2102-03-ൽ 2103-04-ൽ 2104-05-ൽ 2105-06-ൽ 2106-07-ൽ 2107-08-ൽ 2108-09-ൽ 2109-10-ൽ 2110-11-ൽ 2111-12-ൽ 2112-13-ൽ 2113-14-ൽ 2114-15-ൽ 2115-16-ൽ 2116-17-ൽ 2117-18-ൽ 2118-19-ൽ 2119-20-ൽ 2120-21-ൽ 2121-22-ൽ 2122-23-ൽ 2123-24-ൽ 2124-25-ൽ 2125-26-ൽ 2126-27-ൽ 2127-28-ൽ 2128-29-ൽ 2129-30-ൽ 2130-31-ൽ 2131-32-ൽ 2132-33-ൽ 2133-34-ൽ 2134-35-ൽ 2135-36-ൽ 2136-37-ൽ 2137-38-ൽ 2138-39-ൽ 2139-40-ൽ 2140-41-ൽ 2141-42-ൽ 2142-43-ൽ 2143-44-ൽ 2144-45-ൽ 2145-46-ൽ 2146-47-ൽ 2147-48-ൽ 2148-49-ൽ 2149-50-ൽ 2150-51-ൽ 2151-52-ൽ 2152-53-ൽ 2153-54-ൽ 2154-55-ൽ 2155-56-ൽ 2156-57-ൽ 2157-58-ൽ 2158-59-ൽ 2159-60-ൽ 2160-61-ൽ 2161-62-ൽ 2162-63-ൽ 2163-64-ൽ 2164-65-ൽ 2165-66-ൽ 2166-67-ൽ 2167-68-ൽ 2168-69-ൽ 2169-70-ൽ 2170-71-ൽ 2171-72-ൽ 2172-73-ൽ 2173-74-ൽ 2174-75-ൽ 2175-76-ൽ 2176-77-ൽ 2177-78-ൽ 2178-79-ൽ 2179-80-ൽ 2180-81-ൽ 2181-82-ൽ 2182-83-ൽ 2183-84-ൽ 2184-85-ൽ 2185-86-ൽ 2186-87-ൽ 2187-88-ൽ 2188-89-ൽ 2189-90-ൽ 2190-91-ൽ 2191-92-ൽ 2192-93-ൽ 2193-94-ൽ 2194-95-ൽ 2195-96-ൽ 2196-97-ൽ 2197-98-ൽ 2198-99-ൽ 2199-00-ൽ 2200-01-ൽ 2201-02-ൽ 2202-03-ൽ 2203-04-ൽ 2204-05-ൽ 2205-06-ൽ 2206-07-ൽ 2207-08-ൽ 2208-09-ൽ 2209-10-ൽ 2210-11-ൽ 2211-12-ൽ 2212-13-ൽ 2213-14-ൽ 2214-15-ൽ 2215-16-ൽ 2216-17-ൽ 2217-18-ൽ 2218-19-ൽ 2219-20-ൽ 2220-21-ൽ 2221-22-ൽ 2222-23-ൽ 2223-24-ൽ 2224-25-ൽ 2225-26-ൽ 2226-27-ൽ 2227-28-ൽ 2228-29-ൽ 2229-30-ൽ 2230-31-ൽ 2231-32-ൽ 2232-33-ൽ 2233-34-ൽ 2234-35-ൽ 2235-36-ൽ 2236-37-ൽ 2237-38-ൽ 2238-39-ൽ 2239-40-ൽ 2240-41-ൽ 2241-42-ൽ 2242-43-ൽ 2243-44-ൽ 2244-45-ൽ 2245-46-ൽ 2246-47-ൽ 2247-48-ൽ 2248-49-ൽ 2249-50-ൽ 2250-51-ൽ 2251-52-ൽ 2252-53-ൽ 2253-54-ൽ 2254-55-ൽ 2255-56-ൽ 2256-57-ൽ 2257-58-ൽ 2258-59-ൽ 2259-60-ൽ 2260-61-ൽ 2261-62-ൽ 2262-63-ൽ 2263-64-ൽ 2264-65-ൽ 2265-66-ൽ 2266-67-ൽ 2267-68-ൽ 2268-69-ൽ 2269-70-ൽ 2270-71-ൽ 2271-72-ൽ 2272-73-ൽ 2273-74-ൽ 2274-75-ൽ 2275-76-ൽ 2276-77-ൽ 2277-78-ൽ 2278-79-ൽ 2279-80-ൽ 2280-81-ൽ 2281-82-ൽ 2282-83-ൽ 2283-84-ൽ 2284-85-ൽ 2285-86-ൽ 2286-87-ൽ 2287-88-ൽ 2288-89-ൽ 2289-90-ൽ 2290-91-ൽ 2291-92-ൽ 2292-93-ൽ 2293-94-ൽ 2294-95-ൽ 2295-96-ൽ 2296-97-ൽ 2297-98-ൽ 2298-99-ൽ 2299-00-ൽ 2300-01-ൽ 2301-02-ൽ 2302-03-ൽ 2303-04-ൽ 2304-05-ൽ 2305-06-ൽ 2306-07-ൽ 2307-08-ൽ 2308-09-ൽ 2309-10-ൽ 2310-11-ൽ 2311-12-ൽ 2312-13-ൽ 2313-14-ൽ 2314-15-ൽ 2315-16-ൽ 2316-17-ൽ 2317-18-ൽ 2318-19-ൽ 2319-20-ൽ 2320-21-ൽ 2321-22-ൽ 2322-23-ൽ 2323-24-ൽ 2324-25-ൽ 2325-26-ൽ 2326-27-ൽ 2327-28-ൽ 2328-29-ൽ 2329-30-ൽ 2330-31-ൽ 2331-32-ൽ 2332-33-ൽ 2333-34-ൽ 2334-35-ൽ 2335-36-ൽ 2336-37-ൽ 2337-38-ൽ 2338-39-ൽ 2339-40-ൽ 2340-41-ൽ 2341-42-ൽ 2342-43-ൽ 2343-44-ൽ 2344-45-ൽ 2345-46-ൽ 2346-47-ൽ 2347-48-ൽ 2348-49-ൽ 2349-50-ൽ 2350-51-ൽ 2351-52-ൽ 2352-53-ൽ 2353-54-ൽ 2354-55-ൽ 2355-56-ൽ 2356-57-ൽ 2357-58-ൽ 2358-59-ൽ 2359-60-ൽ 2360-61-ൽ 2361-62-ൽ 2362-63-ൽ 2363-64-ൽ 2364-65-ൽ 2365-66-ൽ 2366-67-ൽ 2367-68-ൽ 2368-69-ൽ 2369-70-ൽ 2370-71-ൽ 2371-72-ൽ 2372-73-ൽ 2373-74-ൽ 2374-75-ൽ 2375-76-ൽ 2376-77-ൽ 2377-78-ൽ 2378-79-ൽ 2379-80-ൽ 2380-81-ൽ 2381-82-ൽ 2382-83-ൽ 2383-84-ൽ 2384-85-ൽ 2385-86-ൽ 2386-87-ൽ 2387-88-ൽ 2388-89-ൽ 2389-90-ൽ 2390-91-ൽ 2391-92-ൽ 2392-93-ൽ 2393-94-ൽ 2394-95-ൽ 2395-96-ൽ 2396-97-ൽ

B). Temporary Protective Areas:

No	Area (Shown in the map)	Location
1	Area-PW-1A (Padma)	720m
2	Area-PW-1	Chainage 600m to 1430m = 857.41m, Left Bank
3	Area-PW-2	Chainage 3890m to 4700m = 748.17m, Left Bank
4	Area-PW-3	Chainage 4820m to 7580m = 2837.5m, Left Bank
5	Area-PW-4	Chainage 7590m to 9310m = 1742.5m, Right Bank
6	Area-PW-5	Chainage 10390m to 10970m = 693.95m, Left Bank

৫.৪ কয়েকটি spoil dumping area নদী হতে সেট ব্যাক দূরত্ব না থাকায় এবং spoiled earth এর উচ্চতা বেশী হওয়ায় নদীর ঘোরে ভেসে পড়ছে বলে পর্যবেক্ষণে পরিলক্ষিত হয়।

৫.৫ পরদিন (গত ২৭-০৮-২০১৩খ্রিঃ) সকাল ৮.০০ ঘটিকায় কমিটি পুনরায় কুষ্টিয়া জিকে ঘাট হতে নৌকা যোগে পূর্বদিনের পরিদর্শনকৃত স্থান হতে ভাটির নিকে spoil dumping area এবং erosion area প্রত্যক্ষ করার উদ্দেশ্যে যাত্রা শুরু করেন। নৌকা হতে নিম্নলিখিত স্থান পরিদর্শন করেন :

A). Spoil Dumping Area:

No	Area (Shown in the map)	Location
1	Spoil dumping area-D-6	Chainage 13890m to 17940m = 3670m, Left Bank
2	Spoil dumping area-D-7	Chainage 18400m to 20940m = 2300m, Right Bank
3	Spoil dumping area-D-8	Chainage 21480m to 23400m = 1750m, Right Bank
4	Spoil dumping area-D-9	Chainage 24380m to 27610m = 3050m, Left Bank

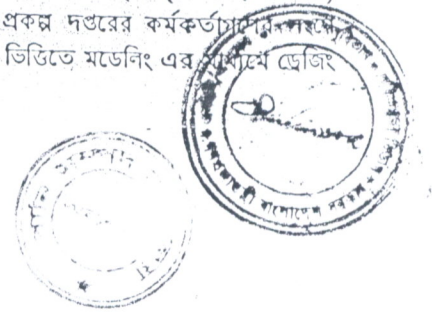
B). Temporary Protective Areas:

No	Area (Shown in the map)	Location
1	Area-PW-6	Chainage 12320m to 13700m = 1360.95m, Right Bank
2	Area-PW-7	Chainage 26110m to 27920m = 1838.25m, Right Bank

৬.০ আইড্রিউএম এর মতামত :

৬.১ Institute of Water Modelling (IWM) এর সংগে বাপাউবোর দুটি পৃথক চুক্তির আওতায় পরামর্শ সেবা প্রদান করা হচ্ছে। ২০০৯-১০ হতে ২০১২-১৩ অর্থবছর পর্যন্ত ড্রেজিং কাজ বাস্তবায়নের ফলে প্রয়োজনীয় তথ্য-উপাত্ত বিশ্লেষণ করে IWM কর্তৃক Mathematical Modeling মাধ্যমে Dredging Alignment নির্ধারণ ও Dredge Spoil Management করণ এবং আধুনিক যন্ত্রপাতি ব্যবহার করে নদী ড্রেজিংয়ের প্রি-ওয়ার্ক ও পোস্ট ওয়ার্ক পরিমাপ গ্রহণ করা হচ্ছে। তদানুযায়ী IWM কর্তৃক একটি সর্বশেষ জরীপ এবং তথ্য-উপাত্ত সংযোজন, বিশ্লেষণ করে একটি ম্যাপ প্রস্তুত করা হয়েছে (চিত্র-৯ চূড়ান্ত)।

৬.২ আইড্রিউএম এর সর্বশেষ জরীপ এবং সরবরাহকৃত ম্যাপ হতে দেখা যায় যে, গড়াই নদীর অফটেক (০ কিঃমিঃ) হতে ২৯.৫০০ কিঃমিঃ দৈর্ঘ্যের মধ্যে মোট ২০.০৯০ কিঃমিঃ দৈর্ঘ্যে নদী তীরবর্তী মোট ৯টি স্থানে (ডি-১ হতে ডি-৯) ড্রেজড ম্যাটেরিয়াল স্তপিকরণ করা হচ্ছে। উক্ত প্রতিষ্ঠানের প্রতিনিধি এবং প্রকল্প দপ্তরের কর্মকর্তাদের সঙ্গে আলোচনা করে আরো জানা যায় যে, প্রতিনিয়ত জরীপের মাধ্যমে তথ্য-উপাত্তের ভিত্তিতে মডেলিং এর মাধ্যমে ড্রেজিং এলাইনমেন্ট এবং স্পয়েল এরিয়া নির্ধারণ করা হচ্ছে।



পাতা-৩

P-15৩



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8-1516

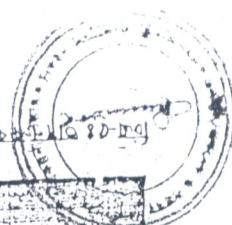


Figure 1: Aerial view of the site showing the location of the excavation area.

Figure 2: Aerial view of the site showing the location of the excavation area.

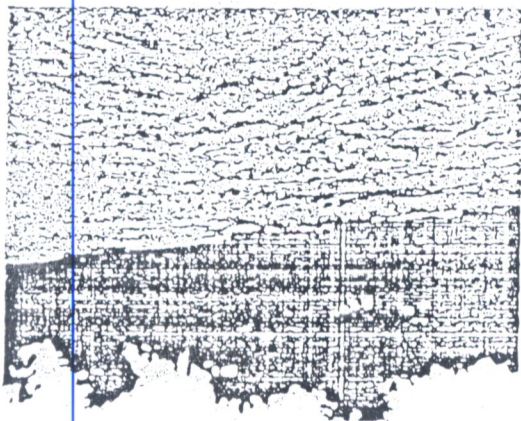


Figure 3: Aerial view of the site showing the location of the excavation area.

Figure 4: Aerial view of the site showing the location of the excavation area.

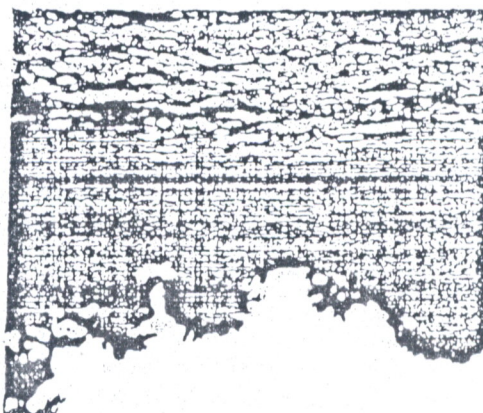
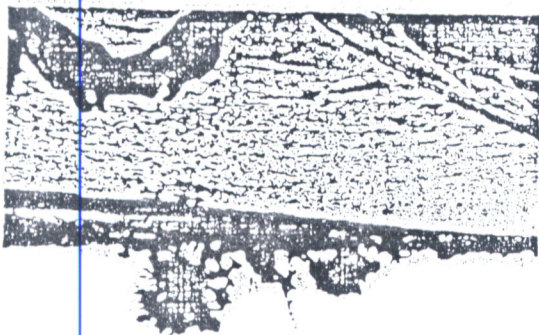
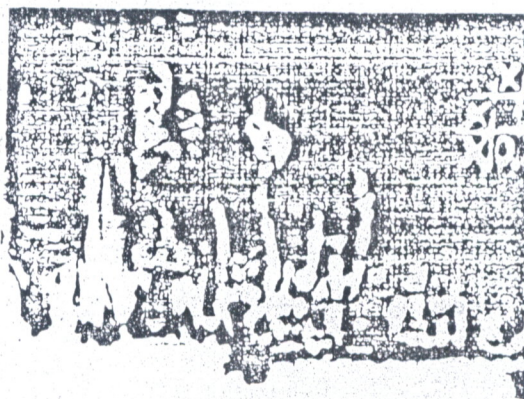
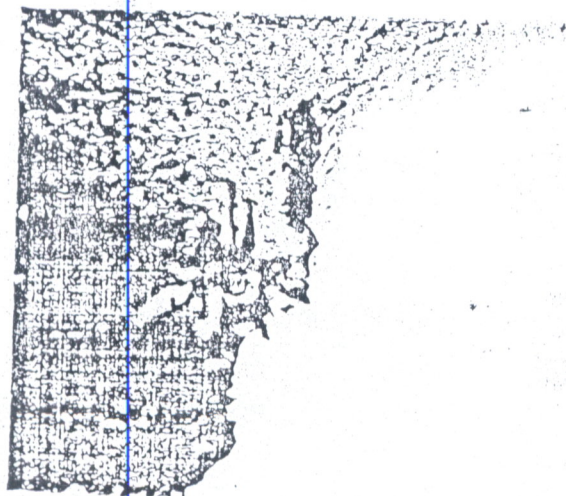
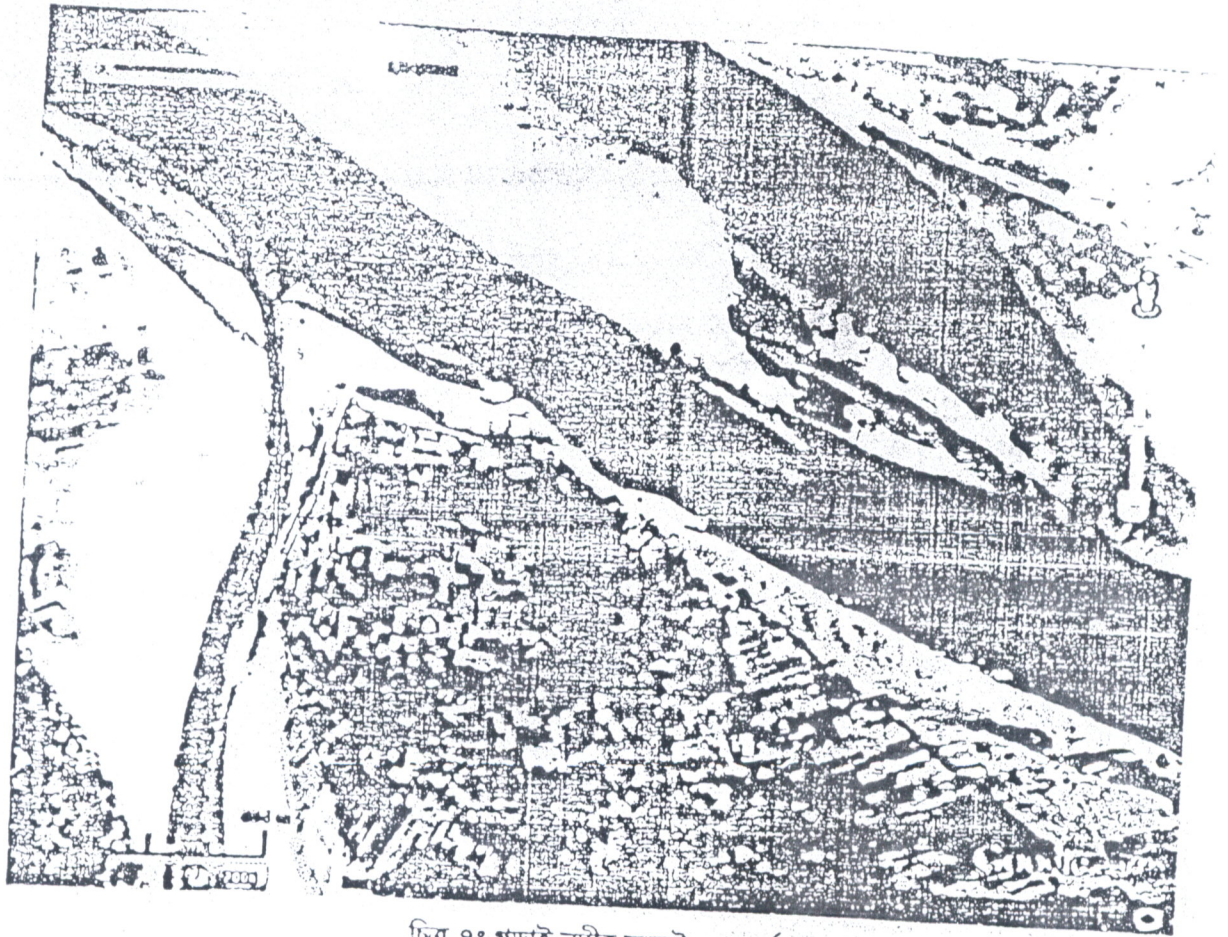


Figure 5: Aerial view of the site showing the location of the excavation area.

Figure 6: Aerial view of the site showing the location of the excavation area.



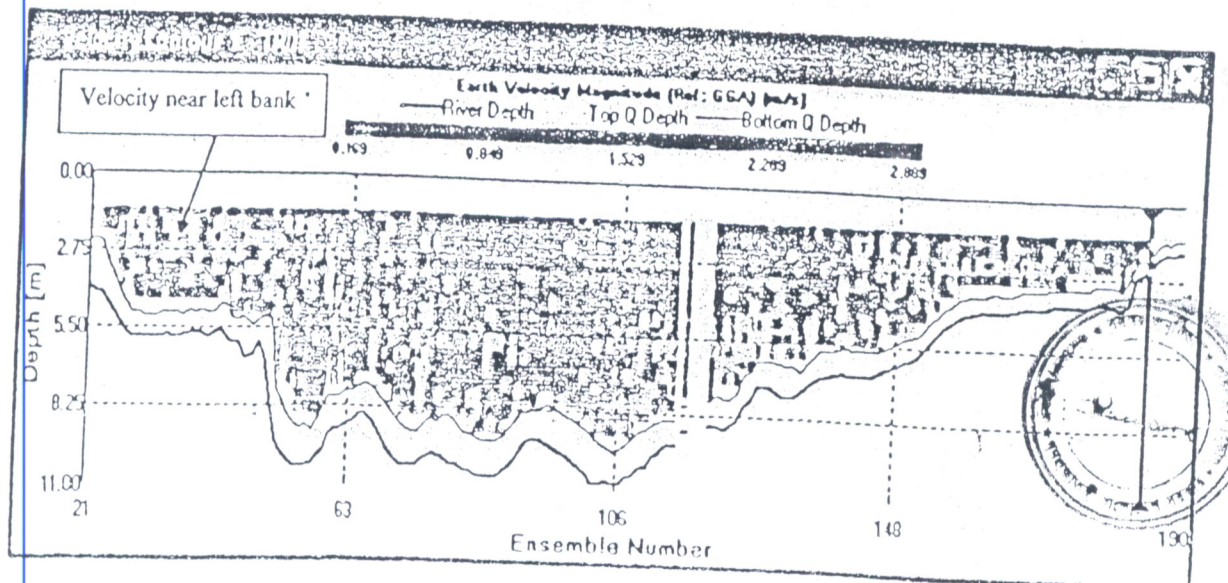
৮.০ গণন মাশে পড়াই নদীর উল্লম্ব এবং অন্যান্য ভাষা-উপাধ (আইডিপিউএম কর্তৃক প্রস্তুত)।



জি-৭৪ গড়াই নদীর অফটেকের বর্তমান অবস্থান

জি-৮: Information on water level, velocity and discharge

Discharge: 4544 cumec, Velocity: Section Average 1.80m/sec, Velocity: Near Left Bank: 2.90m/s, Maximum Depth 10.50m, Water Level: 13.28m



পাতা ৬

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पृष्ठ-6

दुमिंग का मतलब है कि नदी किनारे बसा हुआ गाँव या जमीन का हिस्सा नदी के बहाव के कारण खिसक रहा है।



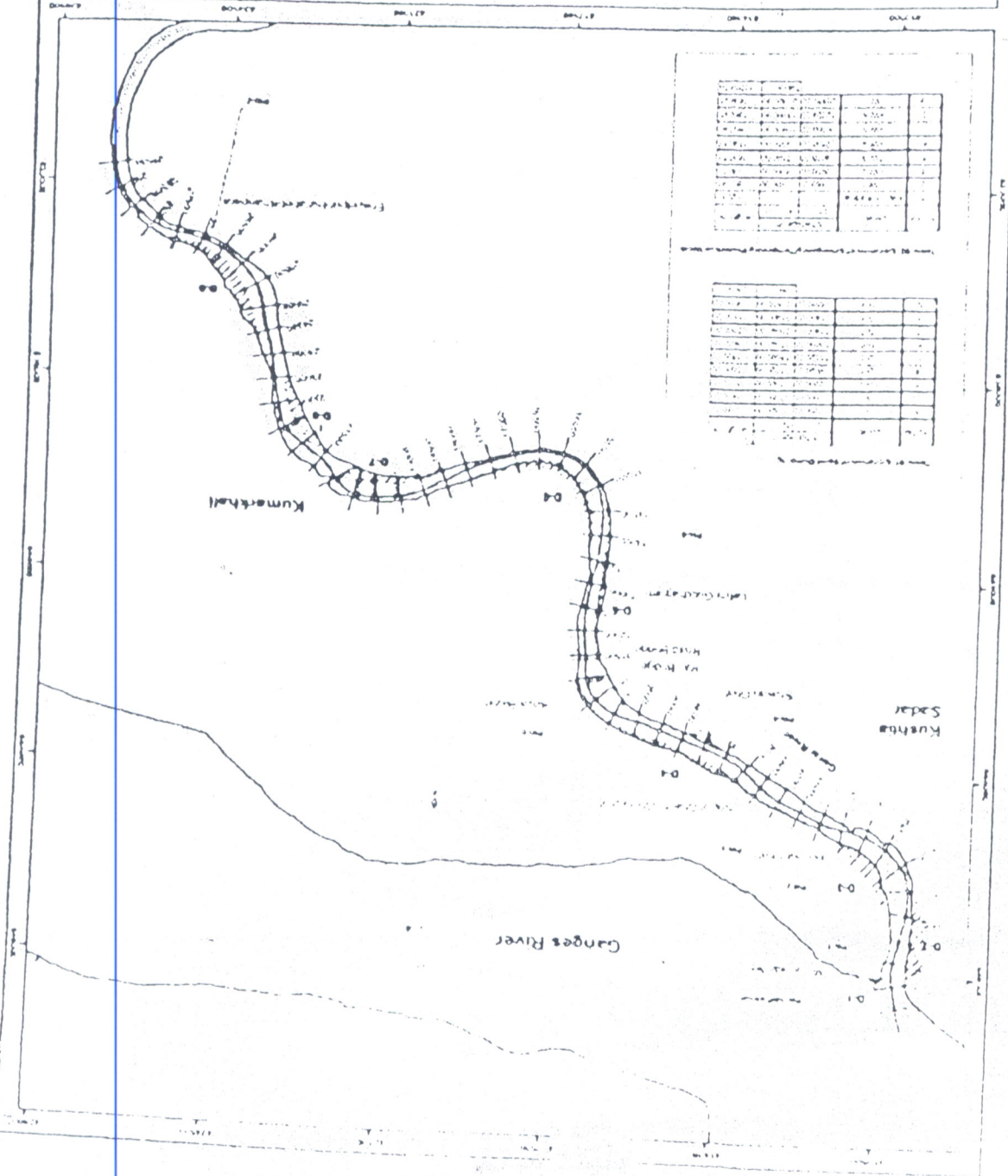
Bank Erosion of Gorai River, August-2013

Legend

- Reclamation Area
- Bank Erosion, August-2013
- Bank Line
- Drainage Alignment 2012-13 (Plan Bridge Portion)
- Drainage Alignment 2012-13

Sl. No.	Station	Left Bank Erosion (m)	Right Bank Erosion (m)
1	0+00	0.5	0.2
2	0+10	0.8	0.3
3	0+20	1.2	0.4
4	0+30	1.5	0.5
5	0+40	1.8	0.6
6	0+50	2.0	0.7
7	0+60	2.2	0.8
8	0+70	2.5	0.9
9	0+80	2.8	1.0
10	0+90	3.0	1.1

Sl. No.	Station	Left Bank Erosion (m)	Right Bank Erosion (m)
11	1+00	3.2	1.2
12	1+10	3.5	1.3
13	1+20	3.8	1.4
14	1+30	4.0	1.5
15	1+40	4.2	1.6
16	1+50	4.5	1.7
17	1+60	4.8	1.8
18	1+70	5.0	1.9
19	1+80	5.2	2.0
20	1+90	5.5	2.1



১১. ১৯৮৮-২০০০ সালে বাস্তবায়িত গড়াই বেল ট্রাজ (১১-১৭ কিঃমিঃ) এবং বোড ট্রাজ (১১-২৬ কিঃমিঃ) এর নিকটবর্তী স্থান পর্যন্ত অতি দ্রুত ছেজিং করে প্রবাহ অব্যাহত রাখলে গড়াই নদী প্রবাহ প্রায় ১০০% বৃদ্ধি পাবে। প্রায় ১০০% অধিক বন্যী বৃদ্ধিকালে ৩০ কিঃমিঃ পর্যন্ত ছেজিং কাজ করা প্রয়োজন হতে পারে বলে কমিটির সদস্যগণের মতামত প্রতীয়মান হয়েছে। ১৯৮৮-২০০০ সালে বাস্তবায়িত গড়াই পুনঃ বন্য প্রকল্প এবং ২০০৯ হতে জুন, ২০১৩ পর্যন্ত বাস্তবায়িত অত্র প্রকল্পের ছেজিং কার্যক্রম পর্যালোচনাতে একই অভিমত ব্যক্ত করা হয়। এজন্য কমিটির সদস্যগণ প্রকল্পের আওড়িপিপি'র আওতায় বাস্তবায়নযোগ্য কাজের আইস্টেমসহ, গড়াই বেল ট্রাজ এবং বোড ট্রাজ এর নিকটবর্তী স্থান পর্যন্ত বিবেচনা করে স্পেশাল ডিম্পিং এরিয়া এবং অস্থায়ী প্রতিরক্ষা কাজের ব্যয় নির্ধারণ করেছে।

১৩ প্রণবিত আরডিপিপি-তে গত ৪ (চার) বছর কাজ বাস্তবায়ন সমাপ্ত হওয়ায় কিছু ঋতে মূল ডিপিপি-তে সংস্থানকৃত ব্যয় হ্রাস পেয়েছে এবং কিছু নতুন কাজ অন্তর্ভুক্ত করার কিছু কিছু ঋতে বৃদ্ধি পেয়েছে। যে সব ঋতে ব্যয় হ্রাস/বৃদ্ধি পেয়েছে সেগুলোর পর্যালোচনা নিয়ে প্রদত্ত হলো :

৯.৩.২ কোড নং-৪৮০০ : Morphological Mathematical Modelling for planning, Design, Monitoring, Quality Control & Impact Assessment of Dredging : মূল ডিসিপিটে এ বাতে প্রাক্কলিত ব্যয় ছিল ৪৫০.০০ লক্ষ টাকা এবং উপদেষ্টা প্রতিষ্ঠানের সংগে ৩৩৩.০০ লক্ষ টাকায় চুক্তি সম্পাদিত হয়। আরডিসিপিটে এক্ষেত্রে প্রস্তাব করা হয়েছে ৫৮৮.০০ লক্ষ টাকা। প্রকল্পের সময়সীমা ২ (দুই) বছর বর্ধিত করনের প্রস্তাব করায় অতিরিক্ত সময়ের জন্য এবং সংশ্লিষ্ট জনবলের বেতন ভাতাদি বৃদ্ধির বিষয়টি বিবেচনায় প্রস্তাবিত ব্যয় (সংযুক্তি-৬) বৃদ্ধি যথার্থ বলে কমিটির নিকট প্রতীয়মান হয়।

৯.৩.৪ কোড নং-৭০৪১ : Maintenance dredging (5th year 6th year) : মূল ভিপিপিভিতে এ বাঁচে প্রাকল্পিত ব্যয় ছিল ৩২৫৪.৫০ লাখ টাকা। আরভিপিপিভিতে একাজে ৩৪৩২.০০ লাখ টাকা খরচ করা হয়েছে। প্রকল্পের ত্রয়কৃত ছেজার দ্বারা এ কাজ বাস্তবায়ন করা হবে এবং গত ২০১২-১৩ অর্থবছরে সমাপ্ত ড্রেজিং কাজে

No.	Location	Length (m)	Cost in Lakh
1	Padma River	720	2138.40
2	Goral River	857	1602.59
Total =		1577	3740.99

[illegible]

Sl. No.	Location	Chainage (m)		Length (m)	Cost in Lakh
		From	To		
1	PW-2	3890	4700	748.17	112.22
2	PW-3	4820	7580	2837.51	425.63
3	PW-4	7590	9310	1742.57	261.38
4	PW-5	10390	10970	693.40	104.01
Total =					6021.65
					903.24

[illegible]

Sl. No.	Location	Chaining (m)		Length (m)	Cost in Lakh
		From	To		
1	D-3	2000	4500	2500	162.50
2	D-4	7000	10250	3250	211.25
Total =					5750
					373.75

[illegible]

(1) $\frac{1}{2}$ (2) $\frac{1}{4}$ (3) $\frac{1}{8}$ (4) $\frac{1}{16}$ (5) $\frac{1}{32}$ (6) $\frac{1}{64}$ (7) $\frac{1}{128}$ (8) $\frac{1}{256}$ (9) $\frac{1}{512}$ (10) $\frac{1}{1024}$ (11) $\frac{1}{2048}$ (12) $\frac{1}{4096}$ (13) $\frac{1}{8192}$ (14) $\frac{1}{16384}$ (15) $\frac{1}{32768}$ (16) $\frac{1}{65536}$ (17) $\frac{1}{131072}$ (18) $\frac{1}{262144}$ (19) $\frac{1}{524288}$ (20) $\frac{1}{1048576}$ (21) $\frac{1}{2097152}$ (22) $\frac{1}{4194304}$ (23) $\frac{1}{8388608}$ (24) $\frac{1}{16777216}$ (25) $\frac{1}{33554432}$ (26) $\frac{1}{67108864}$ (27) $\frac{1}{134217728}$ (28) $\frac{1}{268435456}$ (29) $\frac{1}{536870912}$ (30) $\frac{1}{1073741824}$ (31) $\frac{1}{2147483648}$ (32) $\frac{1}{4294967296}$ (33) $\frac{1}{8589934592}$ (34) $\frac{1}{17179869184}$ (35) $\frac{1}{34359738368}$ (36) $\frac{1}{68719476736}$ (37) $\frac{1}{137438953472}$ (38) $\frac{1}{274877906944}$ (39) $\frac{1}{549755813888}$ (40) $\frac{1}{1099511627776}$ (41) $\frac{1}{2199023255552}$ (42) $\frac{1}{4398046511104}$ (43) $\frac{1}{8796093022208}$ (44) $\frac{1}{17592186044416}$ (45) $\frac{1}{35184372088832}$ (46) $\frac{1}{70368744177664}$ (47) $\frac{1}{140737488355328}$ (48) $\frac{1}{281474976710656}$ (49) $\frac{1}{562949953421312}$ (50) $\frac{1}{1125899906842624}$ (51) $\frac{1}{2251799813685248}$ (52) $\frac{1}{4503599627370496}$ (53) $\frac{1}{9007199254740992}$ (54) $\frac{1}{18014398509481984}$ (55) $\frac{1}{36028797018963968}$ (56) $\frac{1}{72057594037927936}$ (57) $\frac{1}{144115188075855872}$ (58) $\frac{1}{288230376151711744}$ (59) $\frac{1}{576460752303423488}$ (60) $\frac{1}{1152921504606846976}$ (61) $\frac{1}{2305843009213693952}$ (62) $\frac{1}{4611686018427387904}$ (63) $\frac{1}{9223372036854775808}$ (64) $\frac{1}{18446744073709551616}$ (65) $\frac{1}{36893488147419103232}$ (66) $\frac{1}{73786976294838206464}$ (67) $\frac{1}{147573952589676412928}$ (68) $\frac{1}{295147905179352825856}$ (69) $\frac{1}{590295810358705651712}$ (70) $\frac{1}{1180591620717411303424}$ (71) $\frac{1}{2361183241434822606848}$ (72) $\frac{1}{4722366482869645213696}$ (73) $\frac{1}{9444732965739290427392}$ (74) $\frac{1}{18889465931478580854784}$ (75) $\frac{1}{37778931862957161709568}$ (76) $\frac{1}{75557863725914323419136}$ (77) $\frac{1}{151115727451828646838272}$ (78) $\frac{1}{302231454903657293676544}$ (79) $\frac{1}{604462909807314587353088}$ (80) $\frac{1}{1208925819614629174706176}$ (81) $\frac{1}{2417851639229258349412352}$ (82) $\frac{1}{4835703278458516698824704}$ (83) $\frac{1}{9671406556917033397649408}$ (84) $\frac{1}{19342813113834066795298816}$ (85) $\frac{1}{38685626227668133590597632}$ (86) $\frac{1}{77371252455336267181195264}$ (87) $\frac{1}{154742504910672534362390528}$ (88) $\frac{1}{309485009821345068724781056}$ (89) $\frac{1}{618970019642690137449562112}$ (90) $\frac{1}{1237940039285380274899124224}$ (91) $\frac{1}{2475880078570760549798248448}$ (92) $\frac{1}{4951760157141521099596496896}$ (93) $\frac{1}{9903520314283042199192993792}$ (94) $\frac{1}{19807040628566084398385987584}$ (95) $\frac{1}{39614081257132168796771975168}$ (96) $\frac{1}{79228162514264337593543950336}$ (97) $\frac{1}{158456325028528675187087900672}$ (98) $\frac{1}{316912650057057350374175801344}$ (99) $\frac{1}{633825300114114700748351602688}$ (100) $\frac{1}{1267650600228229401496703205376}$ (101) $\frac{1}{2535301200456458802993406410752}$ (102) $\frac{1}{5070602400912917605986812821504}$ (103) $\frac{1}{10141204801825835211973625643008}$ (104) $\frac{1}{20282409603651670423947251286016}$ (105) $\frac{1}{40564819207303340847894502572032}$ (106) $\frac{1}{81129638414606681695789005144064}$ (107) $\frac{1}{162259276829213363391578010288128}$ (108) $\frac{1}{324518553658426726783156020576256}$ (109) $\frac{1}{649037107316853453566312041152512}$ (110) $\frac{1}{1298074214633706907132624082305024}$ (111) $\frac{1}{2596148429267413814265248164610048}$ (112) $\frac{1}{5192296858534827628530496329220096}$ (113) $\frac{1}{10384593717069655257060992658440192}$ (114) $\frac{1}{20769187434139310514121985316880384}$ (115) $\frac{1}{41538374868278621028243970633760768}$ (116) $\frac{1}{83076749736557242056487941267521536}$ (117) $\frac{1}{166153499473114484112975882535043072}$ (118) $\frac{1}{332306998946228968225951765070086144}$ (119) $\frac{1}{664613997892457936451903530140172288}$ (120) $\frac{1}{1329227995784915872903807060280344576}$ (121) $\frac{1}{2658455991569831745807614120560689152}$ (122) $\frac{1}{5316911983139663491615228241121378304}$ (123) $\frac{1}{10633823966279326983230456482242756608$

[illegible]

Table -4

(Taka in Lakh and volume in Lakh cum)
by Recognized

Table -4				(Lakhs in Lakh and volume in Lakh cum)			
S N	Code	Item Description	As Proposed by PD, GRRP		Recommended by the Committee		Remarks
			Qty.	Amount	Qty.	Amount	
1		2					
(a)		Revenue Component		4	5	6	7
(b)		Capital Component		1745.50		1745.50	No change
	8614	Purchase of Dredgers with accessories	2 sets	26250.00	2 sets	26000.00	As per present dollar rate
		Total of Capital Component		26392.00		26142.00	
	7000	Construction of Works					
	7041	B. Maintenance Dredging					
	7041	Maintenance Dredging (3rd year of the project FY 2011-12)	54.37	8354.92	54.37	8354.92	As per actual work done.
	7041	Maintenance dredging - (4th year of the project FY 2012-13)	34.00	4811.00	17.00	4873.15	
	7041	Maintenance dredging - (5th year of the project FY 2013-14)	23.00	3432.00	23.00	2778.86	Considering increase of rate @ 8% per year.
	7041	Maintenance dredging - (6th year of the project FY 2014-15)	23.00	3432.00	23.00	3003.57	
		Sub-Total (Maintenance Dredging)		20030.54		16010.50	
		C. Structure					
	7041	Construction of Flow Divider (Indicative cost)	0	0	0	0	
	7041	Ganges-Gorai Guide Bundh (Indicative cost)	0	0	0	0	
	7041	Temporary Protective Work for dredged material Areas	26220 m ²	1705.00	5750 m ²	373.90	As per analysed rate.
	7041	Temporary Protective Work of Vulnerable Areas	7185 m ²	1078.00	6021 m ²	903.46	
	7041	Protective Work in Ganges	0 m ²	1296.00	720 m ²	2138.40	
	7041	Protective Work in Gorai	0 m ²	1000.00	857 m ²	1602.59	
	7041	Maintenance during protective works		100.00		100.00	
	7041	Land Scaping		200.00		200.00	
		Sub-Total (Structures)		3083.00		5018.35	
		Total (a) + (b)		164435.39		62100.70	
		Physical Contingency		1500.00		1500.00	
		Price Contingency		1500.00		1500.00	
		G. Total		166435.39		62100.70	

* For 5th year rate = Tk. 111.87 + 8% Tk. 111.87 = Tk. 120.82 per cum

* For 6th year rate = Tk. 120.82 + 8% Tk. 120.82 = Tk. 130.49 per cum

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୧. ଉତ୍କଳ-ଲେଖକ ସମିତି
 ଓ
 ଲେଖକ 'ଉତ୍କଳଲେଖକ
 ଓ-ପତ୍ର'ର ଉଦ୍ଦେଶ୍ୟ
 ସ୍ପଷ୍ଟୀକୃତ ହେଉଥିବାର
 (ସ୍ଥାନ ଉପରେ ଖାଲ)

১. কলকাতা বিশ্ববিদ্যালয়
 ২. কলকাতা বিশ্ববিদ্যালয়
 (১৯৫৫-৫৬) কলকাতা বিশ্ববিদ্যালয়
 (১৯৫৬-৫৭) কলকাতা বিশ্ববিদ্যালয়

අ/ප/සැ.පැ.ම

90/2/25 (Seri)

1. Necktie Engel

[illegible]

1. Heute Englisch

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 ୧. ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ
 ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ
 ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ
 (ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ ଶ୍ରୀମତୀ)

1. കേൾക്കുക

୧
 କାମ, କ୍ରମାବଳୀ
 ନିରୀକ୍ଷା
 କ୍ରମାବଳୀ ମାନ
 (କର୍ତ୍ତା ମାନ କ୍ରମ)

1. പ്രതിഭാ
2. പ്രതിഭാ

[illegible]

1. (85-ஆவது 'உத்தரவு') 1972-73-ம் ஆண்டு 06.00.20-ல் பி.சி.டி. 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 8

[illegible]

1. ലഭിക്കുന്ന ഒരു ലേഖനം പ്രത്യേകമായി

[illegible]

1. ପ୍ରାରମ୍ଭ

1. ප්‍රකාශන : ප්‍රකාශන කළයුතුමයාගේ නම, ලිපිනය, සහ අනෙකුත් තොරතුරු සඳහා යොදා ගන්නා කොටස.

ସମସ୍ତଙ୍କୁ ଏହି ସମ୍ବନ୍ଧରେ ସଚ୍ଚିଦ୍ର ମହାପାତ୍ରଙ୍କୁ ସମ୍ବେଦନା ଦେବାକୁ ଅନୁରୋଧ କରାଯାଉଅଛି ।

বর্ষা মৌসুম চক রোগের জ্বর বৃদ্ধি পাবার কারণে এটি প্রতিরোধ করা জরুরী।

[illegible]

1. ലക്ഷ്യം നേടുന്നതിനുള്ള മാർഗ്ഗം

[illegible]

1. ተፈጻሚነት ይኖራል

• Predged sport management એ જાન ૧૯૦૦ નીપર (૧૯૧૪-૧૫)માં બચાવી લેવામાં આવેલા કાલે રાજાના ફોટા દર્શાવે છે.

। एतन्मते नृप ह्येव

[illegible]

බැහැරවූ කැමැත්ත (ලිංගික) ප්‍රතිකර්ම වැනි විවිධ ජීවිත ක්‍රියා කළහ.

১। নতুন প্রকল্পের প্রস্তাবনা প্রস্তুত করা

• ১৯৮০-৮১ সালে পূর্ববঙ্গের বন্যপ্রাণ সংরক্ষণ আইন প্রণয়নের মাধ্যমে বন্যপ্রাণ সংরক্ষণের ব্যবস্থা নেওয়া হয়।

ՀԱՅԷՔ ԽՔՄԻՆ ԵՐԿԵ ԼՍ ԽՔՄՅ ԵՐԵՐՈՐԵ ՄԻՅԷ ԵՐԷ

1. අනුමැතිය ලබා දීම සඳහා අවශ්‍ය වන ප්‍රධාන කාරණා

$\frac{1}{2}$ lb. of sugar 0'08

