

BANGLADESH WATER DEVELOPMENT BOARD



PROJECT COMPLETION REPORT: IMED-04/2003 (Revised)

**Name of the Project: PROJECT FOR IMPROVEMENT OF WATERLOGGING PROBLEM
AND EROSION PREVENTION OF KHUTAKHALI UNION UNDER
CHAKARIA UPAZILLA OF COX'S BAZAR DISTRICT (1st Revised)**

PROJECT PERIOD: APRIL 2021 TO JUNE 2023.

DIVISION : Cox's Bazar O&M Division, BWDB, Cox's Bazar.

CIRCLE : Cox's Bazar Water Development Circle, BWDB, Cox's Bazar.

ZONE : Southern Eastern Zone, BWDB, Chattogram.

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

PROJECT COMPLETION REPORT: IMED 04/2003 (REVISED)

A. PROJECT DESCRIPTION:

01. Name of Project : PROJECT FOR IMPROVEMENT OF WATERLOGGING PROBLEM AND EROSION PREVENTION OF KHUTAKHALI UNION UNDER CHAKARIA UPAZILLA OF COX'S BAZAR DISTRICT (1st Revised)

02. Administrative Ministry/ Division : Ministry of Water Resources (MoWR)

03. Executing Agency : Bangladesh Water Development Board (BWDB)

04. Location of the Project : Upazilla: Chakaria; District: Cox's Bazar.

05. Objective of the Project:

- ❖ Waterlogging, salinity, providing irrigation facilities and sustainable management of water resources of Khutakhali union's large population and 22000 acres of dependent catchment area.
- ❖ Re-excavation of silted up canals including development of rapid water drainage system to restore ecological balance.
- ❖ Undisturbed agricultural production through construction of dams and development of communication system along with creation of new employment opportunities through development of fish farming.

06. Estimated Cost:

(Taka in lacs)

	Original	1 st revised
a) Total	3191.25	2073.40
b) Taka	3191.25	2073.40
c) Foreign Currency	-	-
d) Project Aid	-	-
e) RPA	-	-

07. Date of Approval :

PCP	PP
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a) Original : - 13/04/2021

b) 1st Revised : - Sent for approval after project completion following Planning Commission's memo no. 20.04.0000.358.14.004.2021/121 dated: 20/09/2023

08. Implementation period :

	Date of Commencement	Date of Completion
a) Original	April, 2021	June, 2023
b) 1 st revised	April, 2021	June, 2023

09. Financial Agreement (source wise):**9.1 Status of Loan / Grant:****a) Foreign Financing:**

Source(s)	Currency as per Agreement	Amount in US\$ (Million)	Nature (Loan/Grant Supplier's credit)	Date of Agreement	Date of Effectiveness	Date of Closing	
1	2	3	4	5	6	7	8

..... N. A.

b) GOB:

(In Lakh Taka)

Total Amount	Loan	Grant	Cash Foreign Exchange
1	2	3	4
2073.40	-	2073.40	-

9.2 Utilization of Project Aid: (Source wise)

(In Million)

	Total Amount		Actual Expenditure		Unutilized Amount	
	In US \$	In Local Currency	IN US \$	In Local Currency	In US \$	In Local Currency
1	2	3	4	5	6	7

..... N/A.

9.3 Reimbursable Project Aid (RPA)

(In Lakh Taka)

RPA Amount		Amount Spent	Amount claimed	Amount Reimbursed	Remarks.
As Per DPP	As per Agreement				
1	2	3	4	5	6

..... N/A.

B. IMPLEMENTATION POSITION

01. Implementation Period:

Implementation Period as per DPP		Actual Implementation Period	Time Over Run (% of Original Implementation Period)	Remarks
Original	Latest Revised			
1	2	3	4	5
April/2021 to June/2023	April/2021 to June/2023	April/2021 to June/2023	-	

02. Cost of the Project:

(Taka in lacs)

Description	Estimated Cost		Actual Expenditure	Cost Over-run (% of original cost)	Remarks
	Original	Latest Revised			
1	2	3	4	5	6
Total	3191.25	2073.40	1592.13	-	As per working design the official estimated cost of each component decreased which resulted in decrease of project cost. Furthermore, in monsoon period to prevent intrusion of flood water, local people and Union Parishad members implemented some works along the alignment of embankment, therefore in that portion work had not been done to avoid duplicity.
Taka	3191.25	2073.40	1592.13	-	
PA	-	-	-	-	

03. Project Personnel: Project work has been implemented by existing manpower of Cox's Bazar O&M Division, BWDB, Cox's Bazar. There was no provision of project personnel recruitment on this project.

Sanctioned strength as per PP	Manpower employed during execution	Status of the existing Manpower			Manpower Employed	
		Manpower requirement for O&M as per PP	existing Manpower for O&M	Others	Male	Female
1	2	3	4	5	6	7
Officer (s)	Existing manpower of the implementing agency had been deployed during execution of the project.					
Staff (s)						
Total						

04. Training of project Personnel (Foreign/Local): No provision of any sort of training in this project.

Field of Training /Study tour/work shop/ Seminar etc.	Provision as per PP		Actual		Remarks.
	Number of Person	Man- months	Number of Person	Man months	
1	2	3	4	5	6

a) Foreign Nil

b) Local

Nil

05. Component wise Progress (As per Latest approved DPP):

Taka in lacs

Item of Works (as per PP)	Unit	Target as per PP		Actual Progress		Reasons for deviation (±)
		Financial	Physical (Quantity)	Financial	Physical (Quantity)	
1	2	3	4	5	6	7
(a) Revenue Component						
Internal Travel Expense	Item	2.00	L.S.	0.89	L.S.	
Petrol, oil and lubricant	Item	6.00	L.S.	5.59	L.S.	
Stamps & Seal	Item	3.00	L.S.	2.98	L.S.	
Printing & binding	Item	3.00	L.S.	2.98	L.S.	
Promotion and advertising	Item	8.00	L.S.	7.94	L.S.	
Honorarium of different committee members (PIC, PEC & Mid-term evaluation)	Item	2.00	L.S.	0.75	L.S.	
Survey	Item	8.00	L.S.	7.94	L.S.	
General Supply (Mouza Map purchase, eviction etc.)	Item	2.00	L.S.	0.00	L.S.	
Sub Total (a)		34.00		29.07		
(b) Capital						
Acquisition of Assets						
Computer & accessories (Computer, Printer, Scanner, UPS & other accessories - 1 set; Laptop - 1 No)	Nos	2.00	1 No	2.00	1 No	
Double Cabin Pick-up - 1 no	Nos	60.00	1 No	0.00	1 No	
Motorbike (1 No)	Nos	2.00	1 No	1.41	1 No	
Engineering & Other Equipment (Level Machine 1 No, Total Station- 1No & Others)	Set	12.00	2 set	11.89	2 set	
Office Equipment (Photocopier & others)	Nos	1.50	1 No	1.49	1 No	
Furniture	Item	2.00	L.S.	1.99	L.S.	
Repair of BWDB Colony & Rest House	Item	44.66	L.S.	44.65	L.S.	
Construction of Work:						
Upgradation of Rural Road to Embankment	KM	424.14	3.50	156.10	3.50	
Bank protection of Khal	KM	661.47	0.70	648.49	0.70	
Re-excavation of Khal - 2 Nos	KM	171.38	4.70	91.09	4.70	
Construction of Regulator (2 vent- 1.5m x 1.8m - 1 No; 3 vent- 1.5m x 1.8m - 1 No)	Nos	598.25	2 No	584.70	2 No	
Tree Plantation on slope & berm of Embankment	Item	20.00	L.S.	19.26	L.S.	
Sub-Total (b)		1999.40		1563.06		
Sub-Total (a+b)		2033.40		1592.13		
(c) Physical Contingency		20.00		-		
(d) Price Contingency		20.00		-		
Total (a+b+c+d)		2073.40		1592.13		

6. 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
Probir Kumar Goshwami Executive Engineer (43000-69850) (5 th Grade)	Full time	-	Yes	13-06-2021	12-04-2022	
Dr. Tanjir Saif Ahmed Executive Engineer (43000-69850) (5 th Grade)	Full time	-	Yes	13-04-2022	Till date	

07. Procurement of Transport (in nos.):

Type of Transport	Number as per DPP	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
Motor Cycle	1	29-05-2022	-	Cox's Bazar O&M Division, BWDB, Cox's Bazar 29-05-2022	-	Being used by Sectional officer for future inspection & maintenance of the Project. (CoxsBazar-la-12-1686).

08. Procurement of Goods, Works and Consultancy Service.

08.1. Goods & Works of the Project Costing above Tk. 200.00 lakh and Consulting above 100.00 lakh.

Description of procurement (goods/work/consultancy) as per Bid document	Tender/Bid/Proposal Cost (in Lakh Taka)		Tender/Bid/Proposal		Date of completion of works /services and supply of goods.	
	As per DPP	Contract value	Invitation date	Contract signing/L C opening date	As per contract	Actual
1	2	3	4	5	6	7
River bank protection along the left bank of Khutakhali khal from km. 0.000 to km. 0.600 = 600m & right bank of Noapara khal from km. 0.000 to km. 0.100 = 100m at Noapara total = 700m in Upazilla-Chakaria, District Cox's bazar under Cox's Bazar O&M Division BWDB, Cox's Bazar. (Tender no: 667107, Package No : ADP-KHUTA-COX-W-02/2021-22).	661.47	661.47	27-03-2022	21-07-2022	30-06-2023	30-06-2023
Construction of Regulator over Noapara Khal (3-vent: 1.5mx1.8m) in connection with "Project for Improvement of water logging Problem and Erosion prevention of Khutakhali Union under Chakaria Upazilla of Cox's Bazar District" in upazilla: Chakaria, District: Cox's Bazar under Cox's Bazar O&M Division, BWDB, Cox's Bazar. (Tender no: 618492, Package No. ADP-KHUTA-COX-W-04/2021-22).	335.00	335.00	10-10-2021	13-02-2022	31-12-2022	30-06-2023

Description of procurement (goods/work/consultancy) as per Bid document	Tender/Bid/Proposal Cost (in Lakh Taka)		Tender/Bid/Proposal		Date of completion of works /services and supply of goods.	
	As per DPP	Contract value	Invitation date	Contract signing/L C opening date	As per contract	Actual
1	2	3	4	5	6	7
Construction of Regulator over Fulchhari Khal (2-vent: 1.5mx1.8m) in connection with "Project for Improvement of water logging Problem and Erosion prevention of Khutakhali Union under Chakaria Upazilla of Cox's Bazar District" in upazilla: Chakaria, District: Cox's Bazar under Cox's Bazar O&M Division, BWDB, Cox's Bazar. (Tender no: 640571, Package No : ADP-KHUTA-COX-W-05/2021-22)	263.25	263.25	20-12-2021	30-01-2022	15-12-2022	30-06-2023
Construction of Embankment at Khutakhali from km 0.100 to km 0.430=330.00 m from km 0.530 to km 1.700=1170.00 m & from km 1.800 to km 3.500=1700.00 m Total=3200.00 m in Upz: Chakaria, Dist- Cox's Bazar under Cox's Bazar O&M Division BWDB, Cox's Bazar. (Tender no: 642524, Package No : ADP-KHUTA-COX-W-06/2021-22).	424.14	424.14	27-12-2021	30-01-2022	26-06-2022	10-04-2023

08.2. Use of Project Consultant (s) (Foreign / Local): No provision of deploying consultant in this project.

Name of the field	Approved man month		Actual man month utilized	Remarks
	As per PP	As per contract.		
1	2	3	4	5

a) Foreign Nil
b) Local Nil

09. Construction / Erection / Installation Tools & Equipment:

Description of items	Quantity (As per DPP)	Quantity procured with date	Transferred to O&M with date	Deposed off as per rule with date	Balance	Remarks
1	2	3	4	5	6	7

..... N / A.

C. FINANCIAL AND PHYSICAL PROGRAMME:

11. (a) Original and revised schedule as per DPP.

(In Lakh Taka)

Financial year	Financial Provision & Physical target as per original DPP				Financial Provision & Physical target as per latest revised DPP			
	Total	Taka	PA	Physical %	Total	Taka	PA.	Physical %
1	2	3	4	5	6	7	8	9
2020-21	413.75	413.75	-	12.97%	0.00	0.00	-	0.00%
2021-22	1899.50	1899.50	-	59.52%	93.22	93.22	-	4.50%
2022-23	878.00	878.00		27.51%	1980.18	1980.18		95.50%
Total	3191.25	3191.25	-	100.00%	2073.40	2073.40	-	100.00%

11. (b) Revised ADP allocation and progress:

(In Lakh Taka)

Financial year	Revised Allocation & Target				Taka release	Expenditure & physical progress.			
	Total	Taka	P.A.	Physical %		Total	Taka	P.A.	Physical %
1	2	3	4	5	6	7	8	9	10
2020-21	0.00	0.00	-	0.00%	0.00	0.00	0.00	-	0.00%
2021-22	250.00	250.00	-	12.67%	170.00	93.21	93.21	-	5.85%
2022-23	1723.00	1723.00	-	87.33%	1723.00	1498.92	1498.92	-	94.15%
Total	1973.00	1973.00	-	100.00%	1893.00	1592.13	1592.13	-	100.00%

D. ACHIEVEMENT OF OBJECTIVES OF THE PROJECT:

Objective as per DPP	Actual achievement	Reasons for shortfall, if any.
(a) Waterlogging, salinity, providing irrigation facilities and sustainable management of water resources of Khutakhali union's large population and 22000 acres of dependent catchment area.	Every year in monsoon period the rainwater from upstream hilly areas i.e. Ali Kadam of Bandarban and Eidgaon of Cox's bazar, descends rapidly and converges in the khutakhali area within shortest time. But due to insufficient water drainage system waterlogging, salinity intrusion was common phenomena. As a result of constructing 2 regulators and excavation of Fulchori khal and Noapara khal, now water can drain out easily and for cultivation purpose people can store large amount of water.	No shortfall
(b) Re-excavation of silted up khal including development of rapid water drainage system to restore ecological balance.	Re-excavation of Fulchori and Noapara khal has improved the water drainage system as well as revived the ecological balance.	No shortfall
(c) Undisturbed agricultural production through construction of embankments and development of communication system along with creation of new employment opportunities through development of fish farming.	As there were no polders in Khutakhali and its surrounding areas, during high tides and natural calamities such as cyclones caused saline water to easily enter residential areas and crop lands. The left bank of Fulchari khal and rural roads also needed to be raised to prevent ingress of salt water. The rural roads have been upgraded to embankments which are working as a safeguard from floods and saline water intrusion for the agricultural and fisheries production of the Khutakhali area. Thus, the sustainable economic activities and employment opportunities are flourishing. Besides, the newly constructed embankment being wider the rural communication system is also improved.	No shortfall

E. BENEEFIT ANALYSIS :

01. Annual Out-put:

Items of out-put	Unit	Estimated quantity expected at full capacity	Actual quantity of out-puts during the 1 st year of operation at full capacity (or during real production for newly completed project)
1	2	3	4
Ensure safeguard to tidal flood and subsequent embankment erosion of following items/establishments:			
Kacha/ Semi Pacca/ Pacca House	No	3000	3000
Garden	Acre	20	20
Agricultural land	Acre	250	250
Pond/ Fisheries land	No	36	36
Paultry farm	No	8	8
High School/madrasha	No	4	4
Govt. Primary School	No	5	5
Village market/shop	No	200	200
Post office	No	1	1
Cyclone shelter	No	1	1
Road	Km	20	20

02. Cost / Benefit:

Item	Estimated	Actual
(1)Benefit cost of the project		It will be evaluated later by concerned directorate of BWDB & IMED.
(i) Financial	1.17:1.00	
(ii) Economic	1.36:1.00	
(2)Internal rate of return		
(i) Financial	15.58%	
(ii) Economic	19.46%	

(3) Please give reason for shortfall, if any, between the estimated and actual benefit: No Shortfall.

F. MONITORING AND AUDITING.

01. Monitoring:

Name & Designation of the inspecting official	Date of inspection	Identified Problems	Recommendations
1	2	3	4
Ministry/Agency :			
Nazmul Ahsan, Secretary, MoWR	20-05-2023	No major problems identified.	Project Progress was satisfactory, would finish works within stipulated time schedule June/2023.
Mizanur Rahman, Additional Secretary, MoWR	04-02-2023	No major problems identified.	Project Progress was satisfactory.
Mohammad Mobassherul Islam Deputy Secretary, MoWR	13-01-2023	No major problems identified.	Project Progress was satisfactory.
Md. Shajahan Ali Deputy Secretary, MoWR.	20-05-2023	No major problems identified.	Project Progress was satisfactory.

Name & Designation of the inspecting official	Date of inspection	Identified Problems	Recommendations
1	2	3	4
BWDB:			
S, M, Shahidul Islam Director General, BWDB	20-05-2023	No major problems identified.	Project Progress was satisfactory, would complete the project within schedule.
Ramzan Ali Pramanik Chief Engineer, South Eastern Zone, BWDB.	24-01-2022	No major problems identified.	Instructed to mobilize work quickly to achieve progress.
Shibendu Khastagir Chief Engineer, South Eastern Zone, BWDB.	Several times	No major problems identified.	Instructed to follow approved designs for construction works.
Md. Abul Khaer, Superintending Engineer, Cox's Bazar WD Circle, BWDB, Cox's Bazar	Several times	No major problems identified.	Instructed to follow approved designs for construction works and recommended to take necessary action to revise the DPP for 1st Revision as per instruction of PSC and PIC meeting.
Dr. Jiban Kumar Sarkar, Superintending Engineer, Design Circle-04, BWDB, Dhaka.	03-10-2020	Implemented work need to be strengthened.	Visited as technical committee member for the formation of DPP.
Md. Majedur Rahman, Executive Engineer, Design Circle-04, BWDB, Dhaka.	03-10-2020	No major problems identified.	Visited as technical committee member for the formation of DPP.
Dr. Tanjir Saif Ahmed, Executive Engineer & Project Director, Cox's Bazar O&M Division, BWDB, Cox's Bazar	Several times	No major problems identified.	Instructed to follow approved designs for construction works and close monitoring of the works.
IMED :			
Mohammad Saifur Rahman Deputy Director, IMED	08-01-2023	No major problems identified.	Project Progress was satisfactory, would finish works by maintain quality control within stipulated time schedule June/2023.

02. Auditing during and after Implementation:

2.1. Internal Audit:

Period of Audit	Date of submission of Audit Report.	Major findings/ objections	Whether objection resolved or not.
1	2	3	4
No internal Audit conducted			

2.2. External Audit:

Audit Period	Date of submission of Audit Report.	Major findings/objections	Whether objection resolved or not.
1	2	3	4
2022-23	30-11-23	• Irregular Payment of excavating earth by not using manual labor. • Irregular Payment of Item land lease by not conducting contract with land owner. • Irregular Payment of Item sheet pile without test report.	Answer is submitted through the competent authority and resolve is underway.

G. DESCRIPTIVE REPORT

General Observations/Remarks of the Project on:

1.1 Background

Cox's Bazar district is the land of natural beauty of Bangladesh. Cox's Bazar plays a distinct role in natural beauty, cultural activities, socio-economic contribution and commercial activities in 9 upazilas of Cox's Bazar district. Chakaria upazila is formed with 18 unions. Matamuhuri River, Dulhazara Canal, Khutakhali Canal flow through its north-west side. Due to the horizontal slope of the land in this area towards north-west, water of large part of Chakaria upazila and water of large part of Bandarban district is drained by Khutakhali khal, Fulchari khal and it flows through place called Bahaltali into the Dulhazara khal. According to the statistics of 2011, the population of Khutakhali Union is 37,180 people. Among them 19,789 males and 17,391 females. The location of Khutakhali Union is in the south of Chakaria Upazila. The distance of this union from Chakaria upazila headquarters is about 18 km. To the north of this union is Dulahazara Union; In the west, Dulahajara Union, Maheshkhali Channel and Shaplapur Union of Maheshkhali Upazila; To the south are Pokkhali Union of Cox's Bazar Sadar Upazila, Islamabad Union and Eidgarh Union of Ramu Upazila and to the east Baishari Union of Naikkongchari Upazila of Bandarban District.

1.2 Justification/Adequacy:

Khutakhali union under Chakaria upazila of Cox's Bazar district and its adjacent areas are well known for salt farming, fish farming and agricultural production. Khutakhali khal flows in the north-east of Khutakhali union and Fulchari khal in the south-east. As the horizontal slopes of Jungle Khutakhali, Khutakhali and Fulchari Mouza are towards the south-west, the mentioned single rain water drains into the Fulchari khal through a relatively low and horizontal place called Fulchari of Fulchari Mouza. As there were no drainage infrastructures in the described low-lying area, there was a long delay in draining the water during the monsoon season. The water of dependent large catchment including Khutakhali Union (partial) and upstream Alikadam area is drained into Fulchari khal through a place called Fulchari. From Ali Kadam and Eidgarh, the water of the hilly areas comes down rapidly and converges in the Khutakhali area and within a very short time there is a need to drain more water into the Fulchari khal. Due to the lack of drainage infrastructure in Fulchari khal and the reduced drainage capacity of Fulchari khal, a large part of Khutakhali union was submerged for a long time. This resulted in huge loss of crops and fisheries production every year and surrounding residential areas, educational institutions and commercial establishments are affected by waterlogging. On behalf of the beneficiaries, they requested for the construction of a regulator on the right bank of Fulchari khal at a place called Fulchari to drain the water of Khutakhali Union and adjacent upstream Alikadam Upazila into Fulchari khal. The high tide water of Maheshkhali channel located on the western side

of Khutakhali union enters Khutakhali through Dulhazara Canal. Due to the absence of polders in Khutakhali and its surrounding areas, high sea tides and natural disasters such as cyclones caused saline water to easily enter residential areas and croplands. Local people demanded that the left bank of Fulchari khal and the village road be raised to prevent intrusion of salt water. The Khutakhali khal on the north-east side is erosion prone and meandering. The khal joins the Dulhazara khal at a place called Bahaltali. Due to flash flood during monsoon, 600 meters of canal bank adjacent to Khutakhali market of the canal was at high risk of collapse. The bank erosion also damaged the adjacent pavement bringing tremendous sufferings to local people.

The project has been adopted in line with one of the objectives of Bangladesh Delta Plan-2100-"Building integrated and sustainable river region and estuary management" and Sustainable Development Plan in order to protect the lives of the people of the sub-region from the threat caused by the rise of the sea level due to the adverse effects of climate change. Considering these aspects the design crest level (+) of the embankment is set to 5.50m and the crest width is 4.30m. 600 meters of protective work along the canal adjacent to the Khutakhali market was needed to be constructed to provide protection to life and property. Besides, regulators were to be constructed in line with the proposed embankment. Implementation of all the physical works including embankment will protect the project area from degradation along with disruption of existing agricultural production. The concerned officials were repeatedly requested by the local representatives and public to protect the area from river erosion and tidal inundation.

In this regard, with the aim of eliminating the waterlogging problem of Khutakhali Union and developing the water resources management, a committee consisting of seven members is constituted vide Board's Memorandum No. - Bapaubo (Sachi) / Pari-1 / Miscellaneous-3/2020 (1st Section) / 59, dated: 23-03-2020 to formulate the DPP. The committee members visited the various areas of the proposed project on 03.10.2020 AD. At that time, executive engineer, sub-divisional engineer and related field level officials were present. The present beneficiaries requested for the implementation of the above physical works. In the light of the recommendations of the Technical Committee, the project titled "Project for improvement of waterlogging problem and erosion prevention of khutakhali union under chakaria upazilla of cox's bazar district" was formulated including the improvement of rural road to embankments, permanent canal bank protection works, construction of drainage infrastructure, re-excavation of drainage canals and other necessary works.

1.3. Objectives:

The main objectives of this project are-

- a. Waterlogging, salinity, provision of irrigation facilities and sustainable management of water resources of Khutakhali union's large population and 22000 acres of dependent catchment area.
- b. Re-excavation of silted up canals including development of rapid water drainage system to restore ecological balance.
- c. Undisturbed agricultural production through construction of dams and development of communication system along with creation of new employment opportunities through development of fish farming.

1.4. Project revision with reasons:

1st Revision:

The original project was approved by Hon'ble Planning Minister on 13-04-2021 AD. Government order and administrative approval of the project were issued on 03-05-2021 AD and 11-05-2021 AD respectively. For rapid drainage of water from large catchment area consisting of Khutakhali Union (partial) and upstream Alikadam area into Phulchari canal 01 (one) 2-vent regulator on the right bank of Phulchari canal and to prevent saline water intrusion from Phulchari canal to Noapara canal 01 (one) 3 vent regulator at outfall of Noapara canal along with 4.70 km canal excavation was included in the sanctioned DPP. Besides, for preventing cyclone and high tide water of Dulahazara canal into the project area improvement of 3.500 km

rural road of Phulchari and Khutakhali to embankment and protection of 700 meters of canal bank adjacent to Khutakhali Bazar to protect Khutakhali embankment from flash flood during monsoon was included in DPP.

After DPP approval, all design data were collected for the working design of physical works as per existing condition. Estimates were prepared according to the working design, which were less than the DPP cost. Moreover, before project approval, during the monsoon season some re-sectioning works were implemented by the local management and the Union Parishad to prevent water intrusion along the alignment of the embankment of the project. As a result, the amount of earth required for the construction of the embankment was reduced and the estimated cost was reduced. The total number of physical work packages of the project is 6. At the project implementation stage, the work orders were given by estimating the cost according to the working design. As the contract price is lower than the original DPP estimated price, the total project cost is reduced.

According to the decision of the PIC meeting held on 14.03.2023 A.D. and Steering Committee (PSC) meeting held in this regard on 28.03.2023 AD RDPP of the project entitled "Khutakhali union under Chakaria upazila of Cox's Bazar (1st revised)" was formulated. Hence, second revision of the project at a cost of Tk 2073.40 lakhs was proposed and subsequently approved.

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

- To eliminate the waterlogging, salinity problems and for providing irrigation facilities and sustainable management of water resources in dependent catchment areas of the project area;
- To prevent intrusion of cyclone and high tide water into the project area, the improvement of the 3.50 km village road into embankment of Phulchari and Khutakhali and to protect the common people's housing of Khutakhali Union, unpaved roads, schools, madrasas etc from erosion due to Flash Flood during monsoon by implementing the 700-meter canal bank protection works adjacent to Khutakhali Bazar;
- Re-excavation of canals to improve the drainage system to restore the ecological balance of the environment.
- Top RL of Embankment had been fixed to 5.50 m PWD to comply with highest flood level and freeboard and the top width had been fixed to 4.30m to ease vehicle movement.
- Design of protective work along the canal consisted of pitching and dumping blocks over filters and geo-mattresses. Filter material would facilitate seepage beneath the pitching blocks.
- Dumping blocks associated with guide wall would support the pitching block and perform as wave breakers.

Revetment work is widely recognized as effective bank protection measure around the world. So, design considerations would successfully impart good response against erosion. The design of the embankment worked well.

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

◆ Project Identification:

The Project was initially identified by local politicians, local elites, public representatives, honorable Member of Parliament, local administrative wing etc. Those stakeholders earnestly requested the MP to raise the issue of erosion. Accordingly a technical committee was formed by BWDB to take up the project.

◆ Project Preparation:

According to the directives of Honorable Minister, Ministry of Water Resources, the then Secretary, Ministry of Water Resources & Director General, BWDB, the project was prepared. A Technical Committee was formed by BWDB involving multidisciplinary members of technical, social, economic & environmental wings. Based on the recommendations of technical report submitted by committee, the project was formulated.

♦ **Appraisal:**

PEC meeting was held on 09-02-2021 in planning commission. As per decision of PEC meeting the DPP was recast & sent for approval.

- ♦ **Credit Negotiation:** Not Applicable.
- ♦ **Credit Agreement:** Not Applicable.
- ♦ **Credit Effectiveness:** Not Applicable.
- ♦ **Loan Disbursement:** Not Applicable.
- ♦ **Loan Conditionality:** Not Applicable.
- ♦ **Project Approval:**

The Project was approved by Honorable Planning minister on 13-04-2021 and 1st Revised DPP was sent for after project completion approval following Planning Commission's memo no. 20.04.0000.358.14.004.2021/121 dated: 20/09/2023. The 1st revised DPP was sent to MoWR through Chief Engineer (Planning), BWDB, Dhaka's Memo no. 42.01.0000.037.14.022.24.24 dated: 25/01/2024.

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 Program for use of created-facilities of the project

The stakeholders are directly taking advantages of the created facilities of the project.

4.3 O & M program of the project.

After complementation of the project major repair/rehabilitation works will be accomplished from regular O&M budget of BWDB.

4.4 Impact of the project -

4.4.1 Direct.

- Waterlogging of large catchment area and proper management of water resources was established by implementing the project;
- Crop, salt and fish cultivation are enhanced dramatically boosting economic situation in the project area.

4.4.2. Indirect

- People living in the project area, exposed to cyclone and strong tidal surge induced natural disasters are protected from such natural threats. Land is safe for stay, crop, fish and salt cultivation;
- Communication facilities are being improved through construction of embankment;
- 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 considerable number of skilled/unskilled workers were employed during construction period.

4.7 Possibility of Self employment

There are possibilities of self-employment as existing agricultural, commercial, industrial activities are protected from natural hazards.

4.8 Possibility of women-employment opportunity

Yes, there are possibilities of women-employment throughout the benefitted area in crop, salt and fish cultivation with other types of domestic farming.

4.9 Women's participation in development

Yes.

4.10 Probable impact on Socio-Economic activity.

Through river bank protection work various infrastructures are saved from the natural disasters. As a result, socio-economic balance in the locality is enhanced.

4.11 Impact on environment

Environmental balance is achieved through the implementation of the project.

4.12 Sustainability of the project

The project is sustained. However it requires periodic maintenance.

4.13 Contribution to poverty alleviation/reduction

The project has direct contribution and impact on poverty alleviation/reduction.

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.

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

Project Management	: N/A.
Project Director	: N/A.
Land Acquisition	: N/A.
Procurement	: N/A.
Consultancy	: N/A.
Contractor	: N/A.
Manpower	: N/A.
Law & Order	: N/A.
Natural calamity	: Project area is located at turbulent coastal area. During implementation period it faced cyclones like sitrang. Rainy season came early at the project area like at the start of April, hampered the progress of khal excavation. Moreover, worldwide COVID-19 pandemic squeezed up eligible working time.
Project financing, allocation and release	: N/A.
Design formulation/approval	: N/A.
Project aid disbursement and re-imburement	: N/A.

Mission of the development partners.	: N/A.
Time & Cost Over-run	: As mentioned in B-01 and B-02.
Project Supervision/Inspection	: N/A.
Delay in Decision	: N/A.
Transport	: N/A.
Training	: N/A.
Approval	: N/A.
Others	: N/A.

06. Remarks & Recommendations of the Project Director:

The main objectives include (a) waterlogging, salinity, providing irrigation facilities and sustainable management of water resources of Khutakhali union's large population and 22000 acres of dependent catchment area, (b) re-excavation of silted up canals including development of rapid water drainage system to restore ecological balance, (c) undisturbed agricultural production through construction of dams and development of communication system along with creation of new employment opportunities through development of fish farming. All these targets had been achieved through implementation of the project. Through successful implementation, project area, exposed to cyclonic storms and strong tidal surges induced natural disasters, is protected which is a good example of disaster management countermeasure. It is proven that the project has imparted physical safety and sense of security among the stakeholders resulting in enhanced investment in socio-economic development. New road connectivity has been established already and economic activities have got a major lift through salt, fish and crop culture leading to employment generation and poverty alleviation.

During the implementation of this project, members of different committees & monitoring authorities visited project site and provided their opinion which has helped to implement the project. Project was implemented properly following respective design and specification. The quantity and quality of CC block were ensured by taskforce committee of BWDB and concerned official. Moreover, during implementation, problems related to dredged earth management was faced, lots of obstacles needed to overcome. Finally, all the works were completed maintaining desired quality.

Recommendation: The project is a good example of Disaster prevention countermeasure with improvement of socio-economic situation. It also converges with the idea of Build Back Better (BBB) concept of Sendai Framework for Disaster Risk Reduction (DRR), 2015. Considering overall positive outcomes, the project can be recognized sustainable. However, with challenges of cyclonic storms with heavy landfalls, there is risk of unexpected damage. Proper Monitoring and regular maintenance of the implemented works are required for more sustainability of the project.

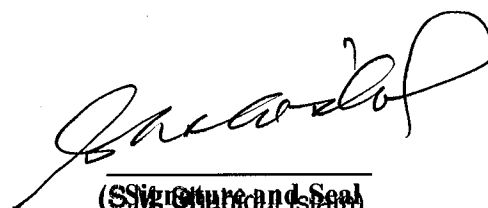
Date 29.01.24


 Executive Engineer,
 Cox's Bazar O&M Division,
 BWDB, Cox's Bazar
 (On behalf of project Director)

7. Remarks/Comments of Agency Head

The aim of this project was to mitigate waterlogging, salinity, providing irrigation facility and sustainable management of water resources of Khutakhali Union of Cox'sbazar district. To achieve this aim, a total of 3.50 km embankment rehabilitation, 4.70 km canal re-excavation, 2 Nos. of regulator was constructed under this project. Through successful implementation, project area, exposed to cyclonic storms and strong tidal surges induced floods, is protected which is a good example of disaster management countermeasure. Socio-economic condition of the stakeholders also improved due to the implementation of this project. Thus, this project can be regarded as successful one.

Date: 11-02-2024


(Signature and Seal)
ID NO: 650307001
Director General
BWDB, Dhaka.

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

Date:

Signature and Seal