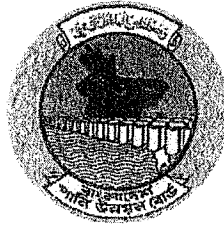


PROJECT COMPLETION REPORT (PCR)
IMED 04/2003 (Revised)

**Name of the Project : Feasibility Study for Protection and Development of
Cox's Bazar Sea Beach**
(কক্সবাজার সৈকত রক্ষা এবং উন্নয়নের লক্ষ্যে সমীক্ষা কাজ)



Directorate of Planning-2

BANGLADESH WATER DEVELOPMENT BOARD

MINISTRY OF WATER RESOURCES

**GOVERNMENT OF THE PEOPLE'S REPUBLIC OF
BANGLADESH**

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** : Feasibility Study for Protection and Development of Cox's Bazar Sea Beach.
কক্সবাজার সৈকত রক্ষা এবং উন্নয়নের লক্ষ্যে সমীক্ষা কাজ
02. **Administrative Ministry/Division** : Ministry of Water Resources
03. **Executing Agency** : Bangladesh Water Development Board (BWDB)
04. **Location of the Project** :

Division
Chattogram

District
Cox's Bazar.

05. **Objective of the Project** :

The objective of the study is to investigate the coastal erosion processes along the Cox's Bazar sea beach, revisiting the existing erosion protection measures and to devise immediate and long-term erosion mitigation measures considering technical, environmental and social aspects to safeguard the coast line and develop the beach as a world class tourist spot.

The specific objectives of the project are:

Technical :

- Understanding of wave and sediment transport dynamics of the area of interest and identification of the reasons of coastline erosions;
- Review of existing design of erosion protection;
- Review of the best practices of costal erosion protection at home and abroad;
- Development of different potential options for protection works considering hydrodynamic and morphological condition at selected stretches of the coastline;
- Stakeholder consultations at Cox's Bazar;
- Assessment of effectiveness and impact of the different protective measures at different stretches of the Cox's Bazar coastline;
- Design of the protective works;
- Spatial & Temporal Sediment Circulation and Wave Pattern with Climate Change and Sea Level Rise(SLR);
- Protection against dynamic loading / impact load.

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Environmental and Social:

- Establishment of Environmental and Social Baselines;
- Preparation of Environmental and Social Impact Assessment (ESIA).

**06. Estimated Cost
(In lakh Taka)**

:

	Original	Latest Revised
(a) Total	498.50	-
(b) Taka	498.50	-
(c) Foreign Currency	-	-
(d) Project Aid	-	-
(e) RPA	-	-

07. Date of Approval	:	PCP/PFS	TPP
(a) Original	:	08 July 2019	-
(b) Latest Revised	:	16 June 2020**	-

(** The PFS of the project was not revised but a no cost time extension has been ordered for the project)

08. Implementation Period

:

	Date of Commencement	Date of Completion
(a) Original	July 2019	December 2019
(b) Latest Revised	July 2019**	June 2020**
(c) Actual	July 2019	June 2020

** The PFS of the project was not revised but a no cost time extension has been ordered for the project.

09. Financing Arrangement (Source-wise):**9.1 Status of Loan/Grant****a) Foreign Financing : Not Applicable**

Source (s)	Currency as per Agreement	Amount in USD (million)	Nature (Loan/Grant/supplier's/credit)	Date of Agreement	Date of Effectiveness	Date of Closing	
						Original	Revised
1	2	3	4	5	6	7	8
Not Applicable							

b) GOB :

(In lakh Taka)			
Total amount	Loan	Grant	Cash Foreign Exchange
1	2	3	4
498.50	-	498.50	-

9.2 Utilization of Project Aid: Not Applicable

Source (s)	Total Amount	Actual Expenditure	Unutilized Amount
1	2	3	4
Not Applicable for this project			

9.3 Re-imbursible Project Aid (RPA) : Not Applicable

(In lakh Taka)					
RPA Amount		Amount Spent	Amount Claimed	Amount Re-imbursed	Remarks
As per PP	As per Agreement				
1	2	3	4	5	6
Not Applicable for this project.					

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
July 2019 to December 2019	July 2019 to June 2020 (No cost time extension)	July 2019 to June 2020	100%	The administrative order of the project was issued on 08/07/2019 and PD was appointed on 22/08/2019. As project activities can not be started before appointment of the PD, all project activities has been shifted accordingly

02. Cost of the Project:

(In lakh Taka)

Description	Estimated Cost		Actual expenditure	Cost over-run (% of original cost)	Remarks
	Original	Latest revised			
1	2	3	4	5	6
TOTAL	498.50	-	371.24	(-25.53%)	
TAKA	498.50	-	371.24		
PA	-	-	-		

03. Project Personnel: The project have been implemented by existing manpower of Directorate of Palnning-2, BWDB, Dhaka.

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	Oth ers		
1	2	3	4	5	Male	Female
-	Officer- 08 Staff-02	-	-	-	Officer- 03 Staff-02	Officer- 05
-	-	-	-	-	-	-
Total	10	-	-	-	05	05

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

a. Foreign: Not Applicable

Field of Training / Study tour/ workshop/ Seminer etc.	Provision as per PP		Actual		Remarks
	Number of person	Duration	Number of person	Duration	
1	2	3	4	5	6

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b. Local: Not Applicable

Field of Training / Study tour/ workshop/ Seminar etc.	Provision as per PP		Actual		Remarks
	Number of person	Duration	Number of person	Duration	
1	2	3	4	5	6

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

(In lakh Taka)

(in lakh taka)

Items of Work (as per TPP)	Unit	Target (as per TPP)		Actual Progress		Reasons for deviation (±)
		Financial	Physical (Quantity)	Financial	Physical (Quantity)	
1	2	3	4	5	6	7
(a) Revenue Component						
Supplies and Services:						The project cannot achieve 100% target due to outbreak of COVID-19.
Honorarium	L.S	1.65	100.00%	1.015	61.52%	
Transport hiring (Hiring of microbus)	Vehicle-months	3.50	100.00%	2.63	75.14%	
Entertainment expenses	L.S	1.00	100.00%	0	-	
Domestic Travel Expenses	L.S	0.75	100.00%	0.55	73.33%	
Petrol & Lubricant	L.S	0.25	100.00%	0.167	66.80%	
Printing & Binding	L.S	0.25	100.00%	0	-	
Consultancy (including IT & VAT)	L.S	489.70	100.00%	366.88	94%	
Repair, Maintenance and Rehabilitation:						
Computers	L.S	0.20	100.00%	0	-	
Machineries and Equipment	L.S	0.20	100.00%	0	-	
(b)Capital Component						
Computers and Accessories (1 nos of Desktop Computer with other accessories, 1no of printer)	Computer-1 nos Printer-1nos	1.00	Computer-1 nos Printer-1nos	0	-	
Total		498.50	100%	371.24	94%	

002

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
AKM Tahmidul Islam Director/ Superintending Engineer Planning-II, BWDB, Dhaka & Project Director. Pay Scale: 50000-71200	-	Yes	Yes	22.08.2019	-	

07. Procurement of Transport (in Nos.): No transport was purchased under this project. A car was hired to provide transport facilities of the officers engaged in the project activities.

Type of transport	Number as per P.P.	Procured with date	Transferred to Transport Pool with date	Transfer red to O & M with date	Condemn ed/damag ed with date	Remarks	
1	2	3	4	5	6	7	
Not Applicable							

08. Procurement of Goods, Works and Consultancy Services:

8.1 Goods and works of the project costing above Tk. 200.00 lakh. And Consultancy above Tk. 100.00 lakh: Goods procured under this project is less than Tk. 200.00 lakh.

Cost of details of procurement of Consultancy Services is given as follows:

Description of procurement (goods/works /consultancy) as per bid document	Tender/Bid/Prop osal Cost (in crore Taka)		Tender/Bid/Proposal		Date of completion of works/services and supply of goods	
	As per PP	Contrac ted value	Invitation date	Contract signing/ L.C opening date	As per contract	Actual
1	2	3	4	5	6	7
Consultancy services of Feasibility Study for Protection and Development of Cox's Bazar Sea Beach	489.70	488.18	12.09.2019	27.10.2019	30.03.2020	30.06.2020

Signature

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	1.25	1.25	-	
(b) Local	50	50	50	

09. Construction/Erection/Installation Tools & Equipment: Not applicable.

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
Not applicable						

C. FINANCIAL AND PHYSICAL PROGRAMME:

01. (a) Original and revised schedule as per PP : Not applicable.

(In lakh Taka)

Financial Year	Financial provision & physical target as per original PP				Financial provision & physical target as per latest revised TPP			
	Total	Taka	P.A.	Physical %	Total	Taka	P.A.	Physical %
1	2	3	4	5	6	7	8	9
2019-20	498.50	498.50	-	100%	-	-	-	100%
Total	498.50	498.50	-	100%	-	-	-	100%

01. (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
2019-2020	498.00	498.00	-	100%	373.50	371.24	371.24	-	94%

002

D. ACHIEVEMENT OF OBJECTIVES OF THE PROJECT:

Objectives as per TPP	Actual achievement	Reasons for shortfall, if any
<ul style="list-style-type: none"> • Understanding of wave and sediment transport dynamics of the area of interest and identification of the reasons of coastline erosions; • Review of existing design of erosion protection; • Review of the best practices of costal erosion protection at home and abroad; • Development of different potential options for protection works considering hydrodynamic and morphological condition at selected stretches of the coastline; • Stakeholder consultations at Cox's Bazar; • Assessment of effectiveness and impact of the different protective measures at different stretches of the Cox's Bazar coastline 	<ul style="list-style-type: none"> • Identification of potential option for sea beach protection; • Data analysis and model development; • Detailed design; • Stake holder Consultation; • Cost Estimate; • ESIA; • 3D Animation of Beach Development Plan. 	
<ul style="list-style-type: none"> • Design of the protective works; • Spatial & Temporal Sediment Circulation and Wave Pattern with Climate Change and Sea Level Rise(SLR); • Protection against dynamic loading / impact load. • Establishment of Environmental and Social Baselines; • Preparation of Environmental and Social Impact Assessment (ESIA). 		

E. BENEFIT ANALYSIS

01. Annual Out-put: Not applicable for study project.

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)			
(b)			
(c)			
(d)			

02. Cost / Benefit: Not applicable for study project.

Item	Estimated	Actual
(1) Benefit cost ratio of the project		
(i) Financial		
(ii) Economic		
(2) Internal Rate of Return		
(i) Financial		
(ii) Economic		

03. Please give reasons for shortfall, if any, between the estimated and actual benefit:

Not Applicable



F. MONITORING AND AUDITING

0.1 Monitoring: As this is a study project, hence there is no scope of field work inspection in this project.

Name & designation of the inspecting official	Date of Inspection	Identified Problems	Recommendations
1	2	3	4

(a) Ministry / Agency:

(b) IMED:

(c) Others:

0.2. Auditing during and after Implementation:

2.1. Internal Audit: No internal audit conducted.

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: Yet to be conducted.

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

08/9

G. DESCRIPTIVE REPORT

1. General Observations/Remarks of the Project on :

1.1 Background

Cox's Bazar, the most popular tourist spot of Bangladesh, is located in the south-east part of the country. It is widely reputed for the longest natural sea beach of the world. The beach of Cox's Bazar is sandy and has a gentle slope; with an unbroken length of 120 km. Every year a number of local and foreign tourists visit the town to enjoy its scenic beauties.

A nationalized programme was taken in 1990 to develop prolonged Cox's Bazar beach as a modern Tourist Industrial Park. About 61.03 ha (150.75 acres) land under Zilonja Mouza of Cox's Bazar sea beach area was declared Hotel, Motel Zone. Commercial plots were allotted on leased basis among individual firms/ entrepreneurs for establishment of Hotels and Motels in the new horizon. Meanwhile, the zone has been developed and many Hotels/Motels (including some of those as international standard) were established.

Recently, the tourism zone of Cox's Bazar has become vulnerable due to continual erosion of sea shore. During last few years, the sea shore erosion/wave action started to engulf the Hotel/Motel zone and in the meantime about 8 (eight) nos. of leased plots along the planned sea beach road got damaged. The continual erosion is threatening the affluent zone, which is being developed as modern tourism industrial park. In this situation, local representative as well as allied people raised their voices to control the erosion.

A project was prepared by BWDB in order to protect Hotel, Motel and other important installations located at the tourism zone around Cox's Bazar Town area from devastating sea shore erosion of the Bay of Bengal. Initially the project was prepared based on the recommendations of Technical Committee formed by BWDB in 2009. Moreover, the Parliamentary Standing Committee of MoWR visited the project area and recommended for execution of the project. Honorable Prime Minister of Bangladesh gave commitment to protect the Cox's Bazar Town area from sea erosion in a public meeting on 3 April 2011. Finally the project including 2.410 km embankment with sea shore protection, 7.890 km embankment, 3 nos Drainage outlet, 3 nos drainage improvement structures along with mathematical modelling of the sea shore area and environmental impact assessment (EIA) & social impact assessment (SIA) was sent the ECNEC for final approval.



In the ECNEC meeting held on 05.02.2013 the project was not approved providing the instruction that “Cox’s Bazar Development Authority in association with Ministry of Communication, Ministry of Environment & Forest, Ministry of Water resources, Ministry of Civil Aviation & Tourism and Ministry of Defense with related other department will submit a new project in this regard.

Several meetings were held in the office of the Deputy Commissioner of Cox’s Bazar regarding this project and it was decided to go for a detailed feasibility study before execution to have a tourism friendly project. Later on, an inter ministerial meeting was held on 12.01.2017 in the Ministry of Water Resources (MoWR) where it was decided that “Cox’s Bazar Development Authority will be lead organization to execute the project and BWDB will execute the protection part only as CoxDA is working with the master plan of Cox’s Bazar”.

Subsequently, Ministry of Housing and Public Works informed that CoxDA is a newly formed organization and lags institutional structure, sufficient manpower and ability to execute such a project and requested Ministry of Water resources to execute the project. Later on, honorable Secretary of MoWR has instructed to carry out a detailed feasibility study prior to take up the project.

1.2 Justification/Adequacy

Cox’s Bazar sea beach is the most visited sites of Bangladesh. The natural beauty of the town is very charming and the climate is very fine. A number of local & foreign tourists come Cox’s Bazar to spend their leisure in the beach. The beach is crowded almost all over the year. The scenic beauty of the sea beach has developed a strong tourism business which is contributing the economic growth of the country. About 61.03 ha land adjacent to the sea beach is declared as Hotel, Motel Zone. But the recent sea shore erosion has made the tourism zone vulnerable which eventually threatening expanding the tourism business of the area.

Section 3.7.2 main document of the National Water Management Plan (NWMP) clearly refers to erosion control, river bank maintenance, and recommends the approach to be followed, particularly with fess on formulating an updated strategy dealing with the problem for sustaining people’s livelihoods and halting erosion.

Goal 11 of Sustainable Development Goals (SDG) refers to make cities and human settlements inclusive, safe, resilient and sustainable and Goal 13 of SDG # 13 refers to take



urgent action to combat climate change and its impacts and Goal. To meet SDG, sea shoreline should be protected which is a cause of climate change and making human settlement vulnerable in the coastal area.

1.3 Objectives

The objective of the study is to investigate the coastal erosion processes along the Cox's Bazar sea beach, revisiting the existing erosion protection measures and to devise immediate and long-term erosion mitigation measures considering technical, environmental and social aspects to safeguard the coast line and develop the beach as a world class tourist spot.

The specific objectives of the project are:

Technical :

- Understanding of wave and sediment transport dynamics of the area of interest and identification of the reasons of coastline erosions;
- Review of existing design of erosion protection;
- Review of the best practices of costal erosion protection at home and abroad;
- Development of different potential options for protection works considering hydrodynamic and morphological condition at selected stretches of the coastline;
- Stakeholder consultations at Cox's Bazar;
- Assessment of effectiveness and impact of the different protective measures at different stretches of the Cox's Bazar coastline;
- Design of the protective works;
- Spatial & Temporal Sediment Circulation and Wave Pattern with Climate Change and Sea Level Rise(SLR);
- Protection against dynamic loading / impact load.

Environmental and Social:

- Establishment of Environmental and Social Baselines;
- Preparation of Environmental and Social Impact Assessment (ESIA).

1.4. Project revision with reasons:

The Administrative Order (A.O.) regarding project approval was issued on 08 July 2019 and Project Director (PD) was appointed on 22 August 2019 by the Ministry of Water Resources. As project works can not be started before appointment of the PD and the remaining time of the project period was not enough to complete the study. The outbreak of COVID-19 also



hampered the study. So the project period was extended for 6 months (Upto June 2020) by the Ministry of Water Resources.

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

Cox's Bazar sea beach is one the most attractive tourist sites of Bangladesh. Due to continual erosion, the tourism business of the area has become vulnerable, also the beach is losing its beauty. This project has been taken up for sustainability of the beach and the tourism business of the area.

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

◆ Project Identification

The strong current in the Bay of Bengal, caused by low and monsoon wind, is severely eroding the Cox's Bazar sea-beach. The monsoon wind is also increasing water level to several feet in the Bay. The beach from Laboni point to Diabetics point, is on the face of severe erosion. The erosion is so extreme that all the attractive objects of the beach are in a threat of extinction. In the last several months, more than 1000 tamarisk trees have gone into the sea. In the last three years, about 6,000 tamarisk trees have become extinct.

The stated portion of the beach has become unsuitable for tourist gathering. Not only this portion, but up to Nazirartek, the last point of the 120-kilometer long sea-beach, is also eroding. Concerned personnel said that the extent of erosion is clearly indicating the possible extinction of the sea beach in near future. As a result, the entrepreneur community related to the sea-beach has become frustrated. The entrepreneur community said, though the Laboni beach is the main point of Cox's Bazar sea-beach, the tourists mainly gather from Kalatoli to Diabetes point. But, for the last three years, the beach from Shaibal point to Diabetes point is eroding faster. In the meantime, about one km of the beach has been eroded. Local people said that the beach has been eroding after the cyclone 'Mohasen' hit in 2014. Besides, the cyclone 'Roanu' in 2016 eroded a vast area from Shaibal point to Diabetes point. As many tamarisk trees have been uprooted, the point has lost attraction. As a result, the tourist gathering has been reduced here.

Forest Department sources said, since the attack of the cyclone 'Roanu', about 6,000 tamarisk trees across the beach have been destroyed, while in the last several months more than 1000 trees have been uprooted. It could be mentioned that Marine Drive Road which is situated along Kalatali sea beach point towards south upto Teknaf, extent of erosion within initial 2.00 km is devastating. So, from starting point of Marine Drive Road towards

northern point at Hotel/Motel of Tourism zone up to Laboni point should also be addressed for erosion control. In view of the above, BWDB decided to conduct a detailed feasibility study for sea beach protection where facility for road cum embankment, parking, access to beach, some restaurant would be provided considering environmental and social issues.

◆ Project Preparation

In view of the above, BWDB prepared a PFS to execute the feasibility study project.

◆ Appraisal

DPEC meeting of the project was held in Ministry of Water Resources (MoWR) on 18 June 2019.

◆ Credit Negotiation

◆ Credit Agreement

◆ Credit Effectiveness

◆ Loan Disbursement

◆ Loan Conditionalities

◆ Project Approval

The PFS of the project was approved on 08 July 2019 by MoWR.

◆ Others (if any).

Not Applicable

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- It is a study project. Benefits can be extracted after implementation of main project.

4.2 Programme for use of created-facilities of the project-N/A

4.3 O & M programme of the project-N/A

4.4 Impact of the project – N/A

4.4.1 Direct

4.4.2 Indirect

4.5 Transfer of Technology and Institutional Building through the project-Yes

4.6 Employment generation through the project-N/A

4.7 Possibility of Self employment-N/A

4.8 Possibility of women-employment opportunity-N/A

4.9 Women's participation in development-N/A

4.10 Probable Impact on Socio-Economic activity-Positive impact have been assessed in the study.

- 4.11 Impact on environment-Possitive impact have been assessed in the study.
- 4.12 Sustainability of the project-N/A
- 4.13 Contribution to poverty alleviation/reduction-N/A
- 4.14 Opinion of the public representatives, local elite, local administration, teachers, religious leaders, women's representatives etc-N/A
- 4.15 Contribution of Micro-credit programmes and Comments on overlapping with any NGO activities-N/A

5. *Problems encountered during Implementation (with duration & steps taken to remove those): Not applicable for study project.*

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

6. *Remarks & Recommendations of the Project Director:*

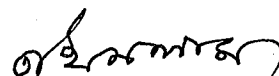
The project was completed in June 2020. Cox's Bazar is the most popular tourist spot in Bangladesh. But in recent time the tourism zone has become vulnerable due to continual erosion of the seashore. This study project has been carried out to investigate the coastal erosion process and to devise immediate and long term erosion protection measures and develop the beach as a world class tourist spot. Through this study, the Consultants have identified the most suitable option for beach protection and development. Design of multifunctional dyke, revetment with sand cover (sleeping defence) and 3 D plan to develop the beach as a world class tourist spot has been prepared through the study. A workshop was arranged in participation of local stakeholders. Due to outbreak of COVID-19, a training program in Netherlands could not be arranged and Expatriate Consultant could not be engaged. But all the major activities has been accomplished



under the project. The design, cost estimate and ESIA have been prepared through this study based on which DPP of the subsequent investment project would be prepared.

02.09.2020

Date :



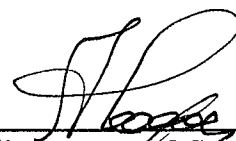
Signature and seal of the Project Director/Manager

A. K. M. Tahmidul Islam
Project Director
Feasibility Study for Protection
and Development of Cox's Bazar Sea Beach
&
Director
Planning-2, BWDB, Dhaka.

7. Remarks/Comments of Agency Head

BWDB is planning to take an investment program to protect and develop Cox's Bazar Sea Beach. The most suitable option for beach protection and development has been identified through this study. Design of multifunctional dyke, revetment with sand cover and 3D plan of the beach has also been prepared. With the consent from MoWR, BWDB will soon furnish a DPP and process it for approval.

Date:



Signature and Seal

15.09.2020
(A. M. Aminul Haque)
Director General
BWDB, Dhaka.

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

Date:

Signature and Seal

