

Bangladesh Water Development Board



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

NAME OF THE PROJECT: ESTUARY DEVELOPMENT PROGRAMME (EDP)

PROJECT PERIOD: 01-03-2007 TO 30-06-2011

**OFFICE OF THE DIRECTOR
PMU-ESPP, BWDB, DHAKA.**

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 | : Estuary Development Programme (EDP) |
| 02. Administrative Ministry/Division | : Ministry of Water Resources. |
| 03. Executing Agency | : Bangladesh Water Development Board. |
| 04. Location of the Project | : Meghna Estuary (down of Chandpur to the Bay of Bengal). |
| 05. Objective of the Project | : |

The main objectives of the Project are as follows:

A. The survey and study support unit:

- Updating of bathymetric survey data and micro-level survey for viable investment oriented project and database.
- Hydro-survey of entire coastal area for understanding of dynamic & morphological process.

B. Investigation & design of Potential Cross-dam

- Identification & Investigation of possible potential cross dams/infrastructure throughout the coastal zone.
- Preparation of detailed design drawings of identified potential cross dams/infrastructure throughout the coastal zone.
- Assessment of the impact on the economy, the society and the environment due to construction of cross dams.

C. Investigation & Implementation of potential erosion control & accelerated land accretion schemes:

- Implementation of modified Pilot Schemes on the basis of the lessons learnt and evaluation during MES period of preparation of investment project in respect of Erosion Control & accretion of land.
- Viable accretion pilot schemes at different locations of Bangladesh estuary to accelerate the natural process of sedimentation for preparing accretion oriented investment project.

Common for A, B & C

- Transfer of technology covering enhancement of in-house capabilities of BWDB personnel concerning data processing, design, monitoring & implementation of pilot schemes for such investment oriented projects.
- To enrich knowledge of coastal oriented multi-disciplinary in-house working force of BWDB aiming at long-term management and follow-up in relation to ICZM.

06. Estimated Cost:

	Original	(In lakh Taka) Latest Revised
(a) Total	5545.82	7353.22
(b) Taka	2700.53	5207.32
(c) Foreign Currency	2845.29 (DPA)	US \$ 31.10
(d) Project Aid	4845.29	4311.05+ US \$ 31.10
(e) RPA	2000.00	4311.05+ US \$ 31.10

07. Date of Approval

: TAPP

(a) Original

: December 2002

(b) Latest Revised

: 31-12-2008

08. Implementation Period

:

	Date of Commencement	Date of Completion
(a) Original	01-07-2002	30-06-2007
(b) Latest Revised	01-07-2002	30-11-2011
(c) Actual	01-03-2007	30-06-2011

09. Financing Arrangement (Source-wise):**9.1 Status of Loan/Grant****a) Foreign Financing:**

Source(s)	Currency as per Agreement (Million)	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
Govt. of the Netherlands (GoN)	BDT 431.105	3.110	Grant	02-08-2005 & Revised 10-09-2008	02-08-2005	30-06-2007	Aug' 2011

b) GOB:

Total amount	Loan	Grant	(In lakh Taka) Cash Foreign Exchange
1	2	3	4
896.27		Grant	Not Applicable

9.2 Utilization of Project Aid: (Source wise)

(In million)

Source (s)	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
Govt. of the Netherlands(GoN)	3.11	BDT 431.105	1.457	139.738	1.653	291.367

9.3 Re-imbursible Project Aid (RPA):

(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
BDT 4311.05 + US \$ 31.10	BDT 4311.05 + US \$ 31.10	BDT 1397.38 + US \$ 14.573	BDT 1397.38+ US \$ 14.573	BDT 1397.38+ US \$ 14.573	-

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

Field of Training/Study tour/workshop/Seminar etc.		Provision as per PP		Actual		Remarks
		Number of person	Man - months	Number of person	Man - months	
1		2	3	4	5	6
Foreign		15	210 days	-	-	-
Local	Training of the staff of SSD/SSSU/PMU-ESPP for data processing etc.	12		12		
	Workshop for engineers/ specialist involved in Estuary Development.	100		100		
	Others special training as required for personnel of the project.	10				

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

(In lakh Taka)						
Items of work (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
Accommodation & Others	1 item	134.60	1 item	17.72	1 item	
Consultancy cost	1 item	3513.30	1 item	1925.54	1 item	
Mathematical modeling	1 item	133.07	1 item	17.35	1 item	
Satellite images procurement, analysis, processing & base map preparation	1 item	78.31	1 item	28.01	1 item	
EIA including Hydrodynamic and morphological behavior assessment	1 item	94.06	1 item	-	-	
Training	1 item	148.80	1 item	-	-	
Project input others (Operational cost of marine survey & others)	LS	849.35	LS	414.44	LS	
Tax (IT & VAT)	1 item	662.37	1 item	283.06	1 item	
Purchase of Equipment	1 item	39.30	1 item	16.40	1 item	
Project input others (Procurement of Geo-text & others)	1 item	1640.06	1 item	54.08	1 item	
CDST & VAT	1 item	60.00	1 item	-	-	
Total		7353.22	-	2756.60	-	

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 Wadud Bhuyan Project Director Tk 15000-19800	Full time	-	CDSP-III	06/08/2005	09/12/2007	
G.M. Shamsur Rahman Project Director Tk 25750-33750	Full time	-	CDSP-III	09/12/2007	30/12/2009	
Md. Hafizur Rahman Project Director Tk 29000-35600	Full time		CDSP-III	30/12/2009	08/09/2011	

07. Procurement of Transport (in Nos.):

Type of transport	Numb er as per P.P.	Procured with date	Transferred to Transport Pool with date	Transferred to O & M with date	Condem ned/dam aged with date	Remarks
1	2	3	4	5	6	7
Car						
Jeep	2 Nos	2 Nos (30/10/2007, 08/06/2009)	2 Nos (28/11/2010)	-	-	Handed over to BWDB after completion of project
Microbus						
Minibus						
Bus						
Pick-up	1No	1No (26/08/2008)	-	1No (26/08/2008)	-	Using by Survey and Study Division, BWDB
Truck						
Motor Cycle						
By-cycle						
Speed Boat						
Launch						
Others with name						

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
2002-2003	945.82	179.22	766.60	17.05				
2003-2004	1100.00	161.00	939.00	19.83				
2004-2005	1100.00	141.00	959.00	19.83				
2005-2006	1200.00	136	1064.00	21.64				
2006-2007	1200.00	83.31	1116.69	21.64	91.05	11.53	79.52	1.24
2007-2008					265.91	77.39	188.52	3.62
2008-2009					1130.10	307.90	822.20	15.37
2009-2010					1252.35	239.60	1012.75	17.03
2010-2011					2147.05	222.62	1924.43	29.20
2011-2012					320.86	37.23	283.63	4.36

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
2006-2007	585.00	85.00	500.00	7.96	79.52	79.52	-	79.52	1.08
2007-2008	595.00	95.00	500.00	8.09	648.55	575.88	88.83	487.05	7.83
2008-2009	725.00	125.00	600.00	9.86	1059.08	572.25	47.60	524.65	7.78
2009-2010	965.00	115.00	850.00	13.12	698.95	895.09	96.82	798.27	12.17
2010-2011	955.00	219.00	736.00	12.99	519.05	633.86	108.76	525.10	8.62

D. ACHIEVEMENT OF OBJECTIVES OF THE PROJECT:

Objectives as per PP	Actual achievement	Reasons for shortfall, if any
i) Hydro-surveys for understanding of hydro-dynamics & morphological processes of Meghna Estuary and updating database. Dedicated topo-hydrographic surveys for preparation of investment projects.	Objective has been substantially achieved.	In original TPP of EDP bathymetric survey was proposed for the areas where morphological changes are very much pronounced. • Lower Meghna from Chandpur to Char –Gazaria. • Area between Char Gazaria and the northern heads of Hatia and Manpura, including northern part of the Shahbazpur Channel(down to approx. 470000 N line) and the area near Char Balua • Area between Noakhali mainland and th northern head of Sandwip, including Urir Char • Area near the pilot project location Nijhum Dwip, for a potential Cross-Dam. • Specific surveys, more times a year close to some areas of interest • Additional survey works will depend on the demands and actual needs for other survey requirements such as bathymetric survey of the Bay of Bengal, survey of the Sunderbans, detailed survey requirements will be determined and formulated in close co-operation with the BWDB and the PDO-ICZM. Since the project started in late, i.e, from March, 2007 and these data had to be used for updating of Bay of Bengal (BoB) Model (Mike -21 hydrodynamic model of IWM); as such the survey programme was shortened from April, 2009 to May, 2010. In the revised TPP, it was proposed to do more survey works. EKN has decided to stop supporting any new works under the EDP Project after 3rd March, 2010. In view of that the collected data has been used in design of Char Montaz – Char Rustom cross dam and conceptual design of other cross- dams, as well as updating of BoB model. It may be mentioned that those outputs of EDP are useful for preparation of investment programme. It may also be mentioned that Char Minka –Montaz cross dam proposasl under climate change Trust Fund was proposed based on EDP data which is being under implementation.

ii) Identification & investigation of potential cross dams for accelerated land accretion in the coastal areas; preparation of detailed design, drawings & tender documents; and assessment of environmental impacts for completing the project preparation.	Objectives have been achieved partly.	In MES study, 19 nos of cross dams were identified for land reclamation. Among 19 nos identified cross dams, design of only Char Montaz – Char Rustom has been completed and implemented. Conceptual design of i. Urir Char- Noakhali ii. Urir Char – Sandwip iii. Jahajer Char- Char Baijid iv. Jahajer Char- Sandwip have been completed. Due to early closing of EDP, detail designs of above four and other cross dams were not possible to complete.
iii) Identification, investigation, design and implementation of potential erosion control & accelerated land accretion schemes.	Objective has been achieved partly.	In TPP implementation of pilot scheme for land reclamation and erosion control were included. Among those, the Char Montaz- Char Rustom cross dam has been implemented. Due to early closing of the EDP financing it was not possible to implement other pilot schemes.
iv) Training and technology transfer for capacity building of BWDB along with development of Survey & Study Support Unit (SSSU) capable hydro-morphological surveys & studies.	Objective have been achieved partly.(onlt local training has been complement ed)	Since EKN has decided to stop supporting the EDP after 3 rd March, 2010 it was not possible to implement the overseas training.

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).
Not Applicable			

02. Cost / Benefit:

Item	Estimated	Actual
(1) Benefit cost ratio of the project (i) Financial (ii) Economic	Not Applicable	Not Applicable
(2) Internal Rate of Return (i) Financial (ii) Economic	Not Applicable	Not Applicable

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

Not Applicable

2. MONITORING AND AUDITING

0.1 Monitoring:

Name & designation of the inspecting official	Date of Inspection	Identified Problems	Recommendations
1	2	3	4
1. Honourable Ambassador of EKN	07/04/2009	Not found	
2. Mr. Andre Vermeer 1st Secretary(water Management) Embassy of the Kingdom of the Netherlands.	07/04/2009	Not found	
3. Pieter terpstra 2nd Secretary(water Management) Embassy of the Kingdom of the Netherlands.	07/04/2009	Not found	
4. Mr. Wafi Md. Quamrul Huda ADG (Planning), BWDB	07/04/2009	Not found	
5. Mr. Md. Saidur Rahman Chief Planning, BWDB	07/04/2009	Not found	
6. Mr. Shekh Md. Wahid-Uz-Zaman Secretary, Ministry of Water Resources.	14/08/2009	Not found	
7. Mr. Andre Vermeer 1st Secretary(water Management) Embassy of the Kingdom of the Netherlands	02/09/2009 to 04/09/2009	Not found	

0.2. Auditing during and after Implementation:

2.1. Internal Audit:

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

2.2. External Audit: (FAPAD)

Audit period	Date of submission of Audit Report	Major findings/ objections	Whether objections resolved or not.
1	2	3	4
2006-2007	28-02-2008	Nil	-
2007-2008	20-10-2008	Nil	-
2008-2009	29-09-2009	Nil	-
2009-2010	13-12-2010	Nil	-
2010-2011	Not done		

3. DESCRIPTIVE REPORT

1. General Observations/Remarks of the Project on:

1.1 Background of EDP:

From 1995 until August 2001, the Meghna Estuary Study (MES & MES-II) projects were implemented. The overall objectives were to increase the physical and social security for the population in the coastal areas and on the islands. Through extensive surveys and studies, an understanding has been obtained of the physical and socio-economic process in the land and sea areas. From this understanding, a phased long-term plan "Master Plan" for the area was made for the next 25 years, along with a list of priority projects and possible interventions as indicated in the "Development Plan" (5-10 years ahead). The essential follow up of the MES was defined as the new "Estuary Development Program (EDP)". Therefore the EDP concentrates on ongoing survey and studies, the preparation of land accretion schemes, and a further pilot program for erosion control.

1.2 Justification/Adequacy

Estuary Development Programme (EDP) of Bangladesh Water Development Board (BWDB), Ministry of Water Resources (MoWR), Government of Bangladesh (GoB) has been initiated to complement and supplement the national policy and activities of the Government of Bangladesh for management of coastal zone. The aims of GoB interventions in the coastal zone, include, among others, improving the management of natural resources; mitigation and/or better management of natural disasters & human induced natural resources degradation as well as creation of opportunities for sustainable economic development in the region; addressing the problems of coastal erosion & tidal submergence; exploitation of potentials for reclamation along with development of new lands along the coastal fringes.

1.3 Objectives

Specific objectives of the EDP are:

- (i) Hydro-surveys for understanding of hydro-dynamics & morphological processes of Meghna Estuary and updating database. Dedicated topo-hydrographic surveys for preparation of investment projects.
- (ii) Identification & investigation of potential cross dams for accelerated land accretion in the coastal areas; preparation of detailed design, drawings & tender documents and assessment of environmental impacts for completing the project preparation.
- (iii) Identification, investigation, design and implementation of potential erosion control & accelerated land accretion schemes.
- (iv) Training and technology transfer for capacity building of BWDB along with development of Survey & Study Support Unit (SSSU) capable hydro-morphological surveys & studies.

1.4 Project revision with reasons:

a) Direct cost:

As per Consultants Contract Agreement, the actual amount in Direct cost is 651.33 Lakh Taka upto August 1, 2010. Then, the System Review Mission recommended to extend the project completion time upto November, 2011. That is why, direct cost increased.

b) IT, VAT etc:

The IT, VAT etc for the RPA expenses was not considered in the original TPP. Later it was included in the revised TPP.

c) Financial Modality:

In original TAPP modality of financial modality was in DPA and RPA. In the signed contribution arrangement, the total grant amount was committed as RPA. Then, the commitment of GoN increased and total amount is also in RPA. As such, revision of RTPP was needed.

d) Extension of Project Period:

As per signed contribution arrangement, duration of the project was upto 1st August, 2008. In the revised TPP, the duration is increased by additional 16 months i.e. upto November, 2011.

e) Project Input Others:

- (i) In the original TPP, there was no provision for repair of survey unit Anwasha. In revised TPP, the cost of urgent repairs and replacement of hydrographic and navigational survey equipments was included for the proper operation of the Anwasha.
- (ii) In the project document, "Updating models and Procurement satellite images are included costing an amount of USD 1.00 Lakh and USD 0.50 lakh respectively. In line with scope of work as delineated in ToR and considering the present situation the cost of these items has also increased. Therefore, the amount for carrying out supporting activities such as mathematical modeling and satellite image procurement, analysis, processing and base map preparation activities increased.
- (iii) The cost to conduct investigation and design of potential cross-dams is rationalized considering scope of works. Thus, the budget for the EIA including hydrodynamic and morphological behavior assessment has been increased.

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

Land reclamation for the estuary is important for the country. In that respect, the concept, design, location and timing are rationale.

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

◆ Project Identification	Not Applicable
◆ Project Preparation	
◆ Appraisal	
◆ Credit Negotiation	
◆ Credit Agreement	
◆ Credit Effectiveness	
◆ Loan Disbursement	
◆ Loan Conditionalities	
◆ Project Approval.	
◆ Others (if any).	

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. -Continuous
- 4.3 O & M programme of the project. -Not applicable
- 4.4 Impact of the project -
 - 4.4.1 Direct. -Positive impact
 - 4.4.2 Indirect. -Positive impact
- 4.5 Transfer of Technology and Institutional Building through the project. -Positive impact
- 4.6 Employment generation through the project. -Yes
- 4.7 Possibility of Self employment. -No
- 4.8 Possibility of women-employment opportunity. -No
- 4.9 Women's participation in development. -No
- 4.10 Probable Impact on Socio-Economic activity. -Positive impact
- 4.11 Impact on environment. -Positive impact
- 4.12 Sustainability of the project. -Sustainable
- 4.13 Contribution to poverty alleviation/reduction. -Positive impact
- 4.14 Opinion of the public representatives, local elite, local administration, teachers, religious leaders, women's representatives etc. -Positive impact
- 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	5.11	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.

-At the beginning of the project, some problems were identified in fund transfer in SAFE account. Later on it was resolved with the assistance of EKN, ERD and MOF.

6. Remarks & Recommendations of the Project Director:

BWDB has acquired knowledge and experience through this study project. Data collected during the project can be utilized by taking further investment or study project. It may be mention that Meghna Estuary is potential for land reclamation, so updated data of the estuary is necessary for further intervention schemes. As such, a new study project may be taken up.

Date: 29.12.11

Date:

Signature and seal of the Project Director/Manager

(Md. Mahfuzur Rahman)

Director

PMU-ESPP

BWDB, Dhaka.

7. Remarks/Comments of Agency Head

Date:

Signature and Seal

MD.AZIZUL HAQUE

Director General

BWDB, Dhaka.

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

Date:

Signature and Seal