RADP-105
2011-12

BANGLADESH WATER DEVELOPMENT BOARD

PROJECT COMPLETION REPORT (PCR)

OF

MUHURI KAHUA FLOOD CONTROL, DRAINAGE & IRRIGATION PROJECT

Division : Feni O&M Division, BWDB, Feni.

Circle : Feni O&M Circle, BWDB, Feni.

Zone : South Eastern Zone, BWDB, Chittagong.

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**	: Muhuri Kahua Flood Control Drainage & Irrigation Project
02.	**Administrative Ministry/Division**	: Ministry of Water Resources
03.	**Executing Agency**	: Bangladesh Water Development Board
04.	**Location of the Project**	: District.-Feni ; Upazilla : Porshuram, Fulgazi, Chhagolnaiya & Feni Sadar

05. **Objective of the Project** :

a) Restore full flood freee environment in project area by construction of embankment & required water control structures;

b) Removal of drainage congestion and endorse post-monsoon excess surface water flow by excavation/ Re-excavation of drainage channel/khals and erection of drainage structures

c) Ensure safety of flood control embankment from river-bank erosion, river scouring, wave section erosion and cyclones/tidal surges etc

d) Enhancement of irrigation management programme throughout erection of required water control structures,rubber dam, development of irrigation canals, irrigation inlets as required.

06. **Estimated Cost** :

(In lakh Taka)

	Original	**Latest Revised**
(a) Total	15060.02	13929.39
(b) Taka	15060.02	13929.39
(c) Foreign Currency	-	-
(d) Project Aid	-	-
(e) RPA	-	-

07. **Date of Approval** :	**PCP**	**PP**
(a) Original :	-	28.04.2005
(b) Latest Revised :	-	19.04.2009

08. Implementation Period :

	Date of Commencement	Date of Completion
(a) Original	2004-2005	2009-2010
(b) Latest Revised	2005-2006	2010-2011
(c) Actual	2005-2006	2011-2012

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 :

(In lakh Taka)

Total amount	Loan	Grant	Cash Foreign Exchange
1	2	3	4
13929.39	-	-	-

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

(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

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

(In lakh Taka)

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

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
2004-2005 To 2009-2010	2005-2006 To 2010-2011	2005-2006 To 2011-2012	16%	

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	15060.02	13929.39	13749.49	(-)8.70%	
TAKA	15060.02	13929.39	13749.49	(-)8.70%	
PA	-	-	-	-	

03. Project Personnel :

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		
1	2	3	4	5	Male	Female
Officer (s)	The project has been implemented with the existing manpower of Feni O & M Division under technical and administrative supervision of Superintending Engineer,Feni O & M Circle,BWDB,Feni					
Staff(s)						
Total :						

04. Training of Project Personnel (Foreign/Local) : Does not Arrise

Field of Training /Study tour/workshop/ Seminer 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

b. Local

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
A.Revenue Component						
Survey & Investigation	1 Item	30.00	1 Item	30.00	1 Item	
B.Capital Component						
a) Land Acquisition	ha	1657.90	73.77	1481.60	52.20	
b) Construction of Works						
i.Construction of Flood Embankment	km	5640.90	122.78	5640.85	122.78	
ii.Construction of Regulator	No	916.27	6	916.27	6	
iii.Surface Drainage Outlet	No	546.63	16	546.59	16	
iv.Irrigation Inlet	No	625.60	130	625.60	130	
v. Rubber Dam(over Kahua River)	No	493.77	1	493.77	1	
vi .Re-excavation of Drainage channel	km	399.94	66.59	399.83	66.59	
vii. Bank Protective works	km	3618.38	6.300	3618.38	6.300	
Total		**13929.39**		**13749.49**		

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.Monirujjaman, Executive Engr, Feni O & M Division (Scale 13750-550-19250)	Yes		Yes	06.08.2005	20.01.09	
Sajidur Rahman Sardar, Executive Engr, Feni O & M Division (Scale 22250-900-31250)	Yes		-	21.01.2009	02.02.2011	
Jashim Uddin Bhuiyan, Superintending Engr, Feni O & M Circle (Scale 25750-1000-33750)	Yes		Yes	03.02.11	Till completion	

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
Car	No transport vehicles were procured					
Jeep						
Microbus						
Minibus						
Bus						
Pick-up						
Truck						
Motor Cycle						
By-cycle						
Speed Boat						
Launch						
Others with name						

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
Construction of Rubber Dam at Barabaria over Kahua River	500	493.77	10.09.06	22.02.07	28.09.07	28.9.07
Protective work of Muhuri River R/B at km 10.260-10.450,24.380-24.530,24.980-25.140	388.58	387.99	30.08.09	07.01.10	21.06.10	21.06.10
Protective work of Muhuri River L/B at km 3.440-3.570, 11.275-11.425 & 12.190-12.280	243.25	278.84	22.09.10	27.12.10	15.05.11	14.06.11
Protective work of Muhuri River L/B at km 14.840-14.930, 15.100-15.200 & 16.740-16.940	228.00	228.73	22.09.10	27.12.10	15.05.11	14.06.11

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
Protective work of Muhuri River R/B at km 13.210-13.450, 16.840-16.900 & 17.750-17.900,	257.90	226.18	23.09.10	27.12.10	15.05.11	14.06.11
Protective work of Muhuri River R/B at km 21.720-22.145	257.90	241.48	23.09.10	27.12.10	15.05.11	14.06.11
Protective work of Muhuri River R/B at km 23.600-23.690, 32.200-32.290,35.500-35.700,35.800-35.900	266.72	266.72	23.09.10	27.12.10	15.05.11	14.06.11
Protective work of Muhuri River L/B at km 16.940-17.340	262.08	262.08	22.09.10	27.12.10	15.05.11	14.06.11
Const. 4-vent Regulator over Gothia khal at R/B of Muhuri River.	256.48	337.45	22.09.10	27.12.10	20.06.11	24.06.12
Const. of 7 nos. SDO at both bank of Selonia river.	234.42	261.88	23.09.10	27.12.10	20.06.11	20.06.11
Const. of Embkt.of Muhuri river L/B at km 16.140-16.525, 17.525-19.415	211.47	212.30	25.08.11	22.11.11	21.04.12	21.04.12
Const. of Embkt.of Muhuri river L/B at km 19.415-21.415,	213.75	217.41	25.08.11	22.11.11	21.04.12	21.04.12
Const. of Embkt.of Selonia river L/B at km 20.510-24.150	218.56	219.35	25.08.11	21.06.11	24.04.12	24.04.12
Protective work of Muhuri River R/B at km 6.140-6.250, 7.050-7.150,21.620-21.690,21.720-21.845,23.450-23.610	339.38	348.20	25.08.11	22.11.11	24.04.12	24.05.12
Protective work of Muhuri River R/B at km26.980-27.180,33.840-33.880, 34.180-34.280 & Kahua river R/B 12.450- 12.510	295.92	301.67	25.08.11	22.11.11	21.04.12	21.04.12

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 :

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

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
2004-05	-	-		-	-	-		-
2005-06	200.00	200.0		1.32%	994.36	994.36		7.14%
2006-07	4693.20	4693.2		31.16%	678.13	678.13		4.87%
2007-08	3922.92	3922.92		26.05%	439.44	439.44		3.15%
2008-09	3777.15	3777.15		25.08%	193.34	193.34		1.39%
2009-10	2466.75	2466.75		16.38%	2063.52	2063.52		14.81%
2010-11	-	-		-	5799.40	5799.40		41.63%
2011-12	-	-		-	3761.20	3761.20		27.00%
Total	**15060.02**	**15060.02**		**100%**	**13929.39**	**13929.39**		**100%**

01. (b) Revised ADP allocation and progress :

(In lakh Taka)

Financial Year	Revised Allocation & target				Taka released	Expenditure & physical progress			
	Total	Taka	P.A.	Physical %		Total	Taka	P.A.	Physical %
1	2	3	4	5	6	7	8	9	10
2004-05	-	-		-	-	-	-		-
2005-06	995.00	995.00			995.00	994.36	994.36		7.23%
2006-07	806.30	806.30			806.30	678.13	678.13		4.93%
2007-08	900.00	900.00			773.00	439.44	439.44		3.20%
2008-09	255.00	255.00			255.00	193.34	193.34		1.41%
2009-10	2074.00	2074.00			2074.00	2063.52	2063.52		15.00%
2010-11	5800.00	5800.00			5800.00	5799.40	5799.40		42.18%
2011-12	3600.00	3600.00			3600.00	3581.30	3581.30		26.05%

D. ACHIEVEMENT OF OBJECTIVES OF THE PROJECT :

Objectives as per PP	Actual achievement	Reasons for shortfall, if any
a. Restoring full flood freee environment in project area by construction of embankment & required water control structures	Flood-free environment created by 122.78 km embankment.	-
b.Reduction of drainage congestion and endorse post-monsoon excess surface water flow by excavation / Re-excavation of drainage channel/khals and erection of drainage structures	Drainage facilities created by 6Nos Regulators,16 Nos Surface Draiage outlets and drainage congestion removed by re-excavation of 66.59 km drainage channels.	More surface drainage oulets required.
c. Ensuring safety of flood control embankment from river-bank erosion, river scouring, wave section erosion and cyclones/tidal surges etc;	Safety of embankments ensured by 6.30 km bank revement works	-
D.Enhancement of irrigation management programme throughout erection of required water control structures, rubber dam, development of irrigation canals, irrigation inlets as required.	Irrigation facilities enhanced by all 130 Nos inlets,1 No rubber dam,re-excavation of khals and construction of regulators as well.	More inlets needed for more irragation facilities at Fulgazi upazilla.

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) (b) (c) (d)			As the project has been complted in June 2012, no such assessment has been done and annual output could not be ascertained.

02. Cost / Benefit :

Item	Estimated	Actual
(1) Benefit cost ratio of the project		
(i) Financial	1.27:1.00	Actual B/C ratio & IRR could not be ascertained as the project has been completed in June 2012
(ii) Economic	1.71:1.00	
(2) Internal Rate of Return		
(i) Financial	15.52%	
(ii) Economic	20.74%	

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

F. MONITORING AND AUDITING

0.1 Monitoring:

Name & designation of the inspecting official	Date of Inspection	Identified Problems	Recommendations
1	2	3	4
(a) **Ministry / Agency**: Md.Sahidur Rahman, ADG(Eastern) BWDB	23.04. 2011	-	-
(b) IMED : i.Mr.Dayananda Debnath Deputy Directir , IMED	13.05.2010 19-20.02.2008	No specific problems identified during inspection	i. Need required allocation for completion of works. ii. Field authority should take utmost efforts to ensure the implementation of the project within stipulated time by creating necessary work - plan.
ii.Mr.Kairul Alam Deputy Director, IMED	16.03.2011	No problems arisen during inspection	-
(c) Others:(Please specify) Md.Saidujjaman, Deputy chief, Planning Commision.	09.04.2011	-	-

0.2. Auditing during and after Implementation:

2.1. Internal Audit: No internal audits were done.

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.
1	2	3	4
2007-2008(26-31.03.09)	31.08.09	-	-
2008-2009(26-31.03.10)	20.06.10	-	-
2009-2010(17-26.05.11)	05.10.11	-	-
2010-2011 (28.03.12-08.04.12)	10.06.11	-	-

G. DESCRIPTIVE REPORT

1. General Observations/Remarks of the Project on :

1.1 Background

Flood management in riverine Bangladesh has been considered as a top priority for last few decades.The high water levels in the major rivers during monsoon cause floods & drainage congestion and over –bank spillage of their tributaries,which is often exacerbated by runoff from coincident high local rainfall. Sometimes,periodic severe flooding is also common covering 37 percent or more of the country in one out of every 10 years.However, an envirinment friendly mechanism is yet to be designed for enhancing integrated flood managent. The present water management plan will address the issue properly.In this backdrop, present project has been formulated aparted from action plan for comprehensive drainage management.

The project is scheduled commencement in FY:2004-2005 as per PCP approved by ECNEC as the project has also been included in ADP of 2004-2005 unbder sectoral block allocation .

The Project area is situted in Feni district. on the north-east proximity of Feni Town at the south eastern part of Bangladesh.The project area is surrounded by Tripura State of India and hilly terrain in the north-east and north-west.In south-east & south-west direction,Feni River and Kalidas-Pahalia River is flowing respectively. Most of the part of Parshuram & Fulgazi upazilla and part of Chagalnaiya & Feni Sader upazilla in Feni district lies in proposed area.The Project area has a natural north to south descending slope with a relatively steep gradient of 1:33.The area is approachable by road communication network round the year.The Feni Parshuram-Bellonia road,Chagalnaiya-Parshuram road and Feni-Chagainaya road is located in the north west,north east and southern direction respectively.

The project area is mainly dispersed in basin area of three rivers.Muhuri,Kahua and Selonia.These river system along with their tributaries and Charas on the east and west and the internal khals constitute natural drainage network of the area.The Muhuri,Selonia and the Charas originate from hills in India with major segments of their catchments lying beyond the country's border.Heavy monsoon rainfall across the border generates excessive flow in these rivers and charas . Flowing downstream, the resultant large water volume often causes flash floods of catastrophic dimension in the adjoining areas of the rivers and charas, particularly those of Muhuri and Kahua rivers.Such short-duration but disastrous flash floods inflict serious damage to standing crops, seedlings and devastate the areas infrastructures. Over the years, recurrence of such floods justifiably has created a strong feeling of insecurity among the people in the area .

Despite, neither any comprehensive water management programme was so far taken to reduce intensity of recurrence flash floods in the area nor any appropriate and/or comprehensive satudy was conducted on this complex hydro morphological regime to initiate an integrated water managment plan . However some piecemeal interventions were scatteredly taken to mitigate flash floods and removal of drainage congestion. For example,dwarf embankment was crected in1955-56 on both banks of Muhuri River that was later on enhanced to marginal dyke by resection. Besides,flood bypass named as Kahua River was excavated in 1965-66 to mitigate bflash flood havoc of hilly stream(from Muhuri river near Parshuram at length of 15.00 km onwards downstream conflence to Muhuri river again)In 1990-1991, 25.40Km length out of total 70.00 Km marginal dyke was enhanced as interior dyke under FFW programme.

Aforesaid intervention though became effective to mitigate flash floods over time in particular area its long sustainability were not fulfilled due to lack of integrated planning covering the whole area. The erected works seemed to be unsustainable due to inadequate setback distance, un-widened sections as well as partial completion of exiating dyke/marginal dykes that became vulnerable in the long run. Hence considering complex hydro-morphological condition in the area with recurrence of flash floods, it was felt rational and realistic to conduct comprehensive pre-investment study prior to formulation of integrated water management project.The matter was discussed in apex level and accordingly, feasibility study was conducted in 1996 by engagement of local consultants. Based on-study recommendations, present project has been formulated in commensuration with works already erected in order to provide comprehensive FCDI facilities in the area.

1.2 Justification/Adequacy

The project needs re-appropriation of cost among the existing items of the project within capital component.To provide additionl cost of some items i.e. regulator,outlet,irrigation inlet,protective work from the savings of the cost of embankment,this re-appropriation proposal has been made.It is to be mentioned here that the schedule of rates for the concern field circle hgave already been changed.Presently the components,proposed to be implemented during 2011-2012,need to be re-estimated based on currently effective schedule of rates.Cost of the components completed as on June,2011 are calculated in this RDPP as per actual value as well as the components proposed to be completed in the year 2011-2012 are calculatede as per current Schedule of Rates of Feni O&M Circle

1.3 Objectives

a) To restore full flood freee environment in project area by construction of embankment & required water control structures;

b) To remove of drainage congestion and endorse post-monsoon excess surface water flow by excavation/ Re-excavation of drainage channel/khals and erection of drainage structures

c) To ensure safety of flood control embankment from river-bank erosion, river scouring, wave section erosion and cyclones/tidal surges etc;

d) Enhancement of irrigation management programme throughout erection of required water control structures, rubber dam, development of irrigation canals, irrigation inlets as required.

1.4 Project revision with reasons

The project was needed revision mainly for changes in prices of land to be acquisitioned and changes in the schedule of rates of the construction works.The original PP of the project costing total Tk.15060.02 lakh was approved by the competent authority on 28.04.2005.The proposed implementation period of the project was from 2004-05 to 2009-10.As the project was approved on 28-04-2005 implementation of the project could not be started during 2004-2005. Hence no physical/financial progress was achieved in the 1st year.The implemention of the project started during 2005-06.Afterwards an inter-ministerial committee was formed to review land & other cost.As per recommendation of the inter-ministerial committee ,the project was needed to be revised and the project period was needed to be extended up to 2010-2011.It is also to be mentioned here that the schedule of rates for the concern field circle was then changed. The revised total estimated cost stood at Tk 13929.39 lakh which was 7.51%(Tk 1130.63 lakh) lower than that of the approved original PP(Tk 15060.20 lakh) The 1st revised DPP was finally approved by the competent authority after discussion in DPEC meeting bheld on 19.04.2009

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

The hydrology of the proposed project area is mainly government by the rivers, Muhuri,Kahua and Selonia which originate in Tripur hills and traverse through Indian territory before entering into Bangladesh.There are several chharas within the project area originating from the hills of Tripura state of India.

T aman is predominantly the main crop in the project area followed by Boro.Pre-monsoon flash flood and monsoon flood enters into the vast cultivated land along the left bank of Selonia river breaching the existing embankment on the Muhuri and the Kahua.Yield of T Aman is low and suffers from drought during the maturing stage.So supplemental irrigation during September –October will enhance the yield of Aman crop.The Boro crops of the project area needs irrigation and so is the case with wheat and other cereal crop.Some of the identified khals,chharas are required to be re-excavated to facilitate the post monsoon drainage.

In this context,the severity of flood has been considered as a major reason for the damage or low yield of Aman crops coupled with lack of irrigation water for Boro-crops in the project area.**The inevilibility of a comprhensive FCDI measures has grown to as a strong social demand by the vulnerable people.**

So, It seemed rational to take up the project in respect of concept, design, location and timing. **The physical work of the project was implemented based on approved design in appropriate location.**

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

- **Project Identification:**

  The project was identified at field level by Feni O & M Division, BWDB, Feni

- **Project Preparation**

  The DPP was prepared on the basis of approved PCP for finalization by DPEC of Ministry of Water Resources in compliance with one of the important decision of aforesaid ECNEC meeting.

♦ **Appraisal** ♦ **Credit Negotiation** ♦ **Credit Agreement** ♦ **Credit Effectiveness** ♦ **Loan Disbursement** ♦ **Loan Conditionalities**	Not applicable

- **Project Approval.**

  The project was approved on 28.04.2005

- **Others (if any).**

4. <u>Analysis of the Post-Implementation situation and result of the project</u> :

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

Usage of created facilities e.g completed irrigation structures, regulators etc will be facilitiated by the local training,stakeholders participation, water user groups activities and workshops.

4.3 O & M programme of the project.

O & M programme will be arranged from O & M budget of BWDB

4.4 Impact of the project -

4.4.1 Direct

Valuable lands of Poshuram and Fulgazi upazillas,targeted structures,Govt and private properties have been saved due to flood-embankment,bank-revetment works etc. For instance,**Fulgazi bazar** has been saved by protective works,embankments.Besides these, Fulgazi-Porshuram Highway, 45 km internal pucca roads, Upazilla offices and its infrastructures etc have been saved by flood embankment and bank-revetment works.Mosques,Madras,Schools of several unions of Chhagolnaiyya ,Fulgazi and Porshuram also saved from devastation of Flash flood .

The valuable properties and infrastures of the project area benefited or will be benefited are tabulated as follows:-

Upazilla	Type of work	Union/Location	Benifited/saved infrastructures from river erosion, inundation,drainage congesion
Porshuram	Protective work and Flood embankment	Belonia	Mozumder B.O.P Camp,Porsuram to Belonia main road
		Bourkhuma	Bourkhuma Govt.Primary School,Bourkhuma Mosque
		Purba Alaka	Home steadsh,Porsuram bazar,Porsuram Degree College,Aloka Govt.Primary School,
		Pashim Aloka	Kalibazar,Kalibazar Madrasha,Kalibazar Mosque,
		Noapur	Noapur Primary School,Noapur Mosque
		Donikunda	Danikunda bazar,Mosque,Health Complex
		Durgapur	Durgapur Govt.Primary School,Madrasa,Fish project,Sochib bari,Buildings etc
Fulgazi	Protective work and Flood embankment	Doulotpur Sahapara	Sahapara Govt.Primary School,Mosque,Temple,homestead
Porshuram	Protective work and Flood embankment	Sahebnogor	Sahebnogor Govt.Primary School,Madrasa,Mosque,Poschim sahebnogor LGED pucca road
		Kunderpaar	Homesteads
		Jongolghona	Jongolghona Govt.Primary School, pucca road
		Saldor	Rajeshpur bazar,Rajespur High school,madrasa,Saldor bazar,Dhpnikunda to Rajespur bazar LGED road
Fulgazi	Protective work and Flood embankment	Derpara	Derpara Jhame Mosque,Nillakhi High school
		Sreepur	Sreepur mosque,Cyclone center,Primary school,Fulgazi Thana,homestead
		Bijoypur	Fulgazi pilot high school,Jubo Unnoyon office,
		Boroiya	Boroiya Govt.Primary School,Mushirhat bazar etc
		Jogotpur	Jogotpur Jamey Mosjid,Govt primary school,Munshirhaat to Aamjadnogor pucca sorok
Porshuram	Regulator	Left bank of Selonia river	Drainage congestion removed from Mirzanogor,Kalikapur,Jhaotola

Upazilla	Type of work	Union/Location	Benifited/saved infrastructures from river erosion, inundation,drainage congesion
Porshuram	Surface drainage outlet	Left bank of Selonia river	Drainage congestion removed from Saldor,Bondhua,Anondopur,Nilakkhi
Porshuram	Irrigation inlet	Left bank of Selonia river	Irrigation facilities created for Jongholghona,Saldor,Anondopur,Gosaipur,Sutarbazar,Bondhu
Fulgazi	Regulator	Left bank of Kahua river	Drainage congestion removed from North-South Ghutuma,Munshir khil,Baghmara,Ketraam maath
	Regulator	Left bank of Kahua river	Drainage congestion remover from Boxmahmud,Khajuria
	Surface drainage outlet & Regulator	Left bank of Kahua river	Drainage congestion removed from Boxmahmud, Bashpodua
Chhagolnaiya	Protective work and Flood embankment	Pathannogor	Haripur school,mosques,bazar,homesteads etc.
Chhagolnaiya	Regulator	Gothia Sonapur	Drainage congestion removed.
Feni Sadar	Flood embankment	Kajir baag	Kajirbaag school,college,madras,homesteads etc

4.4.2 Indirect

Flood embankbanks have evolved new roads and communication facilities which are very helpful for the community people of the project area.

Due to successful completion of protective works, homesteads ,new factories and market places are going to be expanded creating new economic activites.

Additional 40815 metric tonnes (approx.) crops will be produced which market price is equivalent to 7346.70 lakh taka

4.5 Transfer of Technology and Institutional Building through the project

During implementation of various steps of sluices,rubber dam,protective works by CC blocks and geo-bags, local labor and people of Feni district were employed by the contractors throughout the whole project period.As such local people and labor became familier with those works .

4.6 Employment generation through the project.

More than 169 lakh Man-days were created for skilled and unskilled labors during implentation of the project

4.7 Possibility of Self employment

By these FCDI projects, unemployed people will become self-employed by using irrigation facilities e.g khals,inlets,rubber dam for cultivation which was previously uncultivable .About 0.60 lakh farmers will get opportunities to be self-employed.

4.8 Possibility of women-employment opportunity

Due to safety of local market places ,sale of handicrafts will be promoted whereby women employment oppurtunities will be created.

4.9 Women's participation in development

Women participation will be promoted in future developments in the project region due to increased NGO activities in the protected area.

4.10 Probable Impact on Socio-Economic activity.

Due to safety of bankline stability, agriculture and fisheries development will be promoted.As future economic benefits are ensured, it will contribute to poverty alleviation.Social & economic conditions of destitue families living along the river bank will be improved.

4.11 Impact on environment

Completed protective will not create any adverse effect on environment like land, water, air & bio-diversity etc.

4.12 Sustainability of the project

Method of protective works and other structures followed in this project has already been proved sustainable in other similar completed completed projects.As such this project will be sustainable as targeted

4.13 Contribution to poverty alleviation/reduction

Generation of employment of more than 169 lakh Man-days for skilled & unskilled labors has already contributed to poverty alleviation in the project region.Due to increased economic activities in the protected region,poverty alleviation will be continued in the course of time

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

5.1	**Project Management**	**5.12**	**Project aid disbursement and re-imbursment**
5.2	**Project Director**		
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 clamity**	**5.19**	**Approval**
5.10	**Project financing, allocation and release.**	**5.20**	**Others.**
5.11	**Design formulation/approval**		

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

Muhuri,Kahua and Selonia rivers are flashy in nature.As the cross section of the three rivers are limited to carry huge flood water,due to flash floods from neighbouring India and excessive raining bank line erosion aggravates along the both banks of the three rivers.To protect Poshuram,Fulgazi and Chagolnaiya Upazilla's homesteads,stuctures etc from the erosion of bank line on the both banks of the three rivers,the said project was taken up and the implementation work started in 2005-2006.The project was duly completed within the stipulated time in June 2012.Due to completion of protective works and embankments of the project, bank line erosion have been mitigated in those upazillas of Feni district. Government and private properties, infrastructures, market places,roads,schools and homesteads were saved from river bank damages. More protective works, oulets and inlets of the same nature will be encouraged for the success of the project

(Md.Rafique Ullah)
Executive Engineer
Feni O & M Division
BWDB, Feni

(Jashim Uddin Bhuiyan)
Project Director
Muhuri Kahua Flood Control
Drainage & Irrigation Proect
&
Superintendent Engineer
Feni O&M Circle, BWDB, Feni.

Date : .....

Signature and seal of the Project Director/Manager

7. **Remarks/Comments of Agency Head**

Date : .....

Signature and Seal

কে.এ.এম. শহিদুজ্জামান
মহাপরিচালক
বাপাউবো, ঢাকা ।

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

Date :

Signature and Seal