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

PROJECT COMPLETION REPORT : IMED 04/2003 (Revised)

A. PROJECT DESCRIPTION :

01. **Name of the Project** : Integrated Planning for Sustainable Water Management (IPSWAM)
 02. **Administrative Ministry/Division** : Ministry of Water Resources
 03. **Executing Agency** : Bangladesh Water Development Board (BWDB)
 04. **Location of the Project** : South West and Southern zones of Bangladesh (Khulna & Barisal)

District	Upazila
Khulna	Paikgachha, Batiaghata & Dumuria
Patuakhali	Patuakhali Sadar & Golachipa
Barguna	Amtoli

05. **Objective of the Project** :

To strengthen the capacity of water sector organizations towards establishment of a sustainable water management, assuming their roles & responsibility as specified in the NWPo-1999 & GPWM-2000 through participatory approach.

06. **Estimated Cost** :

(In lakh Taka)

	Original	Latest Revised
(a) Total	8706.25	11380.34
(b) Taka	2525.00	2138.92
(c) Foreign Currency	-	-
(d) Project Aid	6181.25	9241.42
(e) RPA	3781.25	3184.12

07. **Date of Approval** :

PCP	PP
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- (a) Original : - 2000
 (b) Latest Revised : - Dec, 2010

08. **Implementation Period** :

	Date of Commencement	Date of Completion
(a) Original	July, 1999	June, 2004
(b) Latest Revised	July, 1999	June, 2011
(c) Actual	November, 2003	June, 2011

09. Financing Arrangement (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 Effective -ness	Date of Closing	
						Original	Revised
1	2	3	4	5	6	7	8
Government of the Netherlands	EUR 11,360,000		Grant			June, 2004	June, 2011

b) GOB:

(In lakh Taka)

Total amount	Loan	Grant	Cash Foreign Exchange
1	2	3	4
2,138.92	-	-	2,138.92

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
Government of the Netherlands		924.142		864.837		59.305

9.3 Re-imbursible Project Aid (RPA):

(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
3184.12	-	2878.04	2878.04	2353.23 (Nov'10)	RPA matter requires more time to be settled

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
1999-2004	1999-2011	2003-2011	60.00%	

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	8706.25	11380.34	10663.54	22.48%	
TAKA	2525.00	2138.92	2015.16	-20.19%	
PA	6181.25	9241.42	8648.37	39.91%	

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)	Existing manpower of the implementing agency were deployed during execution of the project.					
Staff(s)						
Total :						

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

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					
1. Short Course (Netherlands)	17		17		Year 2005
2. Regional Study Tour					
• Philippines	27		9		Year 2006
• Vietnam			4		Year 2009 *One group was cancelled in 2008
b. Local					
Different courses at Central, Zonal and Polder Level			41,068		Year 2004-2008
			15,156		Year 2008-2011

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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 and investigation	Taka	18.36	-	13.07	1 item	Planned task is done with the money spent
Fuel and Lubricants for Planning III	Taka	4.04	-	2.39	1 item	Planned task is done with the money spent
Consultants(Foreign)	mm	2546.34	154	2435.59	149	Arranged by EKN
Consultants(Local)	mm	722.01	450	719.9	450	
Sopporing Manpower	mm	175.16	911	174.54	872	
Coordinator/Consultant at field level	mm	715.50	1,017	712.53	1015	Arranged by EKN
Supporting Manpower at field level	mm	72.37	662	71.73	662	
Reporting	item	42.49	-	40.62	1 item	Planned task is done with the money spent
Training and Workshop	item	596.80	-	557.08	1 item	Planned task is done with the money spent
Feasibility and Sub-regional study cost	item	362.30	-	359.00	1 item	Planned task is done with the money spent
Office maint. Cost from TA/Operation cost	item	507.77	-	422.68	1 item	Planned task is done with the money spent
Cost of Review Mission from TA	item	164.64	8	125.74	5	Arranged by EKN
Vehicle and Office equipment maintenance	Taka	5.85	-	5.68	1 item	Planned task is done with the money spent
Repair of Drainage Sluice (with gates)	nos	487.86	56	465.32	56	
Repair of Flushing Sluice (with gates)	nos	7.13	6	7.13	6	
Repair of Surface Drainage sluice	nos	12.65	11	12.65	11	
Repair of Irrigation Inlets	nos	16.31	40	10.64	40	
Resectioning of Embankmentt/Repair	Km	844.55	175.09	844.19	175.09	
Emergency maintenance and Repair	Km	20.00	-	20.00	1 item	Planned task is done with the money spent
Overhead cost	1 item	203.16	-	136.75	1 item	
SIDOR & AILA						
Resectioning of Embankmentt/Repair	Km	912.62	138.45	813.69	132.84	
Sub-T		8437.91		7950.93		
b. Capital Component						
Machinery & equipment	set	1.10	2	1.10	2	
Furniture and others	1 item	4.97	1	4.97	1	
Speed boat Engine	nos	7.16	2	7.16	2	
Transport vehicles/Vehicles etc from TA	nos	85.96	18	85.96	18	

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
Equipment purchase from TA	nos	71.93	45	70.93	45	
Land aquisition	Ha	79.24	10	79.22	10	
Drainage/Flushing sluice	nos	1076.93	16	1048.30	16	
Re-excavation of canals	Km	569.95	274.75	567.58	274.75	
Irrigation inlet	nos	468.40	201	466.86	201	
Drainage outlet	nos	172.53	19	172.53	19	
Construction of Retired Embankment	Km	111.56	7.93	111.4	7.93	
Excavation/Re-excavation of Pond	nos	1.58	2	1.58	2	
Emergency Protective Work	Km	38.23	1.32	38.21	1.32	
Const. of Minor WM str/Pipe supply	m	29.78	3,547	27.37	3,547	
Duties and Taxes custom Duties & VAT	1 item	15.54	-	15.54	1 item	
SIDOR & AILA						
Re-excavation of Khal	Km	188.07	69.90	0.00	0	Work was dropped due to delayed fund but planned to be considered later under O&M budget.
Irrigation Inlet	nos	7.50	1	4.56	1	
Drainage outlet	nos	12.00	1	9.34	1	
Sub-T		2942.43		2712.61		
Total		11380.34		10663.54		

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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
1. Syedur Rahman Director, Planning III, BWDB 10,700-300×8-13100	Yes	-	-	14-08-1997	31-01-2000	
2. Md. Nurul Ameen Talukder Director, Planning III, BWDB 10,700-300×8-13100	Yes	-	-	31-01-2000	12-04-2000	
3. Kazi Ali Tareq Director, Planning III, BWDB 10,700-300×8-13100	Yes	-	-	12-04-2000	11-01-2001	
4. Md. Musharraf Hussain Director, Planning III, BWDB 10,700-300×8-13100	Yes	-	Yes	05-02-2001	22-03-2004	
5. A. H. M. Kausher Director, Planning III, BWDB 10,700-300×8-13,100 and 15,00- 600×8-19,800	Yes	-	Yes	22-03-2004	04-09-2008	
6. A. T. M. Habibullah Director, Planning III, BWDB 15,000-600×8-19,800 and 25,750-1000×8-33,750	Yes	-	Yes	04-09-2008	18-05-2010	
7. Md. Abdul Latif Miah Director, Planning III, BWDB 25,750-1000×8-33,750	Yes	-	Yes	17-05-2010	11-04-2011	
8. Md. Masud Ahmed Director, Planning III, BWDB 25,750-1000×8-33,750	Yes	-	Yes	11-04-2011	Till date	

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						
Jeep	2	23-03-2004				
Microbus	1	23-03-2004				
Minibus						
Bus						
Pick-up						
Truck						
Motor Cycle	10	Oct'05- Dec'07			1(one) on 03-05-2011	By fire at workshop
By-cycle	9	Feb'04- Mar'06			2(two) on 24-05-2006 & 08-05-2008	Stolen
Speed Boat (Engine)	2	2		-		

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
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
Not such procurement done						

08.2 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 :	154	152	149	
b) Local :	1467	1111	1465	Increased budget neutral, using funds from other budget lines

09. Construction/Erection/Installation Tools & Equipment:

Description of items	Quantity (as per PP)	Quantity procured with date	Transferred to O & M with date	Disposed off as per rule with date	Balance	Remarks
1	2	3	4	5	6	7
Not Applicable						

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
Upto June 2000	0.9	0.9	0.0	-	-	-	-	-
2000-01	200.0	100.0	100.0	-	-	-	-	-
2001-02	1269.85	865.35	404.5	-	-	-	-	-
2002-03	3220.5	2315.0	905.5	-	-	-	-	-
2003-04	4015.0	3025.0	990.0	-	-	-	-	-
2004-05	-	-	-	-	-	-	-	-
Upto June 2006	-	-	-	-	3733.06	435.3	3297.76	-
2006-07	-	-	-	-	2664.08	432.18	2231.9	-
2007-08	-	-	-	-	2871.19	1087.3	1783.89	-
2008-09	-	-	-	-	2956.64	738.17	2218.47	20
2009-10	-	-	-	-	603.35	-	603.35	-
2010-11	-	-	-	-	1489.86	367.58	1122.28	18.855

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
Upto June 2002	-	-	-	-	-	10.98	10.98	-	0.13
2002-03	28.0	18.0	10	0.256	18.0	12.92	12.92	-	0.118
2003-04	460.0	60.0	400.0	5.28	60.0	688.42	58.52	629.9	7.9
2004-05	865.0	165.0	700.0	9.93	165.0	1322.92	164.95	1157.97	15.19
2005-06	1542.0	232.0	1310.0	17.71	232.0	1426.55	190.4	1236.15	16.8
2006-07	1950.0	250.0	1700.0	22.4	250.0	1772.09	194.99	1577.10	19.62
2007-08	2630.0	820.0	1810.0	28	820.0	2525.86	725.18	1800.68	24
2008-09	1760.0	485.0	1275.0	10.5	485.0	1427.12	294.74	1132.38	6.5
2009-10	858.0	53.0	805.0	3	53.0	577.09	47.94	529.15	2.2
2010-11	1356.0	360.0	996.0	15	352.0	899.67	314.63	585.04	12
Total						106,63.54	2015.16	8648.37	92%

D. ACHIEVEMENT OF OBJECTIVES OF THE PROJECT:

Objectives as per PP	Actual achievement	Reasons for shortfall, if any
(a) To strengthen capacity of water sector organization including local level WMO's, different offices of BWDB and limited extent LGI as per in NWPo & GPWM.	Capacity building achieved through the training and knowledge sharing of about 55,000 stockholders. Substantially more BWDB staff trained than envisaged.	Institutional change processes need a long term time horizon, further work is necessary to realize a critical mass of change.
(b) To rehabilitate structures through multi-disciplinary participatory planning.	Plan finalized and executed with the association of WMO's participation.	-
(c) To formulate participatory O&M agreement.	Formulated and introduced with WMO's in Polders	Time to be given to assess the actual achievement.
(d) To develop Sustainable Environmental Management Plan (SEMP)	Developed and disseminated to follow within and beyond BWDB.	Effective results require long term practice.
(e) To rehabilitate SIDR & AILA damage in IPSWAM Polders.	Implemented during the year 2008-2011	-

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) Paddy Production	tonns	Incremental 45524/yr	As per BARD study (2009) conducted in two polders average yield has increased by 27% with an increased cropping intensity by 15%.
(b) Employment Opportunity	m-d	Incremental 2771202/yr	Study identified an increase in average income by 33% in Khuna area and 22% in Patuakhali area.
(c) Quality of life	Soft benefit non-monetary	-	Improved water management unlocks a potential in the subprojects that water users have started to exploit, BARD study (2009) shows extreme poverty was substantially reduced from 45% to 16%.
(d) Empowerment of Woman	Soft benefit non-monetary	-	All WMO groups have women's representation and active participation. They are now enthusiastic in committing for more work and earning more. Their roles and contributions to the process are raising their social position and receiving positive appreciation from the community.
(e) Environmental Enhancement	Soft benefit non-monetary	-	Remarkable positive changes in case of environmental indicators such as land productivity, fish availability, tree plantation, number of livestock, poultry and human disease. Out migrated households started returning home due to generation of work opportunities in the IPSWAM polder areas.

02. Cost / Benefit:

Item	Estimated	Actual
(1) Benefit cost ratio of the project		Yet to be determined
(i) Financial	1 :1	
(ii) Economic	1.29 :1.00	
(2) Internal Rate of Return		
(i) Financial	12%	
(ii) Economic	15%	

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

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:	-	-	-
(b) IMED : Different officials of IMED Inspected Place: Khulna, Patuakhali and Borguna	27-30 July, 2007	- Improper estimates - Delay in supply of gates - Maintenance problem of dug pond - Frequent posting of Project Director	* Time extension to be approved * Necessary action to be taken for swift supply and installation of gates *Frequent posting of PD to be avoided
Rabindra Barman, Director Inspected Place: Khulna (Polder 30)	12/08/2010	* Approval delay of Special Revision * Imperfect desing/construction of drainage sluice guide wall *Improper porcupine design	* Prompt step necessary in approving special revised DPP to avoid Time/Cost Overrun and smooth implementation. * Action needs to revise design of drainage sluice and porcupine
(c) Others: (Please specify)	-	-	-

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
No internal audit was done.			

2.2. External Audit: (By FAPAD)

Audit period	Date of submission of Audit Report	Major findings/ objections		Whether objections resolved or not.
1	2	3		4
		Para	Title	
2003-04	13.08.2005	2.01	Irregular expenditure of Tk.15,53,825 against CD/VAT regarding procurement which is beyond the provision of PP.	Resolved
		2.02	Excess overhead cost of Tk. 28,55,800 booked irregularly.	Resolved
		2.03	Expenditure of Tk. 32990 lakh incurred over ADP allocation	Resolved
2004-05	28.05.2006	2.01	Sale proceeds of tender schedule and accrued Bank interest amounting to Tk.862763/- not deposited into Govt. account.	Resolved
		2.02	Supporting documents for Tk.63,00,000/- against (GOB) overhead expenditure not found available to audit for verification.	Resolved
		2.03	Purchase of Motor Cycle and Speed Boat engine valued Tk.621500/- made without tender.	Not Resolved**
		2.04	Tk.273.57 lakh not reimbursed by the Donor agency.	Resolved
		2.05	Liquidate damage of Tk. 131526/- not realized from contractor due to non-completion of works in time.	Not Resolved

** 'Not Resolved' objections are under discussion/negotiation to be 'Resolved' as early as possible. 11

Audit period	Date of submission of Audit Report	Major findings/ objections		Whether objections resolved or not.
1	2	3		4
		Para	Title	
		2.06	Adjustment bills/Vouchers for Tk.. 258613/- made available to audit for verification.	Not Resolved
		2.07	Expenditure of Tk. 484.40 lakh was incurred beyond ADP allocation.	Resolved
2005-06	01.11.2006	2.01	Irregular payment of Tk.9215150/- was made against the undelivered improved gates of sluices.	Not Resolved
		2.02	Irregular claim of reimbursement for Tk.2924184/- against the expenditure of GOB Fund.	Resolved
		2.03	Liquidate damage of Tk. 755036/- not realized from contractor due to non-completion of works in time.	Resolved
		2.04	Irregular payment of Tk.614126/- made to LCS for re-sectioning of khal and re-excavation of embankment.	Resolved
		2.05	Deposited VAT and IT. Amounting of Tk. 14,02,773.00 not documented with CTR.	Not Resolved
2006-07	29.10.2007	2.01	Payment made for Tk.5862905.40 without received materials.	Not Resolved
		2.02	Expenditure made for Tk.42785254/- beyond PP provision.	Resolved
		2.03	Liquidated for Tk. 8,69,768.45 not realized from Contractor due to non-completion of work in time.	Not Resolved
		2.04	Loss TK.1,40,047.20 for excess expenditure by increasing Schedule rate variation.	Not Resolved
		2.05	Irregular payment of Tk.6630254/- made to LCS for re-sectioning of khal and re-excavation of embankment.	Resolved
		2.06	Tk.177.92 lakh was not released due to poor management control.	Resolved
		2.07	Treasury Challans for Tk.16259697/- not verified by concerned district Accounts	Resolved

Audit period	Date of submission of Audit Report	Major findings/ objections		Whether objections resolved or not.
1	2	3		4
		Para	Title	
			Officer.	
2007-08	12.10.2008	2.01	Loss of Tk. 70,58,223.00 due of allowing 10% contractors profit to the LCS group.	Resolved
		2.02	Excess payment made Tk. 513001.07 only due to by allowing excess measurement.	Not Resolved
		2.03	Bank Interest of Tk. 29,40,760.00 not deposited into Govt. Account.	Resolved
		2.04	Execution of work valued Tk. 4,60,496.00 only without tendering procedure.	Not Resolved
		2.05	Loss of Tk. 98,059/- due to excess payment made to the contractor for supply of steel sheet pile.	Not Resolved
		2.06	Advance for Tk.7450000/- only paid to Deputy Commissioner (D.C) for acquisition of land but remained unadjusted.	Not Resolved
		2.07	Loss of Government revenue of Tk. 66,800/- due to not deposition the sale proceeds of tender schedule into Govt. Account.	Resolved
2008-09	01.06.2010	2.01	Reimbursement of Tk 2300.00 lakh as RPA through GOB fund was not ensured by proper documents.	Not Resolved
		2.02	Excess payment was made in favor of ME by enhancing schedule of rates.	Not Resolved
		2.03	Irregular payment due to allowing in excess of measurement.	Not Resolved
		2.04	Bank interest was not deposited in to Govt. account.	Resolved
		2.05	Expenditure incurred beyond budget allocation.	Resolved
		2.06	Work executed in absence of local supervisory committee.	Resolved
2009-10	11.11.2010	2.01	Excess payment made Tk.832306.74 due to allowing in excess of measurement.	Not Resolved

** 'Not Resolved' objections are under discussion/negotiation to be 'Resolved' as early as possible.



G. DESCRIPTIVE REPORT

1. General Observations/Remarks of the Project on:

1.1 Background

IPSWAM project aims to support the BWDB to find an operational approach to introduce practical and sustainable participatory and integrated water management in line with the Guidelines for Participatory Water Management in the subprojects for which it is responsible. To achieve this purpose IPSWAM has followed a two track intervention approach:

- Piloting and demonstrating a practical approach in nine polders in the Southwest and South-central zones of the BWDB.
- Institutional strengthening of BWDB offices concerned and dissemination of integrated and participatory water management practices throughout the BWDB.

The project started in November 2003 for a period of five years. Due to cyclone damage it was extended twice and terminated in June 2011.

1.2 Justification/Adequacy

The IPSWAM approach has been adopted the concept of partnership in practice, which leads to develop sustainable participatory water management in the polders. Landless Contracting Society (LCS) would involve during re-sectioning of embankment and khal re-excavation. 100% earthwork has been awarded to the LCS with a view to raising their income. It impacts on poverty reduction strategy of the Government of Bangladesh.

The project has also contributed toward capacity building for the LSC and WMO members. About 38680 participants have got training in different subject. So they use the skills in the practice of sustainable water management.

1.3 Objectives

The objectives of the project are given below:

- To strengthen the capacity of water sector organizations, including local level WMOs, the different offices of the BWDB (headquarters and regional/local level) and to limited extent local government institutions, to responsibly assume their roles as specified in the NWPo and the GPWM;
- To rehabilitate the structures through multidisciplinary-participatory planning;
- To formulate participatory operation and maintenance agreement;
- To develop Sustainable Environmental Management Plan (SEMP)
- To rehabilitate *SIDR* and *AILA* damage in IPSWAM polders.

1.4 Project revision with reasons

The project document that was finally approved was formulated in 2001. Implementation started in November 2003 for a period of five years (until November 2008). The total budget of the project is composed of a contribution of the Government of Netherlands (€11.36 million) and a contribution of the Government of Bangladesh of 2,525 lakh Taka.

In November 2007 cyclone Sidr caused extensive damage to some of the subprojects. Repairs were estimated to require approx Tk. 170 million. BWDB could not use its maintenance funds for the repair of the damage caused by Sidr, because the IPSWAM polders were not yet declared "completed". It was decided to extend the project period until the end of June 2010 and EKN made available an additional Tk. 63 million for repairing the damage caused by Sidr. In May 2009 another cyclone (Aila) caused damage to some of the subprojects included in the project. A second extension (one year to June 2011, budget neutral) was agreed to allow the project to repair the damage done.

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

The Government of the Netherlands (GoN) has a considerable history of support to, and involvement with, water management projects in Bangladesh; for the past two decades it has been the most important bilateral supporter of the Bangladesh Water Development Board (BWDB), with whom it has forged an enduring partnership. Initial engineering projects have evolved and broadened into programmes which include a specific focus on operation and maintenance, stakeholder participation, local level water management, and multi-disciplinary project planning and appraisal.

Starting in the early 1990s lessons learned in the Bangladesh water sector from earlier and continuing projects have led to a gradual policy change reflecting these concerns, and forming a current policy framework articulated in a number of interrelated documents, most notably the:

- National Water Policy (NWPo, 1999);
- Guidelines for Participatory Water Management (GPWM, 2000);
- National Water Management Plan (NWMP).

In particular, the National Water Policy is 'bringing order and discipline in the exploration, management and use of water resources in Bangladesh.' As part of this process, „BWDB Act 2000“ was conceived and enacted.

In this policy context the IPSWAM programme has been conceived, since the new policies, guidelines and plans have ensured that the importance of operation and maintenance, stakeholder participation and multi-disciplinary planning have been widely accepted. Through programmes such as IPSWAM and the much larger Water Management Improvement Project (WMIP), the BWDB is currently undertaking a 'globalisation' of Participatory Water Management.

The IPSWAM programme is drawing systematically on the experiences of past projects and its major task is to be a *pathfinder project* to *strengthen institutional capacity* in terms of local water management organisations (WMOs) as well as relevant local government institutions and national bodies such as the Bangladesh Water Development Board.

In that context the programme is encouraging and developing a *decentralised approach* which is *fully integrated in the BWDB*, making full use of zonal offices for *multi-disciplinary, participatory planning for long-term operation and maintenance, in a regional and cross-sector context*.

The IPSWAM programme is contributing to the efforts of the Government of Bangladesh (GoB) to improve the performance of the country's Water Management Sector at three levels:

- It provides assistance to the GoB in elaborating the institutional and regulatory framework for the decentralisation of water management responsibilities.
- It enhances institutional capabilities, especially of the BWDB.
- It assists in the identification, design and implementation of rehabilitation measures in sub-projects.

This both enhances the planning capacity of BWDB and also prepares the BWDB to implement effectively other projects aimed at putting the NWMP into practice, notably the Water Management Improvement Project (WMIP).

Selection of Sub-Projects

As part of project preparation, the following criteria were suggested by the BWDB:

- Proposed sub-projects should be forwarded by Local Government Institutions or existing Water Management Organizations.
- More than 40% of agricultural land in the project area is owned and/or cultivated by landless share croppers or small or marginal farmers.
- The areas should have relatively simple and well-defined problems, with particular reference to environment, fisheries and river morphology.
- Travel time to and within the area should be reasonable.
- There should be a manageable number of Unions/Upazilas/Districts within the project area.
- There should be no local conflicts (shrimp and salt cultivation) and there should be constructive social institutions and leaders.

- There should be a committed attitude on the part of BWDB staff, NGOs and other local organizations in favour of developing the proposed sub-project.
- There should be a good prospect for the sub-project to have significant positive impacts.

Following these criteria a process was outlined for developing participatory water management sub-projects. Final selection of sub-projects was made by the Chief, Planning BWDB. Sub-projects undertaken by IPSWAM were in the small/medium categories and the highest level of water management organization within each polder was conceived as a Water Management Association.

IPSWAM started its activity by making use of the results of existing analyses and studies already carried out by BWDB for Polders 22, 43/2A and 43/2E in Khulna and Patuakhali area. Initially, these polders constitute the ecological and economic planning units for the program. Later more 6 polders were selected adjacent to these polders with similar characteristics (Location Map of IPSWAM Polders attached).

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

- ◆ **Project Identification**
- ◆ **Project Preparation**
- ◆ **Appraisal**
- ◆ **Credit Negotiation**
- ◆ **Credit Agreement**
- ◆ **Credit Effectiveness**
- ◆ **Loan Disbursement**
N/A
- ◆ **Loan Conditionalities**
N/A
- ◆ **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.

One initiative of the project was to ensure project beneficiaries to have proper knowledge about the target/objectives of the project. The same was attained by conducting awareness programme through various training at every tier of them. This has led to grow ownership among the beneficiaries.

4.2 Programme for use of created-facilities of the project

N/A

4.3 O & M programme of the project.

In the agreement between the Water Management Association (WMA) in Polders and BWDB the responsibility for O&M is described as follows:

- Responsibility of the WMA: operation of infrastructures and regular maintenance.
- Responsibility of BWDB: periodic maintenance and emergency maintenance.

The WMOs are assuming their responsibilities in operation and maintenance (O&M) as defined in the MoU and GPWM. They regularly inspect the condition of infrastructures, repairing holes and breaches in embankment, keeping canals clear and doing small maintenance of gates.

The estimated cost of the routine O&M activities carried out by WMOs in IPSWAM polders until December 2009 is Tk. 5,100,000. The contribution of WMOs in O&M is mainly in the form of voluntary labour, though they do occasionally collect cash contributions for contracting LCS and for procurement of small maintenance items (grease, paint).

4.4 Impact of the project -

4.4.1 Direct

In the BARD study conducted during 2009, the main factor mentioned for the positive impacts observed is the improved water management. The Evaluation mission visited polders, collected information from relevant reports, through field observations, group discussions with beneficiaries and with Upazila staff. Discussions were held with local beneficiaries to see if the information of the BARD study could be validated.

It was reported that IPSWAM interventions have facilitated increased cropping intensity and yield levels of crops in Polders 22 and 30. From discussions with farmers in polder-22 and 30, the present T. aman crop was found to be the major added benefit as a result of improved drainage. They also reported to grow maize, sunflower and sesame in rabi season with the limited water for irrigation from nearby canals by retaining water with the help of IPSWAM structures which was not possible without project.

The areas visited are mainly paddy growing. Due to salinity, paddy could not be grown on most of the land in both polders before the IPSWAM interventions. After rehabilitation of the FCD systems, T aman paddy (HYV) occupied the well-drained land which constitutes around 20% of polder net area for cultivation. T. aman paddy (LIV) occupied the remaining 80% of the net area where drainage is impeded because LIV aman can withstand shallow depth of water on land. Following T. aman (HYV/LIV), Rabi crops (vegetables, pulse, gourd, sesame, sunflower and maize) are grown. But no Rabi crop is possible outside the polder because of salinity. The diversity of the cropping pattern has increased with the project. Homestead gardening with vegetables, spices and fruits round the year has also developed.

The Upazila Agricultural Officer estimates that the intensity of cropping has increased from 170% to 194% in polder 30 and to 198% in polder 22. The change is noteworthy because in areas outside the project polders, this official recons there is no increase as such and paddy cultivation is gradually decreasing due to intrusion of salinity, being replaced by brackish water shrimp cultivation. HYV paddy yield is reported to be about 3.5 ton/ha with project while it is less than 2 ton/ha without project. Yield of LIV is about 15% to 20% lower than HYV yield levels. Although lower in yield, LIV is better in quality than HYV aman. So, farmers prefer LIV practice in areas with low drainage efficiency. Yield of Rabi crops are reported to be 30% to 50% higher with project than the yield under without project situation.

4.4.2 Indirect

With the increase in crop production in both polders, demand for agricultural labour has increased. According to farmers' estimates this amounted to an additional employment of 12 labour days per ha. in a year. In addition, employment of wage labour from LCS groups in earthwork (as 100% of earthwork was done through LCS) during project implementation has been substantial, causing increase in poor families' income. There is potential for further employment of agricultural labour with the gradual improvement of drainage efficiency. With release of land from water in kharif-2 season due to better

drainage, demand for labour will increase to cultivate T aman in more areas. The area under rabi crops may also expand with further extension services from Upazila agriculture office. This will also increase demand for agriculture labour in future.

Many WMOs have developed activities other than exclusively water management to strengthen the socioeconomic position of their members, but also more social activities have been undertaken. For economic activities, WMOs are now also involved in savings and credit activities and requesting services from Upazila technical departments. Joint marketing (purchase of inputs and sales of produce) was not (yet) encountered.

Women's participation in earthwork led to meeting the practical needs of the women on a temporary basis. The various skill development trainings and their application in the fields of livestock and agriculture have increased their confidence and performance leading to an increase in income. For this, efficiency in water management remains a pre-condition.

In addition, qualitative changes are reported concerning employment, diversity of livelihood opportunities, organisational strengthening of WMO and stronger relationship with GoB developmental services.

4.5 Transfer of Technology and Institutional Building through the project

In the nine polders included in the IPSWAM project, altogether 242 Water Management Groups (WMG) are set-up. The WMGs and the WMAs were found vibrant and alive. Key data on WMGs are shown in the following table.

Table 4.5: Key data of WMOs under IPSWAM Programme (as of June 2011)

Polder	Gross	Net Area	District	No. of		No. of			Savings of WMG Members				
				WMG	WMA ^{a)}	Male	Female	Total	WMG	WMA	Total	Deposit in	Invested in
									Monthly	Regular			
22	1.630	1.417	Khulna	12	1	1.772	1.112	2.884	12	1	846.000	348.000	498.000
43/2A	5.182	3.887	Patuakhali	22	1	4.780	3.912	8.692	24	3	937.796	821.900	114.000
43/2E	1.650	1.300	Patuakhali	12	1	1.567	1.342	2.909	10	1	196.113	71.900	115.400
43/2D	8.800	6.800	Patuakhali	30	2	5.885	3.866	9.751	27	4	4.277.608	522.047	3.745.000
29	8.218	7.232	Khulna	56	2	7.249	5.796	13.045	32	2	752.252	364.910	387.342
30	7.725	4.867	Khulna	41	1	6.861	4.539	11.400	24	1	504.414	353.454	150.960
43/2F	4.453	3.500	Patuakhali	27	1	4.794	2.424	7.218	30	3	339.070	298.320	22.960
43/1A	2.675	2.200	Barguna	14	1	2.759	1.878	4.637	12	2	1.176.410	13.870	1.156.000
43/2B	5.460	4.000	Barguna	28	6	4.542	3.678	8.220	30	7	97.408	55.466	30.000
Total	45.793	35.203		242	16	40.209	28.547	68.756	218	34	9.127.071	2.849.867	6.219.662

Source: IPSWAM

Note: a) The reason for comparatively a bigger number of WMAs in Polder 43/2B is that there the WMAs have been formed on the basis of smaller hydrological unit.

Training of WMG leaders and members to strengthen the functioning of the WMG and promote the empowerment of its members was an essential part of the approach followed by IPSWAM. Altogether 23,504 persons were trained in different subjects related to WMO formation, functioning and management. Training covered the following topics:

- Establishment and management of LCS
- Establishment and management of WMOs
- Leadership training (for men and women).
- Financial management and auditing of WMO
- Agricultural production
- Cooperative management
- Operation and Maintenance of water management infrastructure
- Sustainable water management
- Quality control of construction works

The acquired skills are employed in O&M of water management infrastructures by the trained members of WMOs. It is noted that the trained members are well aware of details of polder water management for multiple water usages. The gender aspect in much training appears to have generally motivated the community to practical interventions that will perhaps do away with the stereotypes that still prevail. Networking and exposure have led to confidence building of women much of what still needs to be further developed. The fact that 50% of the Training Resource Group (TRG) is composed of women is an indicator that women took their involvement in the WMOs seriously and have proven to be worth to receive more investments in future.

4.6 Employment generation through the project.

With the increase in crop production in the polders, demand for agricultural labour has increased. According to farmers' estimates this amounted to an additional employment of 12 labour days per ha. in a year. In addition, employment of wage labour from LCS groups in earthwork (as 100% of earthwork was done through LCS) during project implementation has been substantial, causing increase in poor families' income. There is potential for further employment of agricultural labour with the gradual improvement of drainage efficiency.

Trough IPSWAM training, networking and exposure have led to confidence building of women. The fact that 50% of the Training Resource Group (TRG) is composed of women is an indicator that women took their involvement in the WMOs seriously and have proven to be worth to receive more investments in future. Women members aspire for further income diversification activities among others using the cooperative savings, but continued support and direction is considered desirable.

4.7 Possibility of Self employment

Covered in other section

4.8 Possibility of women-employment opportunity

Covered in section below.

4.9 Women's participation in development

All WMO groups have women's representation and active participation. The observation made by the Evaluation Mission that participation of women in the discussion and planning of projects was facilitated through the WMGs and the WMAs as envisaged in the GPWM. Women were found enthusiastic in committing for more work and earning more. Their roles and contributions to the process generally received positive appreciation from the community.

The earth work done by women through the LCS was addressing the practical needs of women (though short-lived and with some problematic side – viz. health – effects) while their regular participation in the discussions in meetings is raising their social position and developing decision making authority by them to eventually address their strategic needs.

The issue of women's participation in the LCS was described by the members of the WMOs (both men and women) as igniting the dormant ability of the women to become an earning member and allowing assertion of "local authority". The payment of equal wages to men and women of the LCS was certainly welcomed although the women members demanded a flexible and more accommodative approach in the work-time and mode. The role of women in monitoring the work of the contractors was felt "empowering" by the women members of the WMOs who otherwise exercise very little authority in any matter, domestic or external.

The women members of the WMOs were alert and engaged in discussion on matters of water management (a term undefined in both GPWM and the Guidelines for IPSWAM) that affects them. Such issues include availability of useable water for domestic, household and agricultural needs. They are also involved in "broad" planning of water resource management, O & M, and in

monitoring and evaluation where absence of response mechanism often makes such participation futile. In the meetings of WMGs and WMAs, they articulate and share their grievances against faulty interventions and assert their claims for rectification. They were found aware of the issues.

4.10 Probable Impact on Socio-Economic activity.

Topic is covered in the section 4.4.2, 4.6 and 4. 9.

4.11 Impact on environment

There were remarkable positive changes in case of environmental indicators such as land productivity, fish availability, tree plantation, number of livestock, poultry and human disease after the IPSWAM project. The out migrated households of the IPSWAM polders areas started returning home due to generation of work opportunities in the IPSWAM polder areas.

4.12 Sustainability of the project

4.13 Contribution to poverty alleviation/reduction

Most important, the incidence of extreme poverty was reportedly reduced from 45% to 16%. During visits of the evaluation team to two of the nine polders these findings were generally validated.

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

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

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

5.1 Project Management

5.2 Project Director

Posting of project director for several times obviously hampered the momentum a bit content.

5.3 Land Acquisition

Several incidents were found in Polders where dispute in acquiring land for embankment as well as unwillingness of land owner to provide earth for the repair of embankment encountered. For these reason LCS work were delayed some cases but the field officials and local representatives settled the disputes.

5.4 Procurement

5.5 Consultancy

5.6 Contractor

5.7 Manpower

5.8 law & Order

5.9 Natural calamity

5.10 Project financing, allocation and release.

Delay placement of budget in different cases significantly disturbed the execution of work due to indifference of workers/contractors to commence the work in its suitable time span. There are instances where scheduled work items had to be cancelled for the same reason e.g. re-excavation of khal.

5.11 Design formulation/approval

5.12 Project aid disbursement and re-imbursment

5.13 Mission of the development partners.

5.14 Time & Cost Over-run

5.15 Project Supervision/Inspection

5.16 Delay in Decision

5.17 Transport

5.18 Training

5.19 Approval

5.20 Others.

6. Remarks & Recommendations of the Project Director:

The project has realized considerable achievements and hold significant promise for sustained institutional change of BWDB, which is the stakeholder participation in the project in a legalized platform and overall capacity building. IPSWAM has positive effects on the lives of tens of thousands of people in the targeted polders in southern and southwest zone of Bangladesh. It should be realized that institutional change processes in BWDB require a long term time horizon. A follow-up program is necessary to materialize an essential mass for change within the organization, and with that sustainability of achievements. With the assurance of further assistance from Dutch government with potential co-sponsors a formulation for next phase of IPSWAM project is under effective consideration. Because of the fact a TPP of one year IPSWAM bridging program to hold the momentum for the upcoming phase of IPSWAM is forwarded to the MoWR for necessary approval.


Md. Masud Ahmed
Director
Planning-III, BWDB
Dhaka.

Date: 13/12/2011

Signature and seal of the Project Director/Manager

7. Remarks/Comments of Agency Head

Date:


Signature and Seal

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

(Md. Habibur Rahman)
Director General
Bangladesh Water Dev. Board
Dhaka.

Date:

Signature and Seal

Location Map of
IPSWAM Polders



Legend

- Upazilla Boundary
- IPSWAM Polders
- FCDI projects/Polders (BWDB)
- Rivers
- Roads

