

## PROJECT DESIGN AND MONITORING FRAMEWORK

Design Summary	Expected Results	Project Performance Evaluation Report (PPER) Assessment Method	PPER Assessment Results
1. <u>Sector/Area Goals</u>			
1.1 Poverty Reduction	Reduction in households living below poverty level from 75% to below 60%	PPER household surveys, focus group discussions, key informant interviews	
1.2 Sustained Agricultural Growth	Incremental increase in food grain production of 63,000 tons/year		
2. <u>Purpose</u>			
2.1 Community Management of Natural Resource Base	Leasing of Government lands to legally registered water management associations (WMAs); Farmers adopt integrated pest and crop management practices; facilities operated to maximize agricultural and fisheries potential; Homestead gardening increases nutrition level	PPER household surveys, focus group discussions, key informant interviews with Bangladesh Water Development Board (BWDB), Department of Agricultural Extension (DAE), Department of Fisheries (DOF), Center for Environment and Geographic Information Services and nongovernment organizations (NGOs)	
2.2 Increased Arable Area and Cropping Intensity	30,900 ha of agricultural land able to increase production by one crop per year; cropping intensity increases from 137% to 157%		Household surveys
3. <u>Outputs</u>			
3.1 WMA Formed and Registered	About 20 WMAs registered; WMA agreement in final design proposals prior to construction and certification of completed work	WMA and water user group (WUG) records, focus group discussions and key informant interviews	
3.2 Functioning	Eight new and rehabilitated structures;		BWDB records, inspection of

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<p>Drainage System Covering 100,000 hectares; with Effective operations and maintenance (O&amp;M) program</p>	<p>30 kilometers of embankments rehabilitated (1.2 million cubic meter [mcm] earth work); 70 tidal irrigation inverts; (11.3 mcm of excavation from drainage channels); 1.6 mcm river dredging; needs based O&amp;M budgets prepared annually based on regulator assessments of system inventories</p>	<p>physical conditions of drainage infrastructure</p> <p>Key informant interviews with WUGs and WMAs</p>	
<p>3.3 Agricultural Support Provided:</p> <ul style="list-style-type: none"> <li>• Integrated pest management program;</li> <li>• Training program for women in development;</li> <li>• Homestead gardening and nutritional support;</li> <li>• Assistance to reach available credit programs;</li> <li>• Technical support to manage black fish species</li> </ul>	<p>5,000 farm households provided integrated pest and crop management training with 80% reduction in pesticide use;</p> <p>5,000 farm households given extension services in home gardens, women in development and integrated rice and freshwater fish projects</p>	<p>Key informant interviews with NGOs, DAE and DOF; Records maintained by NGOs, DAE and DOF</p>	
<p>4. <u>Activities</u> 4.1 Mobilize Beneficiary</p>	<p>NGO support: \$1.2 million</p>	<p>Key informant interviews with</p>	

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Participation <ul style="list-style-type: none"> <li>• Organize WMAs</li> <li>• Information Campaigns</li> <li>• Develop land acquisition plan</li> <li>• Develop monitoring program</li> <li>• Examine legal framework for registered WMAs</li> </ul>	Information campaign: \$0.1 million TA: \$0.92 million	NGOs	
4.2 Rehabilitation of Embankment and Drainage facilities <ul style="list-style-type: none"> <li>• Rehabilitate facilities</li> <li>• Dredge congested rivers</li> <li>• Excavate drainage channels</li> <li>• Rehabilitate embankments</li> <li>• Procure maintenance dredging equipment</li> <li>• O&amp;M during construction</li> </ul>	Civil works base cost: \$26.4 million Dredging equipment: \$1.3 million O&M during construction: \$3.2 million	Key informant interviews with BWDB staff involved	

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4.3 Agricultural Development/ Fisheries Management <ul style="list-style-type: none"> <li>• Develop improved extension programs</li> </ul>	Agricultural development base cost: \$0.55 million Fisheries management: \$0.2 million	Key informant interviews with DAE and DOF staff	
4.4 Institutional Strengthening <ul style="list-style-type: none"> <li>• BWDB O&amp;M training</li> <li>• DAE training</li> <li>• Equipment, vehicles, etc.</li> </ul>	Training: <ul style="list-style-type: none"> <li>• BWDB: \$0.1 million</li> <li>• DAE: \$0.1 million</li> <li>• Beneficiaries: \$0.6 million</li> </ul>	Key informant interviews with BWDB, DAE and DOF staff, household surveys	
4.5 Technical Support (consulting services) <ul style="list-style-type: none"> <li>• Engineering design and construction supervision</li> <li>• Agricultural development</li> <li>• Beneficiary participation</li> </ul>	Engineering Consultants: \$3.7 million Agricultural Development Consultants (local): \$0.2 million Monitoring consultants: \$0.15 million	Key interviews with NGOs, Project Consultants	

BWDB = Bangladesh Water Development Board, CEGIS = Center for Environmental and Geographic Information Services, DAE = Department of Agricultural Extension, DOF = Department of Fisheries, NGO = nongovernment organization, O&M = operation and maintenance, PPER = project performance evaluation report, WMA = water management association, WUG = water user group.