



<b>1. Project Data :</b>
<b>OEDID:</b> C2246
<b>Project ID:</b> P009544
<b>Project Name:</b> National Minor Irrigation Development Project
<b>Country:</b> Bangladesh
<b>Sector:</b> Irrigation & Drainage
<b>L/C Number:</b> C2246
<b>Partners involved :</b> EEC
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<b>Date Posted :</b> 08/13/1998

**2. Project Objectives, Financing, Costs and Components :**  
An IDA credit of US\$54 million was approved in FY91 and closed as planned in FY98, with US\$52.1 million canceled. The EEC/EU provided a grant of US\$88 million, of which US\$19.1 million was drawn and financed technical assistance. The main **objective** of the project was to promote faster agricultural growth through increased private sector development of minor irrigation. Main **components** were: (a) Irrigation and drainage development by deep tubewells (DTW) where needed, low lift pumps (LLP) and pontoon mounted pumps for surface irrigation in coastal areas, and upgrading of drainage channels; (b) Demonstrations of irrigation systems; (c) Environment protection (studies, monitoring and data management, rehabilitation of domestic water supplies and training); (d) Training and information dissemination; (e) Institutional development (transitional support for privatization of tubewell operations); and (f) Project implementation support via technical assistance. After joint reviews with EEC in 1995, the project scope was reduced by de-emphasizing DTWs in favor of shallow tubewell pumps lowered into open pits (pit wells), dropping or greatly reducing the size of other irrigation components, but expanding promotional activities to include the whole tubewell industry, increasing the cost of the TA component, and handing over most monitoring and support functions to government agencies. Actual **project costs** came to US\$25.2 million, mostly for technical assistance funded by the EEC grant, compared to estimated costs at appraisal of US\$ 171.1 million (incl. US\$35 million for TA).

**3. Achievement of Relevant Objectives :**  
During a start up delay of over 19 months, caused by the late arrival of the technical assistance team financed by the EEC, there were changes in prices, which - with other factors as in 5. below - resulted in very low farmer demand for DTWs or surface irrigation expansion in coastal areas. Agricultural production growth from minor irrigation continued strongly, however, since during the period shallow tubewell development maintained the high average growth rate of the late 1980s of 23 percent. The ICR attributes most incremental tubewells to high returns and supportive policies, enhanced by a broad range of promotional activities under the project. On that basis it reestimated the economic rate of return at 12 percent, compared with 57 percent (corrected for error) at appraisal. Thus the ICR attributes this outcome to the project TA component, about which it has reservations on technical contributions, and to policy changes which had also been supported by two companion projects (Loan 1045 and Credit 2253). Environmental activities were less than planned and had limited results, but a start was made on ecological monitoring.

**4. Significant Achievements :**  
Deregulation of minor irrigation is a substantial achievement which has allowed a dynamic private sector irrigation industry to expand and flourish, with significant positive equity impacts, but this was underway before the project was approved. Sector dialogue and support from two companion projects, one approved a year earlier, in cooperation with other development partners, was successful in achieving the withdrawal of government from most tubewell operations and the removal of distorting subsidies. Farmers and entrepreneurs responded to general deregulation of minor irrigation more vigorously than anticipated, which made project activities of less significance.

**5. Significant Shortcomings :**  
The project concept and design were ambitious and complex and then proved flawed during a period of rapid change. Farmers did not adopt deep tubewells but aided by liberalization of minor irrigation (under the two

companion projects) were able to expand groundwater use with their own resources . There was very little demand for surface irrigation development, and the pontoon scheme and demonstration components were dropped . Reasons given for the failure of the project's deep tubewell strategy are a mixture of project design deficiencies and changed conditions including the high investment costs for DTWs; difficulty for farmers to operate and maintain DTWs because of their complex technology and the absence of local repair shops; sharply increased fuel costs and lower rice prices; the difficulty of forming farmer groups for joint investment and management; lack of credit, and the highly profitable shallow tubewell technology in the dynamic and recently deregulated private market . At appraisal the profitability of DTWs was exaggerated by over-optimistic assumptions on service areas, and also the capability of farmers to innovate with pit wells for deeper watertables was not foreseen. The surface water and demonstration components were hampered by institutional constraints and lack of farmer interest . The extraordinarily large technical assistance team, which was increased at the MTR, exceeded reasonable levels for such a project and is hard to justify. Moreover, it failed to provide the technical support needed on tubewell specifications, gave inadequate technical support to IDA supervision and (unusually) reported to the cofinancier rather than to the borrower. (Comments received from the cofinancier after the ICR was completed do not question the ICR's criticisms of the technical assistance component.)

6. Ratings :	ICR	OED Review	Reason for Disagreement /Comments
<b>Outcome :</b>	Satisfactory	Marginally Satisfactory	Attribution is tenuous
<b>Institutional Dev .:</b>	Partial	Substantial	Broader definition than ICR
<b>Sustainability :</b>	Likely	Likely	
<b>Bank Performance :</b>	Satisfactory	Unsatisfactory	Underestimated private sector potential, slow to take remedial action and did not deal with excessive TA component.
<b>Borrower Perf .:</b>	Satisfactory	Satisfactory	
<b>Quality of ICR :</b>		Satisfactory	

#### 7. Lessons of Broad Applicability :

(i) Implementation rates of projects that depend on farmer and community initiatives are difficult to predict, and hence a start is best made with flexible small scale initiatives which can be adapted and expanded according to demand; (ii) Social organizers are needed in projects that require beneficiaries to take new community initiatives to obtain project benefits; (iii) Appointment of key implementation staff should be a condition of board presentation or effectiveness to avoid the risk of long delays; and (iv) Where benefits depend greatly on technical innovations, adequate arrangements should be made for appropriate technical support .

#### 8. Audit Recommended? Yes No

**Why?** (a) Examine need for and use of extraordinarily large TA resources, incl . why this did not ensure that adequate technical advice and appropriate technology was made available; (b) Review benefits and attribution issues relating to the ERR reestimate .

#### 9. Comments on Quality of ICR :

The ICR is rated of satisfactory quality, but the absence of comments from the EU on the surprisingly large TA component it financed leaves some unanswered questions which the ICR does not explore adequately . The ICR probably overstates the impact of the project on the growth of minor irrigation during the period .