

## **Second small scale flood control, drainage and irrigation project**

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The Bangladesh Second Small Scale Flood Control, Drainage and Irrigation project, supported by Credit 1870-BD for US\$81.5 million equivalent, was approved in FY89. The Canadian International Development Agency (CIDA) cofinanced US\$10.6 million for technical assistance and training and the World Food Program provided wheat equivalent to US\$10.8 million. In August 1994 exchange rate savings of US\$5.85 million were diverted to the Coastal Embankment Rehabilitation Priority Works Program (PWP). (PWP financed rehabilitation of works damaged by a devastating cyclone in April 1991 and this is evaluated under a separate Implementation Completion Report (ICR)). Total disbursement, excluding funds reallocated to the PWP, was US\$79.10 million. Due to lower total costs and appreciation of the SDR, US\$2.3 million was canceled. The credit closed December 1995. The FAO/World Bank Cooperative Program prepared the ICR on behalf of the South Asia Regional Office primarily as a desk review because civil strife limited field visits. The borrower did not comment on the ICR although specifically requested to do so. CIDA reviewed the draft ICR and its comments are incorporated in the ICR.

The objectives of the project were to (i) increase agricultural production and farm incomes by supporting investments in small-scale flood control, drainage and irrigation (SSFCDI); (ii) strengthen the capacity of the Bangladesh Water Development Board (BWDB) to implement, operate and maintain new projects; and (iii) undertake rehabilitation of flood protection, drainage, irrigation and town flood protection infrastructure damaged by the 1987 floods. SSFCDI objectives were to be achieved through (a) construction of 15 new projects covering about 50,000 ha and construction/rehabilitation of water control structures in 200 subprojects covering 200,000 ha; (b) provision of two years of operation and maintenance (O&M) for both subcomponents; and (c) training of BWDB staff and farmers involved in construction and O&M activities. The rehabilitation component reconstructed 470 km of embankment, 37 km of revetment, 11 km of canal lining and 119 structures. Technical assistance was provided for training in planning, design, modernization of BWDB's financial management, accounting, monitoring and evaluation systems, and establishment of an O&M Cost Cell at BWDB headquarters.

The project scope was ambitious given the institutional capacity of BWDB. Difficulties with land acquisition, reduced counterpart funding, insufficient design staff and late contract awards delayed civil works by two and a half years and eliminated the two-year O&M period. Despite this, works potentially benefiting 94 percent of the SSFCDI target area were constructed by credit closing. The floods of 1988 delayed the rehabilitation component a year, even then it surpassed appraisal targets. Poor quality supervision and construction affected both components and 20 percent of SSFCDI subprojects require additional minor structures to become fully operational. Project works have significant adverse impact on common property fisheries in 40 percent of the projects and drainage in 30 percent. Field surveys of a quarter of the SSFCDI subprojects in FY95 showed crop production had increased by 77 percent, particularly in the dry season. Based on a desk sample (representing only 3.7 percent of total civil works cost), the ICR calculates that the ERR of the SSFCDI component has increased from the SAR value of 31 percent to 38 percent. The evidence presented in the ICR is based on very selective sampling of benefits, overestimation of benefited area, and fails to allow for environmental disbenefits and effects of independently developed irrigation. OED's reevaluation estimates the ERR to be less than 10 percent.

Institutional development under the project had widely differing results. Modernized financial and management accounting systems were successfully developed and adopted, albeit manually. River training studies supported appraisal and subsequent implementation of an IDA financed project.

Improved cost recovery was achieved in a few irrigation subprojects. Conversely, technical training of BWDB staff and farmers in O&M of subprojects has generally been unsuccessful because of insufficient funding. Retrofitted participatory O&M of a few irrigation projects has made little impact. BWDB has not created an O&M Cost Cell despite it being a condition of credit effectiveness, and this indifference is already leading to deterioration of completed works.

The Operations Evaluation Department (OED) disagrees with the ICR rating of project outcome as satisfactory and rates it as unsatisfactory because of notable failure to achieve O&M objectives. OED agrees with the ICR rating of institutional development as modest. OED downgrades the sustainability rating from uncertain to unlikely because of inadequate beneficiary participation, significant negative environmental externalities and BWDB's negligent attitude to O&M. OED downgrades rating of Bank performance from satisfactory to unsatisfactory because of failure to press for resolution of critical institutional issues.

There are three lessons. Sustainability of physical works is jeopardized by failure to realistically address and resolve O&M issues before Board presentation. Insufficient beneficiary participation and investigation during sub-project design have led to substantial adverse externalities. Bank supervision should make a timely trade-off between pursuit of physical targets and achieving essential institutional reform required to make the project infrastructure sustainable.

The quality of the ICR is unsatisfactory for two reasons. The recalculated ERR is based on questionable assumptions. While there is a plan for mitigation of adverse environmental externalities and future project operation as part of a follow-on BWDB Systems Rehabilitation Project (SRP, Credit 2099-BD), the SRP has serious implementation problems and this is not mentioned in the ICR. An audit is planned.