**Madras water supply and sanitation project**

Report No: ; Type: Report/Evaluation Memorandum ; Country: India; Region: South Asia; Sector: Urban Water Supply; Major Sector: Water Supply & Sanitation; ProjectID: P009954

The Madras Water Supply and Sanitation Project, supported by Loan 2846/Credit 1822-IN for US$69 million equivalent, was approved in FY87. The Credit was closed in FY91 and the Loan was closed in FY96, as scheduled: both were fully disbursed. The Implementation Completion Report (ICR) was prepared by the South Asia Regional Office. The Borrower's report is included as an appendix.

The project was the first Bank-financed operation for the city of Madras in southern India. The objectives of the project were: (i) to increase the supply and reliability of water supply; (ii) to improve and extend sewage collection and treatment systems and to initiate a low-cost sanitation program; (iii) to improve planning of water supply; (iv) to increase cost recovery for water and sewerage services; and (v) to strengthen the institutional capacity of the Madras Metropolitan Water Supply and Sewerage Board (MMWSSB). Project components included increasing the supply of water to Madras by developing three new well fields and constructing check dams and a canal to retain seasonal flood waters; improving the water supply transmission and distribution system; laying of new and replacement sewers; improving 10 sewage pumping stations, and improved disposal arrangements for sewage in low lying areas; and technical assistance and training.

Work on the physical components of the project progressed very slowly during the first five years of the project (with the exception of relatively straightforward groundwater development work) due to: (i) several years of drought which meant that MMWSSB had to divert financial and managerial resources to alleviate the water shortage crisis in the city; (ii) inadequate preparation of the physical components of the project and MMWSSB's limited engineering design capacity; and (iii) slow procurement made worse by many small contracts. Nevertheless, the majority of the physical components were either completed or close to completion by the closing of the Credit, and additional works and studies had been added to the project. Unfinished works and studies are being financed under the Second Madras Water Supply Project (Ln 3907-0/6-IN).

Two major water supply components were dropped from the project because of revisions to the city's Master Plan for the sector. The component to improve sewage pumping stations was substantially increased following changes in the Master Plan, but construction only began during the last year of the project because MMWSSB was slow to complete the detailed engineering for the stations. MMWSSB did not implement the recommendations of the low cost sanitation study to install individual household latrines, but chose, against the advice of the Bank, to provide public facilities instead. Finally, the aim of increasing water supply to Madras by 35 percent was not achieved because of lower than expected yields from the well fields developed under the project.

The majority of the institutional and sectoral objectives of the project were achieved, including revised legislation to protect groundwater resources, an improved management information system, introduction of performance-based budgeting, and better planning and execution of operation and maintenance activities. MMWSSB also made substantial progress with the collection rate for bills, although it did not meet the high target set for the project. The major weaknesses of the agency have been slow procurement, made worse by the State Government having to approve the awarding of contracts, inadequate project management, and overstaffing. Financial performance was unsatisfactory for most of the project, although substantial tariff increases improved MMWSSB's financial situation during the last year of the project, when the agency was able to generate substantial internal funds for investment.

The Operations Evaluation Department (OED) rates outcome of the project as satisfactory and institutional development impact as substantial. These ratings are consistent with those in the ICR. OED rates sustainability as uncertain, as opposed to the ICR's rating of likely, because the financial performance of MMWSSB improved only during the last year of the project. Bank performance is rated as unsatisfactory because the project was not ready for implementation at appraisal; insufficient priority was given to low cost measures to conserve water (this is now being rectified under the second project), and there was insufficient supervision during the first five years of the project.

The major lesson from this project is that appraisal of projects should only be carried out after all technical studies, detailed engineering and bidding documents for the first package of works are prepared, and tenders for the first group of goods or works to be procured have been invited and evaluated. This is especially the case with a new implementing agency that is not acquainted with Bank procurement procedures. Also, where the borrower has been reluctant to undertake policy reform in certain key areas, such as water conservation, project appraisal should be conditional on the borrower implementing key policy measures so as to ensure commitment to the policy.

The ICR is satisfactory.

No audit is planned at this time.