



32 India Lake Bhopal Conservation and Management Project

Contributing to lake environment conservation and improvement in the living standards of people in the surrounding areas through an integrated lake conservation and management project

Loan Amount / Disbursed Amount 7.055 billion yen / 6.537 billion yen
Loan Agreement February 1995
Terms & Conditions 2.6% interest rate, 30 year repayment period (10 year grace period), Partially untied
Final Disbursement Date June 2004
Executing Agency Madhya Pradesh State Housing and Environment Department, (<http://mphed.nic.in/>) (Six agencies were responsible for individual components including the Environmental Planning and Coordination Organization and Lake Conservation Authority of Madhya Pradesh)



Project Objectives

The objectives of this project were to promote improvement of overall environmental conditions of Bhoj Wetland (Lake Bhopal) and water quality of the Upper and Lower Lakes by implementing several pollution control and environmental conservation measures in the two lakes and their catchment areas, thereby contributing to the conservation of the lakes and improvement of overall health and sanitary conditions of the local people.

Effectiveness and Impact

Rating **a**

Desilting, dredging and conservation of the surrounding lake area (afforestation, construction of roads, and development of parks and gardens) during the project have resulted in an increase in the storage capacity of Upper Lake by 4% and that of the Lower Lake by 1% against the set targets of 6% and 3%, respectively. The physical lake environment has thus been protected as required, leading to flood prevention measures. In addition, construction of new sewerage treatment facilities increased the amount of sewage treated from 4MLD (million liters/day) before the project to 15MLD, reducing the amount of untreated discharges. Improvement in water quality requires long-term efforts and, therefore, significant improvement was not necessarily observed as a result of this project alone, but the desilting, the relocation of the dhobis (people who make their living from washing clothing along the lake shores) and ritual cleansing places, and capacity building in environmental monitoring for the most part proceeded according to plan and contributed to improvement in lake water quality (see the thematic evaluation on page 55 for details). According to a beneficiary survey, with the exception of the dhobis who were dissatisfied with the dysfunctional purification filter and the absence of cloth drying sheds

that they believed were to have been provided, 63% of the people living in the project areas indicated that living conditions had improved as a result of the project. Therefore, the project has achieved its objectives for the most part and effectiveness is highly satisfactory.

Relevance

Rating **a**

This project has been highly relevant with India's national as well as state policies both at the time of appraisal and at the time of ex-post evaluation.

Efficiency

Rating **b**

Although the project costs remained within the target (93% of planned costs), the project period was longer than planned (184% of planned period), and therefore, the evaluation for efficiency is moderate. The main causes of project delays include time required for collaboration and coordination among the various project stakeholders, resolution of disputes regarding land use, protracted negotiations over the relocation of the dhobis, and delays in construction.

Sustainability

Rating **b**

Promotion of research in lake basin management, capacity building in data collection and analyses, and increased opportunities for training of personnel are major issues to address. In addition, the level of funding has to be significantly increased for more satisfactory operation and maintenance of the facilities built or installed during the project. The long term sustainability of this project is moderate.

Conclusion, Lessons Learned, Recommendation

In light of the above, this project is evaluated to be satisfactory. Lessons learned from the project are that the participation of all stakeholders and affected residents in the project from the planning stage must be ensured. In addition, in projects relating to lake conservation where long-term operation and maintenance (O&M) are needed, it is important to clarify the roles and responsibilities of the O&M organizations prior to the implementation of the project. Immediate actions to be taken are improvement in the utilization of sewerage facilities, constant O&M of basin measure facilities, and capacity building in core agencies.

Facilities and Improvements Developed Through the Project



Afforestation



Sewerage Pumping Station



Lake view promenade



Dedicated wash areas (Dhobighats)

Third-Party Opinion

This project was not only an innovative project in its integrated lake conservation management but also was a project where the new agency established to promote, coordinate, and manage policies is contributing to the decentralization of authority.

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