India

39 Upper Indravati Irrigation Project

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This project's objectives were designed to increase agricultural production and improve productivity by constructing irrigation facilities in Orissa State, where agriculture's reliance on rainwater results in unstable harvests and low productivity, and thereby contribute to the alleviation of poverty by raising the incomes of the scheduled castes* and scheduled tribes who suffer social discrimination and extreme poverty, together with the raising the state's food self-sufficiency rate.

*People positioned outside the caste system that includes Brahmins, etc.

Loan Amount/Disbursed Amount: 3,744 million yen/3,599 million yen
Loan Agreement: December 1988
Terms and Conditions: Interest rate, 2.5%; Repayment period, 30 years (grace period, 10 years); Partially untied
Final Disbursement Date: January 1999
External Evaluator: Ayako Namura (IC Net Limited)
Field Survey: July 2003

Evaluation Result

In this project, the procurement of materials and equipment and the engineering works including the left main canal were carried out almost as planned. The project period was extended considerably beyond the planned period due to the time required to acquire land for the canal construction. However, the project cost was less than planned because the devaluation of local currency exceeded the rate of inflation. Due to the installation of irrigation facilities, planted acreage increased by approximately 2.7 times, from 27,966 ha prior to the project to 75,805 ha in Fiscal Year 2001 (cf. the square area of Asahikawa, Japan, is approx. 748 km^2). Through this, the rice yield in Fiscal Year 2001 increased to 374,800 tons (cf. approx. 60 tons in Niigata Prefecture, Japan), which was approx. 1.8 times the amount planned and in addition, crop diversification was promoted. In Fiscal Year 2001, the number of beneficiary farm families reached 44,000 households. The increase in agricultural yields due to installation of irrigation facilities contributes to higher incomes for farm families, and the average farm family income in Fiscal Year 2000 was 31,000 rupees annually, an increase of 56.5% over the planned amount. Moreover, the rice self-sufficiency rate reached 100%, and even people who do not own land have more opportunities to find employment as farm laborers since the commencement of the irrigation. The executing agency, the Department of Water Resources, Government of Orissa, is presently working on strengthening the irrigation associations, on the basis of the suggestion of the JBIC study. There are no problems in the technical capacity, operation and maintenance system, or financial condition of the executing agency or the irrigation associations. A lesson learned from this project is that, in order to promote operation and management of the project by the beneficiaries, first a study should be made of the social and economic conditions and the actual problems should be clarified, and then an action plan that clearly states the roles of related parties should be drafted in the early stages. Also, it would be desirable to transfer management authority to the irrigation associations at an early stage.

Third-Party Evaluator's Opinion

Increasing the incomes of the poorest, improving their standard of living and achieving food self-sufficiency in Orissa State are the expected objectives of the project. Increased incomes have made it possible for the children to go to school, and the project has had other positive impacts. Thus, it has great relevance to the region and the country.

Third-Party Evaluator: Mr. Usha P. Raghupathi

Obtained a post graduate diploma in planning from the School of Planning, Center for Environmental Planning and Technology. Presently holds the post of Professor, National Institute of Urban Affairs. Specializes in urban development (water and sewerage, poverty, environment, etc).

Irrigation facilities constructed by this project

Indravati Irrigation Waterway

The amount of planted acreage rose sharply due to the installation of irrigation facilities, and 100% self-sufficiency in rice was achieved in Orissa State.

Indravati irrigation water gate

What is irrigation?

To supply the water necessary to cultivate crops and to improve agricultural productivity, water is systematically directed to farm fields and apportioned by region. Irrigation plays an extremely large role in the expansion of agricultural productivity.

What are irrigation associations?

Irrigation associations are organized by farmers who use irrigation water. They operate and maintain the irrigation facilities and also plan and implement the water distribution schedules.