



Indonesia

5 Wonorejo Multipurpose Dam Construction Project (1) (2)

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This project's objective was to supply raw water for residential and industrial use to Surabaya and its environs through the construction of a multipurpose dam in Tulungagung, a regency situated in East Java, in an effort to mitigate flood damage and to improve power supplies, thereby contributing to regional economic growth and improved living standards.

Loan Amount/Disbursed Amount: 18,469 million yen/17,247 million yen

Loan Agreement: November 1993, December 1996

Terms and Conditions: Interest rate 2.6%/2.5%; Repayment period 30 years (grace period 10 years); General untied

Final Disbursement Date: December 2002, November 2002

Executing Agency: Directorate General of Water Resources, Department of Public Works



External Evaluator: Takuya Okada (KRI International Corp.)

Field Survey: October 2004

Evaluation Result

In this project, construction and rehabilitation of a multipurpose dam (effective storage capacity: 106Mm³; Kuroyon Dam in Japan is 149Mm³), access roads, and related facilities (weirs, head races, pumping station, etc.) as well as infrastructure development at the resettlement camp were conducted almost as planned. The project period was longer than planned due to delays in the allocation of the government budget as a result of the Asian currency crisis. However, the project cost was lower than planned.

Under appraisal plans, Surabaya and its environs were to be supplied with raw water at a rate of 8.0m³/second during the dry season. However, the average rate of water discharged during the 2002 and 2003 was 5.0m³/second, which is less than the planned volume. This is due to the irrigation use of raw water which is in short supply and to shortages in the design capacity of facilities of PDAM Kota Surabaya, the municipal water board, which is responsible for treating and supplying water.

The water coverage rate in Surabaya, which was 50% in 1990, increased to 65% in 2002. In the beneficiary survey, it was revealed that, after the completion of the dam, the dramatic reduction in flood damage and stabilized crop yield served to stimulate the local economy and that production of hydroelectric power has stabilized/improved night-time supplies of electricity, which resulted in the improvement of living standards by making it possible for children to study and helping prevent

crime. As for relocation of residents who were living near the dam site, they are generally satisfied with their living environment as roads, school buildings, health centers and other public facilities were constructed in the resettled area.

There is no problem with technical capacity and the operation and management system of Perum Jasa Tirta (PJT) and PT Pembangunan Jawa-Bali (PT. PJB), who carry out operation and maintenance, and their financial status is good.

Water resources from the dam are being utilized effectively, but in order to attain the goal of supplying sufficient water, it is recommended that PDAM Kota Surabaya expand the capacity of its water treatment facilities.

Third-Party Evaluator's Opinion

This project is greatly contributing to the mitigation of flood damage, power supply from the Jawa-Bali grid and water supply mainly to Surabaya, and also is expected to bring about an increase in agricultural production by supplying irrigation water to farmland in the surrounding areas.

Third-Party Evaluator: Mr. Kusumo Martoredjo (private company)

Obtained a bachelor's degree in economics from the University of Indonesia. Presently holds the posts of President Director, PT. Catur Yasa and Chairman of the Indonesia-Japan Economic Committee. Specializes in overall economics and business.

Effect of the project

Since the completion of weirs and other facilities, there has been a substantial reduction in the level of damage sustained by the people of Surabaya (the population is approx. 2.6 million, almost equal to that of Osaka).



Beneficiaries of the project

Comparison of flood damage suffered before and after the project

■ Enormous damage (irreversible) ■ Considerable damage (recoverable with much money and time)
■ Minor damage (recoverable quickly with self-help) ■ No damage

