External Evaluator: Masafumi Ikeno

Overall Rating A

Poverty Reduction, A Foundation for Sustained Growth
Global Issues and Peace-building

36 Brazil

Todos Os Santos Bay Environmental Sanitation Project

Contributing to the improvement of the living environment of residents by improving sewerage and public sanitation

Loan Amount / Disbursed Amount	7.895 billion yen / 7.751 billion yen
Loan Agreement	May 1997
Terms & Conditions	4.0% interest rate (consulting services: 2.3%), 25 year repayment period (7 year grace period), General untied
Final Disbursement Date	September 2003
Executing Agencies	Bahia Urban Development Office (Secretaria de Desenvolvimento Urbano do Estado da Bahia: Sedur) (http://www.sedur.ba.gov.br/) Baiana Water & Sanitation Company (Empresa Baiana de Águas e Saneamento: Embasa) (http://www.embasa.ba.gov.br/)

Project Objectives

The objective of this project was to improve the sanitation of the urban environment and reduce marine environmental impact by constructing sewerage systems in Salvador, the capital of Bahia state, where rapid urbanization and industrialization have caused environmental deterioration, and thereby contribute to the improvement of the living environment and health of the city's residents.

Effectiveness and Impact

Rating a

Through implementation of this project, the population of Salvador receiving sewerage treatment services increased from 28% in 1997 to 68% in 2006, and the facility utilization rate of pumping stations increased from 16% to 86%. Implementation of this project also boosted the sewerage coverage rate in Salvador from 26% to 69% and lowered marine environmental impact by substantially improving the values for environmental indicators such as BOD (Biochemical Oxygen Demand). In a beneficiary survey given to 189 people, approximately 70% of the beneficiaries in the two districts covered by the project responded that they were highly satisfied. The respondents indicated that the installation of in-house sewerage led to the lightning of domestic work and that, on the community level, the environment had improved in public places such as parks and beaches. Therefore, this project has largely achieved its objectives, and effectiveness is highly satisfactory.

Relevance

Rating a

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

Efficiency

Rating b

The project period greatly exceeded the planned period (182% of planned period) although the project costs were almost as planned; therefore the evaluation for efficiency is moderate.

Sustainability

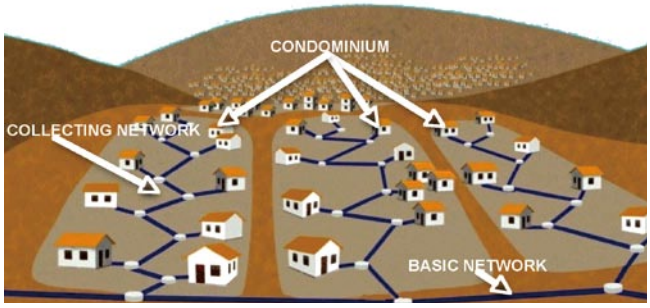
Rating a

No major problem has been observed for capacity of the executing agency nor the operation nor its maintenance system, therefore, sustainability of this project is high. Empresa Baiana de Águas e Saneamento (Embasa) has no problem with its technical organizational structure or technical capacity in performing the operation and maintenance of the project. The technical level of each private contractor that actually performs the operation and maintenance work is verified upon contract award. In addition, Embasa provides complementary technical training to private contractors using the training manual it developed to maintain required technical levels.

Conclusion, Lessons Learned, Recommendation

In light of the above, this project is evaluated to be highly satisfactory. As a lesson learned, changing the sewerage piping system to the condominium method developed in Brazil after the project commencement resulted in more sewerage systems being expanded and installed than planned, and it even enabled the installation of sewerage in poor areas which was considered extremely difficult from a technical perspective. In this regard, it will be worthwhile to consider the introduction of a system suited to the local society at the time of project formation in the future.

Adoption of condominium method



The condominium method adopted for part of this project is a new method of installing branch pipes and drains (conduit pipes) developed at the end of the 1990s in Brazil. Since the cost is lower than the conventional method, and convenient for laying pipes in dense residential areas, Bahia state began to introduce this method at the beginning of 2000, mainly in low income areas.

Third-Party Opinion

This was an important project that undertook appropriate development in a poor area. It improved the sanitation of the bay coast in Salvador, which helped improve the health of children, encouraged continued school enrollment, and was met with appreciation by foreign tourists.

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