

Ex-ante Evaluation

1. Name of the Project

Country: India

Project: Tamil Nadu Urban Infrastructure Project

(Loan Agreement: 03/10/ 2008; Loan Amount: 8,551 million yen; Borrower: The President of India)

2. Necessity and Relevance of JBIC's Assistance

In India, water usage is increasing together with the growth in population. Dependence on groundwater is reducing the groundwater level, leading to a serious imbalance in the supply and demand of water. As a result of the sudden population influx in urban areas and industrialization, the discharge of wastewater exceeds the disposal capacity, and the raw sewage discharged into rivers far exceed the self purification capacity. As a result, the public health and living conditions of local residents are threatened by diarrhea and hepatitis, etc., that are caused by the polluted water.

The 10th 5-Year Plan (April 2002-March 2007) by the Government of India proposed to supply adequate and safe drinking water to the entire population, to clean up the major polluted rivers and to improve the river catchment area environment. Based on this, in the National Water Policy (April 2002), Ministry of Water Resources aims to give priority to the allocation of water resources in the order of drinking water, irrigation, and hydroelectric power. Ministry of Environment and Forests also has been working on cleaning up of rivers, starting with the River Ganga in 1985 and is in the process of constructing sewerage facilities under the National River Conservation Plan. In addition, the 11th 5-Year Plan (April 2007-March 2012) makes reference to the development and promotion of water and sewerage facilities under Jawaharlal Nehru National Renewal Mission (JNNURM).

In JBIC's current Medium-Term Strategy for Overseas Economic Cooperation Operations, the priority sectors for assistance to India are "Economic Infrastructure Development" and "Environmental Improvement." The assistance provided by this project is consistent with the strategy.

In Tamil Nadu, located in southeast India, 44% of 62.11 million people live in the urban area compared to 28% (Indian average) in 2001, which makes Tamil Nadu one of the most urbanized states in India. The cities in Tamil Nadu contribute to 70% of the state's GDP. On the other hand, the development of water supply and sewerage networks cannot keep up with the surge in urban population. Consequently, not only are municipalities and corporations in Tamil Nadu (157 local bodies) unable to supply the enough amount of water targeted by the state, but also only 11 cities have sewerage treatment facilities, leading to a deteriorating hygienic environment. Because of this, State Government of Tamil Nadu, which in 2006 adopted a policy of supplying water 24 hours a day and constructing sewerage facilities in all city-level municipalities, has been striving to improve the urban hygienic environment. Despite this effort, while there is abundance of support schemes for major-size cities offered by the central and state government, medium-size and small-size local cities are so weak financially that they lack the budget necessary for constructing sewerage facilities. In 1996, State Government, together with private financial institutions, established the Tamil Nadu Urban Development Fund (TNUDF) for the purpose of strengthening the financial management capacity of local governments and improving urban areas infrastructure. TNUDF is promoting the construction of water and sewerage facilities in local cities. TNUDF is the first fund established

through joint public and private investment. This project aims to strengthen the capacity of local governments and promote construction of water and sewerage facilities through TNUDF. Thus this project is highly necessary and relevant.

3. Project Objectives

The objective of this project is to provide safe water supply and sewerage facilities for small and medium local cities in Tamil Nadu where the population is growing, by providing long-term funds through TNUDF, and thereby contributing to the economic development of small and medium local cities as well as to the improvement of the living conditions of residents.

4. Project Description

(1) Target Area

State of Tamil Nadu

(2) Project Outline

The project aims to provide funds in the form of two-step loans (TSL) through TNUDF for the development (i.e. construction and expansion) of water supply and sewerage facilities.

(a) Provision of funds required for implementing subprojects

(b) Training (For improving supervision of works by local bodies and enhancing their operation and maintenance capacity)

Note: Local bodies targeted: TNUDF will select the local bodies for financial assistance by taking into consideration, among these things, (i) the financial standing of local bodies targeted by the project, (ii) the need for water and sewerage, and (iii) the maturity of feasibility studies (F/S) etc.

(3) Total Project Cost/Loan Amount

9,824 million yen (Yen Loan Amount: 8,551 million yen)

(4) Schedule

April 2008–June 2013 (63 months). The project completion is defined as when construction work is completed.

(5) Implementation Structure

(a) Borrower: The President of India

(b) Executing Agency: Tamil Nadu Urban Development Fund

(c) Operation and Maintenance System: Same as (b). With regard to subprojects: each local body

(6) Environmental and Social Consideration

(a) Environmental Effects/Land Acquisition and Resident Relocation

(i) Category: FI

(ii) Reason for Categorization

This project is classified as Category FI under the “Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations” (established April 2002) because JBIC’s funding of the project is provided to a financial intermediary etc.; the

sub-projects cannot be specified prior to JBIC's approval of funding; and those sub-projects are expected to have potential impact on the environment.

(iii) Other

In accordance with the "Environmental and Social Framework" prepared based on the World Bank's environmental guidelines, at the time of sub-project selection, experts in environmental and social consideration hired by the executing agency will confirm categorization of social and economic impacts of the sub-projects selected and countermeasures to deal with those impacts. Since experts in environmental and social consideration are to be hired and no problems have been reported regarding similar projects previously implemented with support provided by the World Bank, it is judged that appropriate environmental and social consideration will be made in the implementation of this project.

(b) Promotion of Poverty Reduction

None

(c) Promotion of Social Development (e.g. Gender Perspective, Measures to Prevent Infectious Diseases Including AIDS, Participatory Development, Consideration for the Handicapped, etc.)

None

(7) Other Important Issues

None

5. Outcome Targets

(1) Evaluation Indicators (Operation and Effect Indicator)

| Indicator | Baseline (2007) | Target (2015, 2 years after completion) |
|---|-----------------------|--|
| Water supply | | |
| Population served (1000 persons) | 800 | 900 |
| Available water per capita per day (L) | 70-90 L | 135 L |
| Water supply hours (hr/day) | 2 hrs every other day | 6 hours/day |
| Sewerage | | |
| Population treated (1000 persons) | - | 100 |
| Amount of wastewater treated (m ³ /day) | - | 10,000 |
| Number of households connected (number of households) | - | 30,000 |

(2) Beneficiaries

About 1 million

Note: The above operation and effect indicators and number of beneficiaries are premised on the possible adoption of sub-projects as targets of this project as presented by the Indian side at the time of appraisal. After the sub-projects are determined, the operation and effect indicators and the number of beneficiaries are to be reconsidered.

(3) Internal Rate of Return (Financial and Economic Internal Rate of Return)

Neither FIRR nor EIRR are calculated.

6. External Risk Factors

None

7. Lessons Learned from Findings of Similar Projects Undertaken in the Past

From ex-post evaluations of water and sewerage improvement projects in the past, the lesson learned is that to implement projects smoothly based on TSL, it is important that the executing agency be in a sound financial position and that legal system and legal organization be provided to complement its operation. TNUDF, the project's executing agency, has attracted a lot of attention as the first fund in India to be established jointly by State Government and private financial institutions, and has TSL experience in infrastructure development projects for local bodies financed by the World Bank spanning three phases. TNUDF also has collaborated with the World Bank in executing its capacity building. TNUDF thus aims to execute this project efficiently while capitalizing on its excellent track record working with the World Bank.

8. Plans for Future Evaluation

(1) Indicators for Future Evaluation

(a) Water supply

- (i) Population served (1000 persons)
- (ii) Available water per capita per day (L)
- (ii) Water supply hours (hr/day)

(b) Sewerage

- (i) Population treated (1000 persons)
- (ii) Amount of wastewater treated (m³/day)
- (iii) Number of households connected (number of households)

(2) Timing of Next Evaluation

2 years after project completion