

Ex-Ante Evaluation (for Japanese ODA Loan)

1. Name of the Project

Country: The Republic of Turkey
Project: Municipal Sewerage and Wastewater Treatment Improvement Project
Loan Agreement: June 22, 2011
Loan Amount: 12,784 million yen
Borrower: İller Bankası Anonim Şirketi

2. Background and Necessity of the Project

(1) Current State and Issues of the Sewerage Sector in the Republic of Turkey

Due to the recent economic growth in Turkey, the population is concentrating in the cities, and water pollution caused by domestic and industrial effluents is becoming a problem. Large cities are able to independently raise funds from the markets and overseas financial resources and they are implementing sewerage development. However, medium-sized cities and other small cities rely on the transfer of tax revenues from the central government as the source of funds, but the funding has not reached the necessary investment amount and sewerage development is being delayed in these areas. Due to this situation, sewerage is being directly released into water courses and rivers. Measures are needed to reduce water pollution and improve the living environment.

(2) Development Policies for the Sewerage Sector in Turkey and the Priority of the Project

In its Ninth Development Plan (2007-2013), the Turkish government stipulated five development pillars: 1) increasing competitiveness; 2) increasing employment; 3) strengthening human development and social solidarity; 4) ensuring regional development; and 5) increasing the quality and effectiveness of public services. Sewerage development in medium-sized municipal areas is also considered a priority issue, in the National Rural Development Strategy 2006 which focuses on rural development and the EU Integrated Environmental Approximation Strategy 2007-2023.

(3) Japan and JICA's Policy and Operations in the Sewerage Sector in Turkey

Japan's priority fields for assistance to Turkey include: 1) environmental improvement; 2) human resource development for economic and social development; 3) disaster preparedness; 4) reduction of disparities; and 5) South-South cooperation. The project comes under "1) environmental improvement."

Although no Japanese ODA loans have been provided for the Turkish sewerage sector, loans are being provided to the water supply sector. The Istanbul Water Supply Project (the loan amount: 94.8 billion yen) and the Ankara Water Supply Project (the loan amount: 26.8 billion yen) are currently being implemented.

(4) Other Donors' Activity

The World Bank is currently conducting a project to develop water supply and sewerage systems in local government jurisdictions. İller Bankası Anonim Şirketi is the borrower and the executing agency. KfW, EU, the Islamic Development Bank and others are also conducting environmental improvement projects including sewerage development.

(5) Necessity of the Project

In medium-sized municipal areas, sewer pipes have been installed to a certain extent, but treatment plants have hardly been developed and prompt measures are needed to reduce water pollution.

Therefore, it is timely for JICA to conduct the project and the project is highly necessary.

3. Project Description

(1) Project Objective

The project aims to promote sewerage and wastewater treatment prevalence and to improve water quality of rivers by improving sewerage and wastewater treatment in middle sized municipalities in Turkey whose infrastructure are behind compared to large sized municipalities thereby contributing to improvement of living conditions of local residents and reducing disparities..

(2) Project Site/Target Area

Medium-sized municipal areas throughout Turkey

(3) Project Components

- 1) In medium-sized municipalities in Turkey, the project will conduct sub-projects for sewerage development (sewerage treatment plants, sewer pipes, etc.) and provide consulting services, using two-step loan to be provided through İller Bankası Anonim Şirketi. Consulting services include: assisting with the selection and procurement of contractors for the main facility construction; managing funds at the sub-project implementation stage; assisting with ensuring environmental and social considerations; etc.
- 2) İller Bankası Anonim Şirketi will select municipalities to which it will provide loans, by taking into consideration the targeted municipalities' size, financial situation and the necessity for conducting a sub-project. The loan from İller Bankası Anonim Şirketi conditions are as follows.
 - Loan period: The maximum repayment period is 25 years, of which the maximum grace period is 7 years.
 - Interest rate for the loan: 2.2% (the interest rate for the Japanese ODA loan + 1%)
 - Currency for the loan: Yen (Foreign exchange risks are born by each municipalities.)

(4) Estimated Project Cost (Loan Amount)

15,663 million yen (Loan Amount: 12,784 million yen)

(5) Schedule

The planned implementation schedule is from June 2011 to October 2015 (53 months in total). The project will be deemed complete when the facilities start operations (October, 2015).

- (6) Project Implementation Structure
 - 1) Borrower: İller Bankası Anonim Şirketi
 - 2) Guarantor: The Republic of Turkey
 - 3) Executing Agency: İller Bankası Anonim Şirketi
 - 4) Operation and Maintenance System: Each municipality is responsible for operation and maintenance.
- (7) Environmental and Social Consideration/Poverty Reduction/Social Development
 - 1) Environmental and Social Consideration
 - (i) Category: FI
 - (ii) Reason for Categorization: The project will provide a loan to a financial intermediary and the sub-projects cannot be specified prior to JICA's approval of funding. In addition, those sub-projects are expected to have potential impacts on the environment. Therefore, the project is classified as Category FI under the Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations (established in April 2002).
 - (iii) Others: In the project, the İller Bankası Anonim Şirketi will employ a consultant (an expert on environmental and social considerations). The consultant will then assess the environmental and social impact of the sub-projects, classify them and check the necessary countermeasures, when sub-projects are selected, based on the Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations. It has been determined that there will be appropriate environmental and social considerations regarding the project, because an expert on environmental and social considerations will continuously be employed and a similar project currently being conducted by the World Bank has not created any particular problems. It has been confirmed that the current candidate sub-projects do not come under Category A.
 - 2) Promotion of Poverty Reduction: None
 - 3) Promotion of Social Development (gender perspective, measures for infectious diseases including HIV/AIDS, participatory development, consideration for persons with disabilities, etc.): None
- (8) Collaboration with Other Donors: The World Bank and other donors are conducting sewerage development projects in rural areas, but they do not completely meet the level of demand for funds. The project will conduct developments in the Turkish sewerage sector in coordination with other donors.
- (9) Other Important Issues: None

4. Targeted Outcomes

(1) Quantitative Effects

1) Performance Indicators (Operation and Effect Indicators)

Indicator	Baseline (Actual Value in 2008)	Target (2017) [2 years after project completion]
Population whose wastewater is treated (1,000 people)	0	790
Amount of water treated (m ³ /day)	0	42,000
Number of houses connected to sewerage	32,000	94,000
BOD concentration (mg/L) (when discharged)	300	27

* The above-mentioned operation and effect indicators have been set based on the potential sub-projects (eight municipalities) proposed by Turkey at the time of the appraisal. The figures will be revised for each sub-project after the sub-projects have been determined.

2) Internal Rate of Return: The internal rate of return will be calculated when conducting feasibility studies for the sub-projects.

(2) Qualitative Effects: The living environment and the capacity of municipalities to maintain facilities will be improved.

5. External Factors and Risk Control

None

6. Lessons Learned from Past Projects

Based on ex-post evaluations of similar projects undertaken in the past, it can be concluded that: (1) it is necessary to provide the assistance needed to conduct an appropriate operation in addition to developing infrastructure; and (2) it is necessary to monitor the effects of the sub-projects.

In light of these lessons learned, the project will check at the time of selecting the sub-projects whether the municipalities have operation and maintenance plans. In addition, the contractors will transfer technology and techniques for operation and maintenance during the warranty period of the construction contracts. The project will also set operation and effect indicators for each sub-project.

7. Plan for Future Evaluation

(1) Indicators to be Used

- 1) Population whose wastewater is treated (1,000 people)
- 2) Amount of water treated (m³/day)
- 3) Number of houses connected to sewerage
- 4) BOD concentration (mg/L) (when discharged)
- 5) Internal Rate of Return

(2) Timing

Two years after project completion