

Ex-ante Evaluation

1. Name of the Project

Country: Republic of Tunisia

Project: Jendouba Rural Water Supply Project

Loan Agreement: May 23, 2006; Loan Amount: 5,412 million yen; Borrower: The Government of the Republic of Tunisia

2. Necessity and Relevance of JBIC Assistance

With one half of its land having a semi-arid climate, Tunisia has an average annual rainfall of only 300mm. Moreover water resources are scarce with marked geographical imbalances in rainfall, annual amounts of usable surface water, etc., within the country; therefore, efficient development and management of the limited water resources is one of the most important development issues in Tunisia.

Looking at Tunisia's water sector, the average access to water for the entire country is comparatively high at approximately 94.5%. The country's urban areas have achieved almost 100% access to water; however, in rural areas the comparable figure averages approximately 84.9%. A gap has therefore opened up. In particular, in the northwestern region development is lagging behind and access to water is at the lowest level in the nation due to the fact that the abundant surface water in this region is being exploited as the major water source for the Tunis metropolitan area; there is also a paucity of groundwater, rugged terrain, and a scattering of small villages across the region. The poverty rate in Tunisia as a whole (the definition of the poverty line in the rural areas of Tunisia in 2000 was 209TD/person/year) is 6.2% whereas by contrast the average poverty rate in the governorates in the northwest exceeds 10%. It is essential to increase the access to water in this region and to develop water supply facilities in order to improve the living standards of the community residents.

Given these circumstances, in its 10th Five-Year Economic and Social Development Plan (2002-2006) the Government of Tunisia presents a policy focused on improving access to water in regions where comprehensive water resources management and development is lagging behind, in order to bridge the gap between urban areas and rural areas in the water sector. Under this policy, water supply projects are being implemented under the leadership of the Société Nationale d'Exploitation et de Distribution des Eaux (SONEDE) in the northwestern region in which water resources development is lagging particularly far behind, with the plan being to improve access to water in that region. This project will lay a pipeline network in the Jendouba Governorate in the northwestern region, based on the dams within that governorate, and provide water to all of the villages in the governorate in order to provide water to all of the governorate's rural areas, since these have the lowest access to water in all of Tunisia.

In its Medium-Term Strategy for Overseas Economic Cooperation Operations (FY2005-2007) JBIC has positioned "development of a foundation for sustained growth," "support for global issues," and "support for poverty reduction" as priority areas of support; furthermore, Tunisia has stipulated

“development of sewage systems, the water supply, and other socioeconomic infrastructure” as priority areas and this project is consistent with that policy. JBIC’s assistance for this project is therefore highly necessary and relevant.

3. Project Objectives

The project aims to improve access to water in the northwestern region, which has the lowest level of access to water in all of Tunisia, by developing water supply facilities in that region, thereby improving the living standards of the community residents and contributing to invigoration of the regional economy.

4. Project Description

(1) Target Area

Jendouba Governorate and a part of Béja Governorate

(2) Project Outline

In order to supply tap water in Jendouba Governorate and Béja Governorate in the northwest of Tunisia, the project will develop the following water supply facilities.

- a) Laying of water pipes
- b) Construction of water purification facility (size: 400l/s) (1 location)
- c) Construction of distribution reservoirs (12 locations)
- d) Construction of pumping facilities (9 locations)
- e) Construction of decompression facility (1 location)

(3) Total Project Cost/Loan Amount

7,296 million yen (ODA Loan Amount: 5,412 million yen)

(4) Schedule

May 2006-December 2010 (56 months)

(5) Implementation Structure

- a) Borrower: the Government of the Republic of Tunisia (Government of the Republic of Tunisia)
- b) Executing Agency: Société Nationale d’Exploitation et de Distribution des Eaux (SONEDE)
- c) Operation and Maintenance System: Same as 2)

(6) Environmental and Social Consideration

a) Environmental Effects/Land Acquisition and Resident Relocation

i) Category: B

ii) Reason for Categorization: This project is classified as Category B because it does not involve any of the sensitive sectors, characteristics or areas listed in the “Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations” (established April 2002) and because JBIC judges that it will not have a significant adverse impact on the environment.

iii) Environmental Permit

Under Tunisian domestic law it is not compulsory to write an Environmental Impact

Assessment (EIA) report for this project.

iv) Anti-Pollution Measures

The waste water, sludge, etc., generated from the operation of the project facilities is to be appropriately treated and disposed of according to the standards of the government of Tunisia so no particular negative impact is foreseen.

v) Natural Environment

The project area is not in or near an area that is susceptible to impact, such as a nature preserve, and it is likely to have minimal adverse impact on the natural environment.

vi) Social Environment

This project requires land acquisition mainly for the water purification facilities and it will be implemented in accordance with the Tunisia's procedures. The project does not involve any resident relocation.

vii) Others/Monitoring

The executing agency will monitor water quality, etc., for this project.

b) Promotion of Poverty Reduction

Improvement of the living standards of the poor in the target area can be expected as a result of the development of water supply facilities through this project.

c) Promotion of Social Development (e.g. Gender Perspective)

The majority of the labor of drawing water from the well is borne by women and children; thus the development of water supply facilities can be expected to reduce the labor of women and children.

5. Outcome Targets

(1) Evaluation Indicators (Operation and Effect Indicator)

Indicator	Base-line (2003)	Target (2015 [5 years after completion of project])
Amount of water supplied by the water purification facilities (liters/s)		296
Rate of facility utilization (%)		78
Non-revenue water rate (%)		5
Leakage rate (%)		15
Total population served (number of people)*	0	193,070
Access to water in rural areas of Jendouba Governorate** (%)	69.8	95.2

* The development of a home water supply network for all of the target area will be possible through the water pipe network which this project will develop. The development of the home water supply network implemented under this project will be only for 20 villages at first, but gradually it will be developed in other villages. It is expected that the home water supply network will be developed in 1,016 villages by 2025. The "total population served" in the above table is the

population of all of these 1,016 villages.

** It is expected that other water supply projects will be implemented together with this project in the Jendouba Governorate within the framework of the 11th Five-Year National Plan. Access to water in this governorate is expected to achieve the above targets if all the water supply projects, including this project are, implemented.

(2) Internal Rate of Return

* Financial Internal Rate of Return (FIRR): 1.20%

- a) Cost: project cost, operation and maintenance expense
- b) Benefit: revenue from services
- c) Project life: 40 years

* Economic Internal Rate of Return (EIRR): 7.16%

- a) Cost: project cost (excluding tax), operation and maintenance expense
- b) Benefits: savings accrued from drinking water purchase cost savings, savings accrued from reduced expenditure on medical treatment for diseases caused by the consumption of unsanitary drinking water, increased revenue due to the increase in the amount of time engaged in economic activities made possible by the reduction in the time spent on drawing water from wells.
- c) Project life: 40 years

6. External Risk Factors

None.

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

In past ex-post evaluations, the lesson was learned that in order to get the project facilities to function sufficiently, it is important to ensure fiscal sustainability. The project cost is covered by the government, but operation and maintenance and replacement investment are covered by the return on the project; in this project, therefore, it is important for tariff collection to be sufficient to cover the maintenance cost. Therefore, in order to ensure the future sustainability of this project, JBIC will monitor the tariff collection and connection status of the executing agency.

8. Plans for Future Evaluation

(1) Indicators for Future Evaluation

- a) Amount of water supplied by the water purification facilities (ℓ/s)
- b) Rate of facility utilization (%)
- c) Non-revenue water rate (%)
- d) Leakage rate (%)
- e) Total population served (people)
- f) Access to water in rural areas of Jendouba Governorate (%)
- g) Internal Rate of Return (FIRR (%), EIRR (%))

(2) Timing of Next Evaluation

After project completion