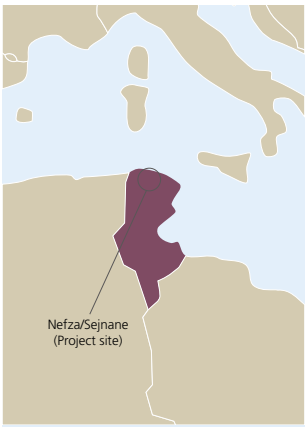
External Evaluator: Koichiro Ishimori

Overall Rating B

Poverty Reduction



44 Tunisia

Water Pipeline Construction and Irrigation Project in North Tunisia

Contributing to the stable supply of tap water and increase in agricultural productivity through construction of a water pipeline and installation of irrigation facilities

Loan Amount / Disbursed Amount	14.130 billion yen / 10.711 billion yen
Loan Agreement	February 1996
Terms & Conditions	2.7% interest rate (consulting services: 2.3%), 25 year repayment period (7 year grace period), General untied
Final Disbursement Date	December 2004
Executing Agency	Ministère de l'Agriculture et des Ressources Hydrauliques (Ministry of Agriculture and Water Resources)

Project Objectives

The objective of this project was to promote a stable supply of tap water and improve water quality in Tunis and other areas by expanding the aqueduct running from Béja Governorate in northern Tunisia to the outskirts of Tunis, and thereby contribute to the improvement of public welfare. The project additionally aimed to promote increased production, including agricultural productivity, by irrigating 4,420 ha of farmland in Nefza, Béja Governorate, and in Sejnane, Bizerte Governorate, and thereby contribute to improvement of farmers' livelihoods and standard of living.

Effectiveness and Impact

Rating b

There are generally no problems with the actual daily average aqueduct water volume in this project's target section, which in 2006 was approximately 200,000 m^3, or about 65% of the 2010 target level of approximately 300,000 m^3. The saline concentration in the drinking water source was reduced from 1.11 g/m^3 in 1996 to 0.75 g/ℓ in 2005. This improvement meets the standards of the World Health Organization (WHO) (1.0 g/ℓ or less).

At 5,378 ha in 2006, the area benefited by irrigation exceeded the initially planned area of 4,420 ha. The number of farm households benefited by irrigation in 2006 was 3,400 compared to an initial plan of 1,850. However, the actual usage of irrigation is not progressing due to the lack of financing required by most farm households to introduce terminal irrigation equipment. Many are taking a wait-and-see attitude toward the activities of the few farm households that are introducing the equipment at this time. In addition, the farmers do not possess adequate knowledge of techniques for irrigation farming and for planting various types of crops. In part because time is needed for effects to be realized for irrigation projects involving new fields, the cultivated area was only 908 ha, which is less than planned. Nevertheless, it is hoped that irrigation use in the project's target area will progress in the future, since the Tunisian government has launched a pilot program to improve the cultivated area and yield per unit area and JBIC has started efforts in the area, including provision of planting guidance. Therefore, this project has brought certain effects and its effectiveness is moderate.

Yield per Unit Area Using Irrigation, by Major Crops (t/ha)

	Plan	Actual (2006)	Average in Tunisia
Corn for animal feed	35	30	40
Oats for animal feed	6	0	NA
Watermelon	30	12	17
Tobacco	2	2	2
Pears	5	6	17
Spring onions	20	7	17

Source: Ministère de l'Agriculture et des Ressources Hydrauliques

Relevance

Rating a

This project has been highly relevant with Tunisia'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 was much longer than planned (228% of planned period) although the project cost was lower than planned (70% of planned cost), 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 regarding aqueduct facilities. There is room for improvement in guidance on planting and operation and maintenance of equipment provided by the Commissariat Régional au Développement Agricole (CRDA) to the farmers association, but it is hoped that sustainability of technical capacity will increase in the future, since JBIC has started to provide technical assistance to CRDA. Therefore, with no major problems, sustainability of this project is high.

Conclusion, Lessons Learned, Recommendation

In light of the above, this project is evaluated to be satisfactory. A lesson learned is that education concerning irrigation and the provision of technical and financial assistance to stimulate actual implementation of irrigation should be considered while installing infrastructure. As a recommendation, it is advisable that regular monitoring be carried out by the executing agency in order to grasp the project's effects and sustainability in the future.

Third-Party Opinion

Although it will take time to realize the full effect of this project, I expect further effects to be realized in the future, since we can already see improvements, including increased annual farm income among the farm households benefited by irrigation and a decrease in the saline concentration of Lake Ichkeul.

Name of specialist: Mr. Noureddine Mejdoub (former ambassador to the United Nations)
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