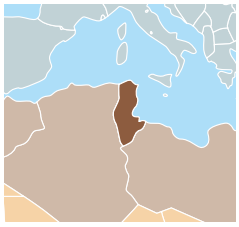
Middle East | Tunisia



Treated Sewage Irrigation Project

Limited effects produced in an effort to stabilize irrigation water supply using treated sewage water

【External evaluator】
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Rating

Effectiveness, Impact	c	Overall rating D
Relevance	a	
Efficiency	b	
Sustainability	a	

Project Objectives

To provide a stable supply of irrigation water and conserve groundwater resources by building the infrastructure for irrigation (including water storage facilities, pumping stations, and water distribution pipes) that is designed to use sewage water treated at 12 treatment facilities in ten regions in Tunisia – Bizerte, Menzel Bourguiba, Béja, Medjez El Bab, Jendouba, Nabuel, Siliana, Msaken, Jerba Aghir, and Medenine – thereby contributing to stable agricultural production and regional economic development.

Outline of the Loan Agreement

- Loan amount / disbursed amount: 1,707 million yen / 1,332 million yen
- Loan agreement: March 2005
- Terms and conditions: 2.7% interest rate; 30-year repayment period (including a 10-year grace period); general untied [consulting services: 0.75% interest rate; 30-year repayment period (including a 10-year grace period); partially untied]
- Final disbursement date: October 2005
- Executing agency: Ministere de l'Agriculture et des Ressources Hydrauliques (MARH) [Ministry of Agriculture and Water Resources]
- Website URL: http://www.ministeres.tn/html/ministeres/attributions/agriculture.html

A reservoir of treated sewage water in Medenine

Effects of Project Implementation (Effectiveness, Impact)

The development of irrigation systems designed to use treated sewage water under the project has alleviated water shortages to some extent. This has produced a number of benefits, including the diversification and qualitative improvement of crops, and higher income and better living standards for farmers due to year round agricultural production.

On the other hand, the project has fallen far short of planned targets. The total area irrigated with treated sewage water is about 20% of the planned figure in the summer and as low as 7% in the winter. The total number of farmers that have benefited from the project remains at about 61% of the planned number. There are three major reasons for this unsatisfactory performance. First, implementation of the project was cancelled in two regions. Second, the practice of using irrigation was not established yet since there was not much time between project completion and ex-post evaluation. Third, high levels of precipitation temporarily reduced the demand for irrigation water.

This project has produced limited effects, and its effectiveness is low.

Relevance

This project has been highly relevant with Tunisia's national policies and development needs at the times of both appraisal and ex-post evaluation. The project was consistent both with the ninth five-year plan for 1996-2000, which considered the agricultural sector an important element of economic development, and with the eleventh five-year plan for 2006-2010, which regards agriculture as an important sector and calls for water resources conservation, including the expansion of irrigation systems that take advantage of treated sewage water.

Efficiency

This project took longer in duration and cost less than planned; therefore the evaluation for efficiency is moderate.

Although water transmission and irrigation distribution pipes were constructed largely according to plan, the actual outputs were slightly less than planned since the number of target regions was reduced by two. The actual project period was 137% of the planned period due to delays in the provision of consulting services and in the procurement of equipment and materials. The actual project cost was 70% of the planned cost because civil works were cancelled in some regions, while it cost more in others due to the surging prices for materials.

Sustainability

No major problems have been observed in the capacity of the executing agency nor its operation and maintenance system; therefore, sustainability of this project is high. The regional general directorate for regional civil engineering of the MARH offers technical assistance and the Commissariat Régional au Développement Agricole (CRDA) provides training for the Groupement de Développement Agricole (GDA) and guidance on crop cultivation for the farmers involved. Although the project impact was low at the time of this evaluation, the farmers will likely make greater use of the irrigation water. It is also likely that the irrigation facilities will continue to be properly operated and maintained.

Conclusion, Lessons Learned, Recommendations

In light of the above, this project is evaluated to be unsatisfactory. The National Sanitation Utility (ONAS) and the MARH should work together to monitor water quality and develop plans for water quality improvements in an effort to convince farmers of the safety of the treated sewage water. They should also mount information campaigns directed at farmers before launching any similar projects to gain their understanding of and participation in such projects.