

Ex-Ante Evaluation

1. Name of the Project

Country: Kingdom of Morocco
Project: Provincial Cities Water Supply Project
Loan Agreement: March 19, 2010
Loan Amount: 15,487 million yen
Borrower: Office National de l'Eau Potable: ONEP

2. Background and Necessity of the Project

(1) Current State and Issues of the Water Supply Sector in Morocco

In Morocco, development of export industry and infrastructure targeting private investments is advancing for the future market integration with EU in 2010, based on the partnership with EU. On the other hand, ensuring sustainable growth and development of basic infrastructure which contribute to alleviation of regional disparities are priority issues. Especially in the water supply sector which is one of the priority areas of those issues, it is steadily increasing with regards to the water supply rate¹. However, it is still required for efforts to improve the water supply rate in the rural area, to promote the diffusion of water supply to each household, and to improve the facilities in order to correspond to the increasing water demand due to the population growth, urbanization, improvement of living conditions, etc.

(2) Development Policies for the Water Supply Sector in Morocco and the Priority of the Project

In the “Economic and Social Development Plan (2000-2004)”, the Government of Morocco targets the economic growth, poverty reduction, and alleviation of regional disparities. With regards to the water supply sector, it is called for the increase of water supply rate or development of water supply facilities in order to comply with the increasing demand, and this policy was reflected to the budget act of 2008. Moreover, improvement of accessibility to basic social services including water supply is included in the *National Initiative for Human Development* (INDH) (2006-2020), which aims to reduce poverty and alleviate regional disparities, besides this plan. The *Water Sector Activity Strategy* (2008-2012) was established for the water sector related plans – the target is to sustainably develop water supply facilities in the urban areas, as well as to improve the water accessibility in the rural areas. Based on this policy, a project plan (2008-2010) was established between the National Office of Potable Water (ONEP) and the Government of Morocco. The main target here is to enhance the water supply to the rural areas, and the diffusion of water supply to each household of both urban and rural areas. This project is positioned as one of the priority projects of the above project plan, which is to aim for stabilizing the water supply in the rural cities and villages around Khemisset and Khouribga, as well as to contribute to the improvement of the living

¹ According to ONED, the water supply rate in urban areas is 100%, and in rural areas is 87%, respectively as of 2008. The water supply rate includes not only water supply to each household, but also through public taps.

conditions of the local people in these areas and the advance of economical activities.

(3) Japan and JICA's Policy and Achievements in the Water Supply Sector in Morocco

Regarding the water supply sector, Japan has assisted a total of 6 projects for the city and rural water supply by ODA Loan (42.6 billion JPY), and 5 projects for rural water supply (2.5 billion JPY) by grant aid. This project is for assisting further effort for the diffusion of water supply and its stabilization, and corresponds to one of the priority issues of Japan's economical support to Morocco – “assistance to the basic infrastructure development that supports sustainable economic growth”. Furthermore, this project also corresponds to “efficient and safe/stable water supply”, which is one of the priority issues of JICA's water sector support policy, “strengthening of economical competitiveness and sustainable economic growth”, which is also one of the priority areas of JICA's assistance to Morocco, and “securing of water resource and its effective use”, which is the development issue set by the JICA..

(4) Other Donor's Activity

Agence Française de Développement (Development assistance agency of France: AFD), Kreditanstalt für Wiederaufbau (Banking group of Germany: KfW), the World Bank, EU, and African Development Bank, etc., is assisting the water supply sector in Morocco.

(5) Necessity of the Project

In the project sites, besides population growth, enhancement of the water supply area and increase of households for water supply are also causing the water demand to increase. Khouribga area is already experiencing water stoppage, and the stoppage is also predicted to occur in Khemisset area in 2010. In addition, due to the reduction of rainfall and groundwater volume in Khouribga, the water resource was switched from the groundwater to surface water, thus underground water resource must be maintained. In response to such background, in the project plan of ONEP (2008-2010), enhancement of the existing water treatment plant in Khemisset, and construction of a new water treatment plant in Khouribga are the priority projects. By implementing this project, the current urgent water supply demand is expected to ease, and the water supply network to the villages and the increasing connection to each household can be realized, as well as maintenance of the underground water resource of Khouribga. Therefore, this project contributes to the improvement of the living conditions of the people in the target region and the advancement of economical activities, and the necessity and validity of the project is high.

3. Project Description

(1) Project Objectives

The objective of the project is to develop water supply facilities in the rural cities and villages around Khemisset located in the north-central, and Khouribga in the center of Morocco, aiming for stable water supply to these areas, thereby contributing to the improvement of the living conditions for the people in these areas and economic activities.

(2) Project Sites/Target Areas

Rural cities and villages around Khemisset and Khouribga

(3) Project Components

1) Khemisset

- a. Strengthening of water treatment plant (240 ℓ/s)
- b. Strengthening of water conveyance facility
- c. Consulting service

2) Khouribga

- a. Construction of new water treatment plant (1,650 ℓ/s, including desalting facility)
- b. Strengthening of water conveyance facility
- c. Consulting service

(4) Estimated Project Cost and Loan Amount

21,801 million yen (Loan amount: 15,487 million yen)

(5) Schedule

The planned implementation schedule of the project is from March 2010 to September 2013 (43 months in total). The use of the facilities will start in June 2013, which is regarded as the completion date of the project.

(6) Project Implementation Structure

- 1) Borrower: Office National de l'Eau Potable: ONEP
- 2) Guarantor: The Government of the Kingdom of Morocco
- 3) Executing Agency: Office National de l'Eau Potable: ONEP
- 4) Operation and Maintenance System: Section in charge of the target area will be responsible for the operation and maintenance after the project.

(7) Environmental and Social Consideration/Poverty Reduction/Social Development

1) Environmental and Social Consideration

a Category: B

b Reason for Categorization: This project is categorized into Classification Category B, because it does not correspond to the vulnerable area to the environmental impact as listed in "Japan Bank for International Cooperation Guidelines for Confirmation of Environmental and Social Considerations" (established April 2002), and its potential adverse impacts is considered to be minor. Therefore, it corresponds to Classification Category B.

c Environmental Permit:

Although the domestic law of Morocco does not require the preparation of an Environmental Impact Assessment (EIA) report as related to this project, the report has already prepared in both Khemisset and Khouriga areas.²

d Anti-Pollution Measures:

The sludge generated due to the operation of the water treatment facility shall be dried and disposed in an appropriate manner. Wastewater shall be recycled. The concentrated water from the desalting process shall be mixed with the wastewater from the water treatment and discharged after resolving to the standard concentration. Additionally, construction shall be executed considering the sound, vibration, and air pollution.

² Khemisset: May 2008, Khouribga: December 2008

e Natural Environment: The target area of the project is not in or on the periphery of national parks or other places that are vulnerable to environmental impacts. It is therefore expected that the negative impacts of the project on the natural environment will be limited to the minimum.

f Social Environment:

150 ha (approx. 370 acre) of land acquisition shall be necessary for this project. The acquisition shall proceed according to the procedure of Morocco. Relocation of residents is not required.

g Other/Monitoring:

ONEP shall monitor the water discharge, sludge treatment, and water quality, etc., for this project.

2) Promotion of Poverty Reduction

By developing a trunk water conveyance network in the area subject to this project, a foundation of the rural water supply project that depends on this network shall be built, thereby contributing to the correction of disparity between urban and rural areas.

3) Promotion of Social Development (e.g. Gender Perspective, Measure for Infectious Diseases including HIV/AIDS, Participatory Development, Considerations for Persons with Disabilities, etc.) :

By strengthening the water treatment and conveyance facilities, improvement of hygienic environment, reduction of water drawing labor can be expected through safe and permanent water supply.

(8) Collaboration with Other Donors: None.

(9) Other Important Issues: None.

4. Targeted Outcomes

(1) Performance Indicators (Operation and Effect Indicator)

Indicator		Baseline (2004)	Target (2015) 【Expected value 2 years after project completion】
Water generation volume (ℓ/s)	Khemisset	390	630
	Khouribga	1,300	1,650
Population subject to water supply (persons)	Khemisset	Urban area	219,600
		Villages	169,907
		Subtotal	389,507
	Khouribga	Urban area	605,062
		Villages	612,986
		Subtotal	1,218,048
In total		992,571	1,607,555

*The only water resource of Khouribga at present is the existing water well. Therefore, the well water generation volume and water supply population is shown in the baseline (2004) of the water generation volume and population subject to water supply. The target values (2015) of water generation volume and

population subject to water supply are all based on the estimation that water is supplied from the water treatment plant.

(2) Internal Rate of Return

Based on the conditions indicated below, the Economic Internal Rate of Return (EIRR) of Khemisset is 14.7%, and that of Khouribga is 18.4 %.

Cost: Construction cost, operation and maintenance cost (excluding tax)

Benefit: Income of water fee, reduction of water drawing labor, saving groundwater
(Khouribga)

Project Life: 40 years

5. External Factors and Risk Control

No particular factors of risks.

6. Lessons Learned from Past Projects

In the Ex-post evaluations of existing water supply projects of Morocco of the past, it is described that “change of project plan shall require additional procedure and result in project delay”. Feasibility Study (F/S) and Detailed Design (D/D) have been discussed repeatedly with the implementing agency of this project. At the time of implementation of the project, the project plan shall be continuously monitored, as well as the actual implementation.

7. Plan for Future Evaluation

(1) Indicators to be Used

- 1) Water generation volume (ℓ/s)
- 2) Population subject to water supply (persons)
- 3) Internal Rate of Return (%)

(2) Timing

Two years after project completion