



# Public-Private Partnership Impact Stories

## Morocco: Guerdane Irrigation



Recurring and persistent droughts force Moroccan farmers to rely heavily on irrigation. In the southern part of the country, citrus farmers on the Guerdane perimeter have long been dependent on water from an underground aquifer. But years of intensive agricultural practices have seriously diminished groundwater levels. The government looked to IFC to attract private investment in an irrigation network that could channel water to the perimeter from a distant dam complex. The concession—the world’s first public-private partnership irrigation project—was awarded in July 2004.

A consortium led by Omnium Nord-Africain (ONA), a Moroccan industrial conglomerate, won the 30-year concession. Other members included Morocco’s Fond Igrane and Infrastructure Development and Management (Infra Man), an Austrian firm. By providing half the water needed by the citrus farmers, the Guerdane project reduced the risk of depleting underground water resources and safeguarded an agricultural industry that provides a living for an estimated 100,000 people.

*This series provides an overview of public-private partnership stories in various infrastructure sectors, where IFC was the lead advisor.*

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*This project benefits over 1,900 individual farmers with improved irrigation and overall access to services.*

## BACKGROUND

The perimeter of Guerdane in the Province of Taroudant covers approximately 10,000 hectares and produces 50 percent of Morocco's citrus crops. For years, private wells pumping into the Souss underground aquifer were the only source of irrigation water for some 600 citrus farmers, but due to overexploitation, the level of groundwater was decreasing by an average 2.5 meters a year. Citrus farming in the region was becoming increasingly unsustainable. Between 1995 and 2002, the area planted with citrus fruit decreased 22 percent as farms were abandoned or put out of production.

To alleviate the lack of water in the perimeter, the 1995 Watershed Management Plan of Souss-Massa allocated an average yearly volume of 45 million cubic meters of water originating from the Mohamed Mokhtar Soussi-Aoulouz dams, about 40 miles away. The government sought a private partner to construct both a 300 kilometer water irrigation network to transport the water, and a distribution system to deliver it to farmers based on the size of their citrus groves. The surface water allocated for the project met half of the water needs of the citrus farms in the perimeter.

## IFC'S ROLE

IFC provided the government with advice on structuring and implementing the Guerdane public-private partnership irrigation project to deliver a high-quality, accountable, financially sound, and environmentally sustainable public service to the farmers. The IFC team undertook technical, financial, and legal due diligence to recommend the most commercially and technically viable transaction structure. IFC also conducted a bidding process that would set a precedent for future irrigation investments worldwide. Finally, IFC played a leading role in marketing the project, prequalifying potential investors, drafting bidding documents, ensuring a competitive and transparent bidding process, and selecting the winning bidder.

## TRANSACTION STRUCTURE

The transaction is structured as a 30-year concession to build, co-finance, and manage an irrigation network to channel water from the dam complex and distribute it to farmers in Guerdane. At the end of the concession, the infrastructure will be returned to the government.

The concession grants exclusivity to channel and distribute irrigation water in the perimeter while allocating operational, commercial, and financial risks among the various stakeholders. The construction (time and costs) and the collection risk are transferred to the concessionaire.

The government is responsible for ensuring water security. The demand/payment risk was mitigated by carrying out an initial subscription campaign whereby farmers paid an initial fee covering the average cost of on-farm connection. The concessionaire's construction obligation did not begin until subscriptions were received for 80 percent of the water available. The risk related to water shortage was allocated among the concessionaire (up to a consequential revenue loss capped at 15 percent), the farmers

(via the application of a tariff surcharge in case of drought leading to a shortage of water, capped at 10 percent of the tariff), and the Government (sustaining the risk of more significant water shortage through a financial compensation to the concessionaire).

The unique selection criteria was the lowest water tariff, in support of the government's goal of making surface water accessible and affordable to the largest number of farmers possible. The public subsidy was designed to maintain water tariffs equivalent to current pumping costs, making them affordable to farmers. The winning bidder provided a tariff significantly lower than the price that citrus farmers in Guerdane had typically paid for irrigated groundwater supplies.

## BIDDING

The project attracted bids from Omnium Nord-Africain (ONA) and Ynna Holding, a Moroccan infrastructure construction company. The bid was won by a consortium led by ONA— heralding the creation of Morocco's first domestic private infrastructure operator for irrigation projects.

## POST-TENDER RESULTS

- World's first public-private partnership (PPP) irrigation project.
- Prompted the creation of Morocco's first domestic private infrastructure operator for irrigation projects.
- Transparent and competitive bid process resulted in a lower-than-expected unit water price.
- Reduced the risk of depleting underground water resources.
- Provided government with technology transfer benefits financed by the private sector.
- Provided a model for similar PPP irrigation projects in the region.
- Achieved a 100 percent connection rate by 2009.
- Benefits over 1,900 individual farmers with improved irrigation and overall access to services.
- Benefits local economy by improving incomes for 11,000 people.
- \$36.9 million private investment was mobilized.

*\* Unless otherwise stated, monetary values are presented in 2009 US dollars. Results are from a post-completion evaluation completed June 2011.*