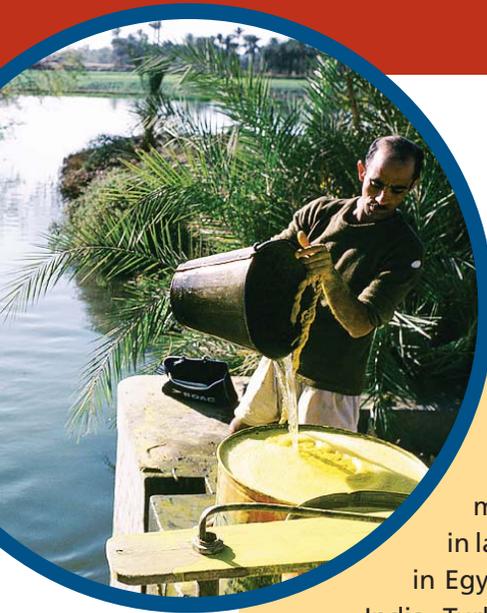


## IMPACT STORIES

# PPIAF Supports Private Sector Participation in Egypt's West Delta Irrigation Project



In 2006 PPIAF helped the Egyptian government develop a conceptual framework and transaction model for implementing a surface water irrigation system in the West Delta region. As a result of this activity, the government adopted a public-private partnership model for the project, which was designed as a hybrid scheme based on the design-build-operate model and focused on minimizing tariffs and mitigating risks. The project represents a sustainable framework for private investment in large- and medium-scale irrigation that has set new precedents for the irrigation sector in Egypt and has already generated interest for possible use in new projects in Ethiopia, India, Turkey, and Zambia. It will also bring higher quality water to the 250,000 agricultural workers and the 500,000 people who inhabit the West Delta region.

The irrigation sector plays a vital role in food production and in the development of rural economies, but irrigation infrastructure is costly and has been founded mostly on massive public funding programs, many of which have been neglected and abandoned because of the fiscal burden of operation and maintenance on national governments. Private investment in the irrigation sector has historically been limited, though more recently the role of the private sector in the financing and operation of large-scale irrigation projects is expanding.

Since the early 1990s, the West Delta region on the fringes of Egypt's Nile Delta has developed a flourishing agricultural economy, but rapid development has led to excessive exploitation of groundwater reserves. The Egyptian government's concern about the collapse of this thriving economy prompted it to request technical assistance from the Public-Private Infrastructure Advisory Facility (PPIAF). PPIAF's support led to the conception of the West Delta Irrigation Project, which will install a surface water irrigation system and has adopted a bold set of reforms allowing for the recovery of costs and the involvement of the private sector.

### PPIAF SUPPORT

In 2004 PPIAF funded a \$75,000 study that explored options for private sector participation in Egypt's irrigation sector. As a follow-up to this study, PPIAF provided an additional \$75,000 grant in 2006 to help the Egyptian government develop a conceptual framework and transaction model for implementing a surface water irrigation system in the West Delta region, which became known as the West Delta Irrigation Project. A demand-driven approach, involving consultations with farmers to ensure their needs and willingness to use and pay for services, was needed due to the complexity of the project and the significant risks associated with it. These consultations led to the creation of a representative advisory group of farmers and guided the development of the technical design, financing alternatives, and commensurate tariffs.

Based on PPIAF's work, the Egyptian government adopted a public-private partnership model for the project, which was designed as a hybrid scheme based on the design-build-operate model and focused on minimizing tariffs and mitigating risks. The transaction involves competitively choosing a private operator to design and construct the system and to assume full operational responsibility for 30 years. The private operator will assume the associated demand and commercial risks, while the public sector will assume ownership of the assets and most of the financing-related responsibilities and risks.

## OUTCOMES

The regulatory and institutional frameworks and transaction model developed were accepted by the Egyptian government in late 2006. A piped irrigation system was chosen based on the needs of farmers and the advantages it offered for the private operator. Demand risk was reduced by building a “subscription period” into the project design, providing the operator with proof of farmers’ commitment and additional capital to finance initial construction. Stakeholders also settled on a two-part tariff which maximizes utilization efficiency and ensures positive cash flow.

The PPIAF-funded framework and transaction model set new precedents for the irrigation sector in Egypt. The West Delta Irrigation Project used a streamlined, largely output-based procurement and disbursement procedure. Local farmers and the government were engaged in the process, with the final report taking into account their recommendations. The project introduced a new approach by transferring more of the risk from the government to the operator, reducing the risks of both public and private partners. It represents a sustainable framework for private investment in large- and medium-scale irrigation that has already generated interest for possible use in new irrigation projects in Ethiopia, India, Turkey, and Zambia.

## DONOR COORDINATION

PPIAF, the World Bank, and the Agence Française de Développement supported the Egyptian government’s work on the West Delta Irrigation Project.

Since 1999 PPIAF, a multidonor technical assistance facility, has helped developing countries use public-private partnerships to improve their infrastructure. A key focus has been upstream technical assistance to support the development of an enabling environment for such partnerships.

This series highlights how PPIAF’s support has made an impact on the ground.

## IMPACTS

The West Delta Irrigation Project is currently in the bidding stage to select a private operator, with a number of international and local firms participating in the process. The Egyptian government will support the initial financing of the project through a \$175 million loan facility, of which \$145 million will come from the World Bank and \$30 million will come from the Agence Française de Développement. The government will assume the currency risk associated with this loan facility, and once it is exhausted the private operator will be required to obtain its own financing.

In addition to the loan facility, PPIAF’s assistance paved the way for a \$6 million grant from the government of the Netherlands to promote the project and the bidding process, implement the regulatory framework, and support capacity building in the Egyptian Ministry of Water Resources.

The West Delta region’s thriving agricultural economy is threatened by excessive groundwater pumping that has depleted groundwater resources and become costlier as water quality erodes. As a model for sustainable irrigation, the West Delta Irrigation Project, made possible with PPIAF support, has the potential to reverse this trend. The project will replace groundwater pumping with surface water irrigation, bringing higher quality water to the 250,000 agricultural workers and the 500,000 people who inhabit this flourishing agricultural area.

### RELATED PPIAF ACTIVITIES IN EGYPT

- 2004: Public-Private Partnership Models in Irrigation, **\$75,000**
- 2006: Development of Regulatory and Institutional Arrangements for the West Delta Irrigation Project, **\$75,000**
- 2006: Options in Public-Private Partnerships in Operating and Maintaining Irrigation and Drainage Infrastructure, **\$75,000**
- 2007: Public-Private Partnership Conceptual Framework for a Water Treatment Plant in the New Cairo Area, **\$75,000**
- 2008: Public-Private Partnership Unit Capacity Building, **\$450,000**