CHALLENGE
Agriculture is a key element of the Tanzanian economy and is highly dependent on water resources. After the liberalization of the economy in 1986, increased food production and traditional and non-traditional exports created greater demand for water for irrigation and hydropower. This demand, combined with several years of below-average rainfall, contributed to water scarcity and conflict. Better management of the two largest basins—Rufiji and Pangani—was critical, as was correcting irrigation inefficiencies since 80 percent of irrigation water was used by small holder farmers applying traditional techniques.

APPROACH
IDA’s River Basin Management & Smallholder Irrigation project addressed water-related environmental concerns at the national level, with focus on particular problems in the two largest basins. It targeted improving water access and use by low-income smallholder farmers in 15 irrigation schemes through better water management, higher quality infrastructure, and improved stakeholder participation in water management.

RESULTS
Agricultural yields for more than 5,000 families doubled and household incomes tripled.

Highlights:
- About 5,317 farming families have benefited from improved irrigation and drainage facilities. Annual household incomes increased from US$425 to US$1,500 in Pangani river basin; and from US$350 to US$1,100 in Rufiji.
- 1,674 farmers were trained in scheme water management, crop production techniques, agro-business and financial management and leadership skills.
- Average rice yields in project areas more than doubled.
- Average irrigation efficiency for both basins increased to 27 percent at project closing, compared to the average of 15-20 percent before the project.
- 19 Irrigators Organizations were formalized, trained and provided with basic facilities.

IDA CONTRIBUTION
- US$26 million from 1996 to 2004
IDA facilitated the first review of the government's water policy. In 2002, Tanzania adopted a new water policy that promotes an integrated approach to water planning and development. It involves beneficiaries in water management and establishes water organizations responsible for resource management in the basins.

The project design was based both on World Bank research and analysis and on lessons learned from other donor operations (a Norwegian project in the Pangani basin and a Danish Rapid Water Resources Assessment).

IDA's support to institutions helped the government coordinate donor involvement in the sector, and move to subsequent support under a sector-wide approach.

**NEXT STEPS**

Subsequent World Bank operations built on the participatory approaches adopted in this project, including the Participatory Agricultural Development and Economic Empowerment Project and the Agriculture Sector Development Program. Proper operation and maintenance of irrigation facilities by farmers, increased understanding of water management and water use efficiency, introduction of water rights, and technical guidance are critical to the project’s long-term sustainability.

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