

Comprehensive Water Management Brings Widespread Benefits to Tamil Nadu

Challenge

Tamil Nadu is a water short state, with limited potential for further water resource exploitation. Its ability to meet rapidly growing water demands in a sustainable manner is contingent on managing the challenge of allocating water across sectors and within sectors. At the time of project preparation, the state lacked the institutional apparatus to support comprehensive multi-sectoral water planning and management. Irrigation constituted over 75% of total water use, but system performance was disappointing resulting in inequitable supplies and significant waste. This affected access to water not only within poor agriculture-dependent communities and but also within other sectors vying for limited water supplies. Groundwater extraction rates were beyond safe yields in several parts of the state, leading to contamination from salt water intrusion. Other water quality issues with associated health consequences were pervasive, primarily due to untreated industrial effluents and sewage.

Approach

The project's primary objectives were to support water resources planning on a river basin basis and across all uses of water; to improve institutional and technical capability for managing the state's water resources; to improve agricultural productivity through modernization and completion of irrigation systems; to upgrade water management and farmer participation; and to assure sustainability of water infrastructure and the environment.

Results

Substantial institutional restructuring and development occurred to enhance multi-sectoral water management on a river basin basis. Environmental considerations were

mainstreamed into water planning and management. Significant agricultural productivity and income gains were registered through improved water use, supported by irrigation system improvements and farmer participation in newly formed water users associations.

Highlights

- The State Water Policy was updated in accordance with the National Water Policy and a State Water Plan was prepared.
- A Water Resources Organization was formed as an independent organization, responsible for multi-sectoral water management and structured on river basin lines. This included the establishment of new decentralized field management under basin managers. A framework water resources plan and five detailed river basin plans were completed. Two River Basin Organizations were created, the first of their kind in South Asia.
- A State environmental planning framework was developed and environmental units were created in several agencies. Environmental and social assessments and environmental action plans were produced for all major river basins. A water and soil monitoring program was operated, with over 400 sampling locations across multiple basins.
- An inventory of about 3.3 million wells throughout the State was completed. The Tamil Nadu Groundwater (Development and Management) Act was passed.
- The Tamil Nadu Farmers' Management of Irrigation Systems Act was passed. 1566 water users associations were formed—covering an area of over 630,000 ha—and given responsibility for the O&M of canals serving less than 700 ha. Training was given to tens of thousands of farmers.
- There were dramatic increases in yields, by over 40% for some crops. Scheme improvements converted almost 218,000 ha from partial to full

irrigation and created over 73,000 ha of new irrigated area, directly benefiting 3.2 million people. Scheme completions increased irrigated area by about 60,260 ha and improved irrigation on about 95,300 ha, directly benefiting over 87,000 people.

- One catchment with depleted cover in a sub-basin of the Cauvery was restored.

IDA Contribution

- IDA financed the full cost of the project, US\$206.1 million.
- The project grew out of Tamil Nadu's long term strategy to promote rural development. IDA played a key role in helping the government design the ambitious project, spread across 20 districts and involving policy, institutional and expenditure reform, changes in planning and decision-making processes, and mobilization and capacity building of water users. It assisted in coordinating project activities, many of which involved several line departments, government and university institutions, and non-governmental organizations.

Next Steps

The Government of Tamil Nadu has indicated its resolve to continue the reform process, including by:

- Increasing irrigation water charges to a level that would meet O&M costs.
- Extending the concept of integrated river basin management to more basins and establishing the administrative and legislative measures required to make River Basin Organizations fully functional.
- Allocating funds under the state budget to support the further training of water users associations.

The Government has also specified that it would welcome further Bank support to consolidate the impressive gains made under the project.



Tamil Nadu has tackled the challenge of meeting rapidly growing water demands through enhanced multi-sectoral water management on a river basin basis.