



Resource Management



Wakal River Basin Project

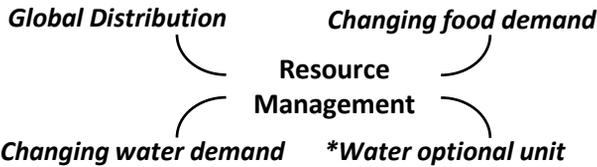
Local Sustainable Water Supplies

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The Big Picture



What is the project?

The Wakel River Basin Project is a local scheme in the southern part of Rajasthan, India, designed to increase the sustainable supply of water. Rajasthan is the driest and poorest state in India, dominated by the Thar Desert, where rainfall is minimal, and temperatures can reach up to 53°C. The project aims to address water scarcity by enhancing water storage and security using locally adapted solutions.



Why was the scheme needed?

- **Water Scarcity:** The region faces significant water shortages due to low annual rainfall (less than 250 mm) and high evaporation.
- **Over-extraction:** Excessive use of groundwater through unregulated wells has led to falling water tables and dried-up wells.
- **Mismanagement:** There has been poor water management historically, with little coordination, resulting in waterlogged areas and salinisation due to over-irrigation.
- **Water Conflicts:** The unregulated use of water by different villages has led to



Main strategies

- **Taankas:** Underground storage tanks to capture and store rainwater from rooftops. A single taanka can hold up to 20,000 litres, providing water for several months.
- **Joheds:** Small earth dams to capture rainwater, raising the water table by up to 6 metres, allowing rivers to flow year-round.
- **Pats (Irrigation channels):** Channels water from joheds to crops. Water is shared among farmers, and maintenance is done collectively.



Key Terms



Johed – Small earth dams built to capture rainwater.



Sustainable water supply – A water system that meets current needs without harming future resources.



Pats – Irrigation canals that channel water from joheds to fields for crop



Taankas – Underground storage tanks that collect and store rainwater from rooftops.

- Local communities are taught water conservation techniques to foster collective responsibility in managing water supplies.
- Awareness campaigns help combat soil erosion, desertification, and groundwater pollution.



Benefits of the scheme

- **Increased Water Supply:** Rainwater harvesting and improved storage provide a reliable water source for communities.
- **Improved Agricultural Productivity:** Water supply to farms enhances crop yields and supports irrigation during dry periods.
- **Community Empowerment:** Local communities actively manage water systems, fostering a sense of ownership and responsibility.
- **Sustainable Water Management:** Techniques like taankas, joheds, and pats help conserve and efficiently use available water resources.
- **Enhanced Water Security:** The project reduces dependency on unreliable surface water and helps recharge groundwater supplies.
- **Flood Control:** The project mitigates the impact of floods through proper water management and storage solutions.
- **Environmental Benefits:** Combats soil erosion and desertification while reducing groundwater pollution.
- **Resilience to Climate Change:** The project builds long-term resilience to water scarcity, especially in a drought-prone region.