

Climate-resilient Water Resources Management (CWRM) in Iraq

The challenge

Iraq is facing an intensifying water crisis, driven by a combination of environmental and human-induced factors. Climate change impacts led to strain on water availability. A significant decline in Euphrates and Tigris Rivers discharge is further exacerbated by the transboundary water flow control by neighboring countries, which severely restrict the volume of water reaching Iraq. Adding to these challenges, the mismanagement of wastewater disposal has contributed to worsening water quality and increased risks of pollution. Rising water demand and unsustainable consumption practices are placing additional strain on the country's already limited water resources.

In response to these pressing challenges, the Government of Iraq has initiated efforts to strengthen climate resilience and promote sustainable water resources management. However, it faces challenges in prioritizing and mobilizing the investments. In recognition of the urgent need for a climate-resilient approach to managing water resources in Iraq, the implementation of a new project has been agreed between the Federal Governments of Iraq and Germany.

This project is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH with the Ministry of Water Resources (MoWR). Hillah River Basin has been designated as a pilot region for enhancing climate-resilient water resources management in Iraq. This vital watercourse, branches off from the Euphrates River, traverses the provinces of Babylon, Diwaniyah, and Muthanna, and is confronted with considerable challenges related to water allocation and distribution.

Our approach

The CWRM project aims to strengthen the technical and institutional capacity of the Ministry of Water Resources for the climate-resilient management of the Hillah River. The project supports the ministry in the following areas:

- **Improvement of the Water Resources Information Systems:** Upgrading monitoring infrastructure, improving data management and sharing, and water quality and distribution tracking along the Hillah River.
- **Strengthening Methodological and Technical Capacities for Climate-Resilient Planning and Water Allocation:** Developing water accounting tool, and calibrated model to inform provincial water resources allocation. This also involves scenario modeling, artificial intelligence (AI) integration, and establishing governance frameworks for strategic decision-making. The project also supports planning, adaptation strategies, and long-term planning in response to climate change.
- **Capacity Development:** This cross-cutting theme focuses on building the capacity of the MoWR staff. It includes upgrading the MoWR training center, delivering trainings on climate-resilient water resources management, and facilitating participation in international conferences. Special emphasis is placed on promoting female specialists and managers within the ministry.
- **Reuse of Drainage Water:** Feasible options for reusing drainage water as an unconventional water resource will be identified through analysis of international, regional, and local experiences. The MoWR will be supported in assessing and prioritizing potential uses, and a bankable project proposal for a demonstration plant will be developed.

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