

# Strong Water Utilities (SWU)

## Resilient water utilities: Tackling water scarcity in Jordan

### The challenge

Jordan is one of the most water-scarce countries in the world. The demand for drinking water already far exceeds the available renewable resources. Climate change is expected to intensify this imbalance, with projections indicating more frequent droughts and increasingly unpredictable rainfall patterns, leading to further declines in freshwater availability.

The water sector also faces different challenges: rapid population growth and several waves of refugees, high water losses of around 54%, aging infrastructure, and costly energy consumption. Inefficient water and wastewater management, legal and regulatory gaps, and weak environmental compliance exacerbate the situation. Moreover, limited adaptation of digitalised systems in water management and the insufficient inclusion of rural communities and women in decision-making processes hinder the development of sustainable solutions.

### Our approach

The objective of the project “Strong Water Utilities” (SWU) is to improve the capacities of the actors of the Jordanian water sector to reduce water losses and energy consumption, as well as to improve wastewater management and rural drinking water supply.

Building on previous GIZ-implemented initiatives, the project works closely with the Ministry of Water and Irrigation (MWI), the Water Authority of Jordan (WAJ), and the Water Utilities (WUs). It focuses on strengthening institutional and operational capacities at both national and utility levels through five main areas of activity:

**The first area** aims at streamlining and unifying the processes and structures to reduce water losses in drinking water supply in the relevant departments of the ministry, the water companies and three southern governorates.

**The second area** aims at adopting energy management practices across the energy departments of the water authority and water companies.

**The third area** focuses on enhancing the performance of the wastewater sector by improving the operation and maintenance of wastewater treatment plants to ensure environmental and technical sustainability. This includes introducing Technical Sustainability Management (TSM) and promoting the beneficial re-use of sludge through valorisation measures.

**The fourth area** aims at strengthening women's groups from the three southern governorates to negotiate measures to improve water supply in rural communities.

**The fifth area** aims at strengthening the capacities of WAJ and WUs in planning, management and operation of desalination facilities through introducing key performance indicators (KPIs) and improving desalination infrastructures to increase the water quantities.

Project name	Strong Water Utilities (SWU)
Commissioned by	German Federal Ministry for Economic Cooperation and Development (BMZ)
Project region	Jordan
Partner	Water Authority of Jordan (WAJ)
Duration	08.2024 – 07.2028

### Key Success Factors

The success of SWU depends on establishing clear and consistent processes within WAJ, MWI, and the water utilities. These processes ensure long-term sustainability and are supported by digital tools that make it easier to monitor progress and report results. Strengthening the technical capacities of specialists, managers, and operators will secure ownership of reforms, while empowering women and rural communities ensures inclusive participation in decision-making.



Left: Drone image of East Jarash Wastewater Treatment Plant

Right: Ghor Safi Desalination Plant in Ghor Safi, Karak Governorate



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*Left: Electrical Meters in Water Treatment plant in Jordan*

*Right: A leaking water pipe in the Balqa region*

Strong partnerships between government, NGOs, and financing partners will be vital to mobilise resources, while adherence to technical and environmental standards will safeguard long-term sector resilience and impact.

## Impacts in figures

The SWU project will strengthen Jordan's water sector by reducing non-revenue water by up to nine percent in Ma'raq and Karak, and by five percent in Tafilah, through digitally integrated processes and improved monitoring.

Energy efficiency will be enhanced with an Energy Management System covering 85 percent of sector consumption. Energy saving measures equivalent to 150 gigawatt hours will be developed and submitted for financing.

Wastewater management will also improve, with 85 percent of treated wastewater expected to meet national standards, 25 treatment plants to be certified under the Technical Sustainable Management (TSM) standard, and by facilitating new investments in sludge re-use, enabling the development of sludge valorisation.

At the community level, women's groups in Ma'an, Karak, and Tafilah will lead initiatives that secure safe drinking water for 1,000 households, while 80 women will receive training in water management topics to strengthen their role in improving rural water supply. The approach will also be scaled to other communities through NGO partnerships.

In addition, desalination plants will achieve 70 percent of their design capacity, while rehabilitation measures and new investments will expand brackish water desalination by five million cubic meters per year, supported by digital performance monitoring.

## Impacts in faces

Partnering with Hamburg Wasser and HanseWasser has empowered Miyahuna Water Company to enhance water and wastewater services through shared expertise and innovation.

Together, the partners have improved treatment processes, boosted energy efficiency, and strengthened water quality monitoring. Reflecting on the collaboration, Eng. Wafa Khreisat, who served as a focal point for the partnership and oversaw its various components, remarked:

"Through this Water Operator Partnership, staff from all three utilities gained valuable knowledge on a peer-to-peer level."



*Eng. Wafa Khreisat, Performance Monitoring Unit, Miyahuna Water*

### Published by

Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ) GmbH  
  
Registered offices Bonn and Eschborn, Germany

'Strong Water Utilities (SWU)'  
GIZ Office Jordan  
Mohamed Baseem Al-Kammash St. 13, Sweifieh  
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### As at

August 2025

### Design

GIZ

### Photo credits

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*GIZ is responsible for the content of this publication.*

### On behalf of

Federal Ministry for Economic  
Cooperation and Development (BMZ)

### In cooperation with

Water Authority of Jordan (WAJ)