



OUR WORK IN MENA

IWMI is committed to addressing critical water challenges that impact human development and ecosystem health across the Middle East and North Africa (MENA), the world's most water-scarce region. Our regional priorities focus on boosting water security while contributing to climate risk management, socioeconomic prosperity and natural ecosystem sustainability.

To achieve water security in the MENA region, we collaborate closely with governments, businesses, civil society organizations, local communities and research partners to:



Co-create inclusive, local water solutions



Strengthen data, capacity and policies



Foster innovation, investment and collaboration

IWMI's work in MENA draws on cutting-edge research, long-term partnerships and cross-regional expertise to accelerate progress. We leverage our strengths in scaling, finance and policy engagement to support transformative change. Our efforts align with national development strategies and regional frameworks, underpinning countries' commitments to achieving the United Nations Sustainable Development Goals (SDGs).

WATER MANAGEMENT IN MENA

The most water-scarce region on Earth, MENA holds just 1% of global freshwater resources and faces mounting pressure from population growth, climate change and rising water demand. By 2050, two-thirds of MENA countries could fall below 200 m³ of renewable water per capita per year, just 4% of the current global average.

Climate change intensifies floods and droughts, and harms water quality, health and agriculture, especially for vulnerable rural communities. Agriculture mostly relies on increasingly unreliable rainfall, and untreated wastewater remains a vast, untapped resource.

Shared rivers and aquifers span borders, creating risks of conflict without cooperation. Low investment, weak governance and infrastructure gaps compound these issues. Marginalized groups are hit hardest by water scarcity and inadequate services.



1% of the world's freshwater resources are in MENA, while it is home to 6% of the world's population



54% of wastewater is not used productively

AREAS OF WORK

Water reuse

Across MENA, IWMI supports the safe, productive reuse of treated wastewater and rainwater harvesting. In Egypt, Jordan, Lebanon, Morocco, Saudi Arabia and the United Arab Emirates (UAE), we identify policy, social and economic enablers to ease pressure on freshwater and boost regional water resilience.

With support from Google.org, IWMI's AI-powered **e-ReWater platform** helps Egypt, Saudi Arabia and the UAE identify treated wastewater reuse opportunities — especially in agriculture — to inform smarter policies, investments and water security. In Morocco, IWMI co-developed a locally tailored cost-benefit framework to guide wastewater reuse in agriculture — reflecting priorities on the ground and designed to fast-track safe, sustainable and financially viable investments.



Data-driven water management

IWMI applies remote sensing, AI and big data to optimize water use and governance. From drought early warnings to irrigation analytics, our tools support decision-making in Iraq, Jordan, Lebanon, Morocco and Tunisia amid growing climate and water stress.

Morocco's Souss-Massa basin faces growing water stress from drought and overuse, threatening agriculture and jobs. IWMI's **Water Accounting Dashboard**—developed with the Agence du Bassin Hydraulique de Souss-Massa—translates complex hydrological data into visual insights on water availability, water balance and climate impact. To improve water productivity in Jordan, IWMI co-developed an Irrigation Performance Assessment Tool using remote sensing data from the **WaPOR** data portal. The tool, refined through stakeholder training and consultations, enables authorities to track water use across seasons and scales, helping optimize resource allocation in a water-scarce region.



Water, energy, food and ecosystems

IWMI supports inclusive water-energy-food-ecosystems (WEFE) business models by empowering small and medium-sized enterprises (SMEs) and startups to scale water-positive innovations. We foster enabling environments and mainstream environmental, social and governance (ESG) principles to drive resilient, inclusive green growth across Egypt, Iraq, Jordan, Lebanon and Morocco.

The **Water and Energy for Food (WE4F) MENA Regional Innovation Hub** provides impact-driven agrifood enterprises with technical assistance, financial support and investment matchmaking. By applying ESG standards and focusing on local context, the hub helps scale inclusive, water- and energy-smart innovations. The project strengthens regional support ecosystems, reduces financing barriers and empowers SMEs to drive sustainable, food-secure and climate-resilient growth.



Cost-efficient nature-based solutions

From agroecology in Iraq to community-driven nature-based solutions in Egypt, Jordan, Lebanon and the State of Palestine, IWMI works with local actors to revive traditional practices, restore degraded infrastructure and deploy low-cost irrigation. We document impacts to inform scaling and support sustainable water-food-ecosystems adaptation in vulnerable areas.



Through the **Al Murunah** project, IWMI pilots resilient nature-based water solutions across Egypt, Jordan, Lebanon and the State of Palestine. In the Egyptian governorate of Beheira, Al Murunah helps farmers combat water scarcity, rising salinity and uneven irrigation, protecting key crops like artichokes. The project also empowers women and youth, promoting resilient, inclusive farming communities amid a changing climate.



Water, conflict and resilience

IWMI promotes anticipatory, conflict-sensitive water management in fragile settings in Jordan and Sudan, and in other countries. Through Al Murunah+ and the CGIAR Food Frontiers and Security Program, we support community-led, gender-transformative water solutions that build resilience, reduce tensions and improve governance across refugee-host divides in some of the world's most vulnerable food and water systems.

In Jordan, where refugees make up nearly a third of the population and water scarcity is extreme, the **Jahez** project strengthens resilience through localized early warning systems and community-driven disaster risk reduction. Led by IWMI and the UK Met Office, Jahez builds on prior initiatives like Al Murunah and MENAdrought to deploy nature-based solutions and climate tools that help both host and refugee communities anticipate climate shocks and manage scarce resources more equitably.

Water governance

IWMI supports Egypt and Morocco in strengthening their national water policies, enhancing institutional coordination and advancing groundwater governance. Through policy coherence frameworks, we promote integrated, cross-sector approaches to ensure sustainable resource management across water, food and energy systems.

In Morocco's Oum Er-Rbia basin, IWMI is piloting a multiscale polycentric governance model to boost water productivity and rural resilience in the olive and dairy sectors. Developed under the **CGIAR Initiative on Climate Resilience**, the model strengthens institutional collaboration across local and national levels. It aligns climate-smart policies, agricultural planning and water governance to enhance youth employment, rural welfare and the adaptive capacity of Morocco's agricultural systems.



IMPACT STORIES



IWMI and partners unlock wastewater reuse in Lebanon and Morocco

IWMI is advancing wastewater reuse as a sustainable response to worsening water scarcity.

In Lebanon, where more than 60% of treated wastewater is lost due to malfunctioning plants, IWMI worked with national partners to develop the country's first water reuse standards for agriculture. Backed by field trials and multi-stakeholder consultations, these new standards enable the safe, productive use of nutrient-rich water to improve yields and reduce pressure on freshwater.

In Morocco, where water availability per capita has dropped significantly over the past 50 years, IWMI is helping improve the financial and social viability of wastewater reuse. The country already operates 141 treatment plants, with reuse expected to reach 100 million m³ per year by 2030. IWMI's Community of Practice promotes fair pricing, cost recovery and private sector partnerships to scale up adoption.

Together, these efforts help MENA countries convert wastewater from a liability into a vital climate adaptation resource.

Jordan's agriculture gets a boost in water efficiency

With one of the lowest levels of per capita water availability in the world, Jordan faces extreme water scarcity, worsened by climate change and growing demand from farms and cities. Through the Water Efficiency and Conservation (WEC) Activity, IWMI supports efforts to strengthen water governance and promote efficient use across key sectors.

Working closely with Jordan's Ministry of Water and Irrigation, IWMI co-developed a national water accounting system using the Water Accounting Plus (WA+) framework. This tool improves the accuracy and accessibility of water data, enabling better basin-scale planning and transparent water budgeting.

The WEC Activity builds on the achievements of the Water Innovation Technologies (WIT) project which promoted irrigation efficiency through a market-based approach. By mainstreaming sustainable technologies and practices across irrigated agrifood systems, the initiative helped farmers adopt solutions that save water while boosting productivity.



ABOUT IWMI

The International Water Management Institute (IWMI) is an international, research-for-development organization that works with governments, civil society and the private sector to solve water problems in developing countries and scale up solutions. Through partnership, IWMI combines research on the sustainable use of water and land resources, knowledge services and products with capacity strengthening, dialogue and policy analysis to support implementation of water management solutions for agriculture, ecosystems, climate change and inclusive economic growth. Headquartered in Colombo, Sri Lanka, IWMI is a CGIAR Research Center with offices in 16 countries and a global network of scientists operating in more than 55 countries. www.iwmi.org

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