

## The Challenges

The Middle East and North Africa (MENA) is the most water-scarce region in the world, and the agriculture sector is by far the largest water user. Agriculture plays a vital role in MENA economies and is the backbone of rural labour markets. Water scarcity, which is compounded by land degradation, therefore poses major political economy challenges. It negatively affects food production, livelihoods—particularly for rural women, low-income households, youth, and refugees—and the wider environment. Climate change exacerbates these problems, especially via aridification and increasingly frequent and intense droughts, heatwaves, windstorms, and floods. Ensuring the effectiveness and sustainability of interventions to address these challenges requires strong collaboration between stakeholders at the national and local levels.

The central premise of Al Murunah ('flexibility' in Arabic) is that appropriately and collaboratively designed Resilient Nature-Based Water Solutions (RNBWS) can enhance water

and food security in agricultural areas of MENA, thereby increasing the resilience of rural households and communities. RNBWS are integrated nature-based and agricultural water management solutions. Broadly speaking, these combined interventions can enhance water availability (including via improvements in quality) and reduce agricultural water demand or otherwise increase its productivity.

Currently there are several key barriers to implementation of RNBWS in the MENA region:

- Knowledge gaps on their effectiveness and experience deficits in their implementation; and
- Technical, social, and economic obstacles.

As a result, communities and institutions, including market actors, have insufficient capacities and skills to implement RNBWS, as well as limited innovation space to finance and upscale them.

## Project Summary

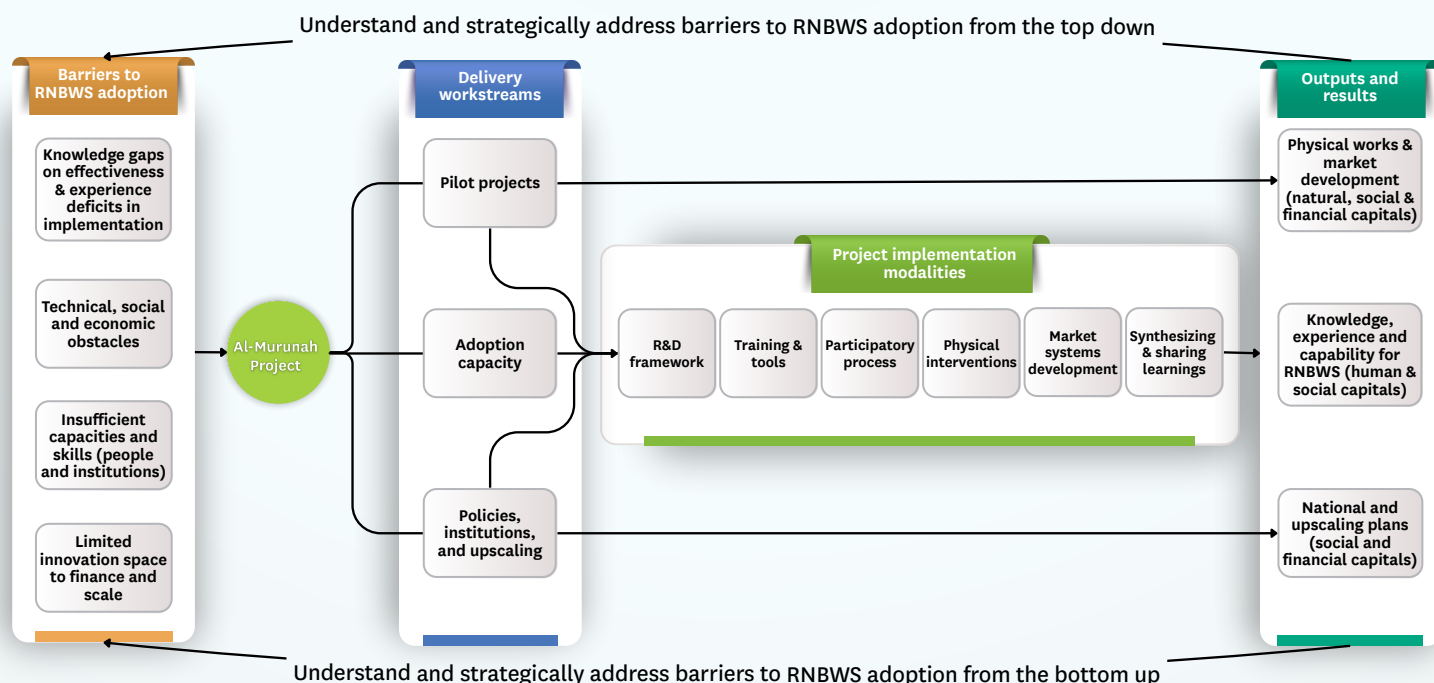
The primary goals of Al Murunah are to address these barriers and facilitate widespread and context-appropriate adoption of RNBWS in the MENA region by 1.) demonstrating their effectiveness, and 2.) strengthening, empowering, and catalyzing national capacities for their implementation.

Al Murunah is meeting these goals through participatory implementation of a pilot RNBWS project in each country; capability building – awareness raising and training to improve understanding of RNBWS, and development of technical and information tools to support institutions

in their deployment, and supporting national level planning and upscaling proposals.

Pilots are being undertaken in:

- **Izbat Al-Hamra** (Abu Matamir District, Beheira Governorate), Egypt;
- **Wadi Seer** (Greater Amman Municipality), Jordan;
- **Baalbek District** (Baalbek-Hermel Governorate), Lebanon; and
- **Wadi Al-Fara'a** (Tubas Governorate), Occupied Palestinian Territories (OPT).



## Key Strategies

### RNBWS pilot projects that embed technical innovations in strengthened institutions and empowered communities

The pioneering RNBWS technical innovations are tailored to the socio-environmental contexts and needs of pilot communities and include:

- Set of hybrid nature-based solutions (mix of green and grey infrastructure and practices) for water resource management and agriculture challenges like salinization, floods, and spring depletion.
- Strengthening local institutions (e.g., water user associations, cooperatives, and municipalities), and building capability of hundreds of community members in both hard and soft skills, to sustain the RNBWS beyond the pilot phase.
- Economic empowerment through market links and/or access to finance, for example through agro-processing support and revolving funds.

- Addressing social norms that pose barriers to innovation uptake, and supporting women and youth to play a leading role in pilots and associated institutions

More detail on each pilot and economic empowerment and social norms work is available [here](#).

Through this integrated approach, Al Murunah ensures that technical solutions uplift entire communities, particularly the most vulnerable, creating a model for inclusive climate change adaptation that is applicable by government agencies and development partners more widely. The pilot development process and RNBWS interventions are designed to be replicable blueprints. Robust monitoring and evaluation will enable and thereby support scaling of RNBWS across the MENA region.

### Strengthening, empowering, and catalyzing national capacities for their implementation

Al Murunah sets the stage for wider RNBWS implementation by governments through:

- Filling awareness and information gaps with structured reviews of nature-based solutions implemented
- Conducting assessments of national agencies' institutional readiness to implement RNBWS,
- Policy and private sector dialogue with multi-sectoral bodies like the National Project Advisory Committees, and

- Development of country-specific scaling approaches—like cooperative-led expansion in Jordan and replication of spring rehabilitation in OPT, and exploration of regional scaling models.

In sum, these activities support strategic advocacy at national and regional levels, and equip government agencies to integrate RNBWS into their policy development, investment planning, and operations.



Photos (L-R): (1) Artichoke farm in Izbat Al-Hamra—photo by Wasudha Abeyrathna/IWMI; (2) Wadi al-seer springflow—midway down the pilot area in Jordan; (3) groundwater irrigated farm on slopes in Qaa, Lebanon; and (4) Ein Fara'a spring outlet rehabilitation site in Wadi Fara'a, OPT—photos by Stephen Fragaszy/IWMI

## Project Partners

Al Murunah is a five-year project (2021–2026) funded by the Government of the United Kingdom through the Foreign and Commonwealth Development Office (FCDO).

The International Water Management Institute (IWMI) is leading the project in partnership with the International Union for the Conservation of Nature (IUCN). National focal points and local partners are:

- **Egypt** – Ministry of Agriculture and Land Reclamation; Centre for Environment and Development for the Arab Region and Europe (CEDARE)
- **Jordan** – Ministry of Water and Irrigation
- **Lebanon** – Ministry of Energy and Water; Society for the Protection of Nature in Lebanon (SPNL)
- **Occupied Palestinian Territories** – Environment Quality Authority; Palestinian Hydrology Group (PHG)