

Al Murunah: Strengthening Water Security and Livelihoods in Palestine

Al Murunah Palestine Pilot

- Led by the **International Water Management Institute (IWMI)** in partnership with the **International Union for the Conservation of Nature (IUCN)**
- Implemented by **Palestinian Hydrology Group (PHG)**
- In coordination with the **Environment Quality Authority**, the **Palestinian Water Authority** and the **Ministry of Agriculture**
- Supported financially and technically by **UK International Development**



Figure 1. Map of Al Murunah pilot site in upper Wadi Al-Fari'a watershed of the West Bank, Palestine.

Source: Authors (2026)

Adaptation in a Complex Governance Landscape

In Palestine, communities face a compounded crisis of water scarcity, economic fragility and prolonged displacement. The situation is rapidly deteriorating in the West Bank where restrictions on infrastructure, land use and mobility intersect with climate-induced water stress. Yet even under these constraints, early outcomes from Al Murunah show that community-led resilience is possible.

The initiative is uniquely positioned to deliver results by combining practical field implementation with capacity development and engagement with local authorities, cooperatives and service providers. Al Murunah is piloting resilient nature-based water solutions (RNBWS) in the upper Wadi Al-Fari'a watershed of the West Bank (Figure 1) including Ras Al-Fari'a, Wadi Al-Fari'a and the Fari'a Refugee Camp, together covering roughly 45 km² and home to about 12,000 residents. Next phases of the project will consolidate hard-won benefits, maintain momentum and expand tested approaches to other vulnerable localities. With interest from national stakeholders including the Environment Quality Authority, the Ministry of Agriculture and the Palestinian Water Authority and growing demand in neighboring municipalities, now is the time to scale.

Our Approach for Vision and Impact

The Palestinian pilot blends hybrid green-grey water infrastructure rehabilitation and improvement, agrobiodiversity and inclusive governance to restore landscape functionality and empower communities. In the Upper Fari'a watershed, the project reimagines a degraded spring site as a climate-smart hub: combining rehabilitated water and irrigation infrastructure with a community space, stalls for women to market products and a new Water User Association (WUA). Local ownership is central. The WUA has been formed to promote efficient water distribution and farmer cooperation and local stakeholders including farmers and

women's groups contributed to project design. The project also focuses on long-term impact, with capacity strengthening activities backed by institutional assessments and curricula

development. It is also informing national dialogues through applied research on nature-based solutions (Nbs) and their economic viability in Palestine.



What we have achieved

Despite severe constraints on access, procurement and political instability, the project has delivered meaningful progress:

- **Land restoration works** are underway as part of spring and irrigation-channel rehabilitation
- Institutional coordination is guided by **the National Project Advisory Committee (NPAC)**, which provides high-level policy direction and oversight
- Across sites, **women** have joined governance and implementation processes
- A **WUA** has been formed to promote fair water distribution and farmer cooperation



Next steps for scaling impact

Training programs are **building local capacity** for water governance. The Palestinian pilot serves as a **replicable, community-led model** for landscape restoration, backed by growing trust from ministries and strong farmer and cooperative engagement. Lessons from **WUAs** and design and implementation of **nature-based solutions** offer adaptable tools for other vulnerable areas in the West Bank. With security and mobility challenges set to continue, investing in decentralized and nature-based **infrastructure and governance, local markets** and **institutional capacity** is both effective, efficient and urgent.

Addressing multi-layered fragility

Water stress in Palestine is not only driven by biophysical scarcity, but also by chronic political instability, degraded infrastructure and fragmented governance. In rural areas like the Upper Fari'a watershed, spring-fed systems are lifelines for agricultural production, yet they have suffered from years of neglect, reduced flows, access challenges and infrastructural damage. Community structures for managing these resources, especially inclusive ones, are weak or absent. Movement restrictions hinder fieldwork and stakeholder engagement, while government agencies

and NGOs often work on sector-specific issues. For women and youth, barriers to participation remain high despite strong local leadership. Climate variability adds further unpredictability, threatening both livelihoods and ecological resilience. Together, these pressures create a development environment where conventional solutions often fail. The Al Murunah pilot seeks to overcome this by leveraging community trust, inter-institutional collaboration and nature-based innovation to build a durable model for water resilience in fragile rural settings.

Our Activities

The Palestine pilot combines hard and soft interventions in one integrated package:



Spring rehabilitation to protect the source as well as improve flow and quality



Construction of a retaining wall at the Fari'a spring, repair and clearing of irrigation canals to reduce leakage and improve water delivery



Revitalization of irrigation channels to reduce contamination and improve water delivery to 10,500 dunams (1,050 ha) of agricultural land



Development of an agrobiodiversity garden to test climate-resilient crops, preserve indigenous species and build awareness of biodiversity



Training on nature-based solutions to promote climate-resilient crops, natural fertilizer use and traditional ecological knowledge



Formation of a Water User Association (WUA) supported by the Palestinian Hydrology Group (PHG)



Multi-agency readiness assessment to strengthen local institutions



Targeted training for farmers, women's groups, youth, local councils and government agencies to strengthen agriculture and water management skills and governance



Creation of market space, kiosks for marketing women's products to create opportunities for women empowerment to participate in decision-making



Creation of a National Project Advisory Committee (NPAC), including the Environment Quality Authority, Palestinian Water Authority, Ministry of Agriculture, Academic Expert – Khadouri University and Gender Expert – Member of Ramallah Municipal Council



Replicable climate adaptation model for tackling water scarcity, pollution, land degradation and improving livelihoods in line with priorities

Scaling What Works

The Palestine pilot in Wadi Al-Fari'a works because it is rooted in community needs, backed by strong partnerships, implemented with sensitivity to the challenging context and aligned with national adaptation plans. Its sustainability lies in the motivation of local actors, strengthened capacity, access to resources and strong institutional linkages. The same approach

could bring similar benefits to other watersheds in Palestine and across the region facing similar environmental and economic pressures.

Scaling now means capitalizing on community trust, technical designs already in place, effective risk management and a pipeline of demand from partners eager to replicate the model.



Ain Fari'a (Al-Fari'a Spring) dry in June 2023. (photo: Stephen Fragaszy/IWMI)



Ongoing works for Ain Fari'a and wadi channel rehabilitation (photo: Palestinian Hydrology Group [PHG])

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Project

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