



**Resilient  
water solutions  
against climate change**  
in Lebanon and Jordan

**Jordan and Lebanon - Increasing the  
resilience of both displaced persons  
and host communities to climate  
change-related water challenges**

**Implementing Entity** \_\_\_\_\_ UN-Habitat  
**Donor** \_\_\_\_\_ Adaptation Fund  
**Grant amount** \_\_\_\_\_ US\$ 14 million  
**Duration** \_\_\_\_\_ Oct 2021 – Oct 2025



## Project background and context

The Mashreq region is part of the most water scarce areas in the world and both urban and rural areas face water challenges. However, some urban areas in Lebanon and Jordan experience extreme pressure on water availability, both in quantity and quality, exacerbated by climate change, the unprecedented influx of Displaced Persons (DPs) and groundwater over-extraction and pollution challenges.

The overall aim of this project is to better respond to climate change impacts and vulnerabilities in the context of the Syrian crisis in Jordan and Lebanon. This is done by demonstrating how concrete adaptation measures respond to the needs of both DPs and host communities, and especially women and youth, while avoiding any tension over natural resources and employment opportunities.

The project will focus on responding to climate change-related water challenges by taking a sustainable water management approach. This means it aims to reduce the demand of unsustainable water sources such as over-extracted (and often polluted) groundwater, while increasing water supply options from non-conventional and more sustainable sources, including, rainwater harvesting and the reuse of treated waste water.

The total number of direct beneficiaries is estimated at more than 120,000. Approximately one fourth of the target population is Syrian. Targets for women and youth are set at 40 percent for women and 15 percent for youth.



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for every child



**ADAPTATION FUND**

# Project components and activities

Project components	Country	Activities / outputs	Executing entities
<b>1. Increasing the resilience of municipal governments:</b> Manage urban risks and vulnerabilities in the context of climate change, especially water scarcity challenges, and urban (population) growth, including from Displaced Persons (DPs) migration	<b>Lebanon</b>	<ul style="list-style-type: none"> <li>• 1 territorial development strategy</li> <li>• 8 urban master plans (Climate change and gender mainstreamed)</li> </ul>	Private sector
	<b>Jordan</b>	<ul style="list-style-type: none"> <li>• 2 urban master plans (Climate change and gender mainstreamed)</li> </ul>	Private sector
<b>2. Increasing the resilience of citizens (DPs and host communities):</b> Improve awareness, ownership and capacities to respond to climate change, including to operate, maintain and replicate resilient water harvesting, supply and irrigation systems	<b>Lebanon</b>	<ul style="list-style-type: none"> <li>• Operation, maintenance and replication / upscaling plans for all concrete adaptation measures</li> </ul>	<ul style="list-style-type: none"> <li>• UNICEF</li> <li>• Lebanese Agricultural Research Institute (LARI)</li> <li>• Bekaa Water Establishment (BWE)</li> <li>• Regional Technical Office (RTO)</li> </ul>
	<b>Jordan</b>		<ul style="list-style-type: none"> <li>• Ministry of Water and Irrigation, Yarmouk Water Company (MoWI/YWC)</li> <li>• UNICEF</li> <li>• Jordanian Hashemite Fund for Human Development (JOHUD)</li> <li>• The Hashemite Fund for Development of Jordan Badia (BADIA)</li> <li>• Permaculture Research Institute (PRI)</li> </ul>
<b>3. Increasing the adaptive capacity of the water sector:</b> Expand unconventional water harvesting, supply and irrigation options, using innovative and replicable techniques suitable for the context	<b>Lebanon</b>	<ul style="list-style-type: none"> <li>• 20 rainwater harvesting systems</li> <li>• High quality water treatment and irrigation from Zahle WWTP</li> <li>• Permaculture demonstration site</li> </ul>	<ul style="list-style-type: none"> <li>• UNICEF</li> <li>• Lebanese Agricultural Research Institute (LARI)</li> <li>• Regional Technical Office (RTO)</li> </ul>
	<b>Jordan</b>	<ul style="list-style-type: none"> <li>• 80 rainwater harvesting systems</li> <li>• 40 greywater treatment and reuse systems</li> <li>• High quality water storage and irrigation from Mafrq, Maered and Al Kaider WWTPs</li> <li>• Permaculture demonstration site</li> </ul>	<ul style="list-style-type: none"> <li>• Ministry of Water and Irrigation, Yarmouk Water Company (MoWI/YWC)</li> <li>• UNICEF</li> <li>• Jordanian Hashemite Fund for Human Development (JOHUD)</li> <li>• The Hashemite Fund for Development of Jordan Badia (BADIA)</li> <li>• Permaculture Research Institute (PRI)</li> </ul>
<b>4. Improving knowledge and policies and regulations to increase urban resilience in the region:</b> Project KM and replication, including development of regional urban risks and vulnerabilities management model in the context of climate change and urban (population) growth (including from DPs migration)	<b>Regional</b>	<ul style="list-style-type: none"> <li>• Knowledge management platform for the (inter)national sharing of project lessons and replication options</li> <li>• 1 urban risks and vulnerabilities assessment, planning and management approach model for type 2 cities (under widespread stress from displacement)</li> <li>• Incentive mechanism (financial) and regulatory framework to replicate and upscale rainwater harvesting activities</li> </ul>	<ul style="list-style-type: none"> <li>• UNESCWA</li> <li>• Private sector</li> </ul>

## Contact details

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