

Smart WASH approach for refugee camps and host communities: harvesting rainwater!

Results summary by the Smart WASH Experts Group from the AGUASAN Workshop 2022

The idea in a nutshell

The Challenge Addressed

In water-scarce countries, the need to adapt to the burden of welcoming refugees on water resources in times of climate change is prevailing. As an example, Jordan is hosting more than 2 Mio Palestinians (UNWRA 2022) and 760,000 asylum seekers (UNHCR 2022) mainly from Syria beside its 8 Mio citizens. Optimised harnessing of its water resources thus is needed to ensure the kingdom’s sustainable development and prevent communities’ tensions.

The Vision

Increase the resilience of the general and vulnerable population to a possible temporary suspension of centralized water supply services.

The Potential Solution

Generalised rainwater harvesting and storage at household level can increase the self-reliance and resilience. It can reduce tensions of refugees and host communities during drought or water supply interruption events.

Key target group

People living in water-scarce countries.

Country

Jordan or other countries facing water scarcity, with limited service capacity and high vulnerability to climate change impact.

The ideas and results presented have been co-created by one of the five water and climate experts groups during the [36th AGUASAN Workshop “Water Management in Times of Climate Change - Finding Actionable Solutions for Fragile Contexts in the Middle East”](#), taking place in Jordan in June 2022. Through an innovative format, the 5-day workshop supported the five thematic working groups to co-develop potential actionable solutions for water-climate issues, highly relevant for the region.

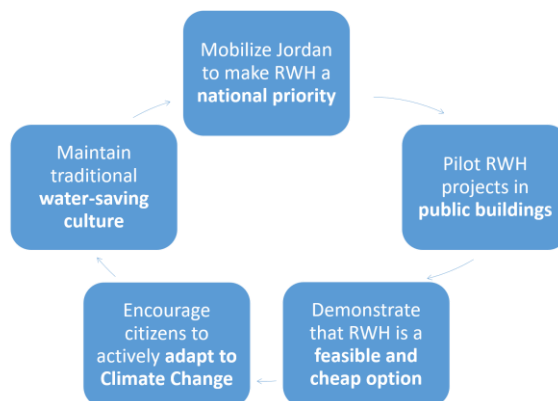
vative, simple, robust, low-energy and water-efficient water & sanitation methods. Fostering sustainable behaviour change through this approach can result in an improvement of public health, a reduced environmental footprint, increasing resilience to climate change and seeding opportunities for livelihoods and economic development. Given Jordan’s water balance deficit and foreseen impact of climate change, optimisation of water resource harnessing through rainwater harvesting (RWH) is a promising avenue (with a potential of an average precipitation volume of 9.9 billion cubic meters/ year).

Climate change will result in more erratic rainfall, with prolonged dry spells and heavy rainfalls, and

The idea

Short description

The **SMART WASH** approach inspires communities in water-scarce countries to play a proactive role in the management of natural resources through inno-



Systematic multi-stakeholder Rainwater Harvesting (RWH) approach in Jordan

potentially reduction of rain volumes. It is thus advisable to mobilize the population living in Jordan to be the actor of the solution by increasing the portion of rainwater harvested (RWH) and consequently their resilience towards climate change.

Specific Aims

In regard of the above, the experts group envisions fostering public buildings and private owners' willingness to implement rainwater harvesting and water-saving infrastructures. This will complement the already existing Jordanian longstanding water-saving culture and further mobilize people living in Jordan to adapt to climate change.

Lines of activities

Several complementary steps were identified, such as national policies, piloting rainwater harvest infrastructures in public and commercial buildings, to support behavioural change and generate mentality-tipping points. In addition, promoting water-saving devices can contribute to the adoption of supplementary saving practices.

Potential partners

To reach its full potential, a communication strategy adapted to different stakeholders and reinforcing the complementarity steps needs to be developed:

- The main message should be that "communities need to take a more active role in adapting to climate change effects and increasing actively the ration of water harvested in water-scarce countries". This message can be stated by the **highest possible political authority** in the country and echoed by actors of different sectors.
- The **Ministry of Water and Irrigation (MWI)** can propose designs and tools to help homeowners to install adapted RWH systems and can study the possibility of a supportive legal framework to accelerate the transition.
- The **Ministry of Finances** should consider tax reduction for investments in RWH systems.
- The ministries can identify **public buildings** to implement pilot projects.
- **Private firms** should be encouraged to implement pilot RWH installations.

Roadmap with key milestones

Dec 2022 - Milestone: MWI has drafted a RWH policy, including identification of possible buildings for pilot projects, suggested design for households and a communication strategy

2024 - Milestone: the number of installed RWH systems at public buildings and at household level takes off slowly but contantly, the communication campaign enters regulary in a new phase with the evolution of the context, its plans and funds are secured at least until 2025



2023 - Milestone: pilot projects are implemented in public buildings, a regular communication campaign about possible initiatives at household level is ongoing, results are regularly shared via social media

Potential outcomes of the implementation of the idea

Through the awareness that individual action is possible, Jordanian are better equipped to decide how and when they will invest in climate change adaptation. Rainwater harvesting can allow securing drinking water supply. It can also serve to reduce indoor temperatures, thus reducing overall energy consumption. Additionally, it permits to supply water for intensified, small-scale food productions at household level.

This soft measure bets on the intelligence of the people rather than on large investments from the state, coercive measures or intruding dogmatic messages. Besides empowering citizens, it could also pave the way to promote better social cohesion among citizens, facing a climatic issue, which very adversely affect their livelihoods. In urban areas, a significant increase in water harvesting would also significantly contribute to reduce flood risks in low-lying areas, thus adding a welcomed Disaster Risk Reduction component to this vision.

The Smart WASH Experts Group

The original question was how to avoid conflicts between refugees and host communities. As the water resources in Jordan are so scarce, and hospitality in Jordan supports to welcome refugees in need of protection and assistance, the group focused on potential solutions to increase water availability for all.

The expert group worked together with great pleasure during the AGUASAN workshop. While many issues were discussed, the promotion of a simple, robust and culturally adapted approach, the harvesting of rainwater was finally selected and developed as a potential solution to address community tension around access to water.

Contacts

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