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Set limits: defining the safe boundary conditions for water sustainability

WATER HARVESTING

for Al-Mashare' Jordan

BACKGROUND

Al Mashare' area, watersheds in the Northern Jordan Valley, is considered as one of the poorest areas in the country. As a follow up to the Royal Court initiatives regarding the preparation of an integrated development plan for the area, the Food and Agriculture Organization of the United Nations (FAO) agreed with Ministry of Water and Irrigation (MWI) to support the area under the project activities.

A pilot site was selected with a target of supporting the poorer farming population in the development zone no. 13 (DZ 13). Water availability was identified as one critical bottleneck for the development of the area.



OBJECTIVES

Water harvesting in one of the watersheds in the Northern Jordan Valley, was proposed to contribute to reduce the water gap and support local livelihood enhancement.



IMPLEMENTATION

The Jordan Valley Authority (JVA) identified the potential for a small water-harvesting structure, an earthen pond and barrier to harvest around 100 thousand m³ of rainwater, that would be connected with the JVA delivery system. The design of structure was conducted by the Ministry of Water and Irrigation and Jordan Valley Authority with the technical guidance of the Food and Agriculture Organization of the United Nations (FAO).



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Source: Google. 2021. [Google]. [Cited 18 January 2021].
<https://www.google.jo/maps/@32.4936574,35.6065972,272m/data=!3m1!1e3>

RESULTS

This structure is considered as the first water harvesting structure in Jordan Valley.

Although small, it plays multiple functions for the area: (i) it stores winter rains, and supplies when additional water is most needed to irrigate agricultural land of the targeted beneficiaries in Al Mashare' area; (ii) improve the quality of irrigation water in Al Mashare' area by increasing fresh water in the mix with reused waste water; and (iii) in an area where livestock is important, increase the available water for livestock watering, which is important for the livestock breeders livelihoods.

Additional benefits that can be highlighted are:

- reduce stormwater impacts and more potential to reduce drift and siltation;
- contribution to climate change mitigation, protecting the local watershed, enhancing the soil-water retention capacity, reducing soil erosion, land degradation and pollution;
- positive environmental impacts that support the ecosystem services;
- improve the surrounding community livelihoods with access to better quality water;
- contribute to the hydrologic cycle with both evaporation and groundwater recharge.



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DETAILS ON THE WATER HARVESTING STRUCTURE

The constructed water harvesting site is located on Wadi Rod Im Eldeb, five km North to Al Mashare' town (plot number 28, basin number 17 Al Mudraj Al Shamali) within the lands of Abu Ziad village/ Ghour Al Arbaaen, on the coordinates (N 32.4944°, E 35.6065°) in the Northern Jordan Valley in Irbid Governorate.

BEFORE AND AFTER



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