

Activity: Communal Water Cistern
Location: Karak, Tafila, Madaba, Wahadneh, Deir abi Saed
Beneficiary: 30 farmers (with families)
Objective: To increase the water available for supplementary irrigation through harvesting rainwater from a catchment's area and store it to be used in the dry season.

Summary

Background information:

Jordan is an arid to semi-arid country, for which over 94% of the country receives less than 200 mm of rainfall per year. 92% of the total precipitation is lost through evaporation. Capturing and saving the surface runoff to be used for different purposes during the dry months of the year is one of the important practices used for challenging drought. To participate in achieving this objective, many water harvesting projects were planned and implemented as one of the activities MEDWA project is aiming to support.

Thousands of years ago Jordanians construct rainwater harvesting structures like Romanians cisterns and ponds. Old water harvesting techniques were improved and new ones were used like small dams and farm level water harvesting (ditches, terraces, lagoon...etc.).

Locations chosen for the communal water cisterns had a suitable catchment's area, which is enough to fill the cistern few times during the rainy season. The areas beside the communal water cisterns are planted with different types of trees (mainly olives and grapes). Trees do not receive the required amounts of water from the rain. The production is much less than the supposed for the age of the trees. This activity aims at increasing the trees production and increasing the planted areas around the cisterns.

Criteria for location/ beneficiary selection:

- The cisterns located at steep sides of mountains with proper area upstream (suitable catchments areas).
- Local communities do not have the required financial capacity to construct a proper rainwater harvesting facility.
- The farmers are cooperative.
- The supplementary irrigation water prices at the different locations are very high (between 3 to 5 Euro/m³) which justifies the cost of construction

Design assumptions:

Location	Annual Rainfall (mm)	Area (m2)	Average Slope	Cistern size (m3)
Karak	300	51563	30%	450
Tafila	169	62500	9%	450
Wahadneh	453	22500	29%	450
Deir Abi Saied	456	11250	26%	450
Madaba	232	19688	28%	450

Available documents

- List of beneficiaries
- Photo gallery
- Tender documents
- Contractor schedule project plane
- Beneficiaries agreements
- Design Report

Photos:



Benefits :
Expected:

- To harvest about 9000 m³ of irrigation water yearly.
- To increase the beneficiaries income, through the increase of trees production.

Actual:

The last rainy days for the first season in Tafila location showed promising results, as the communal water cistern harvested more than 150 m³ of water from the last shower. Other cisterns were not ready for the harvesting.



Beneficiaries contribution:

- Donate the land where the cistern to be constructed
- Construct smaller storage facilities in their farms to make use of the excess water harvested.
- Contribute some of the materials in the construction (the fence and pipes).
- Play an important role in the monitoring.
- Responsible for the maintenance of the cistern

Time schedule of implementation:

Location	Location/beneficiary evaluation and selection		Implementation		Monitoring	
Karak	20/8/04	6/9/04	25/4/06	31/12/07	31/12/07	31/3/08
Tafila	20/8/04	6/9/04	25/4/06	31/12/07	31/12/07	31/3/08
Wahadneh	20/5/06	20/7/06	25/10/07	15/02/08	15/02/08	31/3/08
Deir Abi Saied	20/8/04	6/9/04	1/1/07	15/02/08	15/02/08	31/3/08
Madaba	20/5/06	20/7/06	1/1/07	31/12/07	31/12/07	31/3/08