
Activity:	Installation of 24 greywater units on house level (A 4.11)
Locations:	Sult (Al- Arda District), Karak (Al-Mazar)
Beneficiaries:	144 persons
Purpose:	To increase the water use efficiency through domestic grey water treatment and reuse for irrigation purposes.

Summary

Background Information:

Water scarcity and limited renewable resources have intensified the need for treating and reusing water for different purposes such as irrigation especially in rural areas.

Grey water constitutes about 60% to 80% of the per capita water consumption in Jordan¹.

Constructed wetlands are one method which can be used for treating grey water; it is characterized by low operational costs, high treatment efficiency, and the capacity to respond to fluctuating concentrations of pollutants. The reclaimed household grey water will be used for the purpose of irrigating fruit trees and vegetables at the selected 24 locations in Salt located at the north of Jordan, and Al-Karak in the south.

Design Assumptions:

The average number of residents is 8 per household. The system was designed for a specific load of 1m² per Person Equivalent (PE).

As a pre-treatment system a filter for removing large particles and other suspended solids is placed before the constructed wetland system.

Available Documents:

- . List of beneficiaries
- . Photo gallery
- . Drawings for the unit.
- . Tender document.
- . Contractor schedule/ project plan.
- . Agreements between JOHUD and the beneficiaries
- . Grey water brochure



¹ the per capita consumption is around 125 l/day – including network losses; without losses app. 70 l/d. Source: Ministry of Water and Irrigation statistics

Criteria for locations/beneficiaries selection:

- . Separated sewer system (grey and black water).
- . Existence of a home garden around the house to consume the treated water produced.
- . Family of at least 4 members.
- . Willingness of the beneficiary to operate and maintain the system.

Benefits:

Expected:

In principle, this activity is expected to:

- . Reduce water consumption for irrigation purposes (20 to 40 JD savings on water bills per year).
- . Help families conserve the valuable freshwater for direct contact purposes.
- . Reduce the frequency of emptying the existing septic tanks (usually done once weekly; savings of about 480 JD per year).
- . Increase the area of irrigated lands.
- . Achieve better food security and generate income through sales of produce.

Actual:

Preliminary monitoring of the already constructed units show huge amounts of reclaimed water produced from these units. The tests conducted for the quality of effluent water, according to analysis carried out by the Ministry of water and irrigation show very good to excellent treatment efficiencies (within the standards of water reuse).

Beneficiaries' Contribution:

- . Separate the outlet connections for black and grey water within the house to the connection of the treatment system
- . Operation and maintenance activities to the unit after delivering the unit to the owner.

