

Waste Water Treatment and Reuse in the Northern Part of Beit Sahour

Project Title	Establishing wastewater treatment unit in the Northern part of Beit Sahour.
Project Duration	36 months.
Estimated Budget	The total estimated budget is US \$4,865,000 . The farmers will contribute with 25% for land reclamation and irrigation networks.
Stakeholders	The project stakeholders will be the Beit Shour Municipality, Ministry of Agriculture (MoA), the Palestinian Water Authority (PWA), the Ministry of Local Governorates, Local NGOs, Local Agricultural Societies.
Targeted Areas	Beit Sahour as main beneficiary and Dar Salah and Al Khas & An N’uman as sub beneficiaries.
Map of Targeted Areas	
Beneficiaries	Beit Sahour people and the farmers of the other close localities (16,300 persons).

<p><i>Project Description</i></p>	<p>The Beit Sahour generated wastewater from sewage network and evacuated cesspits (3500-4000 cubic meters per day) discharge into the valleys toward Wadi an Nar without treatment. This wastewater is considered a main threat to the ground water as this area is a water catchment for the ground water eastern aquifer. Most of the generated wastewater is from domestic compared to the generated wastewater from industries and storm rainwater. Beit Sahour has two pumping Stations: one is located in the southern part (receiving 1500-200 cubic meters daily) and another is located in the northern part of the city (receiving 2000 cubic meters daily).</p> <p>The total amount of wastewater which is about 3500-4000 cm/day is discharged</p> <p>Through this project a wastewater treatment plant will be established at the site of the northern wastewater pump station. The treatment plant will treat up to 1000 cubic meters daily of the wastewater arriving to the northern pumping station. This plant will treat up to 50% of the arriving wastewater to the pumping station. The reclaimed wastewater will be used for irrigation of agricultural lands in the area surrounding the treatment plant.</p> <p>Additionally, awareness and capacity building campaign will be conducted to increase the farmers awareness about the proper usage for the treated wastewater and which fruit trees they can irrigate. Additionally, the community awareness regarding the importance of wastewater treatment will be improved.</p>
<p><i>Project Objectives</i></p>	<ul style="list-style-type: none"> • To improve the wastewater management for beit Sahour/Wadi An-Nar. • To improve the environmental and health conditions in the north part of Beit Sahour and in the wadis where wastewater follow. • To increase the agricultural areas by utilizing the treated wastewater for irrigation. • To improve the environmental and health conditions in the Wadi An-Nar and the surrounding communities. • To improve the income generation of the local communities. • To protect the water catchment areas, surface water and groundwater resources from potential contamination. • To increase the food security of local communities. • To increase human resource capacities and knowledge. • To assist in lowering the unemployment rate in the surrounding areas.
<p><i>Project Activities</i></p>	<ul style="list-style-type: none"> • Establishing large wastewater treatment unit with a capacity of 1,000 cubic meters per day, each. • Providing main pipelines to distribute the treated wastewater to farmers or pumping it to distribution station. • Training local authorities on the management of wastewater taking into consideration the local circumstances.

	<ul style="list-style-type: none"> • Creating an association led by Beit Sahour Municipality to follow up, monitor and manage the wastewater treatment plant. • Rehabilitating the polluted lands to become suitable for cultivation. • Planting additional 1,200 dunums of fruit trees.
<p><i>Expected Results</i></p>	<ul style="list-style-type: none"> • The quality of water catchment areas, surface water and ground water resources in the targeted area conserved and improved. • The irrigation water increased by 1,000 cubic meters per day. • Agricultural areas increased by 1200 dunums. • Food security increased at local level. • New friendly technologies at feasible costs adopted. • Jobs created at local level. • Health and environmental conditions improved. • Cost of waste water management reduced. • Awareness regarding waste water management, gardening and the use of new technologies improved. • A wastewater management system operating and functional.
<p><i>Source: Beit Sahour Municipality, 2010</i></p>	