

Proposed Project for Waste Water Treatment in Wadi El Samen

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| <i>Project Title</i> | Mitigating the Impact of Wadi El Samen Wastewater Stream on Health, Environment and Water Resources |
| <i>Project Duration</i> | 24 months |
| <i>Estimated Budget</i> | The total estimated budget is US \$4,500,000 . |
| <i>Stakeholders</i> | Ministry of Agriculture, Palestinian Water Authority, Ministry of Local Governorates, Local NGOs, Local Agricultural Societies. |
| <i>Targeted Areas</i> | Yatta, Beit Arma, Karma, Rabud, Abu Al Asja, Al Heila. |
| <i>Beneficiaries</i> | Local communities of the targeted localities. |
| <i>Project Description</i> | <p>The total localities that are connected to wastewater collection system in Hebron Governorate are 6 localities, forming 7.3% of the total localities at governorate, while the rest of the localities depend on cesspits and open channels.</p> <p>The main wastewater stream in Hebron Governorate flows through Valley El Samen, where sewage flows from Hebron city towards Yatta city. El Samen Valley starts from Al Heila area situated north of Yatta city through al Sada Valley and Abu El Foul Valley reaching Adh Dhahiriya city and then Al Naqab Desert, where approximately 2,300 thousand cubic meter of wastewater drained in the course of the main channel of Al Samen Village.</p> <p>The wastewater flow of Wadi El Samen is affecting many villages and towns in Heron Governorate through creating environmental and health problems to the surrounding areas and its local population. Additionally the flood of sewage water degrades the environmental quality of surrounding agricultural lands, since the wastewater flow affects soil quality, polluting, and damaging the cultivated crops. The area of affected agricultural lands is about 500 dunums, which is mainly cultivated with fruit trees.</p> <p>Furthermore, Wadi El Samen is located over a permeable geological area, which is considered as a water catchment area that supports the Eastern Ground Water Aquifer with harvested rainwater, thus the flow of wastewater in this environmentally sensitive area will create an</p> |

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| | <p>environmental crises; resulting in deteriorating the ground water quality of the Eastern Aquifer.</p> |
| <p><i>Project Objectives</i></p> | <ul style="list-style-type: none"> • To improve the wastewater management in Wadi El Samen area; • To improve the environmental and health conditions in Wadi El Samen area. • To increase the agricultural areas by utilizing the treated wastewater in irrigation. • To improve the income generation of local communities. • To protect the surface and groundwater from potential contamination. • To increase the food security of local communities. • To increase human resource capacity and knowledge. • To assist in lowering unemployment rate in the surrounding areas. |
| <p><i>Project Activities</i></p> | <ul style="list-style-type: none"> • Construction of 2 km of waster water amine pipes in the populated areas to mitigate the impact the flow of wastewater in open stream • Establishment of 3 wastewater treatment units with a capacity of 100 cubic meters per day • Providing of main pipelines to distribute to the treated wastewater to farmers. • Training of local authorities on wastewater management taking into consideration the local circumstances. • Creation of an association to follow up, monitor and manage the wastewater discharge in Wadi El Samen area. |
| <p><i>Expected Results</i></p> | <ul style="list-style-type: none"> • The quality of surface and ground water resources in the targeted area conserved and improved. • The irrigation water increased by 300 cubic meters per day • Agricultural areas increased by 1000 dunums • Food security increased at local level • Adoption of new friendly technologies at feasible costs. • Job creation 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 running and functional. |