



# Innovative Demonstration on Sustainable Integrated Management of Wastewater in Palestine (2017 – 2021)



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#### Introduction

Basic wastewater collection and reclamation is not available in most Palestinian cities and communities, who instead rely on septic tanks and cesspits.

Septic systems generally provide for acceptable treatment and disposal of domestic wastewater in rural and low density communities.

However, as communities grow and housing density increases, or in areas of rocky soil with poor infiltration, cesspit/septic system performance declines.

Overall, these conditions typically lead to higher costs for the residents in terms of increased pumping and reduced protection of health and environment.

The purpose of the Packaged Wastewater Treatment Plant Pilot Project is to bring wastewater collection and treatment/reclamation to the Village of Anin and eliminate the use of cesspit/septic systems within the municipal sewer service area.

It is considered a “pilot” project because the goal is to demonstrate methods which will maximize sustainable wastewater treatment in a small community setting. It has been configured with elements that bring a synergy to treatment and sustainability.



#### **The project outputs are:**

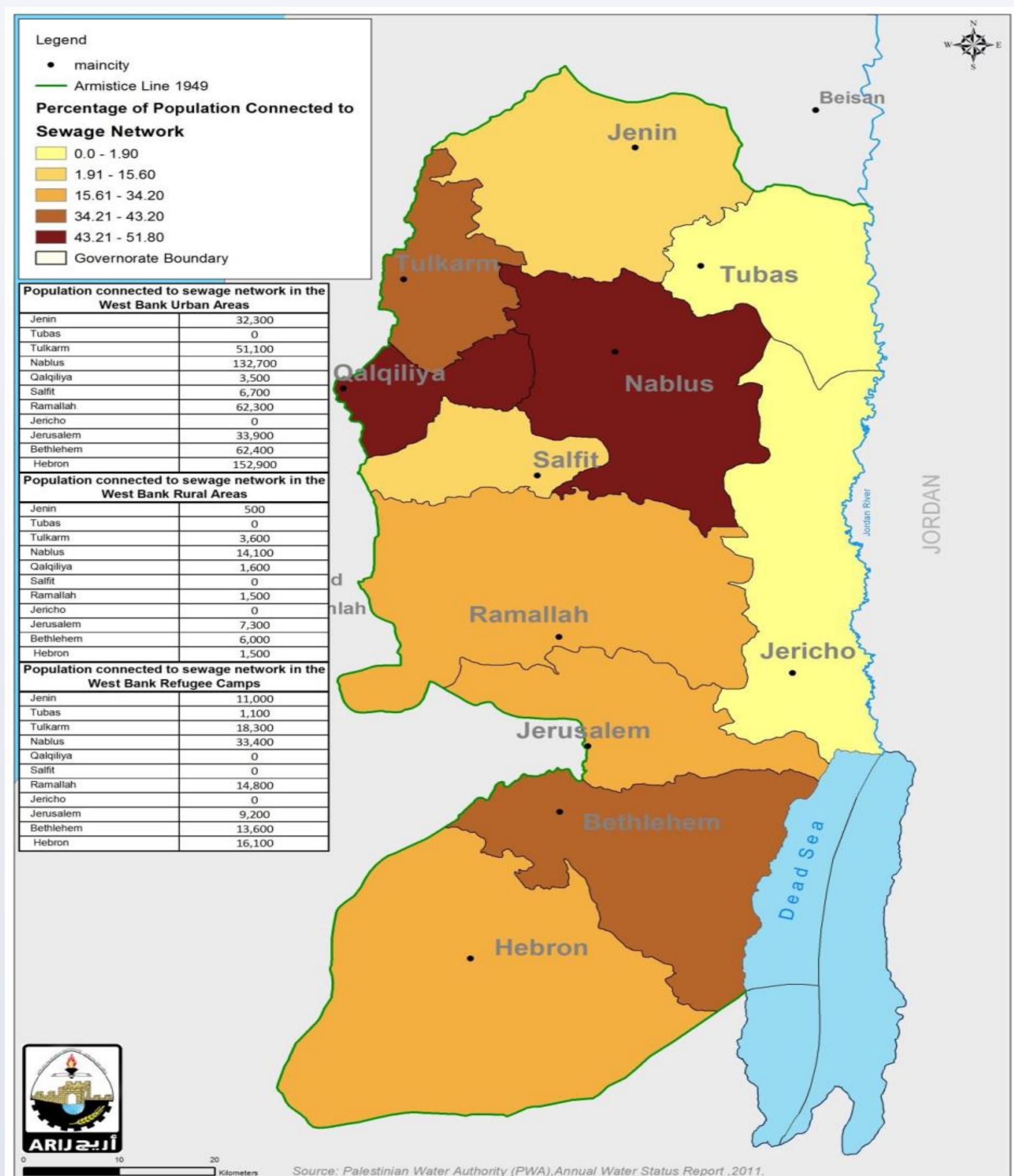
1: Management of rural wastewater and environment improved in a sustainable and socio-economic manner. Self-sufficiency of this pilot is achieved through use of appropriate treatment technologies, solar energy supplement, a structured and phased permitting plan, and synergy with reuse elements and energy supplement.

2: Adaptation and resilience of rural farmers in targeted village to water related impact of climate change is enhanced, by promoting demand and access to additional water resources and irrigated area for agricultural purposes using reclaimed wastewater. Self-sufficiency, increased productivity and added value of this pilot are ensured through the use of appropriate irrigation technologies and well-structured Water Users Associations.

3: Awareness, technical and institutional capacity of farmers groups is enhanced in the field of wastewater treatment and reuse



#### Wastewater Generation in Palestine (2015)



The generated wastewater in 2015: 114.36 MCM.

- 65.82 MCM in the West Bank
- 48.54 MCM in Gaza Strip

#### Sequential Batch Reactor (SBR)

