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“Filling gaps and removing traps
for sustainable resource management”

Using Treated Waste Water for Agriculture in Tunisia: Farmers’ and Consumers’ Perspectives

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Abstract

As climate variability escalates, depleting high-quality groundwater, the exploration of non-traditional water sources for irrigation agriculture has become a top priority in many drought-prone countries in the Middle East and in Northern Africa. Before the background of improvements in and better availability of wastewater treatment technologies, this contribution investigates institutional, social, economic, and governance drivers pertinent to understanding farmer’s acceptance and adoption of treated wastewater (TWW) in agriculture in Tunisia. Regionally, the research focused on the island of Djerba and on the region of Medenine. Here, the selected case study sites are suffering from an increasingly severe water shortage coupled with declining groundwater supplies; therefore, fostering the use of treated waste water for agricultural purposes has become an important policy objective. Empirically, it draws on an extensive review of primary written sources, on more than 12 semi-structured interviews with relevant stakeholders and other experts at national, regional and local level, and on a focus group with more than 20 participants carried out in spring 2018.

The institutional analysis of the collected data reveals a set of common factors affecting the reuse of TWW at farm level. The poor quality and irregular availability of reclaimed wastewater, the lack of coordination between involved actors (e.g., farmers, managers of waste water treatment Plants, regional municipal and state authorities), the low economic incentives, and the low level of knowledge and social awareness regarding the benefits of TWW are the major reasons behind the difficulties of TWW reuse projects on the island of Djerba. The results also highlight differences between farmer’s and consumer’s acceptance of TWW reuse. A consumer survey conducted at weekly fruit and vegetable markets in two different regions on the island of Djerba shows a high reluctance to buy agricultural products irrigated with TWW. While farmer’s attitude is driven by freshwater scarcity and needs for alternative water sources, consumers show high levels of awareness and perception of risks, and insecurity about product quality.

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