



Facing the Challenge of Water Scarcity for Mediterranean Agriculture

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The Mediterranean is under a severe climate change scenario and suffering an increasing anthropogenic pressure, mainly in coastal zones, due to urbanization, agriculture and tourism. The depletion of surface water and groundwater resources is a common reality. Water scarcity is increasing and water should be managed attending to the food needs, but also to the protection of the habitats and biodiversity. The aquifers have an important role for freshwater storage and water transmission, but some of them are contaminated with nitrates from intensive agriculture. In several coastal areas, groundwater over-pumping for irrigation is promoting saline intrusion phenomena.

In the next years, the sustainable water management is a priority to Mediterranean zone, and alternative sources of water should be considered. Many urban areas in several Mediterranean countries, have modern urban water infrastructures, including efficient wastewater treatment plants, which produce large amounts of treated effluents. In recent years, several European countries, have been updating the legal framework for water reuse in multiple non-potable purposes, based on risk assessment. The next step is to increase the use of reclaimed water to agriculture irrigation, with no risks for environment or human health.

Scientific studies are scarce and should be performed, applied to local conditions, to evaluate the water scarcity level, the wastewater treatment plants efficiency and the quality requirements of treated effluents for different crops irrigation. This evaluation will be useful to identify the treatment processes improvements and the operational and maintenance requirements, to produce safe treated water for agriculture irrigation, ensuring the protection of

the natural resources. Moreover, the perception and receptivity of the farmers and consumers, need to be considered and understood.

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