

**The use of reclaimed water for irrigation: Is it financially and socially viable in the case of southern Spain?**

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### **Abstract**

Although the use of reclaimed water for agricultural irrigation in Spain has been done since decades, during the drought period (2005-2008 ) its use was regulated. Since the entry into force of the Royal Decree 1620/2007, which establishes the legal regime for the reuse of treated water, the development of water reuse in Spain has experienced a significant growth. Nowadays, the current drought period (2022-2023) has brought the discussion to the political and social scenes, since conventional water sources are getting more scarce and expensive. Additionally, the EU regulation 2020/741 on the use of reclaimed water has entered into force in June 2023. This research aims to offer a comprehensive assessment of the reclaimed water production (tertiary treatment) upon the financial and cost information gathered from different water treatment companies (both public and private) located on the Mediterranean coast of Andalusia. Results offer valuable information for policy makers, irrigators and water companies on an adequate price setting in the regional context of increasing water scarcity. Additionally, financial affordability of irrigators is also analyzed based on the water productivity of the crop mix in the region and the cost of alternative water sources, such as desalination.

**Keywords:** reclaimed water, cost-assessment, financial assessment, water scarcity, Southern Spain.