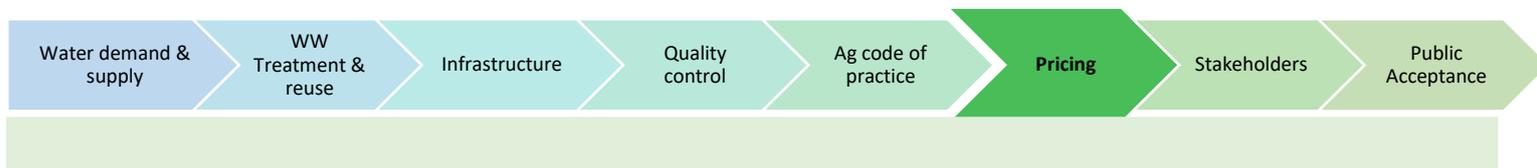




## The Success Story of Cyprus

### Fact Sheet 6 - Pricing system for irrigation water



#### KEYS FOR SUCCESS – Lessons learned from the success stories of Cyprus and Israel

SUWANU EUROPE is a H2020 project aiming to promote the effective exchange of knowledge, experience and skills among practitioners and relevant actors on the use of reclaimed water in agriculture. This factsheet is part of a total of 17 factsheets that describe the successful reclamation practices of Israel and Cyprus in order to learn and boost implementation of solutions adapted to the European context. Our ultimate goal is to enhance acceptance and awareness to an alternative source of an increasingly scarce resource, water.

Adequate water pricing is important for the sustainable, long-term financing of high quality drinking water and sewerage services. However, there are often insufficient price differentials between reclaimed water and freshwater, which is made worse by a lack of sufficient cost recovery and the existence of public subsidies to conventional water resources in many areas of the EU.

The development of water reuse schemes, therefore, needs to be done in the wider economic context of user - polluter - and beneficiary - pays principles (Guidelines on Integrating Water Reuse into Water Planning and Management in the context of the WFD, 2016).

In general, water reuse may be economically favorable compared to other unconventional sources (i.e. desalinated water) (UNEP, 2012) and it is important that pricing for reclaimed water is integrated with pricing in the context of wider water supply. However, competitive price rates from reclaimed water (at or below those of freshwater) have been seen as essential to drive uptake (Hidalgo and Irusta, 2005).

Low levels of cost recovery would discourage both water efficiency and reused water by failing to account for the full external costs of freshwater abstraction and wastewater discharge. Because these external costs are typically borne by taxpayers, price support measures for water reuse may be justified, to enhance its competitiveness.

This is the case for Cyprus, where water reuse schemes have significant uptake partly through the use of subsidies, together with an integrated supportive regulatory regime.



Picture 1 – Image of an irrigated field area of alfalfa crop with reclaimed water in Nicosia, Cyprus

In Cyprus, the Water Development Department (WDD) and the Cyprus Urban Sewerage Boards (Public Utility Organizations) are responsible for the construction of water reclamation facilities and the sewerage networks, while the Urban Sewerage Boards are responsible for their operation and maintenance.

Specifically, **80% of the capital cost** (construction cost) of sewerage networks, reclamation facilities/UWTPs, treated effluent storage lagoons and central irrigation networks are covered by the European Community (i.e. national Funds, co-financed by the cohesion fund of the EU and the Cyprus Government, loans from European Investment Bank (EIB) up to 50% of the required expenses and contribution of the Community).

The remaining **20% of the capital cost** and the 100% of the related cost of the operation and maintenance of the treatment facilities are covered by the Urban Sewerage Boards.

The above operation and maintenance costs are covered through taxation of the citizens, and specifically, through the:

- sewerage fee, which is paid once a year based on the value of the house, and the
- sewerage system use, which is paid every two months based on the drinking water consumption.

Reclaimed water is supplied for irrigation and landscape uses in Cyprus, with a price that is only 33% - 40% of the price of freshwater supplied for the same uses, in the same areas (i.e. freshwater price is €0.17/m<sup>3</sup> for agriculture and €0.36/m<sup>3</sup> for landscape, while the reused water price is €0.07/m<sup>3</sup> and €0.17-0.23/m<sup>3</sup>, respectively). **This is one strong incentive for the end-users to accept reclaimed water as a new reliable water resource.** The water selling prices for reclaimed water and freshwater (not filtered) are presented in Table 1.

Table 1 – Irrigation water rates from Government Water Projects and from governmental networks of reclaimed water  
(Source: Water Development Department, 2019)

Water Selling Rate			
A/A	Use	Tertiary-treated effluent EUR /m <sup>3</sup>	Fresh not filtered water from government water works EUR /m <sup>3</sup>
1	Fixed annual fee	2.40/decario	2.40/decario
2	For persons for agricultural production	0.07	0.17
3	For irrigation divisions for agricultural production	0.02	0.12
4	Industry	0.17	0.25
5	For irrigation of sport fields, parks and other green areas falling under the responsibility of State / Local Authorities	0.12	0.23
6	For irrigation of private sports fields and private green areas, hotel and house gardens	0.17	0.36
7	For irrigation of golf fields	0.23	0.36
8	For over consumption for agricultural use	Increase by 50%	0.45
9	For over consumption for the items 3 to 7	Increase by 50%	Increase by 50%

Setting an excessively low price for reclaimed water in relation to existing alternatives could over-encourage the use of this water, provoking unsuitable uses and even external costs and possibly damage the image of reclaimed water seen as “less good” than existing alternatives. A solution to this is the use of an increasing block tariff - stepped increases in tariffs as usage increments. In essence, fixing the price for reused water is always a trade-off of cost distribution between the beneficiaries, the operators and the tax payer in general (Guidelines on Integrating Water Reuse into Water Planning and Management in the context of the WFD, 2016).

## CLOSING REMARKS

Adequate water pricing is important for the sustainable, long-term financing of high quality drinking water and sewerage services. As a result, pricing mechanisms must be employed by governmental bodies to encourage the reuse of water, in combination with financial incentives such as subsidies for such reuse. Strict monitoring is required to make sure that water is reused appropriately and that no misuse occurs.

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THIS PROJECT HAS RECEIVED FUNDING FROM  
THE EUROPEAN UNION\* HORIZON 2020 RESEARCH  
AND INNOVATION PROGRAMME  
UNDER GRANT AGREEMENT N. 818058



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