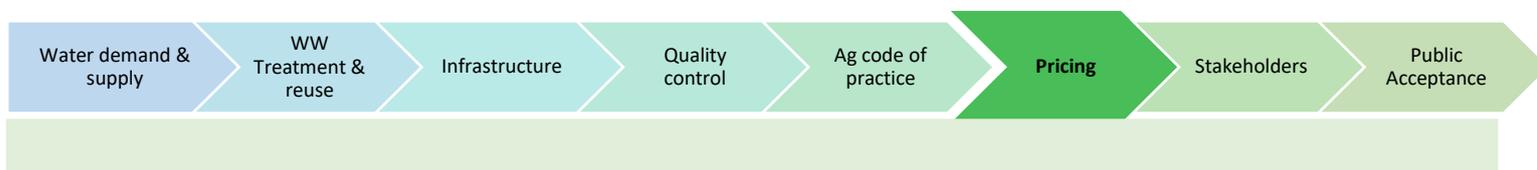




The Success Story of Israel

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.

Water pricing in Israel is complex and comprised of different rates for home (and small business) use and for agriculture. Home use rates are tiered, depend on the number of persons living in a dwelling unit, and represent the real cost of water supply and sewage treatment, including operating, maintaining, and developing municipal water supply and sewage treatment systems. The basic rate applies for a use of up to 3.5 m³/month per person and no less than 7 m³/month per dwelling unit (Table 1). Water consumption exceeding this quota is charged the higher tier 2 rate.

Table 1 - Water and sewer rates for domestic consumers during the years 2010-2019. All prices are in NIS, per m³, including VAT. All rates were recorded on the 1st day of the month. Data obtained through the Israeli Water Authority website, accessed February 5, 2019. Rates assume 1 €=4.0 NIS

Date	Tier 1 rate €	Tier 2 rate €
January 2019	1.72	3.24
July 2018	1.65	3.11
January 2018	1.64	3.08
July 2017	1.64	3.08
January 2017	1.92	3.08
January 2016	1.92	3.09
July 2015	1.99	3.21
January 2015	2.01	3.24
July 2014	2.22	3.57
January 2014	2.22	3.58
July 2013	2.32	3.73
January 2013	2.28	3.66
September 2012	2.21	3.56
July 2012	2.19	3.53
January 2012	2.16	3.47
July 2011	2.16	3.47
January 2011	2.16	3.12
July 2010	2.16	3.12
January 2010	2.03	2.99

Many elements are considered for calculating the price of water, including costs incurred by the water supplier, purchasing desalinated sea water, costs incurred by Mekorot, subsidies and more (Figure 1). Previous pricing mechanisms did not account for real costs, making it difficult to account for actual development and operational costs. The current pricing system allows continuous updating each of these elements, for example as a result of commissioning a new sea water desalination plant. This pricing system also allows for allocating funds for future investments, thus increasing the sustainability of the water market. The unified average rate is subsequently updated frequently and reflects the predicted weighted average for domestic consumption of water under tiers 1 and 2.



Figure 1 - Domestic water and sewer rates as of January 2019 (Israel Water Authority website, accessed February 5th 2019)

Agriculture use rates are different and do not account for sewage treatment costs. Current costs are generally fixed throughout the country and vary primarily according to the quality of the water and the amount used with respect to pre-approved quotas (Table 2). Pricing of the different water sources available for agriculture is used, in addition to covering actual costs of water production, to regulate the consumption of different water types and provide incentives to using lower quality water when possible. For example, fresh water is the most expensive – clearly because the regulator and the managers of the local water market are interested in minimizing the use of this high-quality resource and prefers it is used for consumption. The next most expensive water for agriculture are saline water deemed as a potential threat to other water sources – clearly the motivation for the elevated prices is to prevent farmers from irrigating with such water (even if they are the ones most readily available) in order to preserve other natural resources. Similarly, the direct use of low quality fresh water is discouraged by assigning a relatively high-water price (to preserve the resource for other applications). Using these same waters for mixing with effluents is encourage (assigned one of the lowest prices) because it allows the reuse of a resource which would otherwise be deemed waste.

Table 2 - Sample water rates for agriculture. Rates vary according to water quality and the amount used (relative to the amount allotted). Rates assume 1 €=4.0 NIS

Water type	Cost €/m ³ , VAT not included
Fresh Water	
Within quota	0.57
Up to 10% above quota	0.90
More than 10% above quota	1.50
Shafdan Reclaimed Water	
Within quota	0.28
Up to 10% above quota	0.83
More than 10% above quota	1.43
Effluent for Unrestricted Irrigation	
Within quota	0.30
Up to 8% above quota	0.37
More than 8% above quota	0.45
Lower Quality Effluent	
Within quota	0.26
Up to 8% above quota	0.32
More than 8% above quota	0.38
Brackish or Saline Water	
Saline	0.38
EC between 1.9 and 2.65 dSm	0.34
EC between 2.65 and 3.4 dSm	0.32
EC between 3.4 and 4.1 dSm	0.29
EC between 4.1 and 4.8 dSm	0.26
EC between 4.8 and 5.2 dSm	0.25
EC between 5.2 and 10 dSm	0.23
EC greater than 10 dSm	0.21
Low Quality Fresh Water	
Direct irrigation	0.45
For mixing with effluents	0.25

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