Sustainable **Water treatment** and Agricultural reuse options in Europe

The Success Story of Cyprus

Fact Sheet 8 – Public acceptance

Water demand & supply | WW Treatment & reuse | Infrastructure | Quality control | Ag code of practice | Pricing | Stakeholders | **Public Acceptance**

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.

Despite the clear need for alternative water supplies to address water security challenges, public acceptance is still a critical barrier to the introduction of recycled water schemes (Fielding et al., 2018). Thus, public acceptance is a major consideration for authorities seeking to introduce recycled water schemes, all over the world.

There are various psychological barriers to the public acceptance of reclaimed water reuse, such as the 'yuck factor', health risks, variable reliability of applied treatment technologies, trust in authorities to manage risks as well as an overall disbelief in science and technology. Moreover, there are environmental and pricing concerns.

The literature and the experimental research demonstrate that providing information to the public about the recycling process, the safety of the source, the benefits of the source, that water recycling is well practiced in other countries of the world, and other key aspects increases acceptance of recycled water. Information of this type is likely to be effective because it addresses known predictors of recycled water acceptance.

A lot of reaction and skepticism were observed from farmers/end-users at the early days of implementing wastewater reuse projects in Cyprus, mainly due to ignorance, misconceptions and psychological fear. In order to build trust and get support, Cypriot authorities had to initiate stakeholder awareness raising actions, consultation and collaboration activities during the development of the various wastewater reuse schemes.

In instances where the community associates a high level of risk with the wastewater reuse schemes, trust has shown to be maximised when the following conditions are met (Figure 1) (Khan and Gerrad, 2006):

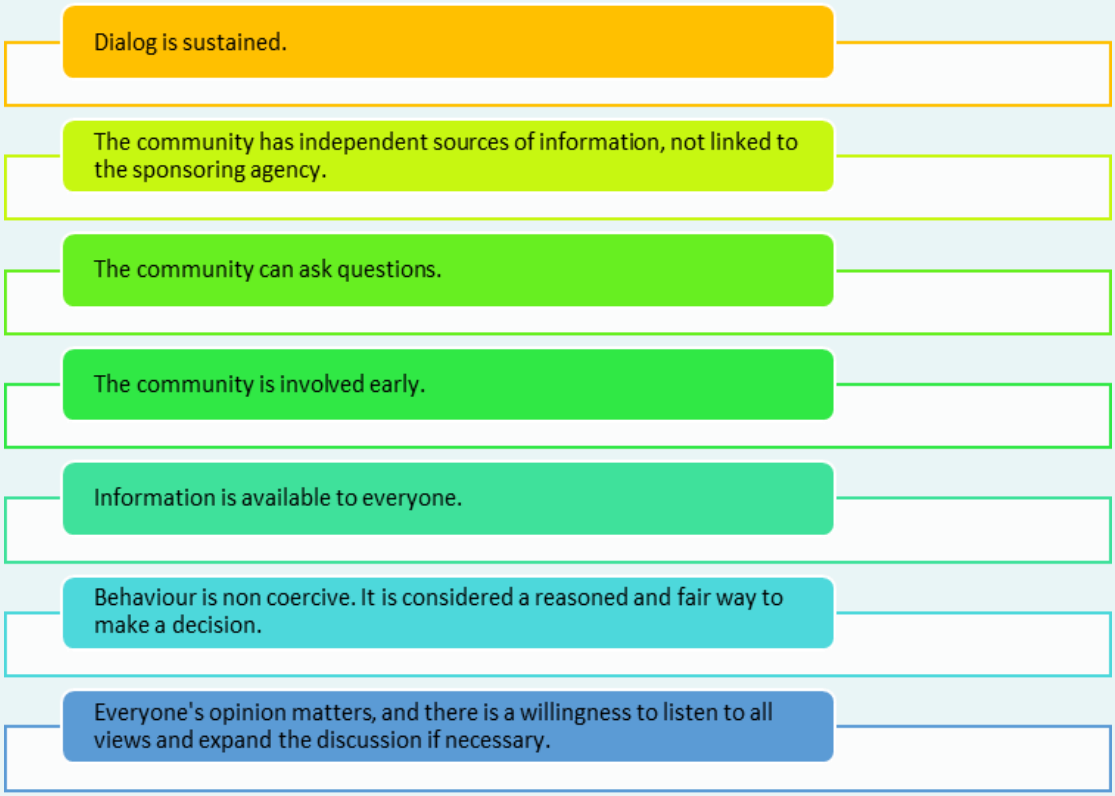

Figure 1 - The main conditions to be met for increased trust in the community in water reuse (Source: Khan and Gerrad, 2006)

In Cyprus, the local authorities gathered sufficient information before communication began with the various stakeholders and end-users, such as:

- The justification of the need for wastewater reuse in Cyprus, e.g. the context of water scarcity, including under future climate conditions;
- The costs of installing treatment and distribution systems;
- The environmental benefits, as well as the environmental drawbacks and risks;
- The social and economic benefits and drawbacks/risks;
- Transparency on exposure risks to the public, how these will be addressed and the treatment levels to appropriate standards.

All the above, were analyzed within the planning process, in order to provide a clear justification for the introduction of the Cypriot wastewater reuse scheme.

Acceptance issues were addressed by the Cypriot authorities through:

- Information / consultation campaigns;
- Education of the farmers in small groups;
- Regulating effluent reuse through the Cyprus Code of Good Agricultural Practice;
- Making recycled water cheaper than freshwater;
- Demonstrating benefits in practice.

Informational/consultation campaigns, development of awareness raising tools and dissemination of information on the various benefits of wastewater reuse among all key stakeholders in Cyprus have two main objectives:

- To build trust, credibility and confidence in wastewater reuse (addressing health risks-related concerns of the general public and workers potentially exposed to the effluent);
- To raise awareness on the benefits of reuse for the various stakeholders involved in the development of wastewater reuse schemes.

Also, Educational and Awareness raising campaigns were organized by the Water Development Department, including:

- TV and radio shows;
- School visits;
- Distribution of informational leaflets;
- Creation of website dedicated to water issues;
- Establishment of the Water Week;
- Social media posts;
- Press articles;
- Workshops/seminars/training events;
- Conferences.

When addressing the issue of public acceptance towards wastewater treatment and reuse, analysis should also include investigation around the attitude towards the environment and the concern of the public for the future generations. Scientists and water managers agree that positive community attitude regarding this alternative source is critical (Keramitsoglou and Tsagarakis, 2013) and, accordingly, informing the public about the treatment process and the resulting quality of water, becomes a success promoter for any reuse policy.

CLOSING REMARKS

Reuse acceptance strongly depends on the potential use of reclaimed water. Change in thinking cannot be acquired unless a large and disperse group of stakeholders is involved, since no individual has the capacity to implement any measures required for sustainable wastewater reuse. These challenges suggest that social learning is an important goal to facilitate stakeholders' involvement.

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