

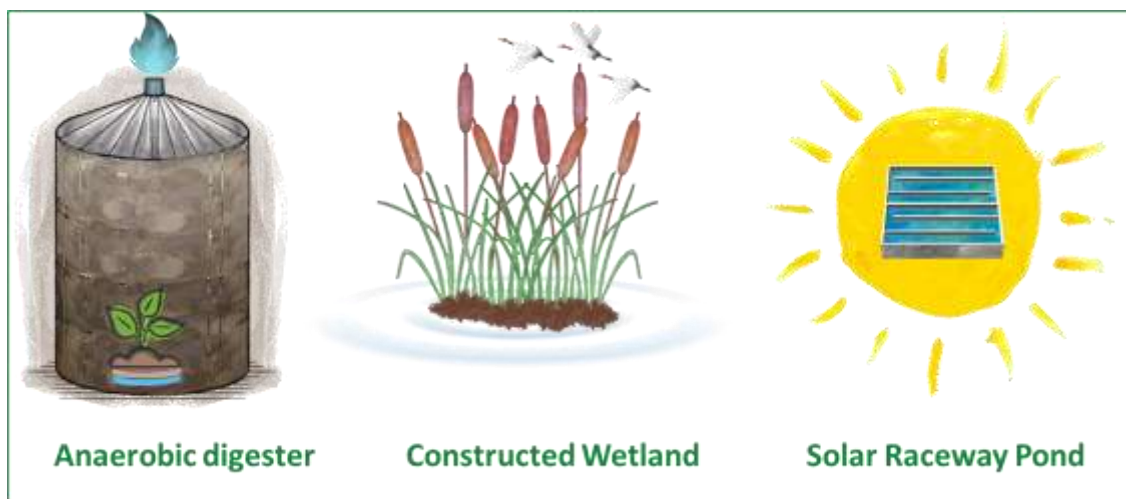


## AQUACYCLE

### Towards Sustainable Treatment and Reuse of Wastewater in the Mediterranean Region ENI CBC Med funded project

The **AQUACYCLE Partnership** is made up of 7 partners from Greece, Lebanon, Malta, Spain and Tunisia. The project budget is of 2.8 Million Euro with an EU contribution of 2.5 Million Euro and 10% co-financing. The project was launched in September 2019 with a foreseen duration of 36 months.

The project is aimed at demonstrating an **eco-innovative wastewater treatment technology** that will consist of **anaerobic digestion, constructed wetlands and solar treatment** for the cost-effective treatment of domestic wastewater with minimal costs of operation and maximum environmental benefits.



The project is motivated by the sad reality that a substantial number of wastewater treatment plants installed in the Mediterranean region have proven unsuccessful copies of western-based treatment system concepts. Besides their high operational and maintenance costs, these systems are often unsuited to address the challenges of wastewater treatment. As a result, treated domestic water remains largely underexploited throughout the region.

The region's prevailing water scarcity is set to worsen as the impacts of climate change are being felt, not least in the agricultural sector, the by far largest consumer of water. As predictions of a decrease

in rainfall by at least 10%, and increased evapotranspiration due to a rising temperature of around 2 degrees Celsius are manifesting themselves, the future of farming, one of the largest employment sectors in the region, looks exceedingly bleak. Clearly, not only water security but also food security in the region is at risk.

This brings the ambition to bring about a much-needed paradigm shift in how the safe reuse of treated domestic wastewater should be looked at: **All water is too precious to waste!**

Pilot demonstration units of the eco-innovative wastewater treatment technology are set to be installed in **Lebanon, Spain and Tunisia**.



**Integrated Resources Management (IRMCo) Company Ltd.**, the Malta based partner in the AQUACYCLE Partnership is guiding the use of **Participatory GIS (PGIS) to build up wastewater reuse action plans that will target the safe reuse of 900,000 m<sup>3</sup> of treated water** around the 3 demonstration units. The participatory-driven process will invite local communities, made up of farmers, environmental NGOs and a widest range of community representatives to come together to draw up proposed reuse action plans. These will then be presented to local, regional and national water management entities following a rigorous and systematic analysis to ensure the final reuse action plans will bring not only the most cost-effective solution with maximum environmental benefits, but also deliver the desired social benefits to the communities as a whole. To this effect, also **the greening of open spaces** for the well-being of society will form part of potential reuse applications.

This effort will be facilitated by the company's 25 years' track record in EU funded research, and in particular those projects that dealt with optimum water and irrigation management through the use of remote sensing and GIS based spatial analysis. AQUACYCLE also brings the opportunity for IRMCo to build further on its successful **demonstration of how local communities** can – and **should** – **be engaged in all planning decisions**. Indeed, in the precursor ENPI funded project, **MARE NOSTRUM**, which dealt with coastal zone management, the local communities around Malta's Grand Harbour joined a PGIS driven process to draw eco-heritage trails for their locality. Eventually, this led to the production of a **Local Communities' Charter** on [Safeguarding Open Spaces around Malta's Grand Harbour](#). Inspired by this successful achievement, in **AQUACYCLE**, IRMCo will oversee the production of a **Mediterranean Charter for the safe and sustainable reuse of treated domestic wastewater**. Crucially, the Charter will bring the voices and aspirations of the local communities who will be contributing to drawing up of the reuse action plans.

IRMCo's Managing Director, Ms **Anna Spiteri** and hydrologist Eng. **Dirk De Ketelaere** are also leading the communication and dissemination related activities, a core work package in all ENI CBC Med funded projects. To date they have overseen the production of 3 e-Newsletters:

[Our current focus: changing the paradigm for wastewater reuse, February 2020](#)

[Special Issue covering interviews on COVID-19 and the Urban Water Cycle, May 2020](#)

[Sharing achievements and outcomes of First Series of Stakeholder Workshops organized on the theme "Changing the Paradigm on Wastewater Reuse", November 2020](#)

The company's ever evolving portfolio of participatory engagement techniques also includes **rolestorming**, which was put to very effective use on the occasion of the project meeting hosted by IRMCo in Valletta during February 2020. The short video on the project's [dedicated You Tube channel](#) continues to be a frontrunner as [the most watched clip](#).



*Participants in the AQUACYCLE second project meeting, hosted by IRMCo in Valletta during 3-5 February 2020, photo © IRMCo*

For more information, please visit the project website, maintained by **IRMCo**, and follow our social media accounts, maintained by Eleanna Pana on behalf of the Centre for Research and Technology, Hellas (**CERTH**):



[www.enicbcmed.eu/projects/aquacycle](http://www.enicbcmed.eu/projects/aquacycle)



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