

Fifth e-Newsletter  
November 2021

## Towards Sustainable Treatment and Reuse of Wastewater in the Mediterranean Region

### A look ahead at AQUACYCLE's Capitalization Plan

**AQUACYCLE's Capitalization Plan** targets the promoting of the uptake of an eco-innovative wastewater treatment system which is foremost addressed to sustain the livelihoods of small and medium sized rural communities around the Mediterranean. The system is designed to provide a safe, all-year-round and reliable supply of treated domestic effluent so as to alleviate the ever-increasing scarcity of the Region's fresh water resources due to competing water demands between the domestic, agricultural and industrial sectors and the impacts of climate change. This aim is being pursued through two, highly complementary, approaches: a technological push among investors, regulators and wastewater treatment plant operators, as well as an awareness pull addressed to the final beneficiaries, i.e. farmers, local communities and society at large.

In this fifth e-Newsletter, **Anna Spiteri** and **Dirk De Ketelaere**, from the environmental research company, Integrated Resources Management Company Ltd. (**IRMC**), take stock of what has already been achieved to date and what lies ahead in pursuance of this goal.

### Drivers of the technological push



For the purpose of attracting the active interest of **investors**, the lead partner of **AQUACYCLE**, the Centre for Research and Technology, Hellas (**CERTH**), commissioned a **3-dimensional model of the eco-innovative APOC system**, which consists of an anaerobic digester, constructed wetlands and a raceway pond reactor. The dashboard (shown to the left of this picture) offers an interactive means to explain the functioning of the system, an ideal way to showcase the system at upcoming trade fairs and exhibitions.

3-D model of **AQUACYCLE's** eco-innovative wastewater treatment system

### Partners



Furthermore, an updated set of project promotional materials is planned, in the form of a **3-gated project flyer** documenting the project’s achievements, and **factsheets** on the 3 locations where the installation of pilot demonstration units is foreseen (in Lebanon, Spain and Tunisia). These will enable to document the efficiency of the treatment process in relation to the recently issued EU regulation on the minimum requirement for reuse of treated effluent (<http://data.europa.eu/eli/reg/2020/741/oj>), which will undoubtedly prove of particular interest to **regulators**.

To permit **operators of wastewater treatment plants** to design, operate and maintain the APOC wastewater treatment system, a dedicated e-training website has been launched (<https://etraining-aquacycle.eu/>).



**AQUACYCLE e-training platform** (<https://etraining-aquacycle.eu/>)

At the start of 2022, the **AQUACYCLE** Partnership is planning for the organization of a training-of-trainers workshop which is envisaged to take place at the Blanca wastewater treatment plant in the Murcia Region of Spain. Two constructed wetlands and a raceway pond reactor have been commissioned by the Spanish partners in the consortium, i.e. the Regional Entity for Wastewater Sanitation and Treatment in Murcia (**ESAMUR**) and the Plataforma Solar de Almeria (PSA) - Energy Department - Solar Treatment of Water Unit (**PSA-CIEMAT**). Although envisaged as an internal event, the capacity building event will enable partners to organize follow-up training events for local water engineers and technicians. Successful participants of these training events will receive a ‘**Certificate of qualified APOC user**’. A target has been set of **180 certified APOC users in Lebanon, Spain and Tunisia**.

### Drivers of the awareness pull

Representatives of the **local communities**, including but not limited to **farmers**, around the foreseen pilot demonstration sites of the APOC system in Lebanon, Spain and Tunisia will be invited to ‘**have their say**’ in the drawing up of reuse action plans for treated effluent. To this effect, participatory GIS (PGIS) will be employed during the upcoming, second series of stakeholder workshops. In preparation for these events, **IRMCo** guided the partners on the setting up of **PGIS ‘landing pages’**. Participants will be invited to either draw their suggestions for reuse directly online or on a print-out of satellite image of the area. The workshops will start with a brainstorming session in which participants will be encouraged to share their views – including possible concerns – regarding the reuse of treated document effluent. This bottom-up, ‘**your voice matters**’ feedback will serve the drawing up of a **MedAPOC Charter**.

### Associate Partners



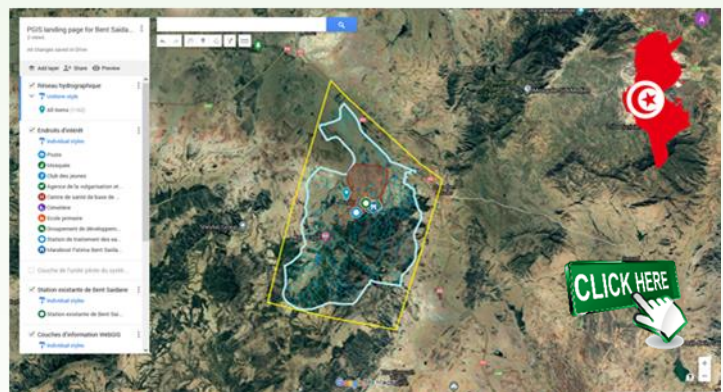
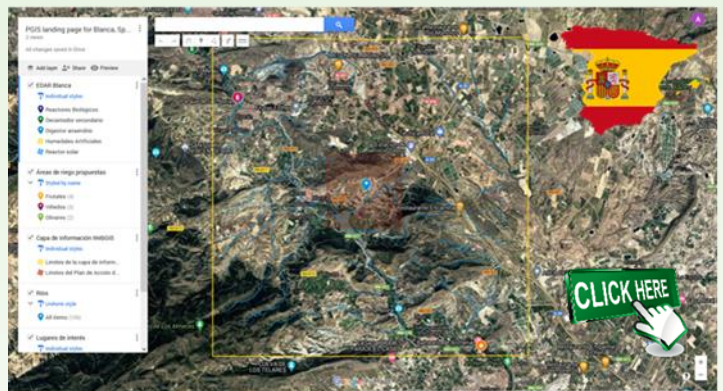
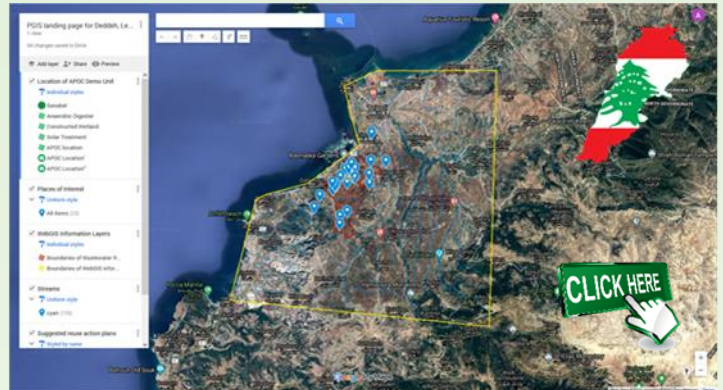
### Together we are stronger!

Dr. Konstantinos Plakas, Project manager, invited **AQUACYCLE**'s 'sister' projects under the Water Efficiency priority axis, as well as **MAIA-TAQA**, under the SMEs access to research and innovation priority axis of the ENI CBC Med Programme, to meet up in Malta on the occasion of the 4<sup>th</sup> Mediterranean Water Forum 2021. The invitation was sent under the umbrella of the recently selected ENI CBC Med funded **MEDWAYCAP** project, coordinated by **CERTH**, which is aimed at the capitalization of knowledge and good practices of Non-Conventional Water Resources generated by ENI CBC Med funded projects.

The 4<sup>th</sup> **Mediterranean Water Forum** is scheduled to take place from 6<sup>th</sup> to 8<sup>th</sup> December 2021. The event is co-organized by Malta's Energy and Water Agency (EWA), the Mediterranean Water Institute (IME) and the Union for the Mediterranean (UfM). The Forum aims to present the Mediterranean as a hub of innovative water management responses which have been locally developed or adapted to address the prevailing challenges of the region including those related to climate change impacts. More information about the event, including the agenda, can be accessed through the link: <https://medwater2021.mt>.

The mutual aspiration of **AQUACYCLE**'s sister projects **MEDISS**, **MENAWARA**, **NAWAMED** and **PROSIM**, in finding innovative and technological solutions to increase water efficiency and encourage the use of non-conventional water resources brings a real opportunity for each individual project to achieve more by joining forces! The sharing of outcomes, organized as a side-event during the Forum, is expected to bring further synergies to the fore.

### Links to PGIS landing pages for the localities of Deddeh in Lebanon, Blanca in Spain, and Bent Saidane in Tunisia



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