

AQUACYCLE

Towards Sustainable Treatment and Reuse
of Wastewater in the Mediterranean Region

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MEDWAYCAP



AQUACYCLE



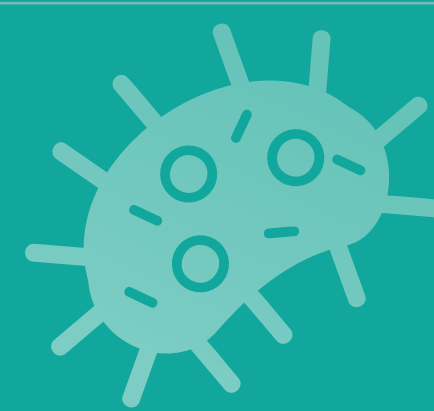
WHAT

APOC eco-innovative wastewater treatment system

The eco-innovative wastewater treatment system proposed by the AQUACYCLE project has the acronym APOC which stands from the three components that compose the system, namely the “Anaerobic digestion”, the “Photocatalytic Oxidation” and the “Constructed wetland”.

AGRICULTURE
DOMESTIC/INDUSTRIAL USE

WETLANDS
WASTEWATER TREATMENT
CIRCULAR ECONOMY
MICROORGANISMS
WATER POLLUTION



HOW

APOC system uses special microorganisms that “eat” with the absence of oxygen the organic matter of the sewage, leading simultaneously to the production of an organic fertiliser and biogas as energy source.

Next, the liquid product is treated by a system that is designed to mimic processes found in natural wetland ecosystems (called constructed wetland).

media link



more info



project

It acts as a natural filter where plants oxygenate the effluent and allow the growth of beneficial microorganisms.

These microorganisms, naturally growing in the wetland ecosystem, break down pollutants and purify water without the use of chemicals and energy.

Finally, with the aid of sun and the addition of environmentally friendly chemicals (e.g. oxygenated water and iron species), the municipal wastewater is purified at a level that satisfies the most stringent standards for reuse in agriculture (irrigation water), or for domestic, industrial or other applications.



WHY

This new technology enables the recovery of valuable substances from treated effluents, such as fertilisers and biogas, representing a good example of the transition to a circular economy.



▲ tested/installed ● partner location