Local Water Solutions for a Global Challenge

Climate change is intensifying floods and droughts worldwide, disrupting communities and economies. The Mediterranean region and Southern Africa are among the most affected, with drought risks expected to increase in the coming decades.

At the same time, rural areas are becoming more vulnerable as populations decline and nearly 80% of people are expected to live in cities by 2050.

Decentralised water solutions provide sustainable, locally adapted systems that help communities manage water resources, reduce climate risks, and build long-term resilience.

Our partners

UC Universidad de Cantabria · Københavns Universitet · itg · KClink · Universidad Rey Juan Carlos · aqualia · Three Clock · Imperial College London · University of Cape Town · Università di Pisa · Coventry University · RIA · Acque · ISTID · Autorità di Bacino Distrettuale dell'Appennino Settentrionale

watersens

Funded by the European Union

Co-creating a Sustainable Future Through Decentralised Water Innovation

Our goal

WATERSENS tackles key water challenges by demonstrating how decentralised water management (DWM) can improve efficiency and sustainability.

The project will provide real evidence of its benefits and create a decision-making framework to help authorities and stakeholders apply the most suitable solutions.

The project will design and test six innovative DWM technologies:

1. Floating treatment wetlands for treating rural and urban stormwater ponds
2. Biofilters to clean contaminated water in informal settlements for agricultural use
3. Photo-bioelectrochemical systems and two-stage denitrifying bioreactors to reuse urban wastewater for irrigation
4. Green walls to treat greywater and green roofs in buildings
5. Modernised rainwater collection cisterns to capture and reuse stormwater for domestic purposes

Our pilots

ARAGON & CANTABRIA, SPAIN

Offering an innovative, low-energy, and eco-friendly wastewater treatment system using **hybrid floating wetlands** with microalgae for small rural communities.

CANTABRIA, SPAIN

Testing an **innovative walkable Floating Treatment Wetlands** (Phytobatea® FTWs) system to improve the quality of water in urban stormwater ponds.

EXTREMADURA, SPAIN

Implementing an innovative **photo-bioelectrochemical (PBEC) system** designed to treat wastewater efficiently and sustainably.

FRANSCHHOEK, SOUTH AFRICA

Developing a large-scale **biofiltration system** that combines nature-based water treatment with digital monitoring to produce clean and safe water for irrigation.

LISBON, PORTUGAL

Upgrading an existing green wall that treats greywater (used household water) using **plants and natural filtering materials** suited to the Mediterranean climate.

NAXOS, GREECE

Modernising the **traditional rainwater cisterns**, turning it into an efficient and sustainable system that meets today's needs

Stay tuned!

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