REGENERATIVE & NATURE-BASED WATER SOLUTIONS

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 776643

HYDROUSA

www.hydrousa.org

Title: Demonstration of water loops with innovative regenerative business models for the Mediterranean region

Acronym: HYDROUSA

CIRC-02-2016-2017: Water in the context of the circular economy, Innovation Action

Total budget: €12,015,448.75

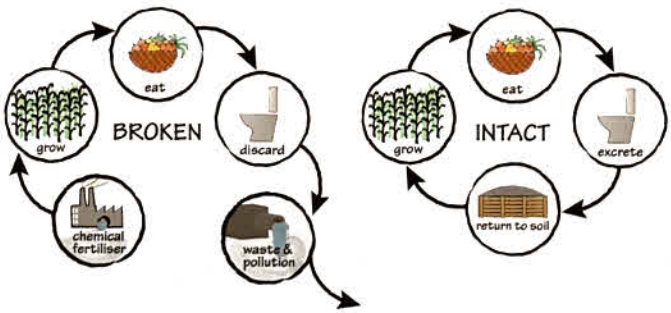
EC contribution: €9,958,706.88

Duration: 54 months

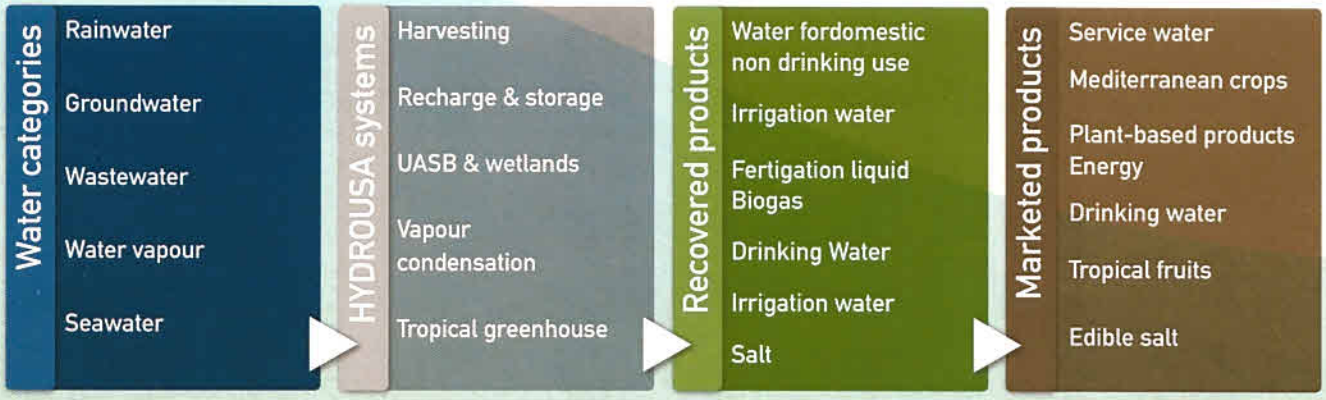
Start date: 01/07/2018

Number of partners: 27

OUR REGENERATIVE MODEL



HYDROUSA will revolutionise the water value chains from water use up to sewage treatment and reuse. The project goes beyond the current water and wastewater management practices by adopting innovative, nature-based, low energy footprint management solutions for different types of water; these include wastewater, rainwater, groundwater, atmospheric vapour water and seawater. HYDROUSA innovations will produce water suitable for different uses including domestic and agricultural use, drinking water as well as energy and high added value products to be marketed. Sensor development, big data valorisation, machine learning, modelling and prediction will be used in HYDROUSA's open source monitoring and controlling platform resulting in the development of our water – energy – food nexus DSS tool.



HYDROUSA aims at

- Closing all water loops at local level, taking advantage of local resources
- Enhance decentralized on-site water, materials and energy conservation, water treatment and reuse
- Promote local economies, based on circular value chains at local level which will eliminate intermediates and long transportation costs
- Promote nutrient management, boosting the agricultural profile
- Apply biomimicry concepts to solve real water problems

The services provided lead to a win-win-win situation for the economy, environment and community within the water-energ

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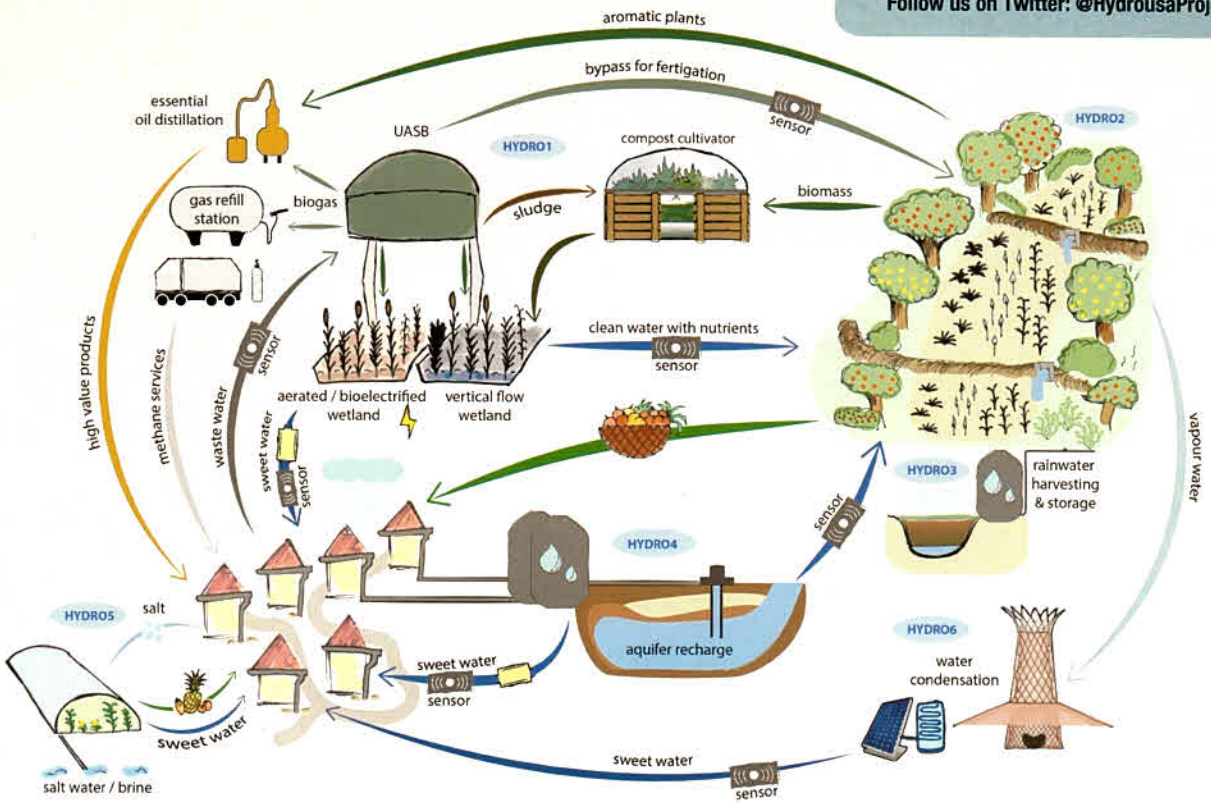
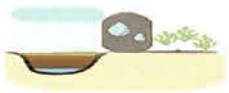


Site	Scheme	Specification	Issue Solved
HYDRO1 Lesvos		Anaerobic treatment & sludge composting, water reuse, biogas production	No wastewater discharge in the sea; cheaper production of reclaimed water; increasing water supply; recycling nutrients
HYDRO2 Lesvos		Irrigation of agroforestry system with nutrient-rich reclaimed water	Wastewater use for fertigation; no fertilizer import; product diversity; creating resilient ecosystems
HYDRO3 Mykonos		Remote rainwater harvesting system and irrigation of oregano	Cheap water supply in remote areas; create business case with little input
HYDRO4 Mykonos		Domestic rainwater harvest ing, aquifer storage and wa tering of local crops	Increase water supply; production of drinking water; aquifer recharge to reduce saltwater intrusion
HYDRO5 Tinos		Seawater and brine treatment to recover salt and water, produce tropical fruits	Produce sweet water from saltwater/brine; decrease import of tropical fruits; salt production
HYDRO6 Tinos		Water loops in eco-tourist facility	Ecotourist facilities which are self sufficient in terms of water, energy and food production