



THE POWER OF EARTHWORMS

INNOQUA is a four-year EU-funded Horizon 2020 project. Bringing expertise from multiple disciplines, the 20 project partners are seeking to demonstrate a novel, modular system for wastewater treatment based on the purifying capacity of earthworms, zooplankton and microalgae, operating under real conditions.

Due to its modular configuration, the INNOQUA system can address multiple aspects of wastewater treatment and water re-use in water stressed communities, rapidly expanding cities and industries – both in developed and developing countries. The decentralised approach helps to reduce pressure on inadequate wastewater networks while reducing the water and energy demands of typical centralised wastewater treatments – supporting sustainable development.

INNOQUA has installed two pilot sites and eleven demo sites across eleven countries (France, Ireland, Italy, Romania, Scotland, Spain, Turkey, Ecuador, Peru, India and Tanzania) to demonstrate the long-term viability of modular and locally sustainable solutions under real conditions. The modules include lumbrifilter, daphnia filter, bio-solar purification and UV lamp.

The sites provide a robust platform for scientific research and act as a focus for local training and dissemination activities.

KEEP IN TOUCH – innoqua-project.eu



DEMO SITE ROMANIA

Almost half of the Romanian population lives in rural areas, and only 10% of this population is connected to centralised wastewater collection and treatment systems. Ilișești is a small village (2,400 inhabitants) in the region of Bucovina located on the northern slopes of the central Eastern Carpathians. Rural tourism has blossomed in this region during recent years, creating a potential niche market for decentralised wastewater treatment solutions.

BENEFICIARIES: The INNOQUA system initially treated the wastewater of a hotel with 10 guest rooms, a restaurant (max. 80–100 seats), a conference hall (max. 40 places) and offices. After 4 months of operation, our local project partner needed more office space for the administrative staff of their growing waste management and recycling business. The hotel was therefore converted to an office building accommodating 30 staff. The treated wastewater is discharged into the nearby river.

DESIGN CAPACITY: 1.5 – 2.4 m³/day

SOURCE OF WASTEWATER: Original hotel building & offices: toilets, showers, grey water from the restaurant kitchen; After conversion to office building: mainly toilets & grey water from the restaurant kitchen.

SPECIFIC SCIENTIFIC RESEARCH OBJECTIVES:

The Romanian demo site aims to demonstrate the long-term performance and suitability of decentralised wastewater treatment in real operational conditions with extremes of temperature (-25 to +25°C) with an annual average of 7.9°C. In such conditions, a wastewater treatment system

would typically be installed underground. For demonstration purposes we decided for an aboveground installation within an insulated biofilter room able to simulate, during winter, typical underground temperatures (12–16°C).

CONFIGURATION: In Romania the INNOQUA system consists of a presettler, a lumbrifilter and a daphniafilter, all monitored by an on-line monitoring and control unit.



Biofilter room with lumbrifilter

LOCATION: Ilișești, 768
727130, Suceava, Romania

To arrange a visit to this site, please contact the INNOQUA partner whose details are provided below.

This demo site is run by the INNOQUA partner

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