UNIVERSWATER

Pioneering innovative solutions for sustainable agri-water management

Our mission

Europe's water resources are facing growing pressure. In 2019, 38% of the EU population experienced water scarcity. Agriculture accounted for 59% of freshwater use in 2017, sourced from surface water, groundwater, and increasingly, reclaimed water.



UNIVERSWATER is an EU-funded project focused on developing a common strategy to optimise water management in agriculture. Bringing together 15 partners from 6 European countries, the project aims to develop a universal agri-water management platform. This platform will support farmers and water stakeholders in implementing localized reclamation and reuse strategies to enhance water quantity and quality, optimize pesticide and fertilizer use, and meet crop growth requirements effectively.

Impacts of the project

- Improve water reclamation and reuse methods to reduce pollution, safeguard freshwater sources, and ensure compliance with EU water standards.
- Optimise the use of water, pesticides, and fertilisers and promote eco-friendly farming, reducing environmental harm, and enhancing biodiversity.
- Advance monitoring and decision-making tools to help farmers adapt to climate change impacts and ensure efficient water use.
- Remove effectively contaminants and pollutants to reduce risks to human health and protect aquatic ecosystems.

3 case studies



Water reuse in dairy farms

County Cork, Ireland



Water reuse for sustainable agriculture

Torre Guaceto, Italy



Farm management for optimised pesticide and fertiliser use

Area of Greek Prespa, Greece



How will UNIVERSWATER operate?

- **Creating portable, on-site sensors** for detecting water and soil contaminants (e.g., E. coli, pH, nitrates, pesticides).
- **Integrating satellite imagery and AI algorithms** for real-time monitoring and decision support.
- **Combining nature and technology-based solutions** for effective water treatment and pollutant removal.
- **Using an incremental approach** to develop, test, and improve technologies, ensuring early feedback and optimisation.
- **Creating a universal, adaptable DSS** to guide sustainable water management practices across various settings.

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DURATION
42 months

BUDGET
€ 5 996 597

CONSORTIUM
15 partners

Project coordinator: Tyndall National Institute, Institiúid Náisiúnta

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