

Enhanced Portable Sensor for Water Quality Monitoring, moving to genuinely integrated Water Resource Management

40,000

million m³ waste water is treated in EU

964

million m³ treated wastewater is reused

4

European countries

Overall objective

The project aims to demonstrate a cost effective portable water monitoring solution for the Water sector. The innovative technology, at a competitive cost allows increased frequency of water quality monitoring with remote access to the device & to results. This affordable solution results in more monitoring, making it easier for management decisions & compliance with regulations. Moreover, its efficient power consumption allows longer deployment periods, diminishing maintenance needs, providing an integrated monitoring solution that is cost effective.

This project will demonstrate an innovative water quality monitoring device in different environments and climates. The Ecosens Aquamonitrix novel solution will be a device designed for Water authorities and other authorities, e.g. regulatory authorities, River Basin Management, with the aim of improving their control of water resources, water quality & facilitate & improve management decisions. The device can carry out a near-continuous analysis of water sources, monitoring the indicators of water quality e.g. Nitrate, Nitrite. The solution can monitor multiple samples continuously allowing end-users to detect pollution events and adverse trends in real time. Thus, the private or public entities in charge of water quality monitoring and management can act in a more efficient and effective way tackling the problems detected (i.e. pollution sources), in a more timely manner, thereby minimizing the negative environmental impact.

The project will achieve the following results

- ▶ A versatile water quality monitoring system adaptable to different applications in the Water Sector.
- ▶ Versatile IoT platform that will allow deployment of scalable and flexible solutions for connected products.
- ▶ Enhanced performance: Precision +/-5%, Accuracy +/-5% at the higher ranges.
- ▶ Enhanced robustness and reliability of the device, both operational and information reliability.

- ▶ Competitively priced solution: its cost is 3-4 times less than current commercial systems.
- ▶ Device will be ready to be launched on the market after the project ends.

Business case studies

- ▶ The co-creation and optimisation of the Life Ecosens Aquamonitrix ensures a device design that answers end user needs.
- ▶ Real time monitoring will provide the water industry with more precise control of the water quality with improved water management decisions, allowing mitigation measures to be put in place for early prevention or alleviation of pollution events

Spain

- ▶ With the Life Ecosens Aquamonitrix water quality sensor, the knowledge acquired with this innovative monitoring solution for the water sector can provide for more robust management of variable conditions e.g. if the process is not in compliance.
- ▶ This device offers a water management solution that has minimal cost, with little/no infrastructural changes required.
- ▶ The Life EcoSens Aquamonitrix water quality sensor can help WWTPs to ensure that reused water complies with regulatory standards and therefore is suitable to be used for irrigation purposes.

Our Demonstration Sites



Galindo WWTP in Bilbao



Crisprijana WWTP in Vitoria



Loiola WWTP in San Sebastian

