



## High resolution AppROach for ManagEMent of Surface Water EutroPhication in RuraL areas of the DUero River BaSin

### COORDINATING BENEFICIARY:

**ITG:** Fundación Instituto Tecnológico de Galicia

### ASSOCIATED BENEFICIARY:

- Ecohydros

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### OBJECTIVE:

The main objective of the 'ROEM+' project is to demonstrate the efficiency and viability of an innovative approach for the integrated management of hydrographic basins to prevent eutrophication and algal blooms. It seeks to bring reservoir management in line with the strategic management trends that can be clearly recognised in other environments, notably regarding marine ecosystems.

The project will deploy cutting-edge remote sensor networks within the whole geographic area directly and indirectly connected to the reservoir. This will serve to quantify and localise the origin of pollutant and nutrient discharges in the whole drainage hydrographic basin, and assess the impact of land use and forest, agricultural and livestock management. Monitoring will provide data that can be used by an integrated 'e-platform' tool to generate dynamic and spatially distributed simulation models. It will consider all natural (ecosystem) and human aspects, including the role of climate change, so that different scenarios can be considered and the likely efficiency of corrective or preventative actions assessed.

The tool should allow managing bodies to decide how and where to use or protect the water so that the water mass can realistically absorb and buffer natural and human impacts and pressures. A plan of corrective actions will be proposed and implemented with the goal of achieving the "good ecological status" of the target reservoir. As an added benefit, it is hoped that some of the corrective measures could turn into new economic activities at the local level in rural areas and enhance other environmental benefits derived from the recycling of materials and from an improvement of the energy consumption balance.

### EXPECTED RESULTS:

- Accurate temporal and spatial data on pollutant and nutrient discharges;
- Modelling systems to identify risks of eutrophication and algal blooms;
- Reduced occurrence of algal blooms and the achievement of "good ecological status" of the water;
- Recycling (closing the phosphorous cycle);
- Significantly improved management of fish stock populations;
- An information platform and case study accessible to other environmental actors, and land managers;
- Improved implementation of the WFD; and
- The potential for new economic activities in rural areas.

### MORE INFORMATION:

<http://www.roemplus-life.eu/>