

Seamlessly estimating socio-economic variables across river catchments

The Water Framework Directive (WFD) and the Marine Strategy Framework Directive (MSFD) set goals for healthy European waters and seas that are not yet met, and which become increasingly challenging to reach due to expanding human activities and escalating climate change effects. To drive holistic decision-making, harmonisation of spatial data is often needed, as data at ecosystem-appropriate spatial levels tend to vary in format, conceptualisations, and completeness, and often arise from silo-based approaches lacking cross-disciplinary perspectives. Many statistical datasets follow coarse, administrative borders that do not correlate well with natural borders. In addition, the availability and use of socioeconomic data in water management is lacking compared to the existence of and models using physical and ecological data.

The Horizon Europe-funded AquaINFRA project (2023-2026) aims to provide an integrated data infrastructure, compatible with the European Open Science Cloud, to restore our oceans and seas in support of digital twin oceans. To enable the inclusion socio-economic data in ecosystem-based management of European waters and seas, we will present our ongoing and future AquaINFRA-based work on utilising dasymetric area interpolation algorithms for making easily and seamlessly available at river catchment level, socio-economic variables relating to population, tourism, and land use. This contributes to integrating Eurostat and EMODnet datasets for ecosystem-based water management and enables easier visual explorations of spatial relationships between human pressures and water quality and ecosystem indicators in support of improved data-driven decision-support, supporting the EU Mission Ocean.

Authors: [Ida Maria Bonnevie](#) and [Henning Sten Hansen](#)

Targeting:

Mapping Sustainability and Support Environmental Risks Management

Description: Exploring the role of geospatial data and other capabilities in advancing the European Green Deal's objectives.

Contributing to Topics: Advancing the European Green Deal with geospatial data integration; Integrating environmental statistics with geospatial data for comprehensive sustainability analysis; Overcoming challenges in data standardisation and harmonisation across borders; Tools and methodologies for effective policy support and decision-making towards sustainability

Preferred format: [Oral presentation](#)