

Abstract

Global warming induced by anthropogenic climate change has intensified the hydrological cycle and water quality challenges and the resulting extreme climatic events bring considerable impacts on both societies and ecosystems.

These challenges include pollution entering our aquatic environments, such as rivers and lakes, from urbanized and agricultural environments leading to increased eutrophication, harmful algal blooms, and high pathogen loads.

Consequently, such challenges negatively impact on our drinking water supplies, ecosystem services and, ultimately, human health and well-being.

Through our consortium, we will bring together cutting-edge knowledge and technology development to inspire, smarten and digitise our water management approaches across Europe and more globally.

Our consortium partners bring state-of-the-art digitalisation in the water industry, advanced water quality sensing and monitoring, risk warning and advanced computation with AI and machine learning combined with process-based modelling.

Our aim is to develop new digital tools for sustainable management of water resources by integrating the impact of climate change, land use, and optimised solutions with receiving waters, transforming our water management approach at a landscape scale.

In particular we will advance the application of urban flood control, 3D technology applications, advanced sensor development and process-based modelling, citizen science engagement and the use of AI for water quality prediction.

Twin-Waters targets Topic 2 in Water4All call to smarten our water system by developing practical tools and models with a combination of lab experiments and digital innovations.



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► Funding organisations

FORMAS (SWEDEN) / NCBR (POLAND) / EPSRC UKRI (UNITED KINGDOM)

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