Kick off for the new EU-funded project UPWATER with the goal to prevent the release of chemicals to groundwaters.

The UPWATER kick-off meeting, held on November 29, 2022 in Barcelona, Spain, successfully brought together the main actors of the project. With the attendance of 36 members from the partner institutions, the meeting provided an enriching environment to discuss the initiation of the project and upcoming actions.

Funded by Horizon Europe call 'Clean Environment and Zero Pollution', the main goal of UPWATER is to assess the **effectiveness of different preventive measures** (e.*g.* regulation, governance, and other non-technological measures) **to minimise the release of pollutants to groundwater bodies**.

The project will run for three and a half years, from November 2022 to May 2026 and is formed by a consortium of 11 organisations across Europe, and 2 associated organisations from Australia. The project is coordinated by the Institute of Environmental Assessment and Water Research, IDAEA-CSIC (Spain). The other project partners, mentioned below, will be introduced in more detail in future updates of the project.

"With this project, we want to increase the knowledge about the pollution sources and pathways that impact groundwater quality. This will allow to design effective at-source preventive measures, both technical and non-technical, to reduce the release of pollutants to groundwaters", explains **Enric Vázquez-Suñé**, IDAEA-CSIC researcher and coordinator of the project.

Reducing groundwater pollution

The main goal of UPWATER is to **assess the effectiveness of different preventive measures to minimise the release of chemicals at source** through the:

a) Increase of knowledge on the identification, occurrence and fate of pollutants and pathogens in groundwaters with purposely developed cost-efficient passive sampling methods,

b) Development of methods for the identification and quantification of pollution sources,
c) Development of water quality models to simulate the effect of mitigation efforts,
d) Development of frameworks for risk analysis and impact assessment as well as for the analysis of nontechnological measures for groundwater contamination.

The second goal is to **develop and validate the performance of bio-based engineered natural treatment systems designed as mitigation solutions to protect groundwater pollution**. The performance of these measures will be evaluated and their scaling-up will be simulated to assess the potential environmental benefits for a broad adoption.

The monitoring, modelling, and mitigation solutions will be validated in 3 case studies in Denmark, Germany and Spain, representing different European climate conditions and a combination of rural, industrial and urban pollution sources.

Stakeholder involvement to enhance water quality

UPWATER will provide tools and strategies to implement a safe and contaminant-free recharge water into aquifers. The **involvement of stakeholders, water agencies, and policy makers** using co-creation spaces that will involve citizenship participation will trigger social acceptance and appraisal of the solutions provided in this project.

The project will also **increase public awareness of the advantages of engineered natural treatment systems to enhance water quality**, while providing evidence, models, and methods applicable through regulatory and governance decisions.

List of UPWATER participants:

- Agencia Estatal Consejo superior de Investigaciones Científicas (IDAEA-CSIC), Spain
- Aarhus University (AU), Denmark
- Institut National de L'Environnement Industriel et des Risques (INERIS), France
- IWW Rheinisch-Westfälisches Institut für Wasserforschung gemeinnützige GmbH (IWW), Germany
- National Technical University of Athens (NTUA), Greece
- Universitat de Barcelona (UB), Spain
- Stichting Future City (FC), Netherlands
- Fundación Nueva Cultura del Agua (FNCA), Spain
- TARH-Terra, Ambiente e Recursos Hidricos Lda (TARH), Portugal
- Barcelona Regional Agencia Metropolitana de Desenvolupament Urbanístic d'infrastructures SA (BR), Spain
- Athens Water Supply and Sewerage Company (EYDAP), Greece
- The University of Western Australia (UWA), Australia
- Australian Nuclear Science and Technology Organisation (ANSTO), Australia

Funded by
the European Union