

# ENVRI-Hub-NEXT: an Ambitious Leap in Interdisciplinary Environmental Research Data Access

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ENVRI-Hub NEXT is a 36-month project designed to address major environmental challenges such as climate change, natural hazards, and ecosystem loss by advancing multidisciplinary research and integration among European research infrastructures (RIs). This project aims to build on the current ENVRI-Hub platform to create a robust framework that brings together different environmental RIs, facilitating their collaboration and contribution to the European Open Science Cloud (EOSC).

The primary goal of ENVRI-Hub NEXT is to support the integration of environmental RIs across four major domains: atmospheric, marine, terrestrial, and Earth observation. This integration is crucial to unlock the potential of RI data for addressing complex research questions, in line with the European Green Deal and Digital Transition. It will also help establish a coherent, sustainable, and world-leading RI cluster.

To achieve this goal, ENVRI-Hub NEXT promotes operational synergies among environmental RIs and e-infrastructures, provides interdisciplinary science-based services, and enhances the integration with EOSC. The consortium leading this project includes key ESFRI Landmarks (ACTRIS, AnaEE ERIC, EPOS ERIC, Euro-Argo ERIC, IAGOS AISBL, ICOS ERIC, LifeWatch ERIC) and RIs from ESFRI Roadmap (eLTER), along with several technology providers and the EGI Foundation to support the project's technical operations and integration with EOSC Core.

The technical objectives of the project include advancing the ENVRI-Catalogue, -Knowledge Base and Federated Search Engine using AI-based dialogue techniques, semantic WEB technologies and metadata standards. These advancements will enable end-users to effectively discover research assets from multiple RIs

ENVRI-Hub NEXT aims to consolidate the conceptual and technical structure of the ENVRI-Hub platform. This consolidation will involve providing data-driven services including an analytical framework and training that facilitate interdisciplinary research, promoting the integrated use of data from different environmental RIs, and expanding the frontiers of multidisciplinary environmental sciences supporting virtual research environments.

The project officially began in February 2024. Its early focus is on summarising the status of the ENVRI-Hub and outlining the plans for ENVRI-Hub NEXT, with an emphasis on building a framework that supports the long-term sustainability and impact of the integrated environmental research infrastructure.

## Topic

Environmental informatics: Climate Change/Environment

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