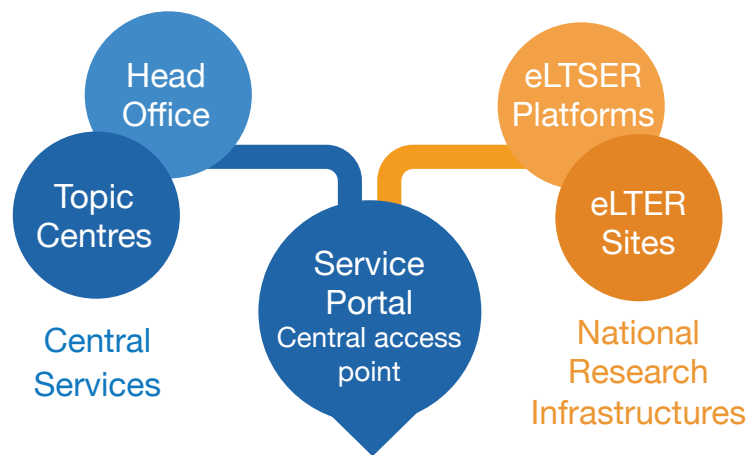


## CENTRAL SERVICES

A range of service providing entities will make eLTER RI much more than the sum of its national networks. These Central Services are expected to consist of:

- **Head office:** coordination, outreach, strategic development & collaborations. Head Office activities are currently hosted by UFZ, Germany.
- **eLTER Service Portal:** access point to sites, data and the entire Service Portfolio.
- **Topic Centres:** covering Thematic Service Areas incl. Quality Assurance for Data, Modelling and Analysis Tools, Design Interoperability, Synthesis towards actionable knowledge and Technological Innovation & Development.



### SERVICES FOR MULTIPLE USERS:

#### ACCESS TO

- Research sites
- Long-term in-situ data (legacy data, recent Standard Observations)

#### DATA INTEGRATION & ANALYSES

- Integration of diverse data into Information Clusters for each site (RS, nat. statistics, modelling & mapping)
- Analytical tools
- High-level data products tailored to inform policy

#### SUPPORT

- Research project design support
- Research technology/R&D
- Education & training

## OUR MISSION

Research into ecosystem structures and functions

Site-based  
Multi-scale  
Cross-disciplinary

ATMOSPHERE

SOCIAL & ECONOMIC SPHERE

BIOSPHERE

HYDROSPHERE

GEOSPHERE

SERVING  
ECOSYSTEM  
CRITICAL ZONE  
SOCIO-ECOLOGICAL  
AND RELATED  
RESEARCH

SUBSCRIBE TO THE eLTER  
NEWSLETTER AT:



## CONTACT US

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[@eLTER\\_Europe](#) [@eLTEReurope](#) [eLTER](#) [eLTER](#)

Images courtesy of LTER-Europe members



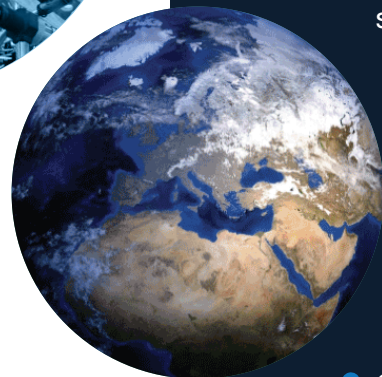
INTEGRATED EUROPEAN  
LONG-TERM ECOSYSTEM,  
CRITICAL ZONE AND SOCIO-ECOLOGICAL  
RESEARCH INFRASTRUCTURE

TAKING  
THE PULSE OF  
EUROPE'S  
ENVIRONMENTAL  
SYSTEM

[elter-ri.eu](http://elter-ri.eu)



## INTRODUCING THE eLTER RESEARCH INFRASTRUCTURE



## THE CHALLENGE

### AN INNOVATIVE RESEARCH ENVIRONMENT FOR THE NEXT GENERATION OF SCIENTISTS

We live in a world of rapid social, economic and ecosystem change, facing major challenges such as global warming, biodiversity loss and pressures on natural resources. Addressing these topics requires world-class ecosystem, critical zone and socio-ecological research by well-connected communities of experts from various disciplines.

eLTER catalyzes scientific discovery and insights through its state-of-the-art in-situ facilities and tools, open and accessible data, collaborative working culture, transdisciplinary expertise and a demand driven portfolio of services incl. analytical tools and capacity building.

## HOLISTIC SCIENCE

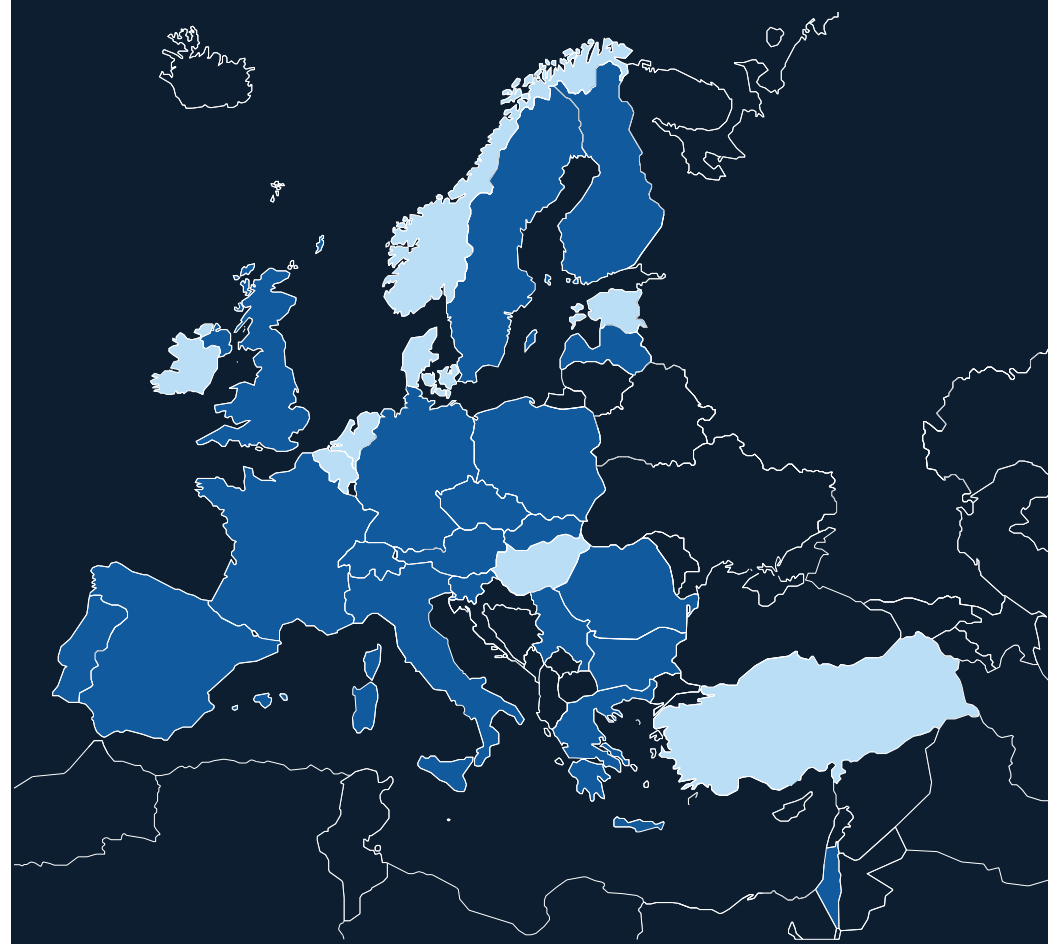
eLTER RI adopts a **fundamentally systemic approach to observe and analyse the human-environmental system**, encompassing biological, geological, hydrological and socio-ecological perspectives.

**eLTER RI will be the first research infrastructure capturing and analysing holistically the integrated impacts** of climate change alongside other pressures on a wide variety of European ecosystems.

It comprises in-situ Standard Observations range from biophysico-chemical to biodiversity and socio-ecological variables. Ecosystem change caused by long-term pressures and short-term pulses are investigated in a nested design from the local to the continental scale.

## KEY FEATURES OF eLTER RI

- Wide scale and **systematic coverage of major European** terrestrial, freshwater and transitional water **ecosystems** – ca. 250 research sites, selected from a wider pool of ~600 LTER-Europe sites
- Investigation of interactions between abiotic and biotic ecosystem components at **multiple scales**, including **human-environment interactions**
- Research into ecosystem processes influenced by **multiple drivers**, as well as socio-ecological research relating to ecosystem services
- **Integrated, long-term and high-quality observations** across the critical zone, supporting whole ecosystem science
- **Central Services** provided by: Head Office, Service Portal and thematic Topic Centres
- **Strong links with other European environmental RIs** encouraging, for example, co-location of measurements
- **International collaboration** through International LTER (ILTER) and the Global Ecosystem Research Infrastructure (GERI)



### Support for eLTER RI

- Politically supported by 20 countries
- ~165 supporting institutions from 28 countries

## A DISTRIBUTED RESEARCH INFRASTRUCTURE



eLTER RI will comprise National Research Infrastructures (NRIs) and European level Central Services, such as data access, training and harmonized variables and methods.

## NATIONAL RESEARCH INFRASTRUCTURES (NRI)

Partner countries of eLTER RI will provide the national building blocks of the **in-situ backbone** of eLTER RI: **eLTER Sites** (focal points for long-term ecosystem & critical zone observation and research) and **eLTSER Platforms** (large areas facilitating socio-ecological research and exemplary stakeholder engagement). Distributed site-based operations will be highly integrated and follow agreed policies. These facilities will be open for research and education via a common access scheme.

## BROAD SUPPORT FOR eLTER RI

Since 2018 eLTER RI is on the European Strategy Forum on Research Infrastructures Roadmap (ESFRI). By 2022, 20 countries support eLTER RI politically and ~165 institutions from 28 countries have signed the eLTER Memorandum of Understanding, signalling strong support for the scientific objectives of the RI.

## SUPPORTING PROJECTS

Since 2020, the provision, testing and development of the eLTER RI has been supported by two EU-funded 5-year projects involving 27 countries:



The Advanced Community Project, eLTER PLUS, coordinated by Jaana Bäck (University of Helsinki, Finland), conducts a performance test of the emerging eLTER RI, challenging, assessing and strengthening its operations through scientific case studies. It also pilots priority service components: <https://elter-ri.eu/elter-plus>



eLTER RI will be further specified and formalized through the Preparatory Phase Project (eLTER PPP), coordinated by Michael Mirtl (Helmholtz-Centre for Environmental Research (UFZ), Germany): <https://elter-ri.eu/elter-ppp>