

eLTER PLUS - ADVANCED COMMUNITY PROJECT

The eLTER Advanced Community Project (eLTER PLUS) - Integrated European long-term ecosystem, critical zone and socio-ecological research infrastructure - is a HORIZON 2020 funded Research and Innovation Action (RIA) with three main pillars: networking, joint research activities and transnational, remote and virtual access. eLTER PLUS is testing the performance and further developing the services of the emerging eLTER Research Infrastructure (eLTER RI), together with RI users from several research communities.



Networking - Strengthening the community

eLTER PLUS is opening the developing RI to current and new users from academia, civil society and industry. The project is challenging, assessing and strengthening the operations of the eLTER RI through engaging the best expertise and sites available for integrated ecosystem research.

eLTER PLUS is:

- Identifying innovative observations and analytical methods that could be implemented across the RI to support its sustainable operations
- Offering an excellent training program for site and platform coordinators, researchers and students to enhance their ecosystem research capabilities
- Further integrating the operations of advanced in-situ, inter- and transdisciplinary research, for example through eLTER Standard Observations
- Developing pilots for IT services and tools according to user priorities systematically collected across the four research challenges
- Creating information clusters by integrating data from eLTER sites with information retrieved from a wide range of sources.

Joint research activities - Case studies

eLTER PLUS is studying ecosystems and socio-ecological responses to globally critical environmental challenges through a set of case studies. These research activities involve creating new tools for cross-disciplinary collaboration, improving access to selected sites and platforms in terrestrial, freshwater and transitional water ecosystems, and facilitating the use of their long-term observational data.



The case studies focus on four research challenges which are endangering ecosystem integrity and ecosystem services:



Biodiversity loss

The future eLTER RI offers an unprecedented opportunity to address limitations resulting from insufficient temporal and spatial scales of biodiversity observations. For the first time, the systematic integration of measurements collected at Europe's most advanced long-term ecological research sites is possible within eLTER PLUS.



Climate-water-food nexus

eLTER PLUS has the unique capacity to generate continental scale, continuous data products of states and fluxes of the biophysical systems. These will enable multi-scale modelling approaches to assess the impact of extreme events (e.g. droughts and high intensity rainfall) on ecosystem services and to design adaptation strategies to sustain ecosystem services.



Biogeochemical controls of ecosystem functions

Investigating interactions of carbon and nitrogen biogeochemical cycles across the European ecosystem types and biogeographic regions are core activities of eLTER. Biogeochemical cycles link all spheres of ecosystems (atmo-, bio-, geo-, hydrosphere) and are crucial for a quantitative understanding of ecosystem services and functions (e.g. net balance of greenhouse gases and water security).



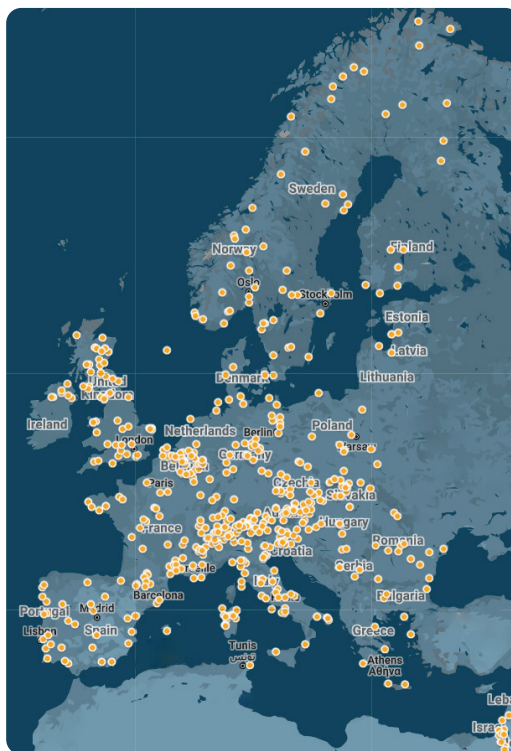
Socio-ecological systems

Finding sustainable solutions for current environmental challenges requires the integration of multiple disciplinary approaches as well as the engagement of stakeholders (e.g. local communities, natural resource managers, non-governmental organisations) in all stages of research and policy-making. Accordingly, eLTER PLUS is consistently developing and refining transdisciplinary frameworks, primarily through the establishment and operation of LTSER platforms in order to address its sustainability goals.

Access

eLTER PLUS is providing opportunities to perform research focussed on a selection of LTER-Europe sites handpicked for the purpose of small- to medium-scale ecological and socio-ecological projects.

- 35 sites equipped with state-of-the-art instrumentation offer transnational access through visits.
- These 35 sites are also providing remote access where site personnel perform the required protocol on behalf of the user.
- More than 50 sites are providing virtual access to their current and legacy data.



Consortium

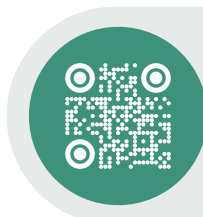
33
partners across
23
countries

Duration

1 Feb
2020
–
31 Jan
2025

Budget

10
million €



eLTER PLUS

For more information, please scan the code or visit <https://elter-ri.eu/elter-plus>