

# TRAINING, KNOWLEDGE EXCHANGE, AND MOBILITY IN eLTER: BUILDING THE FUTURE

Training, knowledge exchange, and mobility are three important actions in building and maintaining a long-term sustainable up-to-date community in the eLTER Research Infrastructure (RI). These various activities will enable us to reach multiple target groups i.e. scientists, students, Site and Platform coordinators, technicians, citizens, industry, managers, and stakeholders, to produce new connections and develop transdisciplinary research in and beyond the eLTER community.



## eLTER Training

The eLTER consortium, comprising 165 partner institutions from 27 European countries, has a wealth of distributed experts, top-class laboratories, and research sites delivering innovative environmental research, tools and approaches. Building on these, eLTER offers various training opportunities to different user groups from students to site personnel, from data managers to researchers. We offer both hands-on, on-site workshops and a wide selection of online training material.

## Training topics

Our training is categorised into different topics corresponding to the needs of different target groups.

**eLTER RI and ESFRI process.** This covers general information about eLTER. It includes online lectures and videos<sup>1</sup> on key eLTER concepts, our vision and our ambition for the eLTER RI. It also provides information on the ongoing eLTER projects and the eLTER ESFRI (European Strategy Forum on Research Infrastructures) process.

**eLTER Science.** This topic focuses on research from eLTER's perspective. The material available is mainly on Social Ecology

and transdisciplinary research in the context of eLTER Platforms (LTSER) and the WAILS<sup>2</sup> (Whole-system approach for Life Supporting Systems) concept.

Future topics will cover the main research themes of eLTER and their main goals:

- **Biodiversity loss** – quantify and attribute variability and long-term trends; identify and rank multiple stressors; explore food security relevant ecosystem functions (e.g., pollination, decomposition).
- **Socio-ecological systems** – integration of multiple disciplinary approaches to problem solving in all stages of research and policymaking in order to maximise potential for sustainable outcomes.
- **Biogeochemical controls of ecosystems functions** understand how soil biogeochemical reactions affect (or control) ecosystem functions and related ecosystem services.
- **Climate-water-food nexus** – to improve knowledge of the impact of drought events on ecosystem water-use efficiency (WUE) and ecosystem resilience.

<sup>1</sup> eLTER - Videos ([eliter-ri.eu](https://eliter-ri.eu))

<sup>2</sup> WAILS approach – Whole System Approach for in-situ research on Life Supporting Systems in the Anthropocene – holistic approach that combines the Press-Pulse Dynamic model and Macrosystems ecology concept in cross-disciplinarity i.e. atmosphere; social sphere; hydrosphere; geosphere; biosphere.



We will deliver online lectures and on-site workshops on these topics and we will run an annual summer school on various topics related to eLTER research.



### Data management and analysis

This topic includes training on both data management and analysis to support scientists and students in their work. Currently there are several videos introducing data tools developed within eLTER, as well as demonstrations on time series analysis, crucial for working with long-term data provided by eLTER.



### Peer learning – staff exchange

Peer learning is one of the most efficient ways of facilitating capacity building and knowledge exchange. In the eLTER context this may include staff exchange in the form of site visits, research group visits or visiting other RIs. The high-level instrumented eLTER Sites and Platforms offer an opportunity to learn, for example, about Standard Observations and their realisation, about data management and site management in general. Furthermore, research group visits offer perspectives to develop transdisciplinary research and applications of the WALLS approach. Visiting other RIs can help in promoting the co-location of sites.



### Managing eLTER Site

eLTER Sites and eLTSEr platforms form an important backbone of eLTER RI (see also **InfoSheet 04** and **InfoSheet 15**). This section will offer training to help to manage and run an eLTER Site. Once decisions on eLTER Standard Observations and methods (see **InfoSheet 30**) are made, we will provide a collection of training material and run a series of workshops related to them. Offering access to long-term data will be one of eLTER's key services, i.e. making sure that data flows smoothly and that all the metadata is available.

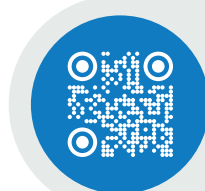


### eLTER Doctoral school

eLTER aims to establish its own doctoral school focusing on the WALLS approach and transdisciplinarity. A doctoral school would allow a new generation of scientists to understand how to best utilise eLTER data, enabling them to contribute to generating knowledge on the functioning of ecosystems which can guide policy decisions.

## Future

Training will develop as the eLTER ESFRI process proceeds. Currently, final decisions on the eLTER Standard Observations are still pending and many tools are still in the piloting phase. New training options will be built on these to ensure efficient functioning of the eLTER RI and wide use of eLTER data. We aim at producing a diverse package of training that is easily accessible for a wide range of target groups. In addition to training offered by eLTER, collaboration with sister RI's (such as ICOS, LifeWatch, ANAEE) concerning training, summer schools, courses, and more will increase the interactions between different target groups, wider scientific knowledge and visibility of eLTER RI activities.



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