



eLTER Preparatory Phase Project

eLTER RI Stakeholder Handbook

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Introduction

The eLTER Research Infrastructure (RI) is designed to address the needs of a diverse range of stakeholders, including decision-makers, researchers, businesses and civil society (for more details see D7.1 “Stakeholder landscape analysis report”). Against this background, we have created a set of Info Sheets that provide more detailed information on key aspects of eLTER which are of interest to different stakeholders. Thereby, the Info Sheets constitute a valuable addition to other materials and available communication channels of eLTER. In the following, we outline the responses of the eLTER RI to stakeholder-specific needs and present a compilation of key eLTER Info Sheets which offer insights into ongoing processes and core elements of eLTER. For more information, please consult our website <https://elter-ri.eu/media-center>.

eLTER RI’s response to stakeholder-specific needs

The eLTER RI addresses the needs of a range of different stakeholders (for more details see D7.1 “Stakeholder landscape analysis report”) and thereby supports their work through targeted services.

Scientific users and the eLTER community:

- eLTER addresses the research needs for an improved understanding of the **long-term impacts** of multiple pressures on ecosystems at local, regional and continental scale.
- eLTER improves the capacity to **predict long-term trends** and **system trajectories** and enables upscaling and forecasting of the ecosystem responses to climate change, biodiversity loss, soil degradation, pollution, and over-exploitation on major European ecosystems.
- eLTER integrates in-situ data from ca. 250 Sites and Platforms into ‘**Information Clusters**’, providing access to resources across domains, enabling large-scale analyses and interpretation through its one-stop-shop Service Portal.
- eLTER **facilitates access to its Sites and Platforms** and opens their data for new users, ensuring the sustainability of site and platform operations.
- eLTER promotes **excellence in scientific research** by developing and implementing modern tools, standardised observations and innovative, novel methods for ecosystem, critical zone and socio-ecological research.
- eLTER invests in the **current and next generation of European ecosystem scientists** to strengthen their expertise, skills and capacities.

Peers and environmental Research Infrastructures (RIs):

- eLTER is a building block of the **European environmental RIs**.
- eLTER explores the **compounded impacts** of climate change, biodiversity loss, soil degradation, pollution, and over-exploitation **on major European ecosystems**.
- eLTER's integrative role results from a **holistic approach** to investigating ecosystems and socio-ecological systems.
- The holistic approach stimulates **co-location with other RIs** and **networks** jointly using basic infrastructure and scientifically complementing each other.
- eLTER harmonisation efforts adopt the **best available standards** from more specialised peers and fill critical gaps to achieve whole system observation.
- eLTER triggers **bi- and multilateral network optimisation** and **funding alignment** at local, national and global scales.
- eLTER aims at **integrating, co-designing** and **co-implementing** services with other RIs.
- eLTER responds to project calls in collaboration with other RIs and engages in the **European environmental Research Infrastructures cluster (ENVRI)**.

Decision makers:

- eLTER uniquely explores the **compounded impacts of climate change, biodiversity loss, soil degradation, pollution, and over-exploitation on major European ecosystems**.
- eLTER informs **evidence-based decision making** by providing data and information at local, regional and continental scales.
- eLTER investigates **socio-ecological systems, their stakeholder interactions and resilience** to explore fair mitigation and adaptation options.
- eLTER data can provide insights into how **environmental changes lead to social effects and responses**, and can help determine causation from correlation effects.
- eLTER is embedded in **concerted continental and global efforts** in the context of the European environmental RIs, GEO, UNECE WGE, GERI, ILTER, etc.
- eLTER's **in-situ network of ca. 250 Sites and Platforms** and its **central service portfolio** are well embedded in the European and global landscape of research infrastructures and EOSC.
- The research and data by eLTER RI are relevant for policies regarding the **EU Green Deal** and the **UN SDGs**, including Zero Hunger, Sustainable Cities and Communities, Climate action, Life Below Water and Life on Land (SDG 2, 11, 13, 14, 15).

Public, business and industry:

- eLTER's **long-term observations** help us understand how nature changes and copes with the pressures arising from human behaviour over centuries. Protected sites enable comparisons between natural and human-modified environments, and help us understand what **actions and management are necessary to preserve nature and ecosystem services for future generations**.

- eLTER Sites and Platforms provide excellent opportunities for students, pupils, and the wider public to get **first-hand experience of modern ecological and socio-ecological research**.
- eLTER Sites and Platforms offer excellent opportunities for conducting **Citizen Science** projects.
- eLTER's international network of state-of-the-art instrumented sites offers **a testbed and market for industrial manufacturers and developers** of precision devices, technology and software.
- eLTER's scientific work at its Sites and Platforms offers **opportunities for innovating, co-design and piloting novel tools and methods** for next generation of environmental observations.
- eLTER and its national partners offer regular **employment opportunities** within the **framework of joint, EU-funded research projects** involving scientific and business partners.

Targeted information on diverse aspects of eLTER

In light of the diversity of eLTER stakeholders and their needs, we have created a range of Info Sheets to provide information on specific aspects of eLTER in a compact format. They address key questions such as:

- What is eLTER?
- Who are the prospective users of eLTER?
- How is eLTER working?

Thereby, these Info Sheets supplement the eLTER website (<https://elter-ri.eu/>), the eLTER site catalogue (available via <https://elter-ri.eu/elter-ppp/library> and at the open repository Zenodo <https://zenodo.org/records/4012241>), hard copies of promotional materials of eLTER (e.g., flyers, banners, brochures) and the Impact Sheets (available via <https://elter-ri.eu/media-center/impact-sheets>).

In the following, we introduce a compilation of the key Info Sheets grouped by thematic categories. The present handbook is published as a summary document which does not include physical copies of the information sheets but provides links to them via QR codes. This approach allows the collection to be updated as needed, ensuring that readers always have access to the most recent versions of the information sheets they wish to consult.

Info Sheets Category: What is eLTER? Chronology



Info Sheet Nr. 1 “Overview of European LTER components” presents a general overview of the European LTER components.



The previous Info Sheet is complemented by the **Info Sheets Nr. 25 “eLTER preparatory phase project (PPP)”** and **Nr. 26 “eLTER PLUS - advanced community project”**, which comprise further information on the currently ongoing eLTER PPP and PLUS projects.

Info Sheets Category: What is eLTER? Design



The design of the eLTER RI, including the National Research Infrastructures, the eLTER Site Categories and Topic Centres, is presented in **Info Sheet Nr. 17 “eLTER RI: The design”**.



The latter is complemented by **Info Sheets Nr. 4 “What does a typical eLTER site look like?”** and **Nr. 15 “Transdisciplinary research in eLTER RI (eLTSER Platforms)”** which introduce eLTER Sites and LTSE Platforms in more depth.



Info Sheet Nr. 18 “How eLTER collaborates with peers in Europe and globally” describes eLTER’s collaboration on the European and global level, thereby embedding eLTER into the broader RI landscape.

Info Sheets Category: Who are the prospective users of eLTER? Services & Hosts



Info Sheet Nr. 23 “The eLTER service portfolio development process” unravels the complexity and development process of the eLTER Service Portfolio.



The previous Info Sheet is complemented by Info Sheet Nr. 21 “Service host selection process” which explains the selection process of the prospective service hosts.

Info Sheets Category: Who are the prospective users of eLTER? Target groups & Stakeholders



Info Sheet Nr. 32 “Training, knowledge exchange, and mobility in eLTER: building the future” on training and Info Sheet Nr. 33 “eLTER’s access scheme” on site access describe exemplary eLTER services which are already in place and generate tangible benefits for different kinds of stakeholders.



The stakeholder categories which are relevant for eLTER and for which the services are being designed are outlined in Info Sheet Nr. 24 “eLTER stakeholder categories and analysis”.



The previous Info Sheet is complemented by further information on the interaction and communication with stakeholders in Info Sheet Nr. 31 “Stakeholder interaction and communication”.

Info Sheets category: How is eLTER working? Sites & Data



Several Info Sheets cover essential data-related aspects of eLTER: **Info Sheet Nr. 29 “Building the eLTER information system”** gives an overview of the eLTER Information System and its key components.



This is complemented by **Info Sheet Nr. 8 “Making eLTER data fair”**, explaining how the FAIR principles are applied to data management, and **Info Sheet Nr. 27 “Catalogue of long-term ecosystem research and monitoring sites”** on DEIMS-SDR, which makes information on eLTER Sites and data available to different

users.



In addition, **Info Sheet Nr. 30 “eLTER standard observations”** introduces the eLTER Standard Observations and summarises the collaborative efforts made to develop them.

Info Sheets category: How is eLTER working? Funding



Finally, **Info Sheet Nr. 22 “eLTER RI funding model”** dives into the prospective funding model of the eLTER RI.

Graphical representation

Finally, we graphically summarize and indicate the relevant Info Sheets according to the needs of the target stakeholder groups identified by eLTER.

