



**Issue: December 2021**



## Highlights



**Get funded access to 39 eLTER research sites**

eLTER announces its latest call for **funded Transnational Access (TA) and Remote Access (RA)** for scientists working in the areas of biodiversity,

biogeochemistry, hydrology or socio-ecological research.

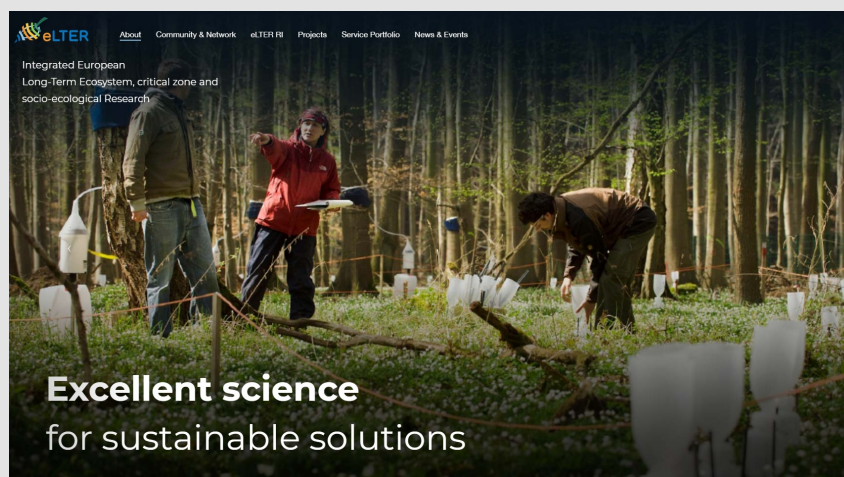
All **39 sites in 19 countries are equipped with state-of-the-art instrumentation** to enable comprehensive ecological measurement and experimental campaigns. The long-term data on those sites is available to compare with other data or to be used as a reference. Likewise, state-of-the-art socio-economic research is conducted at several of them. IT facilities are provided for data upload, storage and processing. Financial support is available.

The sites, which were selected to represent all European biogeographic zones, are described on the eLTER website and in the eLTER Site Catalogue.

Deadline for Submissions: **31 January 2022**

Evaluation and notification of outcome: **15 March 2022**

[Read the full call](#)



## eLTER launched its new website

eLTER is happy to announce the launching of its new website which will be the **online home to both projects**: eLTER PPP and eLTER PLUS. It can be found on [www.elter-ri.eu](http://www.elter-ri.eu). The old website under the domain [www.lter-europe.net](http://www.lter-europe.net) will also stay accessible.

Apart from updated looks, the new website provides easy access to all eLTER visual elements, project newsletters, press releases, videos, flyers, impact

sheets and brochures.

The new website features **updated information about our vision, mission and the strategic elements of eLTER**, including maps and details of the 27 national networks, continent-wide (and beyond) participating institutions, a project timeline and deliverables, details of project work packages, the eLTER service portfolio, a calendar of events, news from across the community and much more.

The website will be continuously updated to provide current information and news on the development of the project as we journey on the road to establishing an eLTER RI in the foreseeable future. Through it, you will also be able to subscribe to eLTER's newsletter and **follow us on Twitter, Facebook, LinkedIn and YouTube.**

For project communication or support for the website, **please contact Kaloyan Konstantinov**, k.konstantinov@pensoft.net.

[Visit the website](#)

## Strategic Section



### **The new Chairperson of the eLTER Interim Council meets the eLTER team**

On 23rd November 2021 Kevin Bishop (Sweden), the new Chairperson of the eLTER Interim Council (Ministerial delegations) met several members of the eLTER team (Jaana Bäck, Terhi Rasilo, Marjut Kaukolehto & Michael Mirtl) in Helsinki, Finland.

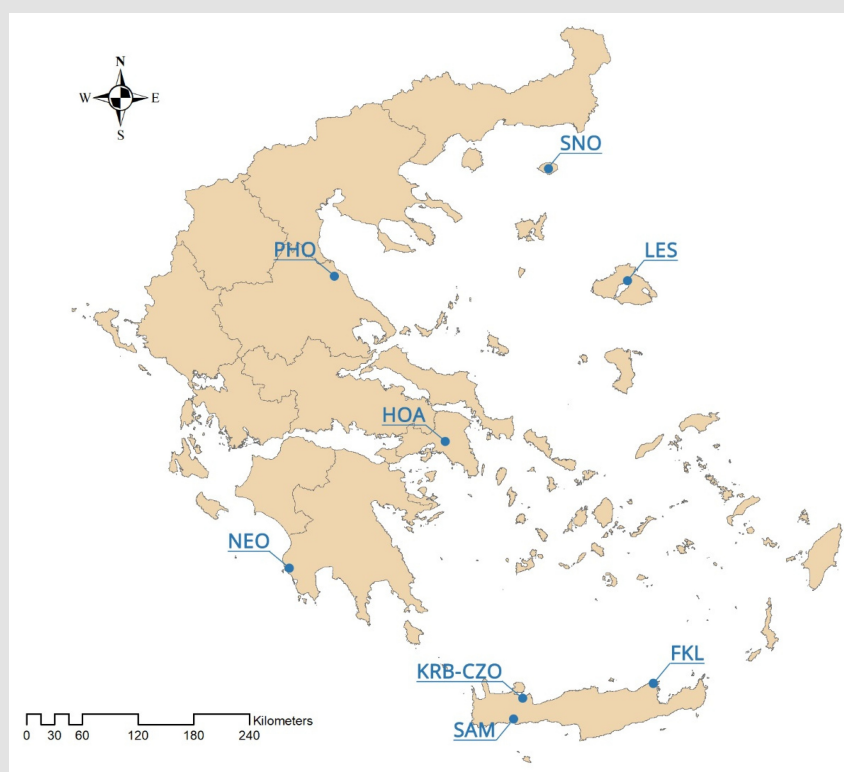
**A full day was dedicated to clarifying several strategic eLTER matters,** discussing the status of eLTER across 26 countries and working on the agenda

of the third eLTER Interim Council (IC), to be held on 28 and 29 January 2022.

A deeper understanding of the different scientific foci, and organizational, governance and **operational structures of the national LTER networks will be crucial for leading the Interim Council**. The IC is challenged with finding the common ground needed for the establishment of a strong eLTER RI with feasible site designs and services of highest relevance across our existing and future user groups.

eLTER is grateful for the time that Kevin has dedicated to the preparation of this challenging task. Specifically, after the long pandemic time, the group enjoyed the "informal" parts of the day, which ended in a **Georgian restaurant**. This made the team even more aware that it has to find ways of exiting lock-down times and establishing new working realities that better balance virtual and physical interactions.

## Latest Research



### LTER-Greece Environmental Observatory Network: Design and Initial Achievements

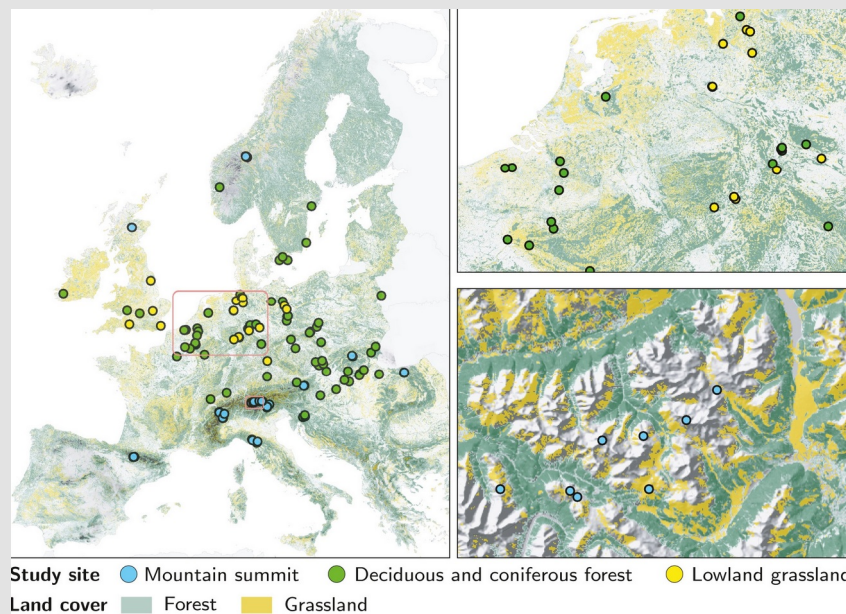
Five years after its establishment (2016), the [LTER-Greece network](#) has outlined its vision, aims, objectives and its achievements through **a series of case studies in an article published in the WATER journal**. The network consists of eight observatories, focusing on innovative research topics, aiming to be both cooperative and complementary. The article describes the **design of the LTER-Greece network**, its research priorities as well as recent

interdisciplinary research collaboration results, as a means of demonstrating its service to society and the environment.

The case studies presented provide a **glimpse of the types and relevance of the research the LTER-Greece observatories** can conduct in order to identify and stimulate sustainable management practices for water, land and ecosystems. The Network has identified nine research hypotheses that will be used to guide research and contribute to achieving the ultimate objective; sustainable management of land and aquatic resources and promotion of ecosystems and biodiversity. These research hypotheses have been framed around five research themes that deal with climate change, environmental management, socio-ecology and economics, biodiversity and environmental process dynamics.

LTER-Greece adopts, develops and implements state-of-the-art interdisciplinary methodologies to assess the environmental impacts of development activities in order to understand underlying mechanisms and to **design targeted management** and conservation measures aimed at preserving ecosystem integrity and natural heritage.

[Read the article](#)



## Global soil temperature maps and insights into drivers of biodiversity loss

**Two new scientific papers acknowledge the eLTER PLUS project.** In the first, thousands of soil temperature sensors from around the globe allowed Jonas Lembrechts from the University of Antwerp, Belgium, to map the global soil temperature at a 1-km<sup>2</sup> resolution. These maps are freely available online with the methods described in *Global Change Biology*.

The second paper **focuses on the drivers of biodiversity loss.** By

analysing long-term trends of 1827 plant species 141 sites across mountain summits, forests, and lowland grasslands in Europe, Staude et al. found a displacement of smaller ranged species- by those with larger-ranges. The authors present arguments as to why this may be happening.

[Lembrechts et al. 2021. Global maps of soil temperature. Global Change Biology](#)

[Staude et al. 2021. Directional turnover towards larger-ranged plants over time and across habitats. Ecology Letters.](#)

*Thomas Dimböck, Umweltbundesamt, Austria*

**Picture:** *The analysis spans 141 resurvey study sites. Resurveys are from three habitats in Europe: mountain summits = 52 sites (blue), deciduous and coniferous forests = 68 sites (green) and lowland grasslands = 21 sites (yellow). CORINE forest cover (green) and grassland cover (yellow) in Europe are displayed along with elevation (dark shades). Insets show details for forests and grasslands (top), and summits (bottom). Source: Staude et al. 2021. Directional turnover towards larger-ranged plants over time and across habitats. Ecology Letters.*

## Reporting Back



### eLTER PPP & PLUS first Periodic Review meetings

The **first Periodic review meetings** of both eLTER PPP and eLTER PLUS took place at the end of October 2021. From the projects' side, the coordination and Work Package leads were present, and from the **Commission's side the project officer**, Pierre Quertenmont. Richard Bradshaw (University Leeds, UK) was an external evaluator.

The Review meetings consisted of a general introduction by the coordination, Work Package (WP) specific presentations by WP leads highlighting the most important outcomes of the work, and a short statement of the project's impacts and financial status by the project managers.

Overall, the feedback was positive and comments were encouraging. Written reviewer comments were provided to help the eLTER team to refine its planning for the upcoming reporting period and in order to plan how to take into account the specific suggestions regarding the next steps of the projects.

In the course of the projects' lifetimes, **there will be three 18 month review periods**, each followed by a review meeting. The aim of these meetings is to inform the Commission about the projects' progress and to receive feedback and advice on how to best manage the projects.



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## **Presentation on Nitrogen deposition effects in ecosystems at COP26**

Thomas Dimböck (Umweltbundesamt, Austria, and LTER site Zöbelboden) talked at the **COP26 side event „Atmospheric Deposition, the invisible threat - impacts on agriculture, ecosystem and oceans”**, organized by the WMO. He presented the latest scientific results regarding Nitrogen deposition effects in ecosystems including water pollution with nitrate, biodiversity loss but also changes in the potential of ecosystems to absorb or release greenhouse gases.

In order to better assess the impacts posed by atmospheric deposition and provide tools to better inform the decisions of policymakers, WMO is leading the **Measurement-Model Fusion for Global Total Atmospheric Deposition Initiative** with the aim to produce best available global maps of total (wet + dry) atmospheric deposition of ozone, nitrogen and sulfur using the latest techniques to “fuse” observations of deposition with computer model output.

The **eLTER infrastructure is a key resource for research in the processes involved in ecosystem impacts related to airborne Nitrogen**. In recent years, eLTER projects supported model development and usage to gain policy relevant knowledge[1][2][3].

[1] <https://doi.org/10.1088/1748-9326/aaf26b>

[2] <https://doi.org/10.1016/j.scitotenv.2020.141791>

[3] <https://doi.org/10.1016/j.scitotenv.2018.05.299>



## **eLTER presentation during the YSSchool MEGAPOLIS-2021**

The background, current status and future perspectives of eLTER RI and the European environmental research infrastructures were **presented to a wide audience of young scientists in Earth system research** by professor Jaana Bäck (eLTER PLUS coordinator) from University of Helsinki on November 18, 2021.

[The Young Scientist School \(YSS\)](#) on “Multi-Scales and-Processes Integrated Modelling, Observations and Assessment for Environmental Applications” was organized in memory of distinguished professor Sergej Zilitinkevich (1936-2021).



The School included lectures from integrated **research infrastructures, measurements and modelling of the Earth system, hydrology, numerical weather prediction and atmospheric chemical transport**, as well as practical exercises and small-scale research projects. The course was jointly organized by Moscow State University and University of Helsinki.

## Upcoming and ongoing events

### ENVRI Community International Winter School on DATA FAIRness

**Date:** 11-22 January 2022 | **Place:** Online

The theme of the school is “ENVRI-FAIR Resources: Access & Discoverability”, and it will cover a range of topics including semantic navigation, Jupyter environments for visualisation and data discovery, resource access tools and cloud computing.

The Winter School is organised over a two-week period, on average dedicating around 40 hours in total (including preparations). It will be structured around daily activities, with scheduled lectures and presentations in the mornings (9-11 am), followed by associated group and individual work time (11 am -12 pm). For practical reasons, the course can accommodate 30 participants in total. The selection of participants will be based on a mix of criteria, including motivation and use case descriptions.

[Learn more](#)

### Microclimate Ecology & Biogeography conference

**Date:** 28-31 March 2022 | **Place:** Antwerp, Belgium

The event aims to be the first large international conference to put microclimate and its applications in ecology and biogeography on the center stage.

Microclimate enthusiasts with a broad variation in terms of spatiotemporal scales (from the centimeter-scale to the entire globe), ecosystems (from the Arctic to the tropics, from the desert to aquatic to marine ecosystems) and organisms (from plants, over mammals and arthropods, to microbes, and any other species) are welcomed..

[Learn more](#)

### eLTER Mallorca Meeting

**Date:** 28 March-1 April 2022 | **Place:** Mallorca, Spain

The eLTER Mallorca Meeting will be a physical meeting, marking a change from the online format of the previous three events: Mercury, Venus and Mars.

Special attention will be paid to the participation of young scientists and strategic talents from across partnering institutions to learn about eLTER and encourage active engagements.

There will be a dedicated session about job opportunities created by RIs and specifically in the eLTER RI context in the mid term; as well as about communication and new communication platforms.

[Learn more](#)

**EGU General Assembly  
2022: eLTER co-convended  
session**

**BIOGEOMON Symposium  
on Ecosystem Behavior**

**Date:** 26-30 June 2022  
**Place:** Tartu, Estonia

**Date:** 3–8 April 2022  
**Place:** Vienna, Austria

The EGU General Assembly 2022 will bring together geoscientists from all over the world for one meeting covering all disciplines of the Earth, planetary, and space sciences. The EGU aims to provide a forum where scientists, especially early career scientists, can present their work and discuss their ideas with experts in all fields of geoscience.

During the event Michael Mirtl (eLTER PPP coordinator) will co-convene a session on Long-term interdisciplinary in-situ observations in the world's mountains: challenges and opportunities.

The deadline for abstracts is January 12, 2022.

[Learn more](#)

This conference is a get together of the world's biogeochemistry researchers. The focus of BIOGEOMON is on the biogeochemistry of various ecosystems as influenced by anthropogenic and environmental factors.

The focus of BIOGEOMON is on the biogeochemistry of various ecosystems as influenced by anthropogenic and environmental factors.

We invite empirical and modeling studies on fluxes and processes related to the turnover of major and trace elements at the ecosystem, watershed, landscape, and global scale. Abstract submission runs until April 2022

[Learn more](#)

## FORECOMON 2022 - The 10th Forest Ecosystem Monitoring Conference

**Date:** 30 May - 1 June 2022 | **Place:** Helsinki, Finland

The goal of FORECOMON is to highlight the extensive ICP Forests data series on forest growth, phenology and leaf area index, biodiversity and ground vegetation, foliage and litterfall, ambient air quality, deposition, meteorology, soil and crown condition.

It combines novel modeling and assessment approaches and integrate long-term trends to assess air pollution and climate effects on European forests and related ecosystem services. Latest results and conclusions from local scale to European scale studies will be presented and discussed.

[Learn more](#)

## AnaEE Conference 2022

**Date:** 27-30 June 2022 | **Place:** Prague, Czech Republic

In order to mark the official start of AnaEE, the first AnaEE Conference will be held under the theme "Ecosystems services under pressure: the role of experimentation" and will feature a series of review talks on the functioning of ecosystems and their behaviour under anthropogenic pressures.

A stakeholder meeting focusing on agroecology challenges as well as training will also be held on this occasion. The primary goals of the AnaEE Conference 2022 are to discuss the role of agriculture, forests and natural ecosystems in reducing greenhouse gas emissions and increasing carbon sequestration, as well as to discuss the importance of holistic approaches that integrate across ecosystem boundaries spanning from terrestrial to freshwater ecosystems.

[Learn more](#)

## Call for abstracts for AOGS2022

**Date:** 01-05 August 2022 | **Place:** Online

Asia Oceania Geosciences Society (AOGS) was established in 2003 to promote geosciences and their application for the benefit of humanity, specifically in Asia and Oceania and with an overarching approach to global issues.

The Asia Oceania region is particularly vulnerable to natural hazards, accounting for almost 80% of human lives lost globally. AOGS is deeply involved in addressing hazard related issues through improving our understanding of the genesis of hazards through scientific, social and technical approaches.

AOGS holds annual conventions providing a unique opportunity for exchanging scientific knowledge and discussion to address important geo-scientific issues among academia, research institutions and the public.

[Learn more](#)



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