



## **News from Countries, Sites and Platforms: December 2023**





wishes you  
**HAPPY HOLIDAYS**  
and a fantastic New Year

**"News from countries, sites and platforms" highlights the efforts of a great many eLTER colleagues in various roles - scientists, site and platform coordinators, national coordinators, etc. - engaged in a wide variety of fascinating eLTER activities across Europe and beyond. So enjoy!**

# Access Ecological Research Sites for FREE

**APPLY for 4<sup>th</sup> eLTER Transnational and Remote Access Call**

Open until 31<sup>st</sup> Jan 2024

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



Are you a **scientist** working in the areas of **biodiversity, biogeochemistry, hydrology** or **socio-ecological** research?



Do you want to study the natural environment at one of our **well-equipped research sites**?

The eLTER PLUS project opens up the eLTER Sites and Platforms for small and medium size research projects from various disciplines. Through the Access Scheme you can visit one or several of 43 long-term research sites in 19 European Countries (Transnational Access) or have your protocol be performed by local staff (Remote Access), or both.

**WHERE DOES YOUR RESEARCH TAKE YOU?**

**APPLY NOW**

<https://elter-ri.eu/apply-now>

**Fund your research at eLTER sites**

eLTER announced its 4th call for funded Transnational Access and Remote Access for

scientists working in the areas of biodiversity, biogeochemistry, hydrology or socio-ecological research to 43 long-term research sites in 19 countries.

All sites 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 or to be used as a reference. Likewise, state-of-the-art socio-economic research is conducted at several of them.

Deadline: 31st January 2024.

[Learn more](#)



**eLTER is organising a session** at the upcoming **EGU 2024** conference on the topic of “**Integrated solutions for landscape management of GHG balance and biodiversity in a changing environment**”.

eLTER invites solutions-oriented studies using cross-disciplinary and integrated ecosystem approaches, particularly at the landscape level. By providing new results and methodologies, the studies can support evaluation and development of environmental policies and measures across spatial scales that support multiple societal objectives.

**Submit your abstract by January 10<sup>th</sup>**



### **eLTER at EGU: Submit your abstract**

eLTER is organising a session at the upcoming EGU 2024 conference on the topic of “Integrated solutions for landscape management of GHG balance and biodiversity in a changing environment”.

eLTER invites solutions-oriented studies using cross-disciplinary and integrated ecosystem approaches, particularly at the landscape level. By providing new results and methodologies, the studies can support evaluation and development of environmental policies and measures across spatial scales that support multiple societal objectives.

Deadline: 10th January 2024.





## **LTsER Baixo Sabor case study on rewilding: quantifying the costs, benefits, and trade-offs on abandonment and ecological restoration**

[LTsER Baixo Sabor](#) is involved in the EU project [wildE - Climate-smart rewilding: ecological restoration for climate change mitigation, adaptation and biodiversity support in Europe](#).

The main goal of wildE is to assess and enhance the potential of climate-smart rewilding as a Nature based Solution (NbS) to the twin threats of climate change and biodiversity loss.

LTsER Baixo Sabor site will serve as a case study focusing on the potential for rewilding in a Mediterranean region under land abandonment since the 1950-60s, where natural vegetation, large herbivores (red deer, roe deer, wild boar), large carnivores (wolf) and scavengers (gryffon and Egyptian vulture) have been progressively recovering.

This region encompasses a diverse range of land uses, from agriculture and grazing to more natural areas. Three main ecosystem management options will be pursued:

1. Active restoration of oak-juniper forests and riparian galleries;
2. Rewilding through unmanaged land abandonment;
3. Rewilding through natural vegetation recovery, combined with active fire risk and wild herbivore management.

The information gathered will be used to evaluate the feasibility and cost-benefits of rewilding options at the regional level. Stay tuned for more updates on the engagement of the LTsER Baixo Sabor on the wildE project.

*Photo: Image sequence of stands in different successional stages. Image 1 depicts the first stage (5-10 years after abandonment) where the dominant species is *Lavandula pedunculata*. This stage will give place, in turn, to a taller shrub community (Images 2 and*

3) dominated by broombush species (*Cytisus* spp., *Cistus* spp.). *Juniperus oxycedrus* woods (Image 4 and 5) often precede the climax community (Image 6), with *Quercus* spp. forming the tree layer of the vegetation. Photosequence by António Vaz Pato.

Ambio 2023, 52:1687–1696  
<https://doi.org/10.1007/s13280-023-01931-3>



CARBON SEQUESTRATION AND BIODIVERSITY IMPACTS IN FORESTED ECOSYSTEMS

## **Integrating carbon sequestration and biodiversity impacts in forested ecosystems: Concepts, cases, and policies**

Syed Ashrafal Alam, Sonja Kivinen, Heini Kujala,  
Topi Tanhuanpää, Martin Forsius

### **Special issue on “Integrating carbon sequestration and biodiversity impacts in forested ecosystems”**

A special issue on [“Integrating carbon sequestration and biodiversity impacts in forested ecosystems”](#) was published in the journal *Ambio* on 16 October 2023. It contains several papers where LTER data has been used in spatial modelling, remote sensing, developments of research infrastructures, and prioritization of important areas for biodiversity and carbon values.

The special issue also contains papers on economic instruments and policy integration. Similar open access papers are also available online:

- [Modelling the regional potential for reaching carbon neutrality in Finland: Sustainable forestry, energy use and biodiversity protection](#)
- [Effect of forest management choices on carbon sequestration and biodiversity at national scale](#)
- [Utilizing historical maps in identification of long-term land use and land cover changes](#)
- [Reforming a pre-existing biodiversity conservation scheme: Promoting climate co-benefits by a carbon payment](#)

*Image: Cover of the Special issue*



## **A new infrastructure project for the eLTER site Lehrforst Rosalia**

The eLTER site [Lehrforst Rosalia](#) has been granted with an infrastructure project which will enable the already highly-instrumented site to be developed into a digital infrastructure for ecosystem research. The modernisation measures will enable the Rosalia site to fulfill standard observations in the frame of the European eLTER RI network, in which the Rosalia site aims at becoming Category 1 in several spheres. Furthermore, the project aims at the digitalisation of the infrastructure, from data collection to data transfer and elaboration of data products. The infrastructure is a showcase project, with an open-air laboratory that will support both research and teaching, and will offer a platform for advancing our knowledge of ecosystem responses in a changing world.

Overall, the interdisciplinary approach applied will prepare the site for the challenges of ecological and digital change and will thus become a sustainable part of a future-oriented research infrastructure with open digital access. The project is funded by the Austrian Ministry of Education, Science and Research and it is supported by the EU Recover and Resilience Facility.

*Photo: The eLTER site Lehrforst Rosalia*

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## **LTER-Italy is back on the road with its itinerant science communication initiative “Cammini LTER” (TRAILS)**

After a three year gap due to pandemic restrictions, [LTER-Italy](#) is once again running its informal, itinerant science communication initiative “Cammini LTER” (TRAILS). During Cammini researchers walk, cycle or kayak along itineraries that connect two or more LTER-Italy sites, creating a physical and visible movement of researchers towards and with citizens, sharing informal events and communication activities. In the “2023 edition” LTER-Italy organised two trails:

### **[Lake Tovel](#): past, present and future**

From 21-28 August 2023, the first “Cammino” took place in Northern Italy, aiming at exploring the Lake Tovel LTER site and the LTER research on the environment and biodiversity in the surrounding area, which is a natural lab to study the effects of global warming on Alpine ecosystems.

### **Ecological transition: cycling from [Mar Piccolo \(Taranto\)](#) to [Acquatina \(Lecce\)](#)**

The second “Cammino” took place in Southern Italy (Apulia) from 15 - 18 October 2023, connecting by bike two transitional water ecosystems: Mar Piccolo and Acquatina. The organisers shared visions and experiences of ecology, sustainability, biodiversity, and transitions with the people and the local associations that they met along the trail.

*Photo: Some of the participants during the Lake Tovel researchers walk.*

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## **eLTER regional cluster meeting for Central and Eastern Europe**

The [eLTER regional cluster meeting for Central and Eastern Europe](#) was held on 6-7 September 2023 at the Institute of Landscape Ecology of the Slovak Academy of Sciences in Bratislava, Slovakia. Sixteen participants attended in person, with another 15 participants joining online.

Country reports were presented by representatives of Romania, Poland, Hungary, Czech Republic, Slovenia, Serbia, and Slovakia. They covered the state of the art of the national eLTER RI process; the major problems/challenges and constraints and how to solve these issues; successful stories; and the possible future of eLTER RI in the country. Pressing issues discussed during the event included criteria for ESFRI eLTER sites and their implications, LTSER platforms, Topic Centres and central services, eLTER at the national level and cooperation with partners from other countries.

The final discussion confirmed that such meetings at regional level are meaningful and are important for eLTER network improvement and cooperation. It was also agreed that they are worth organising regularly in the future.

*Photo: The participants in the eLTER regional cluster meeting*



## **Braving windy conditions to learn about our monitoring in the Cairngorms**

On 20 September 2023, staff of the [Cairngorms UKECN site](#) (Scotland, UK) joined forces with the landowner, [NatureScot](#), to hold an open day at the site. The open day consisted of a 5 km walking tour rising from the stream monitoring station to the hilltop (~375 m of ascent ) where the weather station is located and other abiotic measurements are collected. Some 20 people braved the windy conditions to learn about the management of the [Invereshie and Inshriach National Nature Reserve](#) from the reserve manager, Ian Sargent (NatureScot), and the abiotic and biotic monitoring conducted on the site from Chris Andrews (UKCEH).

The open day was planned in collaboration with the Cairngorm Connect conference which kicked off on 18 September with a series of talks about the science conducted within the Cairngorms National Park, when Chris presented the long-term monitoring of the site.

*Photo: Ian Sargent, NatureScot explains the history of the site and the current forest structure in the Invereshie and Inshriach NNR*

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### **3rd OZCAR summer school 2023**

The third edition of the OZCAR summer school took place from 1 - 7 July 2023 in Aubure, France, a small Alsatian village that is home to the [Observatoire Hydro-Géochimique de l'Environnement \(OHGE\)](#), in the lush green setting of the Vosges forest at the foot of the Strengbach watershed.

The school brought together around 30 students (doctoral students, post-doctoral students and researchers) from a variety of backgrounds and as many speakers, experts in different fields ranging from the geosciences to the human and social sciences (anthropology, philosophy, sociology). This year's courses combined disciplinary lectures and presentations of observatory sites ([OHGE](#), [Ploumeur Guidel/H+](#), [Col de Porte/Glacioclim](#), [Mule Hole/MTROPICS](#)), as well as practical work (geochemistry, geophysics, measurement of evapotranspiration and CO2 fluxes, forestry ecology).

An original “transformative” experiment, proposed by speakers from the humanities and social sciences, enabled participants to tackle an issue relevant to the Strengbach basin, such as the question of sharing water resources, by playing the roles of human and non-human actors and expressing their feelings in this role. Two keynotes, one given by Olivier Ragueneau, director of [Zones Ateliers](#), and the other by Veronica Calvo, anthropologist, provided an interdisciplinary opening, demonstrating the dynamism of [OZCAR RI](#). This week spent in the Vosges was rich in discoveries, learning and exchanges, creating links that without any doubt will last for years to come. Read more [here](#).

*Photo: Participants in the 3rd OZCAR summer school 2023*



## **A week of multidisciplinary experimentation on the Frasne peat bog (Tourbières Observatory/OZCAR RI)**

A multidisciplinary field campaign was organised on the French Frasne site belonging to the Tourbières Observatory from 26 - 30 June 2023, at the initiative of members of the [OZCAR research infrastructure](#) and the EQUIPEX + "[Terra Forma](#)" project, bringing together nearly 15 researcher for the fieldwork and around 30 in total from 13 research units. The aim of the campaign was to track carbon production, transfers and exchanges in the Critical Zone.

The campaign made it possible to characterise the spatial heterogeneity (vertically and along the upstream-downstream gradient) of the production, transfers to the surface and exchanges with the atmosphere of Carbonaceous Greenhouse Gases (CO<sub>2</sub>, CH<sub>4</sub>) in the peat bog by combining physical, geochemical and biological approaches and tools. Hence, the team carried out major ions, trace elements, dissolved gas, organic content and isotopic evaluations in piezometers and at the outlet of the peatland, peat sampling for further microbiological characterisations, as well as gas measurements at the peat surface using a portable chamber, a flux tower and drone overflights.

*Photo: Platform SNO Tourbières at Frasne site - © Hubert Raguet, CNRS Images*

# **eLTER Sites & Platforms videos**

Starting from this newsletter, we are introducing eLTER Sites and Platforms through some [videos](#) so that you get to know them better. We start with the introduction to the [Hyttiälä SMEAR II LTER site](#) in Finland. Enjoy!



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