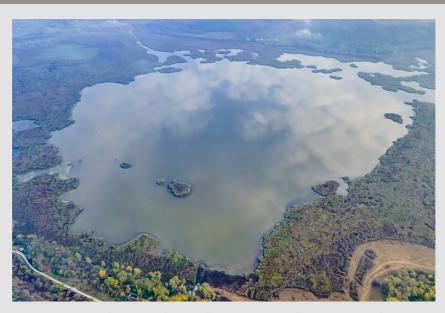# Issue: April 2023

Highlights

eLTER launches its Grand Campaign

After months of preparation, **eLTER launched its Grand Campaign** (GC) aimed at **filling a critical gap in the photo/video archive** of the project and to significantly strengthen communication and dissemination activities. The RI's central communication team will visit selected sites and platforms in **over 20 partner countries** to take photos and videos with drone and camera, as well as to interview researchers and the national LTER teams.

The Grand Campaign will provide **five core outcomes** (and a few surprises in preparation):
1. A structured and consistent photo/video archive of eLTER sites and platforms comprising over **1000 photos aLND more than 40 videos** by drone and camera, done by a professional team;
2. Over **200 social media posts** during the country visits with special hashtags for stakeholders to follow up on the progress: **#eLTERgc**

#eLTERGrandCampaign;

3. A dedicated **social media campaign** after the end of the Grand Campaign showcasing the most interesting photos from our sites and platforms;

4. **eLTER Instagram** page tailored around the visual development and communication of the project;

5. Update of the **visuals on the website**, promotional materials and social media to provide a fresh new look to eLTER.

The Grand Campaign will run until the end of 2023, but ongoing updates, photos and videos will be released onto our social media channels and website. **Bulgaria and Israel were the first two pilot countries** that participated in the activity. More than 20 countries are expected to be covered in the coming months.

Photo: Srebarna site in Bulgaria, as seen during the Grand Campaign visit.

Expanding our reach: eLTER joins Instagram

We are excited to announce the launch of the **eLTER Instagram account: europeanlter**!

To ensure that the eLTER community reaches out to as wide an audience as possible, we launched the eLTER Instagram account. As of January 2023, the **majority of Instagram users (around 77%)** are between the **age of 18 - 44**. eLTER puts a special focus on reaching early career researchers, one of the main target audiences of the project. Apparently, Instagram is the place to be.

Being an entirely visual platform, Instagram will aid us in showcasing eLTER's Grand Campaign. We will present **photos and videos of the spectacular sites and platforms** and the surrounding resilient flora of the multiple eLTER member countries across Europe (and Israel) that will be visited in the coming months.

Along with the already existing social media profiles on **Facebook, Twitter,** and **LinkedIn** (as well as **YouTube**), the eLTER Instagram profile will contribute to sharing information and updates regularly, promoting research infrastructure sites in and beyond Europe.

Photo: A Mollusk shell found at Park Shaked, an Israeli eLTER site, as seen during the Grand Campaign visit.

Strategic Section

eLTER Methods-Costs Workshop adopted 71 Standard Observations from four ecosystem 'spheres'

eLTER PPP WP4 and WP6, and eLTER PLUS WP3* jointly organised a 'Methods-Costs Workshop' at the **CNR Headquarters in Rome**, Italy from 10-12 January 2023.

The aim was to **collect all available information on the elements that affect the costings** of the eLTER Standard Observations (SOs) in different habitats and different 'spheres' (**atmosphere, biosphere, geosphere, hydrosphere, and socio-econosphere**). This information is crucial for building the eLTER National RI, i.e., the eLTER Sites and eLTSER Platforms. The main goals of the workshop were to:
(1) create an understanding of the detailed SOs in different habitats and spheres, and fill the gaps in SO protocols and methods, and
(2) update costs for sensor-based, sample-based and retrieval-based methods.

To achieve the goals, eLTER National Coordinators and expert groups were invited to attend the workshop. Altogether about **50 participants from 15 European countries** including Israel attended the workshop either in person or via video. At the end of the workshop, **71 SOs from the atmosphere, biosphere, geosphere, and hydrosphere** were adopted. Work on the socioecological SOs is continuing.

Recommendations were made for the SOs that need to be measured for each of the eLTER habitats in Site categories 1 and 2. Also the experts agreed on the cost estimation of the proposed Prime and Basic methods for atmosphere, biosphere, geosphere and hydrosphere SOs.

Photo: Discussion during the workshop.

*eLTER PPP WP4 - Financial framework
eLTER PPP WP6 - Operation and design: NRI
eLTER PLUS WP3 - Interoperability of eLTER Standard Observation variables – the user perspective

Reporting Back

Exploring the Latest Tools and Techniques for Environmental Data Management at the eLTER Tools Workshop

The eLTER tools workshop was held in Lyon, France in mid-February 2023, with about **20 participants from 10 countries**. The workshop aimed to introduce the latest tools and techniques for working with environmental data from eLTER stations.

Topics covered included the **collaborative data management platform**, **DataLabs**, which provides a secure space for researchers to collaborate and store code and data. Participants were also introduced to Python **tools to extract information** from **DEIMS-SDR**, an essential metadatabase that stores information on eLTER sites. The **ReLTER** R-package was also introduced, providing a streamlined way to access data from eLTER stations, allowing researchers to easily **combine and analyse data from multiple sources**. **PhenoApp** and Cookie-cutting tools were also introduced.

Participants **visited restoration sites** in Lyon and monitoring stations in the region, providing valuable insights into the challenges of working with environmental data.
The workshop was an excellent opportunity for researchers and data managers to learn about the latest advancements in **environmental data management and analysis**. It emphasised the importance of collaboration, data sharing, and practical applications in achieving successful outcomes in ecosystem research.

Participants left with a better understanding of the latest tools and techniques for working with environmental data from eLTER stations as well as a **greater appreciation of the importance of collaboration and data sharing**.

Photo: Participants at the eLTER Tools Workshop

Latest Research

Two sibling papers on citizen science at ILTER just published

Citizen science (CS) is one the most promising forms of public engagement and it has **huge potential** to support science-society interactions with mutual benefits.

Environmental and ecological sciences are among the most active in proposing CS initiatives, since they necessarily include **social and cultural dimensions** to confront the complex local and global environmental challenges. This aspect is particularly evident in the **International Long-Term Ecological Research** (ILTER) network, which offers a valuable landscape to explore CS features across a wide range of different cultural and socio-ecological contexts.

Scientists working at **LTER-Italy** (from two institutions: CNR and CREA-DC), in cooperation with the University of Maryland, launched a survey among ILTER scientists, aiming at assessing **different aspects of CS**. Which are the main features of CS initiatives? How are citizens involved and how is their contribution acknowledged? What do scientists think about CS, and what is their willingness and reasons to participate in CS? What are the associated barriers, and the impacts of these efforts on them?

These and other questions were investigated and discussed in **two articles** that have been recently published in Frontiers in Environmental Science:

Bergami C, Campanaro A, Davis C, L'Astorina A, Pugnetti A and Oggioni A (2023), **Environmental citizen science practices in the ILTER community: Remarks from a case study at global scale**. Front. Environ. Sci. 11:1130020, https://doi.org/10.3389/fenvs.2023.1130020

L'Astorina A, Davis C, Pugnetti A, Campanaro A, Oggioni A and Bergami C (2023), **Scientists' attitudes about citizen science at Long-Term Ecological Research** (LTER) sites. Front. Environ. Sci. 11:1130022, https://doi.org/10.3389/fenvs.2023.1130022

Figure: Map of the distribution of respondents by biogeographic regions [© OpenStreetMap contributors (openstreetmap.org). Map data July 14, 2022].

Upcoming and ongoing events

Monthly SPF webinars

Date: Varies monthly | **Place:** Online

eLTER will continue with SPF webinars also in 2023. Topics will be related to Citizen Science, Remote sensing and research performed at eLTER Sites and Platforms. Dates will be confirmed later. Stay tuned! Information will be available on the eLTER website.

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[eLTER events calendar]

eLTER PPP & PLUS Consortia meeting

Date: 17-21 April 2023 | **Place:** Frankfurt, Germany

The next eLTER PPP & PLUS consortia meeting will build upon the successful consortia Mallorca meeting. eLTER members will present latest news about finished and ongoing project work in dedicated sessions, participants will have the chance to visit a long-term research site, and of course, a social event will also be offered. The agenda and more details will be communicated via email and will be published on the dedicated eLTER wiki page.

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[eLTER Wiki]

EGU23

Date: 23-28 April 2023 | **Place:** Vienna, Austria

The EGU General Assembly 2023 brings together geoscientists from all over the world to one meeting covering all disciplines of the Earth, planetary, and space sciences. The EGU aims to provide a forum where scientists, especially early career researchers, can present their work and discuss their ideas with experts in all fields of geoscience.

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[Learn more]

High Performance Data Analysis with R (EuroCC)

Date: 26-27 April 2023 | **Place:** Online and Prague, Czechia

This course is focused on data analysis and modeling in R statistical programming language. The first day of the course will introduce how to approach a new dataset to get a better understanding of the data and its features. Modeling based on the modern set of packages jointly called TidyModels will be shown afterward. This set of packages strives to make the modeling in R as simple and as reproducible as possible.

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[Learn more]

International Society for Ecological Modelling Global Conference

Date: 2-6 May 2023 | **Place:** University of Toronto, Canada

The International Society for Ecological Modelling Global Conference 2023 (ISEM 2023), under the theme 'Ecological Models for Tomorrow's Solutions', will bring together scientists from all professions and applications that deal with the use of ecological models and systems ecology.
Toronto shall be the inspiring space for the Ecological Modelling community to meet, discuss and share ideas. In this conference, ecological modellers will join in their ongoing effort in advancing the concepts and methods of ecological modelling to develop ecological theory in a wide range of topics and modelling approaches.

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[Learn more]

eLTER Sites and Platforms Forum

Date: 9-10 May 2023 | **Place:** Online

The forth Sites and Platforms Forum (SPF04) will take place on two days, Tuesday 9th May afternoon (13-16:30 CEST) and Wednesday 10th May morning (9:00-12:00 CEST).The meeting is open to all eLTER Site and Platform personnel and other interested persons.

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[Learn more]

eLTER socio-ecological theme meeting

Date: 12-13 May 2023 | **Place:** Online

Twice a year, the socio-ecological theme project team for eLTER PPP/PLUS will hold open meetings for all project members who are interested in the SE efforts in and beyond the two projects. At these meetings, we will provide updates regarding various research activities, as well as introduce activities in which we would like to draw in more participants from the network (e.g., workshops, grant writing, collaborative research).
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Learn more

eLTER Talk: Caterina Bergami

Date: 05 June 2023 | **Place:** Online

The third eLTER Talk for 2023 will be done by Caterina Bergami on the topic linked to the Italian LTER network. Caterina Bergami is a Researcher at the Institute of Marine Sciences (CNR) and Secretary of the LTER-Italy network, Italy.
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Learn more

eLTER WAILS approach workshop for early career

Date: 12-16 June 2023 | **Place:** Gran Paradiso National Park, Italy

The workshop was built as a summer school, the first days will focus on lectures that will explain in depth the approach of eLTER which is based on the whole system approach (WAILS) - a holistic view on the ecosystem that combines bio-geo-hydro and socio-ecology and on the long term research conducted in the Gran Paradiso LTER site including a field tour.
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Learn more

20th International Boreal Forest Research Association Conference

Date: 28-31 August 2023 | **Place:** Helsinki, Finland

The 20th IBFRA (The International Boreal Forest Research Association) Conference will be held in Helsinki, Finland from 28-31 August 2023. Call for abstracts will open on 29 August 2022.
The bi-annual conference will bring together researchers, companies, policymakers, and members from civil society to discuss the future of boreal forests in Pikku-Finlandia conference centre.
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Learn more

ACTRIS Week 2023

Date: 23-27 October 2023 | **Place:** Heraklion, Greece

The aim of the ACTRIS Week 2023 is to bring the ACTRIS Community together, to update the community about the most recent and ongoing ACTRIS progress and challenges, and to provide a platform for various ACTRIS and ACTRIS-adjacent groups and communities to get together.
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Learn more

Follow us on social media!