



Issue: July 2023



Strategic Section

**Business Plan and Socio-Economic Impact Assessment
(SEIA) Framework development services tender**

eLTER [Business Plan and Socio-Economic Impact Assessment \(SEIA\) Framework development services tender](#) is now **open**. Qualified applicants can **apply by 25 August 2023 at 2pm EET**, and offer services regarding the Business plan, SEIA or both.

eLTER Business plan

We are looking for support in developing the eLTER Business plan - **a central document for the success of eLTER** that will be used when approaching the potential eLTER members, private sector and funders as well as set the ground for the governance, management and operations of the eLTER RI in the years to come.

Socio-Economic Impact Analysis (SEIA)

With our distributed physical infrastructure and scientific expertise, we aspire to provide Europe and the world with the **scientific capacity to improve our understanding of terrestrial, freshwater, and transitional water ecosystems**. A draft SEIA Framework has been produced as part of the eLTER, and now eLTER is looking for support in collecting the impact indicators through developing tools for **data collection, implementing qualitative and quantitative surveys as well as data analysis**.

All relevant information and accompanying documents can be found [here](#). Note that some documents are only available after you have registered on the platform.

Highlights



Prof. Dr. Harry Vereecken received the EGU 2023 Alfred Wegener Medal and Honorary Membership award

Prof. Dr. Harry Vereecken has been awarded the [2023 Alfred Wegener Medal & Honorary Membership](#) for his groundbreaking contributions to **soil-plant-atmosphere research** with a focus on subsurface processes related to the hydrological and biochemical cycles. Not only has he greatly advanced the specific research on the subject, but perhaps more importantly, he has been an integrator of connecting the individual sub-processes and sub-disciplines.

In [an interview he gave for eLTER regarding his award](#), he emphasised that he sees it as a **recognition for his research during the last 40 years**. He accepts the award not only as his merit but as the result of many interactions with colleagues during that period and especially collaborators at the Agrosphere Institute, IBG-3, at the Forschungszentrum Jülich at Jülich, Germany where he works as a director.

Prof. Dr. Vereecken is also **a professor of soil science at Bonn University**. He joined eLTER in 2008 and is currently **a member of the eLTER steering committee**, leading a work package in eLTER PLUS and coordinating the Research Theme on the water-climate-food nexus.

Photo: Prof. Dr. Harry Vereecken and the symbol of the Alfred Wegener Medal and Honorary Membership award



eLTER second physical consortium meeting in Frankfurt

Between 17 – 21 April 2023, the **second physical meeting of eLTER took place in Frankfurt, Germany** with more than 80 participants. During the meeting, eLTER PPP and eLTER PLUS leaders had the chance to share **updates about the projects' progress and the respective research activities**, exchange valuable insights and plan future steps.

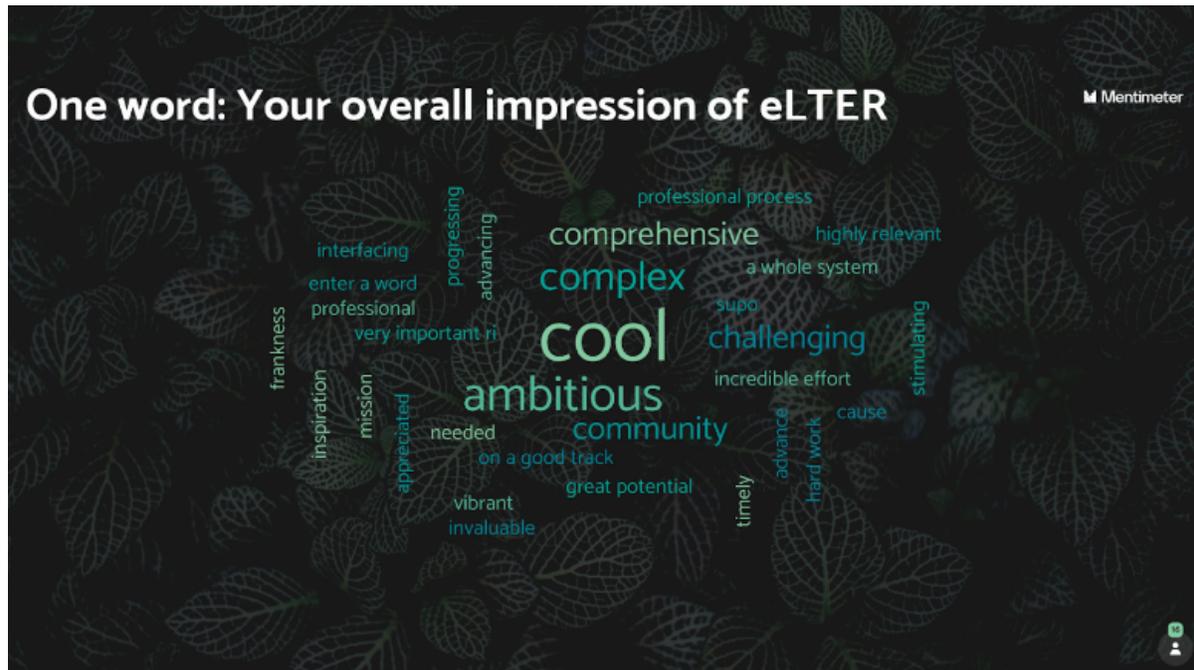
Participants also engaged in **group work activities** that allowed them to brainstorm and collect input about the eLTER mentoring program, opportunities for joint work, and communication developments.

In addition to the lively discussions, a half-day **field trip** to a scientific station in Germany ([Kroffdorf Forest hydrological station](#)) was organised, providing an opportunity for partners to observe ecosystems firsthand and learn about the research being conducted at the station, as well as the difficulties faced and how to overcome them.

A **poster exhibition** was also part of the meeting. It motivated fruitful discussions and interactions among the participants during the breaks and after the other sessions and fostered knowledge exchange and collaboration. The exhibition showcased the latest data from the research done at some of our sites and national networks. To recognise outstanding contributions, the [LTsER-Montado, Portugal](#) poster was awarded a prize, acknowledging the efforts and quality of the work presented.

Photo: eLTER PLUS and eLTER PPP consortium members group photo in Frankfurt.

Reporting Back



Fifth eLTER Interim Council meeting, May 2023: Keeping the ball rolling

On 2 May 2023, the fifth meeting of the **eLTER Interim Council** took place with **50 participants** via zoom. 16 countries that are members of the IC were represented by national delegates. Norway and the Netherlands attended as observers for the first time and gained an insight into the main developments of the eLTER RI.

IC delegates approved the **eLTER RI Human Resources Strategy**, which describes the type of staff needed in the Research Infrastructure (RI), how they will be recruited and how expertise will be developed within the future eLTER RI. They also received an update on the emerging design of the **eLTER site network**, based on the results of an **expert workshop and the category screening survey** conducted in February and March this year. Overall, the coverage of the network looks very good with over **300 sites initially listed**, but some gaps in the network design at European and national level were discussed.

The eLTER Coordination encouraged IC delegates to **advance the dialogue between countries on (co-)hosting core eLTER RI services** and the possibility of sharing responsibilities. In addition, a proactive dialogue is needed on national in-situ facilities regarding scientific priorities, strategic interests and gap filling.

The eLTER team is already looking forward to the next opportunity for the Interim Council to meet in person: 24-25 October 2023 in Berlin, Germany.

Photo: "Your impression of eLTER in one word" - Participants' feedback during the Mentimeter session at IC05.



SPF04 meeting and advertising SPF05 on-site event

eLTER Sites and Platform Forum (SPF) is a precedent of a formal body in eLTER RI. It aims to bring together eLTER Sites and Platform coordinators (SPCs) and to make it easier for SPCs to develop and communicate joint activities and to contribute to the development of eLTER RI.

The SPF04 meeting took place online on 9 - 10 May 2023. About **75 representatives for eLTER Sites and Platforms** gathered to hear about updates regarding **Standard Observations, Site Labelling and Service Portfolio**. Data and training needs of SPCs were addressed in breakout sessions led by [SPF Working Group](#) leads and new ideas were collected for Citizen Science initiatives and future eLTER Transnational Access programmes. Vivid discussions and engagement during SPF04 highlights the **importance of bringing the SPF community together and the interest of SPCs regarding eLTER activities**.

The next main activity of the SPF will be [the first in-person and onsite meeting to take place in Lunz, Austria on 2-5 October 2023](#). The meeting will consist of various networking activities and sessions ranging from scientific topics, data management and funding opportunities to standard observations and other practical aspects of sites in developing the eLTER RI.

Photo: A wordcloud showing how the Sites and Platform coordinators view the Sites and Platform Forum.



eLTER WAILS approach workshop for early career researchers at Gran Paradiso National Park, Italy

The **eLTER whole system approach (WAILS) workshop** took place in **Gran Paradiso National Park in Italy** on 12-16 June 2023. It brought together **20 participants from 11 countries** and diverse research areas.

The workshop took the form of a summer school, with the first days focused on lectures that explained in depth the **WAILS approach of eLTER**. This is a **holistic view on the ecosystem** that combines bio-geo-hydro and socio-ecology. The workshop also looked at the long-term research conducted in the **Gran Paradiso LTER site**. The lectures were given by experts from diverse disciplines such as: **biodiversity, hydrology, remote sensing**, etc. In addition, lectures given by the national park professional staff covered the main aims and challenges of the park, who's role is to manage and preserve the protected area and maintain the biodiversity of the landscape.

During the workshop, there was also **groups and cross-groups activities**. The goal was to create dialogue and joint work between researchers from different research fields and from different countries and diverse ecosystems. The outcomes were presented as posters and graphical abstracts.

During the 4th day of the workshop, participants had the chance to go on a **field trip to the [Gran-Paradiso National Park LTER site](#)**.

Photo: A group picture of the eLTER WAILS workshop participants



eLTER General Executive Team convenes at Hyytiälä Forestry Field Station

From 18 – 22 June 2023, the eLTER General Executive Team (GET) met at the [Hyytiälä Forestry Field Station](#) in Finland, a respected **multidisciplinary research facility** known for its long-term ecological research initiatives.

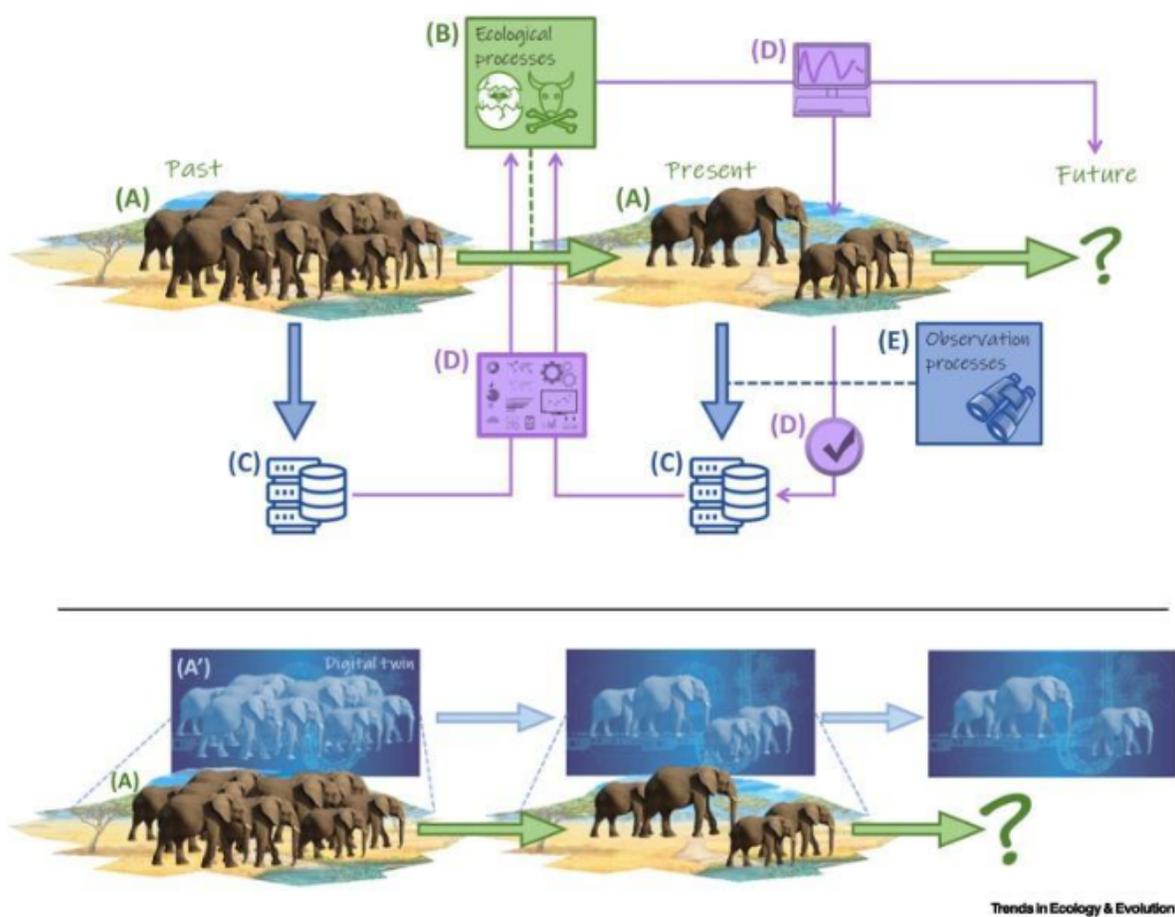
During the meeting, GET members had the opportunity to identify and discuss the **challenges lying ahead for both eLTER PPP and eLTER PLUS** projects and to explore potential solutions. These challenges covered various aspects, including division of responsibilities, staffing issues and recruitment of new members, future projects, communication developments, potential bottlenecks, critical risks and conflicts, etc. Through collaborative brainstorming and sharing of expertise, the team sought to identify approaches and strategies to address the challenges.

The team also spent some time **visiting and exploring the [Hyytiälä SMEAR II LTER site](#) and the [Siikaneva wetland station](#)**. The field hikes provided a unique opportunity to become immersed in the local ecosystems and to gain a first-hand understanding of the advanced measuring installations and data collection efforts in place. The team saw the complex measuring instruments and techniques used to collect **real-time data on air quality, greenhouse gas emissions, and other essential parameters**.

In addition to the discussions and hikes, the eLTER GET also indulged in a number of enjoyable **social activities** designed to promote team building and provide opportunities for relaxation and local cultural enrichment.

Photo: eLTER General Executive Team members in Hyytiälä Forestry Field Station in Finland.

Latest Research



Trends in Ecology & Evolution

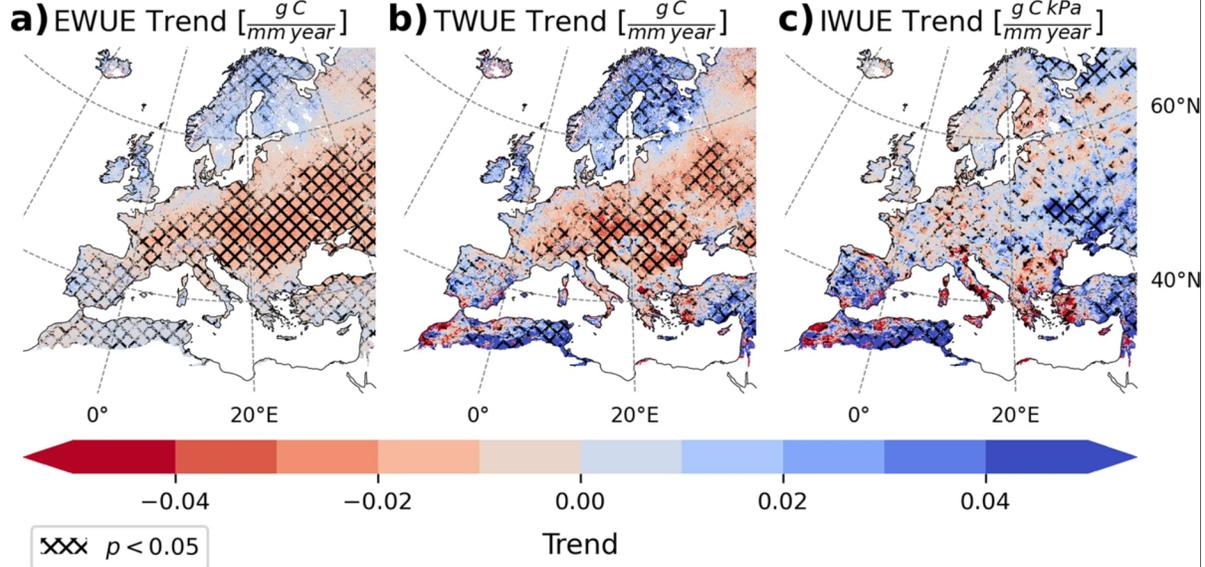
Why are Digital Twins of ecological systems different?

Digital Twins (DTs) started in industry to monitor and understand systems and processes, but they have now also become a hot topic in ecology. In [a new paper \(De Koning et al. 2023\)](#), they describe how DTs can help ecology, as a kind of real-time model that can integrate data and domain knowledge to continuously adapt to the real world.

The study aims to clarify potential misunderstandings, as they are not necessarily artificial intelligence, large interconnected databases, and a synonym for a “big model of everything”. They do not have to be mechanistic (which often cannot be parameterised in ecological systems), but can be based on empirical models. They are driven by public demand and are intended to support the exploration of future management scenarios to **help policy makers and practitioners make better decisions in managing biodiversity and ecosystems**. The best-known (non-ecological) DTs are probably the precipitation forecasts (“radars”) of many weather services.

The paper is a product of colleagues from the EU project “[A Digital Twin prototype to help protect and restore biodiversity](#)” in which several eLTER partners are involved and in which they combine data from [GBIF](#), [eLTER](#), [DiSSCo](#), [LifeWatch ERIK](#) and other ecological Research Infrastructures with existing models to be implemented on the fastest European supercomputer [LUMI](#) in Finland.

Photo: Comparison between ecological research in the status quo (top) and with digital twins (DTs) (bottom). Credits for the graph go to TREE (Trends in Ecology and Evolution).



Rising water-use efficiency in European grasslands is driven by increased primary production

[This work](#) is part of eLTER PLUS T9.3 and uses multiple eLTER sites to evaluate already available data from remote sensing and re-analyses. Specifically, **eddy covariance data on evapotranspiration and gross primary production** is used to validate the spatial data products. Relating the gross primary production to the evapotranspiration, the water-use efficiency of an ecosystem then indicates the **water-use strategy of the vegetation and the variability of its functionality**.

We calculated **three different indices of water-use efficiency** using the spatial data across the pan-European domain and found that Central and Eastern Europe experienced decreasing water-use efficiency within the last two decades and are therefore threatened in their performance. On the other hand, European grasslands drastically increased their water-use efficiency during that time. During droughts, arid and semiarid ecosystems were able to increase their water-use efficiency through adaptation of stomatal conductance.

These results indicate that **Central and Eastern European ecosystems could be threatened by an increasingly dry environment in future**, and that an adaptive water-use strategy, as seen in arid ecosystems, is key to maintain functionality with those changes.

Photo: Figure from the article "Rising water-use efficiency in European grasslands is driven by increased primary production".

Future Events and Calls



#BiodivNBS

Upcoming research call on
Nature-based Solutions

Call launch: 11 September 2023



Co-funded by the
European Union

Coming soon: Biodiversa+ Call for Research Proposals on nature-based solutions

To support biodiversity research, [Biodiversa+](#) will launch a new transnational joint research call "**Nature-based solutions for biodiversity, human well-being and transformative change - BiodivNBS**" in September 2023. The call will provide a better understanding of the tipping points, trade-offs and underlying mechanisms that influence **nature-based solutions and their successful implementation in terms of benefits for nature, human well-being and societal transformation.**

It will address three **research themes**:

- Synergies and trade-offs of nature-based solutions in the context of human well-being
- Nature-based solutions that mitigate anthropogenic drivers of biodiversity loss
- The contribution of nature-based solutions to equitable transformative change.

The scope of the call includes transnational, interdisciplinary, transdisciplinary and cross-sectoral research on nature-based solutions in all parts of the world. Eligibility extends to different **ecosystems, including terrestrial, marine, coastal and freshwater environments.**

The call will be officially launched on 11 September 2023.

It will be a **two-stage application process**, with the deadline for submission of pre-proposals in early November 2023. The deadline for the submission of full proposals will be the beginning of April 2024.

In order to provide full details of the application process, an **information webinar will be organised on 26 September 2023 from 13:00 to 15:00 CEST.**

More information about the call is available [here](#).

Photo: The original slide promoting the Biodiversa+ Call for Research Proposals on nature-based solutions. Credits for the image go to Biodiversa+.

Ecological Society of America 2023

Date: 6-11 August 2023 | **Place:** Oregon, USA

The theme of the event seeks to help create an ESA for All Ecologists by providing programming and inviting sessions that better engage private- and public-sector ecologists by highlighting projects that are implementing ecological science, collaborating across sectors, educating future scientists and decision makers, and disseminating basic and applied ecology research to those who need it most.

[Learn more](#)

20th International Boreal Forest Research Association Conference

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

The title of the 2023 IBFRA conference is "*Climate resilient and sustainable forest management*". It will bring together researchers, companies, policymakers, and members from civil society to discuss the future of boreal forests in Pikku-Finlandia conference centre. The conference week will feature keynote speeches, parallel sessions on different sub-themes, networking opportunities, trainings, excursions, and side events.

[Learn more](#)

Expert group on Remote training for RI staff and researchers (online)

Date: 5 September 2023 (10:00 - 12:15) | **Place:** Online

The [Euro-BioImaging](#) is organising an Expert Group meeting about Remote training for Research Infrastructure staff and researchers. The meeting is organised as part of the [eRImote Project](#). The group will explore the impact of remote training on staff interaction and networking, aiming to identify the technical and didactic requirements for remote courses and many more.

Click [here](#) to register for the meeting.

[Learn more](#)

52nd Annual Meeting of the Ecological Society of Germany, Austria and Switzerland

Date: 12-16 September 2023 | **Place:** Leipzig, Germany

Join ecologists from across the world for a vibrant conference hosted by the German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig. The meeting will be held under the motto "**The future of biodiversity – overcoming barriers of taxa, realms and scales**" to shed light on future challenges and opportunities with regards to biodiversity, as well as how to address and manage these in an interdisciplinary and integrative way.

[Learn more](#)

European Lidar Conference 2023

Date: 13-15 September 2023 | **Place:** Cluj-Napoca, Romania

The 4th edition of the European Lidar Conference (ELC) will be hosted by the Babeş-Bolyai University with on-site attendance. The conference will feature plenary sessions: oral presentations, PICO & poster presentations. The early registration deadline is 15 August 2023, and the late registration is by 31 August 2023.

[Learn more](#)

6th International Conference “Water resources and wetlands” (Hybrid)

Date: 13-17 September 2023 | **Place:** Tulcea, Romania

The scientific subjects which will be addressed at the Conference cover a wide area of interest ranging from the study of the inland waters (groundwaters, rivers, lakes and

man-made reservoirs) and coastal sea waters to the analysis of the degree to which these resources have been affected in terms of quality due to human intervention and present climate changes. To register, click [here](#).

[Learn more](#)

ERIC Forum Project 2.0 Kick-off Event

Date: 15 September 2023 (13:00 - 15:00) | **Place:** Online

The official kick-off of the ERIC Forum 2 Project will be held online on 15 September 2023. Another one will take place in person at the beginning of next year. The agenda of the meeting will include several keynote speeches, Work Packages presentations, and General Assembly discussions.

[Learn more](#)

TERENO-OZCAR Conference 2023

Date: 25-28 September 2023 | **Place:** Bonn, Germany

The event will offer keynote lectures oral presentations and poster sessions on scientific research on the Critical Zone, which is the most superficial layer of the planet where all human activities concentrate. The conference will cover the cutting edge scientific progresses in a variety of disciplines: hydrology, geophysics, soil sciences, geochemistry, ecology, socio-ecology and will highlight interdisciplinary research to address critical zone functioning in the anthropocene.

[Learn more](#)

5th European Conference on Biodiversity and Climate Change Riverine and Coastal Wetlands

Date: 26-28 September 2023 | **Place:** Bonn, Germany

The European Conference on Riverine and Coastal Wetlands for Biodiversity and Climate (BioClim Wetlands) aims to strengthen the exchange of experiences and networking among scientists, policy makers and practitioners. The tentative conference programme can be found [here](#). A preliminary list of speakers is available [online](#).

[Learn more](#)

Sites and Platform Forum on-site meeting

Date: 2-5 October 2023 | **Place:** WasserCluster Lunz, Austria

Registration to the first Sites and Platform Forum on-site meeting (SPF 05) is now open! SPF 05 will offer opportunities to get to know other SPCs, learn more about the eLTER ESFRI process and its influence on Sites and Platforms, and build new initiatives together.

[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.

[Learn more](#)

6th eLTER Interim Council meeting

Date: 24-25 October 2023 | **Place:** Berlin, Germany

More info will come prior to the meeting.

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 871126 (eLTER PPP) and No 871128 (eLTER PLUS).

