

News from Countries, Sites and Platforms: July 2023



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!



Joint ICP IM & Waters meeting in Austria back-to-back with 30th anniversary celebration of Zöbelboden site

The Environment Agency Austria (EAA) organised this year's joint Task Force Meeting for ICP Integrated Monitoring and ICP Waters of the Geneva Convention on Long-range Transboundary Air Pollution (CLRTAP). The event took place at the WasserCluster Lunz in Austria and gathered a total of **60 experts from 17 countries**. During the event, EAA also presented the results of **30 years of ecosystem monitoring** at the Zöbelboden site, which is part of LTER Austria and a candidate for the eLTER Research Infrastructure.

Austria has been involved in the ICP Integrated Monitoring since 1992. Monitoring data from the Zöbelboden site are reported annually to the Program Centre and the EAA works actively on scientific syntheses in various international teams within the framework of **ICP Integrated Monitoring and beyond**.

The CLRTAP's site monitoring network for the effects of air pollutants in terrestrial and freshwater ecosystems has a close cooperation with eLTER, which was formally adopted by a letter of cooperation last year. The specific areas of cooperation have been defined as:

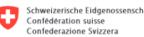
- Standardisation and harmonisation of measurement protocols and standards
- Methodological development for both cost efficiency and data accuracy
- Scientific co-operation in data evaluation and analyses
- Network development for wider spatial coverage
- Identification and specification of services of joint interest.

Photo: The Environment Agency Austria Task Force members



Swiss Roadmap for Research Infrastructures in view of the 2025-2028 ERI Dispatch (Roadmap for Research Infrastructures 2023)

Part II: Swiss Participation in International Research Infrastructure Networks



Schweizerische Eidgenossenschaft Federal Department of Economic Affairs, Education and Research EAER State Secretariat for Education,

eLTER Switzerland confirmed as key research infrastructure

Since 2019 eLTER Switzerland has been listed in the Swiss Roadmap for Research Infrastructures. The new edition of the Swiss Roadmap for Research Infrastructures 2023 has confirmed that eLTER Switzerland is a key research infrastructure, which is under consideration for ERIC membership.

The 2023 Swiss Roadmap for Research Infrastructures provides an overview of planned

construction and existing research infrastructures. It also includes information on Swiss participation in international research organisations and European research infrastructure networks. In the document, one can find **5 points referring to the benefits of participating in eLTER**, one of which is:

"LTER Switzerland's participation in eLTER will further increase the visibility of the Swiss research system, fostering national collaboration with ETH Zurich, EPFL and Swiss universities, international networking and globally competitive research frameworks for cutting-edge research. It will also **expand opportunities to promote Switzerland's excellent forest and ecosystem research** expertise and unrivaled research facilities to stakeholders in public administration and industry."

Learn more

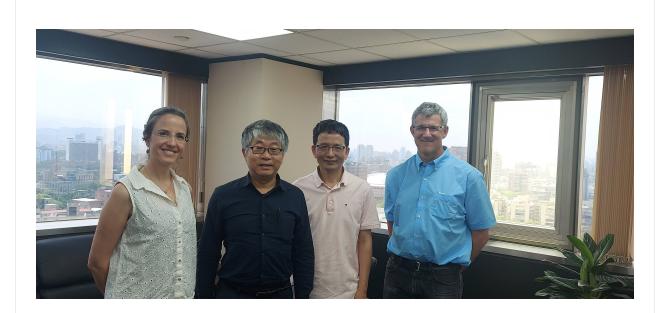


Bringing eLTER to target communities

LTER-D is organising a session "**Long-term and historical data: prerequisites to reveal changes in ecosystems in the light of global change**" at the <u>GFOE conference "The</u> <u>Future of Biodiversity – overcoming barriers of taxa, realms and scales"</u> in Leipzig (12-16 September 2023) with more than 1000 participants.

The session is addressing the need to continuously track the status of ecosystems in order to watch the development and related impact on functions and processes in the long run. The importance is self-evident given trends such as global human population growth and the **increase in anthropogenic greenhouse gas emissions**. It refers to eLTER as the most important European network dedicated to creating, combining and analysing long-term ecosystem research data. People are even encouraged to provide an outlook for future development and its consequences based on the insights of their studies. We look forward to hearing **'lessons learned'** in various aspects, e.g. in terms of ground breaking concepts for future data gathering and monitoring or consequences for required actions.

In May 2023 eLTER **biodiversity standard observations** were presented at the 2nd forum of the National Monitoring Center for Biodiversity (NMZB) in Leipzig. The focus of this meeting was on new technologies and methods for monitoring and analysis of biodiversity data, which matched well with the current development of eLTER.



Establishing socio-ecological research platforms in Taiwan: Sharing experiences

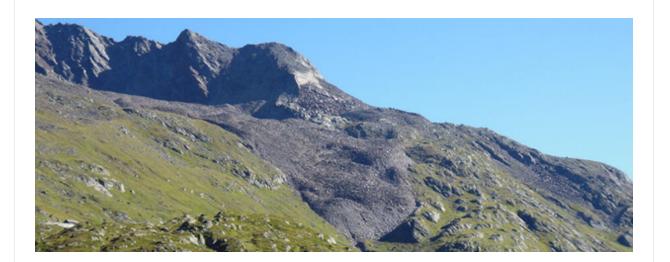
Representing the eLTER RI socio-ecological team, <u>Daniel Orenstein and Merav Cohen</u> from the Israel Institute of Technology traveled to Taiwan in April/May to learn about the **Taiwanese experience in establishing LTSER platforms**.

Taiwan's three platforms (with a fourth in development) were established under the leadership of <u>Prof. Teng-Chiu Lin</u> and with the support of Taiwan's National Science and Technology Council (<u>NSTC</u>). The platforms span diverse socio-ecological systems, including an island surrounded by coral reefs, a mountainous forest with interspersed tea plantations, and a **coastal site of mangrove forests, oyster farms, and wind turbines**.

In the space of one week, and under careful organisation by the hosts, Prof. Lin and <u>Prof.</u> <u>River Huang</u>, the team managed to visit two platforms, have three sit-down meetings with various individuals associated with advancing LTSER platforms, trek uncountable kilometers across the city of Taipei, and indulge in a vast diversity of Taiwanese cuisine. While all of the efforts to advance LTSER were impressive, one of the characteristics that impressed the eLTER team the most was the articulate and dedicated advocacy for longterm transdisciplinary research coming from a government advocate – a rarity among government decision makers.

Photo: Meeting at Taiwan's National Science and Technology Council (NSTC) with deputy director Prof. Minn-Tsong Lin. Left to right: Merav Cohen, Prof. Minn-Tsong Lin, Prof. Teng-Chiu Lin, Assoc. Prof. Daniel Orenstein

Learn more



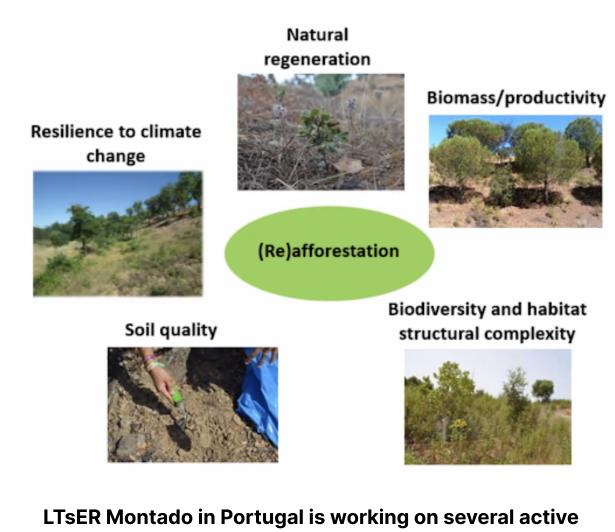
Study at LTER site Obergurgl in Austria reveals destabilising effects of climate change on the rock glacier in Äußeres Hochebenkar

Rock glaciers are complex structures of boulders and debris held together by a frozen permafrost core. Due to their characteristic appearance, they are probably the most impressive permafrost phenomena in the high mountains. Rock glaciers, like ice glaciers, are strongly influenced by the climatic changes of the last decades. This may lead to alarming developments, as shown by an international team of researchers, monitoring the rock glacier in **Äußeres Hochebenkar** near <u>Obergurgl</u>.

The time series shows two cycles of destabilisation in the lower section of the rock glacier. The first lasted from the early 1950s until the mid-1970s. The second began around 2017 after approximately 2 decades of more gradual acceleration and is currently ongoing. Both destabilisation periods are characterised by high velocities and the development of morphological destabilisation features on the rock glacier surface. **Acceleration in the most recent years has been very pronounced, with velocities reaching 20–30 m a⁻¹** in 2020–2021. These values are unprecedented in the time series and suggest highly destabilised conditions in the lower section of the rock glacier, which shows signs of translational and rotational landslide-like movement.

Read more: Multi-sensor monitoring and data integration reveal cyclical destabilization of the Außeres Hochebenkar rock glacier (Earth Surface Dynamics, https://doi.org/10.5194/esurf-11-117-2023).

Photo: The rock glacier in Äußeres Hochebenkar with "Gurgler Alm" alpine hut in the lower *left corner for size comparison (photo credit: Alpine Research Sites, Nikolaus Schallhart)*



projects supported through national and EU funding

The Portuguese LTsER Montado platform currently has several active research projects:

- Project **RENEWAL** aims tot promote the resilience of agroforestry systems in drylands to a more arid future, ensuring ecosystem functions and services. It addresses climate change effects on oak woodlands (montados), semi-natural agroforestry systems of high ecological and socio-economic importance, that are an important ecosystem type southern Portugal.

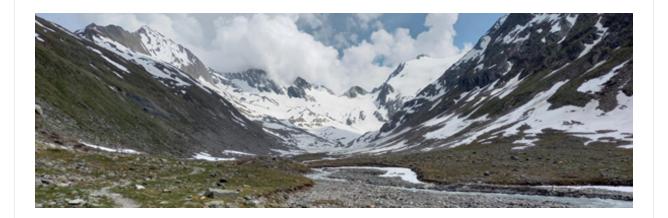
- The objective of the project LandUnderPressure - Avoiding, mitigating and restoring land under pressure to combat desertification and increase resilience to climate change in the montado is to promote the regeneration of the Montado and boost various ecosystem services, for example improving soil fertility and erosion control, climate regulation and biodiversity, including the enhancement of nature tourism.

- The project **REA Alentejo** has the general objective of gathering, producing, and disseminating the knowledge necessary to identify the strategies, methods and techniques for restoring Mediterranean ecosystems in the Lower Alentejo interior, as a way of reducing their vulnerability to desertification and the effects on the supply of ecosystem services. The aim is to create a replicable model that allows restoring agricultural and forestry productivity in the semi-arid areas of southeastern Portugal.

- The main objective of the **Fight Desert project** is to develop actions in areas susceptible to desertification. Actions for the improvement and restoration of Mediterranean ecosystems will be implemented in six locations in Alentejo and Lezíria, namely in three LTER Montado Sites (research and monitoring stations of the Long-Term Ecological Studies platform).

Photo: Focus areas of the projects

Learn more



LTSER Tyrolean Alps, LTER Obergurgl: New publication on successional pathways of plant communities in a glacier foreland in Plant Ecology

The scientific term succession describes the mechanisms by which inanimate or disturbed areas are colonised by living organisms. In the Rotmoos valley near <u>Obergurgl</u>, such succession studies have been carried out for decades. The glacier that originally dominated the valley has been melting for **over 150 years, releasing areas for recolonisation**.

As a result, this open-air laboratory continues to reveal new findings. In a long-term study carried out by a group of researchers at the University of Innsbruck led by Brigitta Erschbamer, the development of plant communities of different successional stages in the valley was examined. Sown experimental plots were established at selected sites together with control plots. **All plots were then regularly studied over a period of 25 years**. The

team concludes that seed and establishment limitations, drought, facilitation deficits, and ageing of individuals are the essential drivers on the studied glacier foreland, creating 'quasi-stationary' communities.

Learn more: Long-term monitoring confirms limitations of recruitment and facilitation and reveals unexpected changes of the successional pathways in a glacier foreland of the Central Austrian Alps (Plant Ecology, https://doi.org/10.1007/s11258-023-01308-2).

Photo: The Rotmoos valley in early summer 2021 (photo credit: Alpine Research Sites, Nikolaus Schallhart)



Advanced course cE3c "Use of Technology in Field Biology"

The advanced course "Use of Technology in Field Biology " took place between 6-9 June 2023 at Herdade da Ribeira Abaixo (HRA), one of the sites included in the Portuguese <u>LTsER Montado</u> platform. This course focused on the use of technological tools, which are increasingly employed in the **collection of animal ecology field data**, mainly due to the development of equipment that allows for automatic recording and storage of environmental information.

The students received training on the use of movement tracking devices (e.g., **GPS loggers, geolocators**), environmental variable data loggers (e.g., for recording temperature or water depth), passive acoustic monitoring devices (audiomoths), **drones**, **camera trapping, and species identification** apps (e.g., iNaturalist, Merlin). At the end of the course, the students applied the acquired knowledge by conducting a practical fieldwork using several of these devices. The results of species identification using the different technologies were entered by the students into a project specifically created for this <u>iNaturalist platform</u>.

Students made **444 observations of 162 species**, including species that are challenging to observe such as the otter, the stone marten, and the genet, which were registered on camera traps, and the golden oriole, the cuckoo, and the nightingale, recorded with the audiomoths.

Photo: Participants in the advanced course

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 <u>Euro-Biolmaging</u> is organising an Expert Group meeting about Remote training for Research Infrastructure staff and researchers. The meeting is organised as part of the <u>eRImote Project</u>. 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 <u>here</u>.

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 <u>here</u>. A preliminary list of speakers is available <u>online</u>.

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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