



News from Countries, Sites and Platforms: October 2022



"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 and so on - who are engaged in a wide variety of fascinating eLTER activities across Europe and beyond. So enjoy!



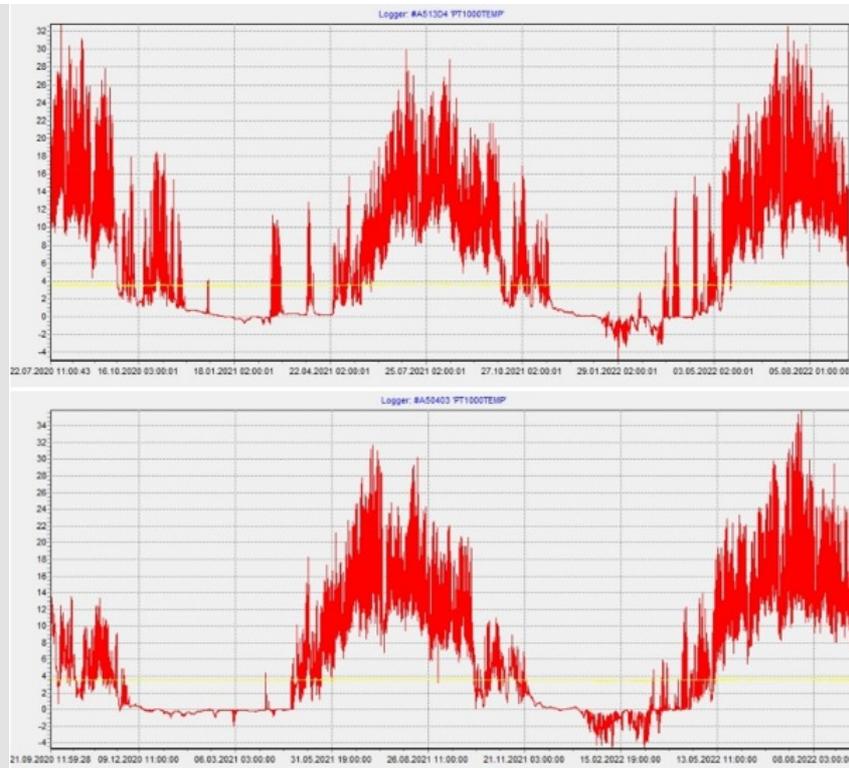
The Land Under Pressure Project approved by an EEA Grant to be implemented on the LTsER Montado platform

The LandUnderPressure project - Avoid, mitigate and restore pressured zones to combat desertification and increase resilience to climate change in the montado, was approved for funding with an EEA Grant and signed on the 17th of June 2022 in Portugal.

This project was part of the call for tender nº 5 of the EEA Grants - “Projects to prepare for **extreme weather conditions and risk management in the context of climate change**”. It will join other projects taking place in the [LTsER Montado platform](#), during 2023.

LandUnderPressure, coordinated by the [cE3c Researcher](#) - Alice Nunes, is promoted by the Faculty of Sciences of ULisboa and has as partners the Polytechnic Institute of Bragança and The Soil Conservation Service of Iceland.

This project aims to contribute to efforts to **avoid, mitigate and restore areas under pressure, to combat desertification and increase resilience to climate change in the montado**. It is focused on agroforestry systems comprising cork oak forests and extensive pastures, dominated by cork oaks or holm oaks at two scales: regional and property (where a pilot restoration project will be implemented and monitored at Herdade da Coitadinha, Portugal).



Increased climate extremes confirmed by the latest data from the LTER Italy Gran Sasso d'Italia" site

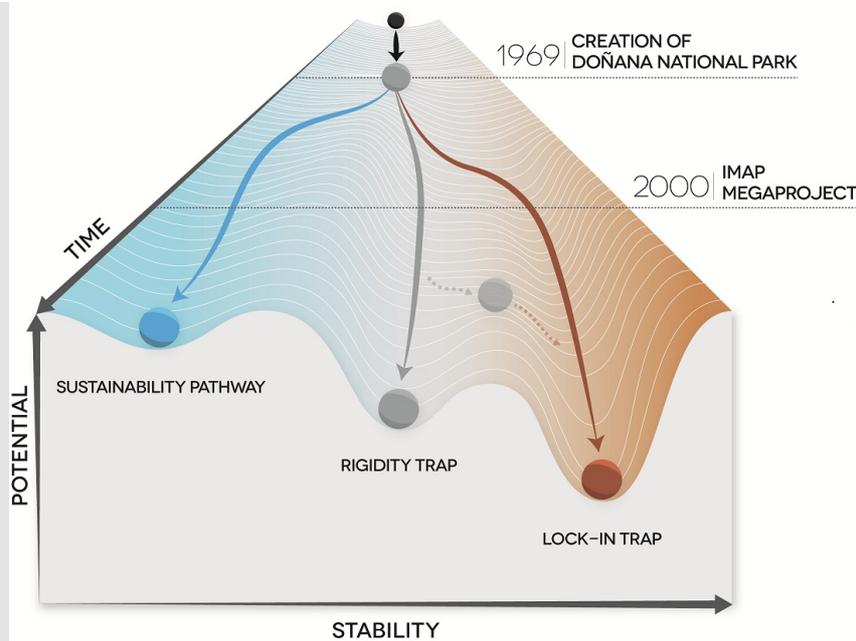
The trend towards increased climate extremes in the Central Apennines (Central Italy), already documented in *Petriccione & Bricca (2019)* ([doi:10.3897/natureconservation.3430218](https://doi.org/10.3897/natureconservation.3430218)) is clearly confirmed by the latest field data collected in September 2022 at the LTER Italy *Gran Sasso d'Italia* site between 2100 and 2400 m a.s.l. by ecologists from the **Biodiversity Department of the Carabinieri**.

As can be seen from the graphs shown above, **recorded summer temperatures in 2022 were 3-4 °C higher than in 2021, with winter temperatures 3-4 °C lower**, due to the presence of snow cover for only two months instead of the four to five months in 2021. The trend towards extreme annual temperature ranges and shorter periods of snow cover is increasingly confirmed by data collected over the last ten years at all LTER Italy high-altitude sites in the Central Apennines.

Upper graph: High-mountain primary dry grassland / (EU habitat 6170 - Alpine and subalpine calcareous grasslands)

Lower graph: High-mountain primary mesic grassland / (EU priority habitat 6230 - Species-rich Nardus grasslands)*

Bruno Petriccione, Carabinieri Biodiversity Dpt., Italy



Understanding sustainability pathways in Long-Term Social-Ecological Research Platforms

Enabling robust and just pathways to sustainability requires understanding how social-ecological systems (SES) respond to different governance configurations. The latter are, in turn, explained through their **historical trajectories, biophysical conditions, institutional dynamics, political-economic contexts, dominant discourses, and power differentials**. All these factors must be considered to devise future governance configurations that are able to foster successful sustainability pathways.

Key questions are **where and how we should start such a convoluted task**, involving multiple actors with different interests, values and beliefs about nature and sustainability. Recent research in the *Doñana region (Guadalquivir estuary, SW Spain)*, an estuary-delta SES and LTSER Platform, offers some answers to those questions. Doñana is characterized by a **“rigid” governance configuration for water resource use and wetland conservation**, posing a continuous risk of “locking-in” a situation from which it would be more difficult to achieve sustainability outcomes.

These ingredients, the researchers argue, could help **prevent harmful social and political dynamics**, and create a new baseline governance configuration more prone to nurture the conditions for a sustainability pathway. For further reading check the related publications in [Advances in Ecological Research](#), and a [SocArXiv preprint](#).

[Read more](#)



eLTER Stillberg site (Switzerland): renewed interest in treeline ecology at the International Mountain Conference IMC

The [International Mountain Conference](#) took place in Innsbruck (September 11-15, 2022), continuing the series of scientific conferences **exclusively targeting mountain-research**.

Hosted in the European Alps, the IMC provided a **fantastic opportunity for experts from different disciplines to discuss mountain-related issues in a cross-disciplinary setting**. The conference aimed at enhancing and synthesizing our understanding of mountain systems, particularly their response and resilience to global change.

On the verge of its 50th anniversary, the [Stillberg](#) afforestation experiment was presented at the IMC with two oral presentations and two posters, sowing the seeds of potential future collaborations in this unique site and setting in the Swiss Alps. The renewed interest for the five decades of monitoring data on growth and survival of trees at the treeline is now also supported by the new [StillbergDAT project](#).

This project will make the **data from 50 years of the different research activities conducted at eLTER Stillberg site** openly available to the scientific community, thus contributing significantly to diverse synthesis studies on mountain ecosystems.



LIFE MODERn(NEC) reports on air pollution

[LIFE MODERn\(NEC\)](#) (LIFE20GIE / IT / 000091) was launched in October 2021 to meet the requirements of Art.9 of the EU Directive "NEC" (National Emission Ceiling, 2016/2284), that commits Member States to monitor the impacts of air pollutants on terrestrial and freshwater ecosystems. The European countries pursue the objectives of the Directive through a **network of monitoring sites representative of the main European ecosystems**.

The current NEC Italy Network consists of **six forest and four freshwater sites, belonging to the monitoring programs ICP Forests and ICP Waters**. Nine forest sites (including six ICP Forests) are dedicated to the specific monitoring of ozone and its effects on vegetation. Three out of the six forest NEC sites are also included in the LTER Italy Network (ABR1 Selva Piana, CAL1 Piano Limina, LAZ1 Monte Rufeno), as well as two of the four freshwater NEC sites are also LTER sites (upper and lower Lake Paione). The project aims at selecting four new forest and six new freshwater sites, to improve the representativeness of the Network.

The project also intends to **implement innovative "indicators" of the effects of atmospheric pollution on ecosystems**. On the 7th of September 2022, in Torino (IT), the first press conference of *LIFE MODERn(NEC)* took place, together with the 2022 edition of Clean Air Day, in cooperation with Clean Cities. It was the first occasion of presenting project aims to the press and the general public.

Photo: First press conference of LIFE MODERn(NEC)



Portugal presents eLTER sites during Ecology Day

Each year, the different LTER-Pt partners prepare dissemination events for the general public to promote knowledge and generate discussions about the **role of ecologists within LTER sites**, as part of an *Ecology Day* celebration.

Ecology Day emerged as a celebration of the 150th anniversary of ecology in 2016, marked with a roundtable at the European Parliament in Brussels. The 14th September was the chosen date since it coincides with the day **Ernst Haeckel defined ecology as a science**. Since 2017, this day has been promoted by the *Portuguese Society of Ecology (SPECO)*, in association with the *European Ecology Federation (EEF)*. This year the celebration ran from 13-17 September.

Two sites, **Ria de Aveiro and LTER-Estuaries**, offered activities for the **general public**. For Ria de Aveiro, this involved screening an LTER video, followed by a general discussion. The activity, entitled *Ria de Aveiro as a Natural Laboratory*, was organised in the Centro Ciência Viva of Aveiro to be accessible for all. Meanwhile LTER-Estuaries offered a quiz to test peoples' knowledge about the Minho, Mondego and Mira estuaries, that are part of the *LTsER Estuaries platform*. This online activity is updated quite often in order to promote better scientific literacy on different estuaries.

Photo: Aveiro sunset



Draw me an observatory: Second OZCAR summer school

The second *OZCAR summer school* ("Draw me an observatory") was held from 3 to 8 July 2022 at the *Séolane Centre* located in Barcelonnette. This summer school pursues one of the objectives of the *OZCAR Research Infrastructure* (RI) to **promote training to and through research on the knowledge of the Critical Zone and to train the new generation of scientists** to approach the study of the Critical Zone in a multi- and interdisciplinary way.

The school was an undeniable success, bringing together nearly **55 participants (28 early career researchers, doctoral students, post-doctoral fellows, lecturers and engineers from a wide range of backgrounds) and 26 speakers** from the field of Critical Zone field, including not only scientists from the "*OZCAR*" *RI and Zones Ateliers* RI networks, but also, as a new feature of this school, personalities from the humanities and social sciences (**anthropology, philosophy, sociology, history and literature**) as well as artists. A varied and complete program kept participants and speakers on their toes with the discovery of *OZCAR RI* sites and observatories, as well as an observatory of the American Critical Zone network during the morning classes.

The summer school included practical workshops on three themes - **geochemistry, geophysics, evapotranspiration** - as well conferences and poster sessions during the evenings. New for this school, and proving very successful, was the "artists' curiosity cabinet" where participants were asked to provide and present an object they felt represented the critical zone, or to write poems highlighting their perception of the critical zone.

Find the synthesis report of the OZCAR summer school on the [OZCAR website](#).



The Morris Kahn Marine Research Station in Israel monitors the shallow Mediterranean ecosystem

The station located in Kibbutz Sdot Yam, Israel, was established to provide **baseline data and understanding of the shallow Mediterranean ecosystem**. MKMRS is a satellite station of the *Leon H Charney School of Marine Sciences, University of Haifa*.

Its [Activity Report](#) covers monitoring seasons 1-10 of the first 6 years of operation. The Long-Term Ecological Research (LTER) station was established in 2015 as a **response to the lack of open-access, high-resolution data on several aspects of the Israeli marine space**. The team regularly monitors several layers of the sea, including:

- **Apex Predators**
- **Rocky reef Fish community**
- **Marine Invertebrates and algae**
- **Water Chemistry**
- **Marine Pathology**

The Israeli coastal area and the eastern Mediterranean Sea are experiencing **accelerated development and infrastructure projects along the coastline and massive exploitation of marine resources never experienced** in the region and nation. Coupled with this, the effects of global climate change and acceleration in the settlement of foreign species, are driving rapid changes for life in both the shallow and deep sea.

To accompany such momentum, there is a need to provide reliable knowledge and an in-depth understanding of how the system works. To

accomplish these goals, the station employs top-of-the-line researchers specializing in the Mediterranean and collaborates with other academic and research centres in Israel.



OZCAR- RI and Zones Ateliers Network organise two events

International scientific symposium

The French national research infrastructures *OZCAR- RI (Critical Zone Observatories, applications et research)* and *Zones Ateliers Network (RZA-RI)* **will hold a joint international scientific symposium from 9 to 10th November 2022 to discuss and organise their contribution to the eLTER infrastructure.**

This symposium is an opportunity to review our long-term observation systems and to support their transformation in close interaction with actors. It will be held in English at IGP, 1 Rue Jussieu, 75005 Paris. The **symposium will combine ten keynote lectures across three sessions, a poster session, a roundtable with actors and a collective workshop** to imagine the LTSEr observatory of the future:

- i) Critical zone instrumentation, from CRITEX to TERRA FORMA**
- ii) Sciences for action and transformation**
- iii) Thinking of the LTSEr observatory of the future.**

More information will follow on the eLTER website, as well as the OZCAR-RI and Zones Ateliers Network.

Congress of French local authorities for air quality

The Alliance of French Local Authorities will hold its first congress on **Air**

Quality, from 18 to 19 October 2022 in Strasbourg. This congress is co-organised by Eurométropole Strasbourg, a member of Zone Atelier Environnementale Urbaine. The aim of these two days is to promote commitment from local authorities, to share good practices and to allow local elected officials and public agents to improve their knowledge and skills on air-related subjects: mobility, wood heating, agriculture, urban planning, involvement of residents, indoor air, financial cost of air pollution, etc.

[The event is open to all local authorities on registration.](#)

[The link to the program.](#)



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