News from Countries, Sites and Platforms: May 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 and so on - who are engaged in a wide variety of fascinating eLTER activities across Europe and beyond. So enjoy!

First eLTER regional cluster meetings in

Brussels and Uppsala

On 17-18 January the eLTER coordination, National Coordinators and site managers from **Belgium, the Netherlands, Ireland and the UK gathered in Brussels** to discuss current developments in their national networks.

The meeting proved to be a great **opportunity to identify common challenges and exchange experiences with pushing forward national processes** towards establishing eLTER. Moreover, the participants were thoroughly updated on the current status of eLTER from a European perspective.

"It was a useful opportunity to share thoughts with, and learn from, other countries regarding **national eLTER development approaches and challenges**, and to clarify various issues with the Head Office team", said Don Monteith from the UK team.

Participants were happy to learn about the development not only of the project in general, but of the other national networks: **learn from each other's mistakes, borrow good ideas and improve shared practices.**

This is best summarised by Nathalie Cools from Belgium: "The cluster meeting was a very instructive and helpful meeting for us as national coordinators. We **now know better where we stand in the eLTER process compared to our neighbouring country networks**."

The second regional cluster meeting was held on 13-14 March in **Uppsala, Sweden**, where the eLTER coordination, National Coordinators, as well as site and data managers from **Denmark, Norway, Sweden, Finland and Estonia**, came together. Further participants from **Latvia, Lithuania and the eLTER Head Office**, amongst others, joined virtually.

Participants emphasised the **value of learning from other countries' experiences** with obtaining national funding and ministerial support. The constructive discussions yielded several ideas about how to move forward and join forces in the region, including a potential **workshop for arctic sites and further collaboration in the context of the BioDT project**.

Photo: Participants during the first eLTER regional cluster meeting in Brussels.

eLTER Grand Campaign: Exploring the Israeli desert

Israel was the first country to be visited by the eLTER Grand Campaign team for photo and video documentation of the research being done there, as well as the flora, fauna and landscape. As much as the team would like to present its journey as an adventure, it survived the harsh environment of the Israeli desert in the comfort of air-conditioned transport and accommodation. So don't let them tell you otherwise!

Nevertheless, it was a real challenge to capture the **essence of an ecosystem that is vastly different from what most European researchers and networks are used to**. The GC team visited two sites:

(1) **[Park Shaked (PSK), LTSER Northern Negev](#)** where research focuses on (but not only): **long-term experiments (up to 20 years) for monitoring changes** in abundance, diversity, species composition and distribution, and development of biological soil crusts, hydrological studies on the rainfall-runoff relationship under natural and manipulation experiments, cross scale-cross level interactions in the natural and human-modified landscape, and global comparison of woody plant diversity effects on ecosystem functionality of most dryland regions of the world.

(2) **[Ramon (RMN)](#)** where research focuses on **biodiversity, climate change, and runoff hydrology**. The arid zone is a geo-hydrological ecological system that is dependent on a combination of rainfall and runoff that creates water-enriched parches that support relatively high biodiversity.

You can track the progress of the Grand Campaign on Facebook, LinkedIn and Twitter, but especially on the newly created **[eLTER Instagram](#)** page. Just search for these hashtags **#GrandCampaign #eLTERgc #eLTERGrandCampaign**.

Photo: Drone view from the edge of the Mitzpe Ramon crater in Israel made during the Grand Campaign visit.

Ecological restoration within eLTER community: the results of a questionnaire presented at Encontro Scientia in Portugal

On March 16, 2023, Bruna Paolinelli Reis, a researcher at the [cE3c - Centre for Ecology, Evolution and Environmental Changes](#) and [CHANGE – Global Change and Sustainability Institute](#), presented the results of a **questionnaire on ecosystem restoration directed to eLTER restoration experts at the Encontro Scientia in Portugal**. The Econtro Scientia is a weekly meeting organized by cE3c and provides an excellent opportunity for researchers to share their work and insights on **ecology, evolution and environmental changes**.

Bruna's work was developed during her ERASMUS training at cE3c in Portugal and involved partners from the [Society of Ecological Restoration Europe (SERE)](#), the [Restoration Ecology Group – Hungary](#), and also eLTER site managers.

During her talk, she demonstrated **how a long-term ecosystem perspective of eLTER provides key insights about ecosystem restoration** and how this long-term knowledge can be crucial to **meet the challenges of the UN Decade on Ecosystem Restoration, the EU Green Deal, and the Biodiversity Strategy 2030**.

Bruna explained how she gathered information about **42 restoration projects** covering all major **terrestrial habitats from 18 countries in Europe and Northern Africa**. She concluded that ecological restoration takes time and requires long-term research and standardisation, and the eLTER network could help to tackle these issues through its **infrastructure, its wealth of long-term data sets, and the diversity of expertise and strategies within eLTER**. eLTER can, therefore, play a valuable role in the **large-scale restoration of European ecosystems**.

Photo: A promotional screen for the Encontro Scientia weekly meeting with Bruna Paolinelli Reis.

Collaboration between biodiversity and socio-ecological data projects

A **poster** presented during a dedicated session at the **eLTER consortium meeting in Frankfurt**, Germany (17 to 21 April) highlighted the **collaboration between researchers contributing from biodiversity and socio-ecological data provided by eLTER RI sites and long-term socio-ecological research platforms**.

It presented the [BioDT project](#) which has eight **use cases,** one of which concerns **creating a digital twin* linking cultural ecosystem services of recreational potential and biodiversity** and is initially focusing on the **Cairngorms LTSER platform**.

The BioDT project use cases will test the work developed by the project and will **address the biodiversity challenges through scenario simulations, predictions and biomonitoring methods**. The cases will be divided into four main groups, focused on: 1) species response to environmental change; 2) genetically detected biodiversity; 3) dynamics and threats from and for species of policy concern; 4) species interactions with each other and with humans.

Several eLTER sites and platforms joined the poster session, all of them interested in the potential to **include their datasets to parameterise the digital twin being developed in BioDT and provide knowledge to their local stakeholders**.

* The BioDT consortium adheres to the following definition of a digital twin: "A digital twin is a virtual representation of real-world entities and processes, synchronized at a specified frequency and fidelity."

LTsER Ria de Aveiro addresses climate change with two projects

The research group of **LTsER Ria de Aveiro** from the University of Aveiro is involved in **two H2020 projects** that will consolidate basic knowledge on **biodiversity, ecosystem services, restoration ecology, ecosystem management and environmental economics**. Through these projects, the group will be able to **address climate change, biodiversity loss and habitat degradation**, aiming towards **sustainable management of European wetlands**.

 The two projects are:

1. RESTORE4Cs - "Modelling Restoration of wetlands for Carbon pathways, Climate Change mitigation and adaptation, ecosystem services, and biodiversity, Co-benefits" will **assess the role of restoration action on wetlands capacity in terms of climate change mitigation and a wide range of ecosystem services** using an integrative socio-ecological systems approach.

The project involves a multidisciplinary consortium of **15 partners, from 9 European countries**, bringing together a well-structured and multi-disciplinary team, holding all the essential expertise to be at the forefront of this research area/policy interface.

 2. BESIDE - "Institutional, BEhavioural, critical and adaptive economics towards Sustainable Development, management of natural capital and circular Economy" aims to **reinforce and consolidate at the University of Aveiro a research group of excellence in Environmental Economics and Natural Resources**.

The BESIDE project will benefit from the scientific coordination of Dr. Ana Lillebø and the recent hiring of ERA Chair Holder, Dr. Helena Vieira. BESIDE Involves all **12 research groups from CESAM, GOVCOOP staff and the (ongoing) hiring of an exclusive team in Economics**. Research activities will focus on filling gaps in environmental economics studies to support business and policy decisions, financial impact assessment of environmental policies, high-skilled job opportunities, and the promotion of circular economy solutions and business models.

Photo: Participants during the RESTORE4Cs kick-off meeting

CALTER project started new phase of carbon cycle research in LTER Slovakia

In Fall of 2022, LTER Slovakia started the project **"Soil carbon fluxes in dominant forest ecosystems along an elevation gradient in the Western Carpathians" (CALTER)**. The project is funded by the national grant agency APVV and led by dr. Peter Fleischer from the Technical University in Zvolen (Slovakia). This is **the first project that involves all institutions coordinating research in LTER Slovakia sites**.

The project's main aim is to identify carbon loss by respiration and leaching and to identify their driving factors along an elevation gradient representing the main forest communities in the Western Carpathians.

The project is implemented in the following **LTER sites**:

- **Báb** – lowland oak forest, altitude 210 m;
- **EES Kremnické vrchy** – beech forest, 500 m;
- **Poľana Biosphere Reserve** – mixed beech-fir-spruce forest, 850 m;
- **Tatra National Park** – mountain spruce forest, 1,100 m;
- **Kráľova hoľa** – acid alpine grassland, 1,900 m.

The possible impact of elevated temperature on soil carbon fluxes will be studied in open-top greenhouses. **Besides soil respiration, some other parts of the carbon cycle, climate, soil and vegetation properties will be studied**. The project has finished its preparatory phase and site-based measurements began in March.

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