

ANAEE-ERIC

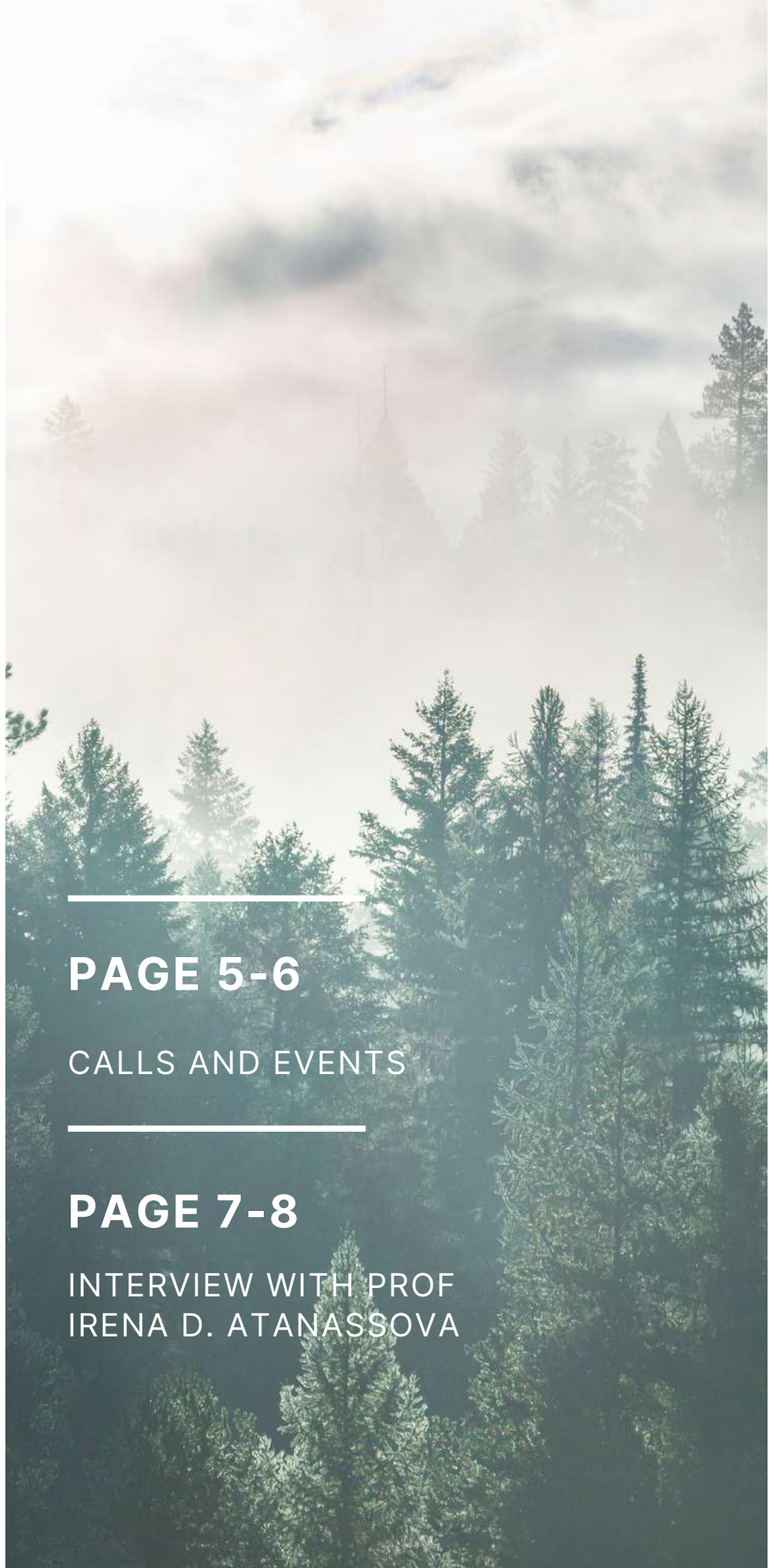
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IRENA D. ATANASSOVA



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NEWSBYTES FROM OUR NATIONAL NODES

FOREWORDS

Dear reader,

Welcome to the Spring issue of our newsletter. I hope that you will enjoy reading it, while finding the information useful.

I am writing this text on the 8 March, the International Women's Day. This day was to be instituted to recognize women achievements, regardless of divisions, whether national, linguistic, ethnic, cultural, economic, or political.



In this issue we present the inspiring portrait of Dr. Irena Atanassova, one of the leading scientists in ecology and agronomy, Director of the ISAPPNP institute and coordinator of our national node in Bulgaria. Across the network of institutions that are making the backbone of the AnaEE Research Infrastructure network, there are many strong figures of female scientists. We should also think into the many female engineers, technicians, and administrative colleagues, who are behind the scenes, but essential for the research at AnaEE.

Among the news, the fourth Assembly of Members took place in Helsinki, a great and inspiring place, and we thank our Finish colleagues for their kind hospitality and rich discussions. Also in December, we sign officially the host agreement of the Interface and Synthesis Centre with the Czech Global Change Institute in Brno. After the headquarters, AnaEE-ERIC service centres are taking off.

We are trying to make this newsletter informative and playful. Please, don't hesitate to share with us your ideas of articles, news, projects, etc.

With best wishes, *Michel Boër*

ABOUT ANAEE- ERIC

The core mission of AnaEE-ERIC (Analysis and Experimentation on Ecosystems European Research Infrastructure Consortium) is to create a continental-scale network of advanced experimental facilities, analytical platforms, and modelling approaches to study ecosystems.

The organization aims to understand the impacts of global environmental changes on ecosystems and develop strategies for adapting to and mitigating these changes. The goal is to safeguard ecosystem services and their benefits to society. To achieve its objectives, AnaEE-ERIC focuses on coordinating and integrating high-tech platforms and data resources across Europe.

It offers experimental capacity to investigate multiple global change pressures, a variety of ecosystem types, analytical tools to understand ecosystem processes, and the ability to investigate changes across different biological levels. AnaEE-ERIC also connects experiments to models through a Data and Modelling Center, enabling upscaling, inference, and extrapolation.



ANAEE-ERIC - NEWS AND UPDATES

AnaEE-ERICs 4th Assembly of members

Helsinki, 23-24th of November 2023

The fourth AoM of AnaEE-ERIC took place in a freezingly cold Helsinki at the end of November.

Our Finnish Node presented the latest news, and the atmosphere breathed optimism for the future. The preparational phase of the project is coming to an end and this year AnaEE-ERIC will begin to deliver real, concrete results by offering research services.



The group present in Helsinki, AoM 2023.

The chairman of the board, Sanna Sorvari-Sundet said that the meeting brought a lot of hope for the future of AnaEE-ERIC.

- I am glad about three things, first of all the organisational set up and establishment is picking up. It is a crucial element for the operations that we have good personnel installed in the central hub. Second, I am happy that the catalogue of services has concretely taken form and I am looking forward to the upcoming calls of AnaEE-ERIC.

Thirdly, Sorvari-Sundet thinks AnaEE-ERIC has been very successful in partnering with other RIs and gathering funding from projects at a European level.

- That demonstrates that the field we work in is very relevant. It's serving a wide community from food and health to environmental clusters.

There is a good collaboration with many RIs and science communities, placing AnaEE-ERIC in a nice position in the European landscape, she sums up.

The following AoM will take place in Madrid, Spain, 12-13th of June 2024.

CzechGlobe is now home to the Interface and Synthesis Centre (ISC) in AnaEE-ERIC!

Brno, 13 December 2024

This milestone was officially reached with the signing of a host agreement between CzechGlobe and the AnaEE-ERIC. ISC will lead result integration, prepare papers, and contribute to the usage and synthesis of data from experiments in ecosystems. This also marked the culmination of almost ten years implementation of AnaEE infrastructure providing tools for experimental studies of terrestrial and aquatic ecosystems in Europe.

PERSONNEL UPDATES - 2 OPEN POSITIONS

There are news and updates for the AnaEE-ERIC crew - **Sarah Dramé**, Project Manager for AgroServ, has now officially transferred from a contract with CNRS to AnaEE-ERIC. The project is preparing for the second call for proposals to be opened in June.

Our communication efforts will get more muscles as our new Communications Officer, **Amanda Ölander**, has joined us. During her first months her focus has been on AgroServ, but she has now been joined by **Daniele Baldo**, who will overtake the main responsibility of the future project communication.

It's also looking promising for the two open positions in our Interface and Synthesis Centre, in Czech Republic. More on that shortly.

There are currently **two open positions** as *Science Project Manager* and *IT engineer* situated in the Central Hub in Gif sur Yvette, France. The full job description is available [on our website](#).

PROJECT UPDATES

AnaEE-ERIC - a sought-after partner for its services in both the life and environmental sciences.

AnaEE-ERIC partnered key European consortia in Horizon Europe INFRA calls in the spring of 2023 and we are extremely pleased to share with you that the expertise of the ERIC, and platforms across all members of the RI, will be shared with the larger community via four INFRA projects in 2024. Here are the latest updates on them - and other project updates.

Fheritale has begun!

Florence, Italy, January 2024

The kick-off meeting for FHERITALE took place in Florence where DG Michel Boer and Senior Programme Manager (SPM) Lavanya Premvardhan participated. The project's mission focuses on the impact of artificial materials (plastics, micro-, nano-, and biotechnological materials) on health and the environment. AnaEE-ERIC is taking the lead on Work Package 4 - Definition of key thematic priorities.

Coordinator: CIRMMMP

Microbes4Climate has begun!

Braga, Portugal, February 2024

AnaEE-ERIC participated in the kick-off of Microbes4 Climate and we look forward to getting started with this much needed project as microbiomes-plants-soil-environment interactions, and its roles in climate change responses, resilience, and mitigation is still poorly understood. AnaEE-ERIC takes the lead on Work Package 7 - community building, training, and user engagement.

Coordinator: MIRRI-ERIC

AquaServ

Research Infrastructure Services for Sustainable Aquaculture, Fisheries and the Blue Economy. The starting date is set for the first of April 2024. In this project three AnaEE-ERIC installations from our Finnish and French national nodes offers TA/VA that further enhances the opportunities for collaboration, knowledge exchange, and advancement in sustainable aquaculture and fisheries practices.

Coordinator: EMBRC-ERIC.

IRISCC

Integrated Research Infrastructure Services for Climate Change will have its Kick off meeting on 5.-7. June 2024 in Helsinki.

It represents a concerted effort to harness research infrastructure and expertise in tackling the complex challenges posed by climate change.

Coordinator: LUKE

ERIC Forum 2

ERIC Forum 2 held its annual meeting in February 2024. Following the successful set-up and implementation of the ERIC Forum (2019-2022), further efforts are needed to consolidate its achievements and expand the coordination and monitoring of the now 28 ERICs. This project aims to structure the cooperation between ERICs, and deepen the forum's contribution to research policies.



AnaEE-ERICs SPM Lavanya Premvardhan made a presentation as the WP leader in WP10 - strategy on building shared services between ERICs.



Group photo of participants during Microbes4Climate (Photo: LinkedIn, MIRRI).

CALLS AND EVENTS



CALLS

AGROECOLOGY

The first AGROECOLOGY co-funded call, "Fostering agroecology at farm and landscape levels" is launched!

AGROECOLOGY is an ambitious, large-scale European research and innovation endeavour between the European Commission and 26 Member States, Associated Countries and Third Countries. This partnership will support an agriculture sector that is fit to meet the targets and challenges of climate change, biodiversity loss, food security and sovereignty, and the environment, while ensuring a profitable and attractive activity for farmers.

The proposals shall provide a strong strategy for stakeholder engagement in co-creation processes and for communication and dissemination of the project activities and results. This means, in particular, a multi-stakeholder or living lab approach is expected.

The deadline for pre-proposals is 2024 April 26, 14:00h CEST.

All information on the call including documents as well as a partnering tool can be found on the submission website: <https://agroecology.ptj.de/call1>

EVENTS

NEW AnaEE-ERIC webinar series!

AnaEE-ERIC launches a new series of webinars on **climate change and environmental research** in Europe! The goal is to raise awareness of the potential within the AnaEE-

ERIC consortium, and to shed light on burning topics and the latest news on environmental and climate change-research AnaEE ERIC will begin a series of Webinars for one Wednesday per month until June 2024, to have a short summer-break and return in September.

The first Webinar will be in March, and open to an external audience next autumn. Follow our social media for more updates.

Suggestions on interesting projects and people to invite are always welcome!



Research & Innovation Week, 18-21th of March 2024, Brussels

The [Research and Innovation Week](#) will take place between 18 and 21 March 2024 both, online and physically in Brussels.

Celebrating the 40-year journey through the Research and Innovation Framework Programmes, the R&I Week 2024 will debate the future of R&I and shape the contribution to EU political priorities, in particular the EU Tech Sovereignty and Competitiveness.

Share your work at this year's Landscape 2024 Conference by 15th of March. (Conference the 17-19th of September 2024, Berlin.)

LANDSCAPE 2024 invites anyone interested in the future of agriculture and the role of technological innovations and actors in driving sustainable change.

There is the possibility to share your work and the deadline for submitting is 15th of March 2024. The session titled "[Living labs for the transformation of agroecosystems](#)" could be of special interest.

The Wallonia S3 Forward event, 11th of April 2024, Namur.

The aim is to initiate transnational collaborations with agri-food and innovative environment ecosystems at EU level. In addition, on the sidelines of the event, meetings will be held with operators active in the Ingredients for a Circular Economy partnership (I4CE) and for EU funded

projects: [MixMatters](#), [BioTech4Food](#), [Be-Resilient](#) and [F2F](#). These partnerships and projects focus on the following themes: double transition, bio-based ingredients, bio-waste recovery, internationalization, etc.

4th EU Carbon Removals Expert Group meeting, 15-17th of April 2024, online

In April, the next Expert Group meeting will take place online to discuss certification framework, certification process, verification, and registries, carbon farming, permanent removals and long-term storage in products.

The agenda and practical details to follow the meeting will be shared soon.

World Circular Economy Forum, 15-18th of April, 2024, Brussels and online

The world's leading event for circular economy thinkers, doers and leaders showcases the most impactful circular solutions from around the world.

Online participation is open to everyone.

Policy makers, industry leaders, academics and activists from all around the world will turn circular visions into actions More information: [Visit external website](#).

Tripartite Exchange Seminar 2024, 8-31st of May 2024

Eurofound, Cedefop and the EEA are organising a Tripartite Exchange Seminar (TES) to identify the way the green, just transition is dealt with through social dialogue in European countries. It will zoom in on the impact of the green transition on industrial relations, employment, skills, and training needs at national and sectoral level and explore how the green, just transition can become a standard topic of the social dialogue agenda. Brussels and online. More information: [Visit external website](#)

EU green week, 29-30th of May, conference registration open in April.

EU Green Week is an annual opportunity to raise awareness and to promote and discuss European environmental policy. Organised by the European Commission's Directorate-General for Environment, this high-level event attracts policymakers, leading environmentalists, stakeholders, and interested parties from across Europe and the globe.



The 2024 EU Green Week is part of a wider communication campaign dedicated to the topic of water resilience.

Guest speakers will discuss topics such as: fostering a water smart economy within the EU, addressing the challenges of restoring and safeguarding the disrupted water cycle, ensuring widespread access to clean and affordable water and international water cooperation.

This year exceptionally, [partner events](#) can be organised beyond the Green Week period, starting from 29 May till 1 September 2024.

3rd International Conference on Natural Hazards and Risks in a Changing World, 12-13th of June 2024, Amsterdam.

The in-person format of this event will facilitate broader exchanges between stakeholders from policy makers, scientists, practitioners, research organisations and communities driving the engagement with compound and multi-hazard risk around the world. More information at <https://www.changingworldrisks2024.eu/sites/>

26th IUFRO WORLD CONGRESS, 23-29th of June 2024, Stockholm.

The Swedish University of Agricultural Sciences and the City of Stockholm in close collaboration with the Nordic and Baltic partners, welcome delegates from all over the world to Stockholm 2024 under the theme Forests and Society Towards 2050.

Link: <https://iufro2024.com/>

OTHER

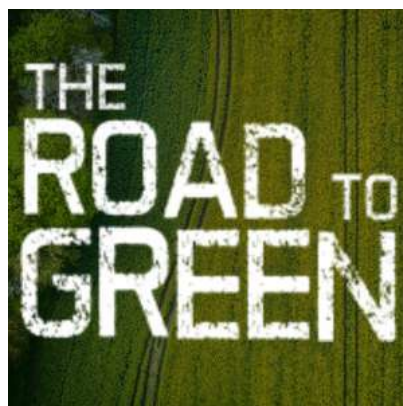
THE ROAD TO GREEN - DOCUMENTARY SERIES ON THE EUROPEAN GREEN DEAL

The European Commission has launched a TV magazine in cooperation with Euronews. The programme explores how various aspects of the European Green Deal are taking shape on the ground, positioning EU environment policies as responses to ongoing societal challenges.

It features monthly 8-minute videos, delivered in a road trip format, covering Europe's continuing transformation to a circular, net-zero, nature-positive and clean economy.

The reporter Cyril Fournier takes you on a road trip across Europe to meet those who are finding solutions to the greatest environmental challenges of our time. Carbon neutrality, circular economy, zero pollution, biodiversity preservation.

The episodes are available here: <https://www.euronews.com/green/green-series/the-road-to-green>



CLIMATE ACTION HIGHLIGHTS EU

The urgency to take decisive climate action has never been greater, and at the European Commission we've been busy working on that in 2023.

Here are some of the highlights of the past 12 months: https://climate.ec.europa.eu/news-your-voice/news/climate-action-highlights-2023-2023-12-21_en

WOMEN AND GIRLS IN SCIENCE!

Since 2015, UN General Assembly declared the 11th of February as the International Day of Women and Girls in Science. This day aims to raise awareness in order to achieve full and equal access to and participation in science for women and girls. It also aims to promote gender equality and the empowerment of women and girls.

According to [Shefigures2021](#) in the field of research and innovation policy, almost 50% of doctoral graduates in the EU are women (2018,

Eurostat) but they are under-represented at the highest level in academia reaching about 42% of academic staff, with almost half of them as grade D to only a quarter of them as grade A.

AnaEE-ERIC presents to you a portrait of an inspiring female scientists, prof. Irena D. Atanassova, who is also the leader of our Bulgarian node.

Her research deals with various organic and inorganic soil ameliorations and their effects on dealing with soil pollution, contamination and improving soil fertility. One of these ameliorants is biochar which improves a lot of soil characteristics and helps plants thrive even on soils with unfavourable properties. It is therefore used on various degraded lands such as mine soils. It also provides soils with nutrients and improves the structure and microbiological activity, which is why it is a very good way of decreasing emissions of greenhouse gases and improving soil structure.



SOIL DESERVES TO BE LOVED

Exploring the Soil: A Journey of Passion and Purpose with Dr. Irena Atanassova.

Irena Atanassova's journey into soil science was sparked by her father's infectious enthusiasm for agricultural chemistry.

— My father seemed very happy with what he was doing, so I became curious...

Continue on next page >>>



IRENA ATANASSOVA

Prof. of soil science and environmental chemistry at the Institute of Soil Science, Agrotechnologies and Plant Protection.

Leader of a project to the National Science fund at the ministry of education and science in Bulgaria.

What began as this mere curiosity gradually transformed into a deep-seated passion for understanding the intricate dynamics of soil ecosystems.

Driven by a desire to uncover the hidden treasures beneath our feet, Dr. Atanassova found herself captivated by the enigmatic world of soil.

— I am chemist by background and graduated from the faculty of chemistry in 1985 after which I started my PhD at the institute of soil science. Actually I didn't have any idea that I would become a soil scientist but little by little, when I realized that soil actually is an underestimated natural resource, I was enchanted by the idea of studying it further, she recalls.

Despite soils' fundamental importance to life on Earth, it often remains underappreciated, referred to simply as "dirt." Dr. Atanassova, however, sees it differently, believing that we owe the soil a lot of attention and a lot of love.

MORE SELF CONFIDENT GIRLS 2024

The situation for young female scientists has changed since she started her career herself.

— The young women of today are see the importance of science, they see the fact that society turns to science in situations of crisis, as we saw during the COVID crisis. Women acquire more and more strength, ambition and enthusiasm, and they are assured that they can do things as well as the men, she says.

Her impression is that women in science are much more involved, stronger and self confident than they used to be.

— So I can definitely see a positive development.

As she delved deeper into her research, Dr. Atanassova became increasingly committed to addressing soil degradation and advocating for its protection. Soil is more than just a scientific subject - it's a living, breathing ecosystem that sustains life on Earth.

— It's actually one of the most complex, if not the most complex, ecosystems on earth, with its diverse array of organisms and intricate chemical composition, soil embodies the interconnectedness of all living things.

With a sense of optimism she acknowledges that there is a growing awareness of soil-related issues and the increased funding directed towards soil research initiatives confirms this.

However, the importance of immediate action to mitigate soil degradation and ensure the sustainability of this precious resource for future generations can not be overstated.

— I hope that society will understand that soil is important for maintaining ecosystem services on earth; for the pure water, for the cycle of chemical elements including macro and micro elements. Pollutants are degraded in soil either by strongly absorbing them or degrading them to non-hazardous substances due to the microbiological activity that takes place inside.

Her journey in soil science led her to explore the intricate web of factors contributing to soil degradation, from pollution to climate change. And the soils are under pressure. With climate change, extensive farming methods and urban expansion the needs for action are urgent. According to the EU strategy around 70% or more of the soils could be degraded by year 2030.

With a heartfelt plea to young female scientists, she urges them to join the fight to protect our planet. She sees it as a mission, something that the scientific community does in favour of society.

— Society will need more scientific research and more scientists, she affirms.

And despite the challenges ahead, Dr. Atanassova remains optimistic.

— As Greta Thunberg mentioned a couple of years ago 'climate change is not a problem of science, scientists have already admitted the effects of climate change, it's a problem of political decisions'. And in my view as a scientist is that we have to take sustainable actions in order to preserve not only air and water but also soil as natural resources. Because without soil we can't live on the planet, she sums up.



NEWSBYTES FROM OUR NATIONAL NODES

BELGIUM

Prof. Dr. Nadia Soudzilovskaia (UHasselt) will take over the leadership from Prof. Dr. Ivan Nijs (UAntwerp), as part of a rotation leadership principle adopted by AnaEE Flanders/Belgium.

Focus on the aquatic “Mesodrome” platform (UAntwerp, ECOSPHERE)

Previously: An impressive experiment in the flume took place in 2021: large monoliths, excavated from a natural reed (*Phragmites australis*) tidal marsh along the Scheldt estuary, were installed in the Flume artificial river in order to be exposed to high flow velocities. [This research](#) demonstrated that tidal marshes, even in winter without aboveground biomass, have the potential to be a valuable extra natural barrier reducing flood discharges towards the hinterland, following a dike breach. These results can be used to rethink the idea of dike strengthening as a primary measure against tidal storm floodings in future times as tidal marshes could be used as part of the overall flood defence.



Currently: Atlantic salmon (*Salmo salar*), raised in aquaculture tanks in 2023, are being used to investigate the effects of chronic stress on heart morphology and functioning of these fish. In experimental ponds, the fish are exposed to two treatments: control and stress. Furthermore, also swimming performance trials and heart rate measurements are conducted in the raceways. The results of this experiment will give better insights into the physiological functioning of the Atlantic salmon related to commercial cultivation of these fish.



CZECH REPUBLIC

1. In the second half of 2023, the project “AdAgriF - Advanced methods of greenhouse gases (GHG) emission reduction and sequestration in agriculture and forest landscape for climate change mitigation” was launched. The project has great use of the experimental and analytical infrastructure that is part of AnaEE-ERIC.

The main objectives are to increase the capacity of agriculture and forestry to store carbon in the soil in the long term, to reduce emissions of trace greenhouse gases (N_2O and CH_4), to develop a network of stations for monitoring carbon capture/emissions by ecosystems using inverse modelling, and to facilitate the implementation of the best methods into practice.

The project uses for example Experimental station Domanínek - Open top chamber facility, Phytoscopes - Growth chamber facility, Brno. The involvement of the analytical infrastructure - Laboratory of metabolomics and isotope analyses and Flying laboratory of imaging systems is also significant.

2. From a long-term experiment running at the "Cultivation domes/Bily Kriz" research infrastructure, a manuscript was published in 2023 in the journal *Tree Physiology* that focuses on the interaction of the effect of simulated increased nitrogen deposition and limited water availability on changes in the effect of elevated CO₂ concentration on photosynthetic performance of Norway spruce (*Picea abies*).

Drought, in combination with reduced nitrogen availability, causes downregulation of photosynthesis, thereby significantly reducing the stimulatory effect of elevated CO₂ concentration. Conversely, however, elevated CO₂ concentration leads to increased water use efficiency, but only when nitrogen availability is increased.

Ofori-Amanfo, K.K., Klem, K., Veselá, B., Holub, P., Agyei, T., Juráň, S., Grace, J., Marek, M.V., Urban, O., 2023. *The effect of elevated CO₂ on photosynthesis is modulated by nitrogen supply and reduced water availability in Picea abies*. *Tree Physiology* 43, 925–937. <https://doi.org/10.1093/treephys/tpad024>

3. The results from the experimental station Domanínek - rain-out shelter facility were published in the journal *Agriculture*. The results of these experiments in the context of crop rotation show that the impact of summer drought will have the most significant impact on spring crops (spring barley, corn) and the least impact on winter rye.

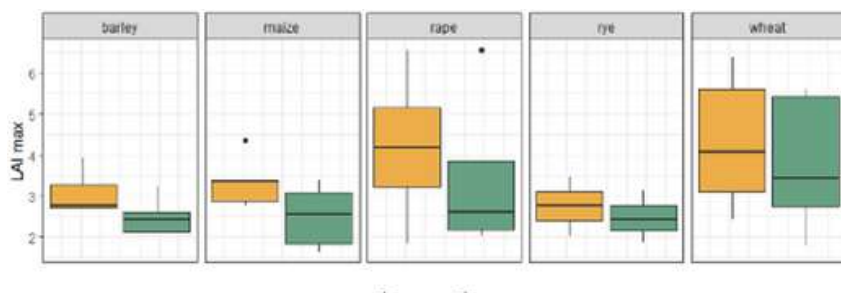


Fig. 3 Rain-out shelters installed in a crop rotation to simulate the effect of summer drought and the effect of simulated drought on leaf area index (LAI)

Thaler, S., Pohankova, E., Eitzinger, J., Hlavinka, P., Orság, M., Lukas, V., Brtnický, M., Růžek, P., Šimečková, J., Ghisi, T., Bohuslav, J., Klem, K., Trnka, M., 2023. *Determining Factors Affecting the Soil Water Content and Yield of Selected Crops in a Field Experiment with a Rainout Shelter and a Control Plot in the Czech Republic*. *Agriculture* 13, 1315. <https://doi.org/10.3390/agriculture13071315>

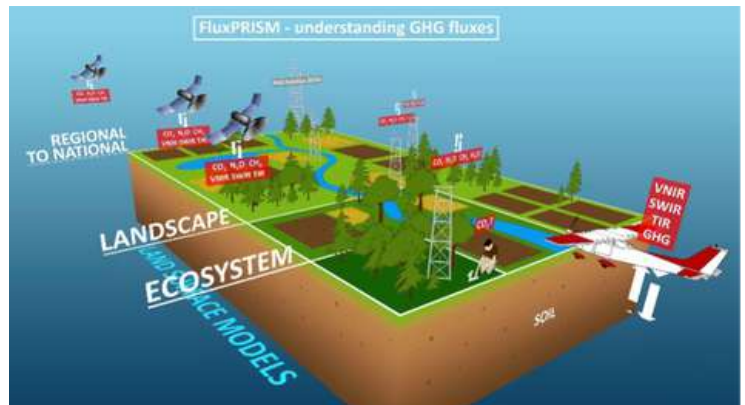


Fig. 1 FluxPRISM system for understanding the GHG fluxes on larger spatial scale within the project AdAgrif.

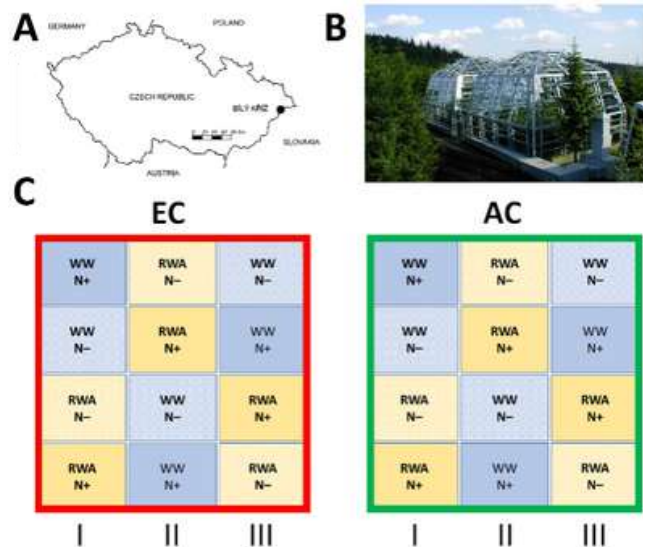


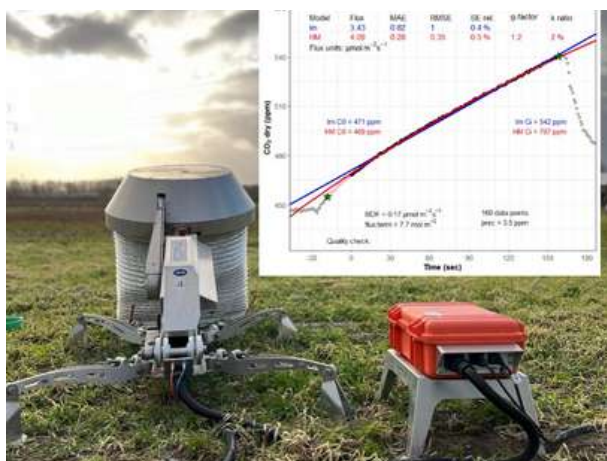
Fig. 2 Experimental setup at Cultivation Domes Bily Kriz focusing in the interaction of elevated CO₂ concentration, drought and simulated nitrogen deposition on Norway spruce



DENMARK

1. University of Copenhagen (UCPH) will host the AMAGS PhD course on Advanced Measurements and Analyses of Greenhouse Gas Fluxes from Soils and Ecosystems the 26-30th of August 2024. The course has financial support by AnaEE Denmark and has no tuition fee but students need to pay for travel and accommodation. The teachers are from UCPH and Aarhus University.

The course focuses on developing the skill set for post-graduate students in measuring and analyzing the exchange of GHG's between the soil/ecosystem and the atmosphere by using the newest chamber technologies.



The AMAGS PhD course focuses on measuring and analyzing greenhouse gas fluxes (CO₂, CH₄, N₂O) using closed chamber techniques. Photo: Klaus Steenberg Larsen.

The course highlights the conceptual, technological and analytical challenges involved in obtaining the "true" measure of the GHG flux between an ecosystem and the atmosphere and how these data can be used to address fundamental knowledge gaps related to the processes involved in ecosystem GHG production and uptake and potential ecosystem feedback to climate and global changes. Maximum number of PhD students is 30.

Learn more and sign up:
<https://phdcourses.ku.dk/DetailKursus.aspx?id=111671&sitepath=NAT>

2. New project at the AnaEE platform Foulum.

The project RECALL (Total greenhouse gas REduction potential of CARbon rich agricultural LowLand) funded by The Danish Agricultural Agency will measure nitrous oxide, methane, carbon dioxide emissions from different types of rewetted organic lowland soils

that vary in carbon content, water level and vegetation type.

One component of RECALL is to combine net ecosystem fluxes of CO₂ and CH₄ (eddy covariance towers) with automated chamber fluxes for specific plant types and surface water fluxes. Another component is to conduct a semi-field experiment using intact peat cores that will test how carbon and nitrogen content impact emissions under contrasting hydrological regimes. Lastly, RECALL has an emphasis on technological development on developing proxies for CH₄ and CO₂ emissions based on cost-efficient sensors in soil and water. Collectively, the research in RECALL will support the development of new models for quantifying the dynamics and magnitude of greenhouse gas emissions from rewetted organic lowlands in Denmark.

FINLAND

AnaEE RI service provider the University of Helsinki's research stations collect long-term measurement data that are used to study changes in nature and the climate. A forest station with long traditions, Hyytiälä Forest Station offers a base for diverse studies of Finnish natural environments.

Research in Hyytiälä focuses especially on the forest, peatland and lake ecosystems, as well as on peatland and forest management, silviculture and the atmosphere. Remote sensing techniques have been developed extensively around Hyytiälä.

The Pirkanmaa Climate Action Lab, located in Hyytiälä has started its operation. The Lab develops new science-based solutions to climate change mitigation and adaptation as well as biodiversity loss prevention together with the local stakeholders: small and medium-sized enterprises, municipalities, parishes, and associations in Pirkanmaa. The Lab is funded by The Council of Tampere Region and co-funded by the European Union.

After more than 30 years as the station head of Hyytiälä, Antti Uotila retired in late 2023 and Juho Aalto started as the new station head in the beginning of 2024.

ITALY

AnaEE-Italy is working at the national project ITINERIS that offers opportunities of buying new instruments and consolidating collaboration within and outside AnaEE.

Good news is that AnaEE-Italy now has a representative in the AoM.

Scientific news: At the International Conference on "Role and Fate of Forest Ecosystems in a Changing World" held in Bangkok, Thailand, in January 2024, researchers presented their findings from studies conducted at the AnaEE open-air platform "FO3X O3-FACE" (Free-air O3 eXposure).

A fascinating study on *Pica pica* revealed how increased O3 levels alter the bird's feeding patterns on grape berries. Surprisingly, grapes in ambient O3 conditions were consumed more rapidly than those in elevated O3 treatment, suggesting O3 as a possible olfactory restriction to these birds and highlighting the broader environmental consequences of O3 pollution, probably affecting birds' habits in both natural and urban settings.

Further contributions included a study on poplars, establishing critical O3 levels for biomass reduction. Another study investigated the interaction between O3 exposure and cypress canker disease, offering insights into the interplay between biotic and abiotic stressors.

Lastly, the differential impacts of O3 on plant physiology and secondary metabolism emphasized the ecotype-specific vulnerabilities to O3 in *Moringa oleifera*. The studies conducted at the FO3X facility highlight the urgent need for research on O3's impact on ecosystems, which is crucial for developing strategies to ensure the resilience of ecosystems in the face of environmental challenges.

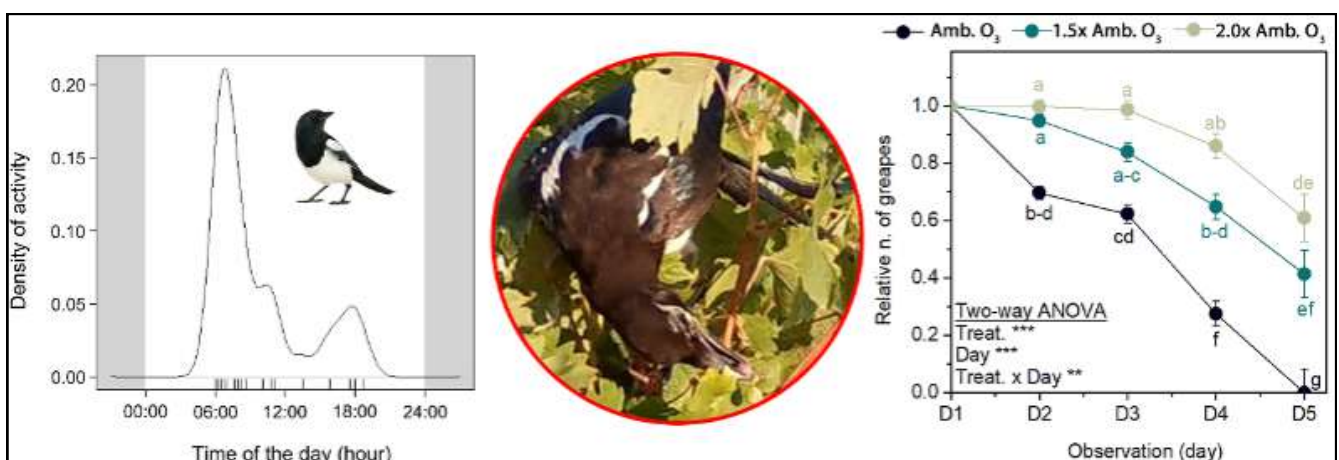
FRANCE

The AnaEE France infrastructure is consolidating its plan for the future by proposing a new four-year project focused on targeted investment in upgrading, rejuvenating and purchasing new technologies for analysis and experimentation, including unprecedented sequencing resources and instruments to diversify field measurements.

Subject to a call for tenders by the Ministry of Research in 2023, this project should start at the end of the year if it is selected and will enable the infrastructure to be renewed and retained on the national roadmap of research infrastructures. At the same time, the infrastructure is continuing to roll out internal catalog, pricing and data management tools to improve its service offering.

An internal audit conducted over the winter on all platforms identified areas for improvement that will be implemented at the end of the year, but notable progress has been made since the last audit in 2019. Recent events organized within the national community include a meeting of the "analytical platforms" working group in January 2024, a meeting of the "pricing" working group in March, the general assembly at the end of March 2024 and a CNRS thematic school on phenomics in May. Finally, a highlight of the period is the launch in early 2024 of the ALAMOD project of the national FairCarbon program, to which several AnaEE France schemes are contributing by providing long-term soil carbon data for modeling (<https://www.pepr-faircarbon.fr/actualites/un-lancement-alamod>).

A recent article : Bektaş, B., Thuiller, W., Renaud, J., Guéguen, M., Calderón-Sanou, I., Valay, J.-G., Colace, M.-P., & Münkemüller, T. (2023). A spatially explicit trait-based approach uncovers changes in assembly processes under warming. *Ecology Letters*, 26(7), 1119–1131. <https://doi.org/10.1111/ele.14225>



Patterns of magpie activity rhythms throughout the day. A *Pica-pica* picking grapes at the FO3X O3-FACE. The relative number of berries during the five days of observation (D1-D5).

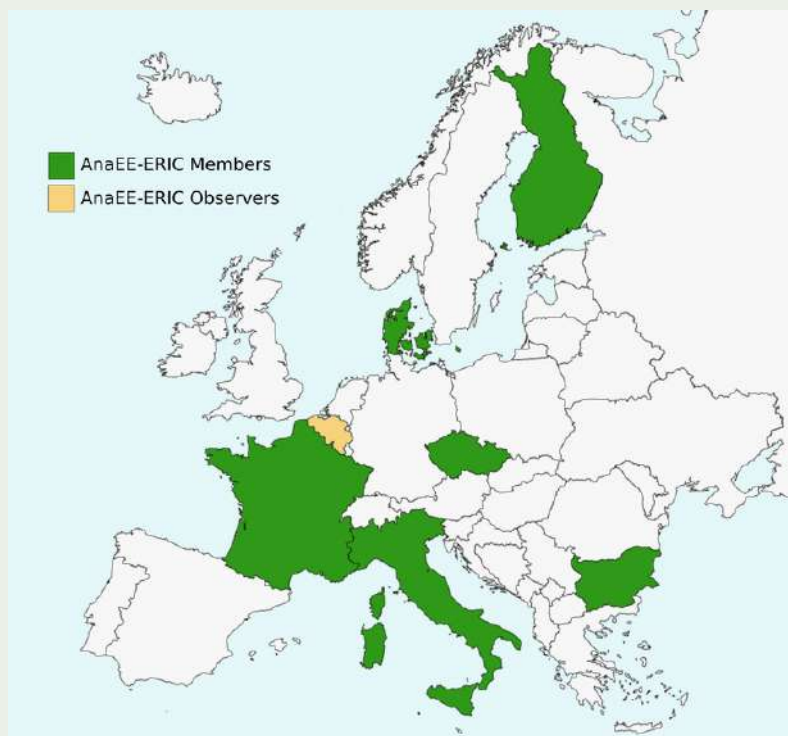
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