

DECEMBER 2023

# AgroServ Chronicles

AGROECOLOGICAL  
TRANSITION IN EUROPE

## Content

Wrapping up the year - 03  
Collaboration makes us better - 04  
The first call, a brief analyse - 05

## Table of content

PAGE 2	News
PAGE 3	Wrapping up 2023
PAGE 4	Collaboration makes us better
PAGE 5	A brief analyse of the first call
PAGE 6-7	A member in the spotlight, AnaEE-ERIC
PAGE 8	A message from the new communication officer

## Wait a minute...

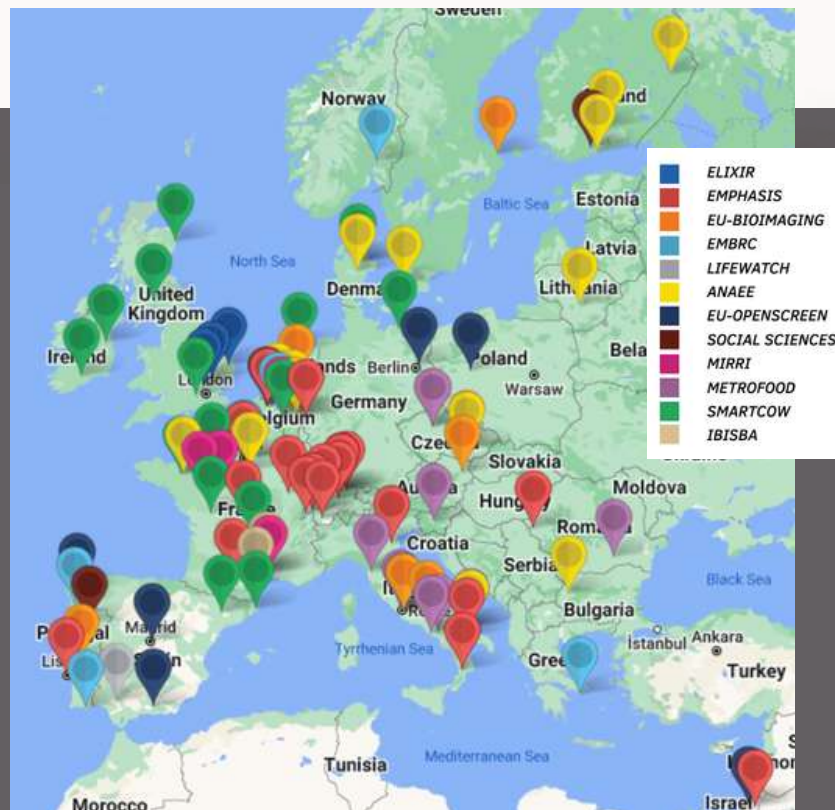
### WHAT IS AGROSERV?

The set of challenges that agriculture is facing now are complex - a growing world population and degrading soils being only two of them. There is an urgent need for a shift towards more balanced and sustainable systems, to ensure food security, biodiversity and human health.

Since individual scientists and labs can't possess all the expertise and equipment needed to tackle every aspect of agriculture's complex systems, AgroServ was created.

By linking researchers and their facilities together, and by involving farmers, the industry, projects and policymakers as well, AgroServ intends to speed up the agroecological research.

By involving stakeholders and working cross borders we make sure to take as many aspects as possible into consideration. Collaboration is necessary if we want to solve these challenges on time.



A total of 73 partners comes together, offering 143 Research Services in more than 20 countries. AgroServ is running from 2022-27 and is funded by the European Union under the Horizon Europe programme.

# Wrapping up 2023

MICHEL BOËR  
DIRECTOR GENERAL



Dear readers, welcome to this new issue of our newsletter with a rejuvenated look.

As we are almost at the end of the year, let's have a look back. 2023 has been a busy year for AgroServ. We have developed the catalogue and issued the first call for expressions of interest, which resulted in more than 100 proposals, as explained in this issue. This demonstrates the quality of the work done in the preparation of the catalogue, of the call, and the need of research services in agroecology. We have achieved an unprecedented offer of integrated interdisciplinary services, and we are ready to start deliver them in 2024.

## »»» Important milestone

Other important tasks have taken place. Ethical and quality aspects have been handled. The knowledge hub is now designed and will be populated with the first data from the services we will deliver. An important work has been made to identify our stakeholder community, as reported later in this issue, and we started liaising with them. We designed our living-labs, which are at the core of our transdisciplinary strategy; they will be key for co-creation between researchers and farmers, and in turn will result in projects that will use our services.

An important milestone is the completion of the first reporting period. It has been a busy period, reporting on the overall status of the project.

We will report on the outcome of this process in a future issue of this newsletter. In this issue we also present a selection of services from one of our partners RI, AnaEE, and we plan to continue the tour of the infrastructures involved in AgroServ in the next issues of this newsletter, with the goal to present a full view of the diversity of our collaboration. We hope that you will appreciate the format and content of the AgroServ newsletter.

I would like to take this opportunity to wish all our reader and all partners involved in AgroServ a Merry Christmas and Happy New Year.

Sincerely yours,

*Michel Boër*



## Collaboration makes us better

IRIA SOTO

We're not just here for the project; we're building a community.

To ensure AgroServ leaves a lasting impact beyond 2027, we're teaming up with key players in the Agroecology Community. Sharing knowledge, experiences, and resources prevents repeating mistakes, avoids duplication, and supercharges our project results.

We're reaching out to a number of stakeholders in Agroecology, targeting key initiatives and projects

ALL-Ready, Vitalise, ISIDORe, CanSERV and BicIKL are some of examples with whom we are establishing collaborations. We are exchanging experiences on issues such as access of services, transdisciplinarity, harmonization of ICT tools, services provision and living lab models.

While the research community is our main focus, we're eager to start engaging with a broader community in the field of agroecology.



**ALL-Ready**  
**Vitalise**  
**Network**  
**ISIDORe**  
**CanSERV**  
**BicIKL**

EU INITIATIVES  
THAT AGROSERV  
IS INVOLVED WITH

Land managers, farmers, advisors, and the private sector are essential. They are the ones benefitting from our research, so their involvement is crucial for a real impact and to accelerate the agroecological transition.

We are constantly looking to broaden the collaboration with more key actors in the field, for example the EU Agroecology partnership and the EU CAP Network.

A communication kit tailored for various audiences is needed and under development.

By the end of 2024 we will organize an event to strength EU collaborations on Agroecology, Stay tuned!



# A member in the spotlight

## AnaEE-ERIC



### AnaEE-ERIC

Analysis and experimentation on ecosystems (32 services)

AnaEE-ERIC is the coordinator of AgroServ and its core mission 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 these changes. The goal is to safeguard ecosystem services that benefit the society.

The distributed network of National Nodes allows AnaEE-ERIC to conduct experiments across various environmental conditions and ecosystem types, covering different climates and geographical regions in Europe. The organization also emphasizes the importance of disseminating research results, encouraging open access to data, and maintaining a transparent and inclusive approach to access policies for users.

To this day the member states are Bulgaria, CIHEAM Bari, Czech Republic, Denmark, Finland, France, Italy. Belgium has the status as an observer.

PHOTO: AARHUS UNIVERSITY  
DENMARK



### Lake Mesocosm Warming Experiment

The Lake Mesocosm Warming Experiment is a unique long-term (with 20 years so far the world's longest running) flow-through mesocosm experiment addressing climate-change effects on lakes under contrasting nutrient levels and water clarity.

Twenty-four cylindrical outdoor mesocosms are used, each with a capacity of 2.8 m<sup>3</sup>. The mesocosms receive groundwater 6 times per day, resulting in a theoretical water retention time of 2.5 months. Water in the meso-cosms is continuously mixed by paddles and heated by electrical elements. Three temperature regimes are run: ambient temperature and two elevated temperatures according to IPCC climate scenarios A2 and A2 + 50%. Individual meso-cosms of each temperature regime are run at either low or high nutrient concentrations. The latter are obtained by weekly dosing of N and P. In June 2023, after 19 years of the previous nutrient loadings, the nutrient treatments were reversed to study the effects of oligotrophication and eutrophication under different warming scenarios.

CIHEAM, ITALY



### The Geomatics Laboratory

The Geomatics Laboratory focuses on the field of geomatic sciences applied to agro-ecosystems. The main objective of the laboratory is to deepen and expand knowledge in areas such as proximal and remote sensing,

unmanned aerial drone platforms, geographic information systems (GIS), and territorial mapping systems within the context of agrosystems. One service are the drones that feature RGB and multispectral cameras for crop monitoring, early detection of plant health issues, and analysis of agronomic conditions with superior precision. This information is crucial for implementing targeted agricultural practices in the optimal management of irrigation, fertilization, and the application of plant protection products, thereby improving the productivity and sustainability of agricultural businesses.



# Presenting Ecotron ÎleDeFrance

PHOTO: CNRS, FRANCE



## SEVERAL EXPERIMENTAL PLATFORMS

- Five Ecolabs, each of them having a lab space for preparation and supervision and three independent climatic simulators of 13m<sup>3</sup>.
- One Ecocube characterised by three independent climatic simulators of 78m<sup>3</sup>
- One laboratory to prepare and analyse soils
- One analytical platform. a modular structure coupling together three environmental chambers and one laboratory room

PHOTO: CNRS, FRANCE



The Ecolab is a new generation of environmental simulators dedicated to experimentation in ecology. It's part of the Ecotron ÎleDeFrance complex, south of Paris.

It's built for studying the response of different ecosystems that can be artificially created and controlled in the climatic simulators.

The Ecotron helps us understand environmental challenges and anticipate the consequences of climate change by reproducing different futuristic scenarios. The findings can be used in the development of new agroecological methods.

The Ecolab enables precise real-time programming of weather conditions (temperature, humidity, and precipitation), of the concentrations of atmospheric gases (like CO<sub>2</sub>, O<sub>2</sub> and O<sub>3</sub>) and of several artificial lighting conditions.

The uniqueness of the Ecotron IdF lies in the exceptional control of the environmental conditions allowing a wide range of temperature from -10 to +45°C. It's also hosting both aquatic and terrestrial ecosystems and offers a multidisciplinary team of expertise.

## »»» The time machine

To give an idea of what can be done, we present an example: By reproducing meteorological data from different times, we can observe how plants would have reacted in these periods.

The climate conditions imposed and controlled were for the year 1700 (low CO<sub>2</sub>), one for year 2022 (actual CO<sub>2</sub>), and the last one with the predicted climate of year 2100 (high CO<sub>2</sub>, according to ICCP reports).

In each of those climatic simulators different species of Arabidopsis is used, which is a well-known plant for studying effects of climate change. In this test the inter-species competition under the different conditions is examined.

# Bringing the future of European agriecological research together

AMANDA ÖLANDER  
COMMUNICATION OFFICER

I hope you have enjoyed reading the new version of AgroServ chronicles. This magazine will serve as a central hub for all our members scattered across Europe, aligning with the overarching concept of AgroServ as a whole.

In the upcoming year, one goal is to forge a stronger identity, fostering a sense of unity and connection despite the vast geographical and thematic diversity among us.

To achieve this, we are not solely relying on a magazine but will also develop our website, making it more dynamic with a news column and clearer sections for different interest groups. More events, both online and live are also important for staying connected and engaged.



LIVE EVENTS ARE CRUCIAL FOR BUILDING NEW NETWORKS, AGROSERV KICKOFF 2023. PHOTO: CZU

Building new bridges between people is a challenge, and we are working on it in many ways, you can read about one example in Iria Sotos article.

Presenting a person, or a research team in the future issues of this magazine will be my contribution to increasing the sense of identity within AgroServ. It gives a face to the science and the people involved.

Having a journalistic background with a few years of experience as a goat farmer, I will surely bring a new perspective to the role as your new communications officer.

And as a newcomer to the European science community, I most enthusiastically welcome suggestions on noteworthy people or projects deserving more visibility for their work.

## Events

**FOOD 2030 Networks Conference**  
*Brussels, March 5th to 7th.*

The aim is to:

- Provide a space for food innovation projects to gather, share results and explore upscaling opportunities;
- Foster discussions on how policymakers, at different levels of governance, can further support and facilitate transformative innovation and green transition of the food system;
- Make the case for financing food innovation and explore alternative financing routes.

**Chemical programming of microorganisms in service for natural products bio-production**

*Webinar, February 27th*

Invited speaker: Dr Dorota Jakubczyk, Polish Academy of Sciences, Institute of Bioorganic Chemistry – Poznań

Free registration at the EU-Openscreen website.

Dr Dorota Jakubczyk is the Head of Medicinal Chemistry Laboratory of the Polish Academy of Sciences, Institute of Bioorganic Chemistry – Poznań at the Department of Molecular Probes and Prodrugs, one of the Polish EU-Openscreen partner sites.





## NEWS FROM OUR PARTNERS

### AnaEE-ERIC

AnaEE-ERIC finally to sign the agreement with CzechGlobe, a step forward on getting the Interface and Synthesis Centre up and running. This is an important milestone for to move things ahead. This center serves to integrate and synthesize data in the field of environmental research within the European infrastructure of AnaEE-ERIC.

### EMBRC

EMBRC funds new FAIR training. Marine biologists and biodiversity scientists are invited to learn how to make the most of their research data in a three-day FAIR training course at the end of January in Belgium. More info at their website.

### LifeWatch-ERIC

In collaboration with ENVRI Research Infrastructures, LifeWatch organises two sessions in the upcoming European Geosciences Union 2024 conference in Vienna in April 2024.

**Call for abstract:** tell us how Research Infrastructures helped with your research, Contributions needed by 10 jan 2024. More information on the LifeWatch website.

AnaEE-ERIC

CNRS Campus, Bâtiment 11

1 Av. de la Terrasse, 91190 Gif-sur-Yvette, France



contact@agroserv.eu

+33 7 89 31 21 33



Funded by  
the European Union



# AgroServ Chronicles

DECEMBER 2023