



NEWSLETTER N°6, February 2022

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Foreword by Michel Boér, AnaEE DG



Dear readers,

This year comes with a good start for AnaEE and the 11 associated research infrastructures, with the selection of the AgroServ project (see below). With AgroServ, we expect to provide a large set of transdisciplinary services to boost the research on the resilience and adaptation of agriculture, and the agroecological transitions, with high impact on the agricultural system, within the framework of the 1Health approach. AnaEE will also organize its first technology foresight workshop (see below) at the Ecotron Montpellier (France), with the participation of representatives of all members, in view to build and optimize common projects between enclosed and open-air platforms.

This newsletter is the opportunity to participate to the international day of women and girls in Science. Though, in life sciences, women represent about half of the population in research, higher positions are still occupied by a majority of male colleagues. Also, science is not the first choice for girls in schools and high-schools, and we have to make efforts to improve the balance. AnaEE has already prepared a draft Gender Equality Plan, with concrete actions, which will be submitted to the first AoM. Gender, including the role of women in agriculture, ranks high in the AgroServ project, and we expect that many proposals submitted to AgroServ will address these issues.

We are now looking forward for a busy year for AnaEE, with the establishment of the ERIC, the kickoff of AgroServ, and many activities directed towards the research in functional ecology.

Let's celebrate Women and Girls in Science !

Since 2015, UN General Assembly declared 11 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.

Regarding decision-making positions, women represent less than a quarter of heads of higher education institutions. They are also less successful than men in accessing research funding (about 4% less success).

In ecology, despite approximate gender parity among undergraduates and young researchers (Damschen et al. 2005) senior academic positions are still dominated by men (Tregenza 2002, Larivière et al. 2013, Howe-Walsh and Turnbull 2016). Consequently, most ecology papers are written by men (Cameron et al. 2013, West et al. 2013).

On the occasion of this day, AnaEE presents two portraits of inspiring women scientists working in the network, and who kindly accepted our invitation to share their experiences.



Meet with Elena Ormeno Lafuente
Research Scientist at CNRS and Scientific Director of the

**1) Briefly present yourself, what is your scientific background?**

After a bachelor's degree in Environmental Sciences in Madrid (Spain) and a Master on Health and Environmental Chemistry in Marseille (Aix-Marseille University) in 2003, I obtained my PhD at IMBE (Mediterranean Institute of marine and terrestrial Biodiversity and Ecology) on plant Ecology in 2006 where I focused my research on *plant – atmosphere interactions through hydrocarbon emissions to the atmosphere* under different biotic and abiotic pressures. The ADEME-Region funded my PhD project.

2) How did you choose your field of study?

I decided to work on this topic (*plant – atmosphere interactions through hydrocarbon emissions to the atmosphere*) because it includes both fundamental and applied research. Emissions of hydrocarbons (also known as Volatile Organic Compounds or VOC) from terrestrial ecosystems to the atmosphere are indeed related to a plethora of processes including plant-to-plant and plant-insect communication, plant defense against environmental stress, formation of air pollutants in the low atmosphere, climate change, and ecosystem fire hazard.

3) What are your accomplishments?

The main accomplishments I have gone through my research rely on interdisciplinary works combining chemical ecology, ecophysiology, analytical chemistry, air quality and fire ecology. My research has strongly contributed to put into light the role organic molecules within vegetation on fire hazard and plant health. My studies are also important because they point out the plant species (natural and crop species) and ecosystems (garigue, maquis, forest) that contribute the most to air quality through emissions of VOC under different climate scenarios in the Mediterranean context.

4) Which topic are you working on at the moment? Why did you choose this topic?

I am currently working on three research axes. The first one is about the chemical and physical defences developed by trees to adapt to chronic drought in Mediterranean forests. I coordinate this chemical ecology and ecophysiology research program funded by CNRS in collaboration with three French laboratories belonging to different CNRS institutes (INC, INSIS, INSB) and INEE-INSU institutes where I belong to, as well as the Spanish unit CIFOR (Centre for International Forestry Research) from CSIC. The second topic, performed in collaboration with the Laboratory of Chemistry and Environment in Marseille (LCE UMR 7376) and the Laboratory of Climate and Environmental Sciences in Paris (LSCE UMR 8212) aims to assess the role of decomposing plant material (litter) as a source and sink of air pollution. Finally, I work on the biological roles plant metabolites play on ecosystem flammability and I currently put my efforts in considering organic molecules (cuticular waxes) never tested so far despite their relative high flammability. I coordinate this third axis in collaboration with CIFOR (SCIS, Spain) and University of California in Santa Monica.

5) Why did you choose to become a scientist? What inspired you to become a researcher/to work in science?

When I did my Master research in Marseille at IMBE in 2003, I really discovered my passion for research. I used to leave the lab at 8.00 pm and came to the lab even on holidays. Nobody obliged me, it was my sole decision. It does not mean research was not hard at the beginning. It really was. Studying abroad always requires a lot of energy the first years not only to accomplish the job while you learn much of the language but also to obtain the confidence from colleagues. I also decided to become a scientist because I enjoy living in different countries and knowing different people. However, after moving so much I really appreciated when CNRS recruited me so I could find a final place where I could have a family life. The fact that work is very diverse (tasks we accomplish are diverse so two days are never the same) and that we can manage our time are also very positive points. However, administrative tasks clearly require too much of our time and impede us to accomplish our scientific work as we would like to, but I did not know that twelve years ago.

6) What are the main challenges you have encountered in your career so far?

Moving from country to country and getting adapted to new rules and people is always challenging. I have been living in five countries: Spain (my country of origin), Ireland, USA, Belgium and France. Doing a postdoc at University of California at Berkeley for two years was also specially challenging and the best experience of my entire career, both scientifically and humanly speaking. It was a real challenge because the UCB is a highly competitive university, the team I integrated was only formed by men and it was an Air Chemistry lab, while I had performed my previous research in an Ecology unit. I was also young (26 years). Fortunately, I was not aware of all these challenges before applying for this postdoctoral position. Also, obtaining a permanent position at CNRS while being a woman, Spanish and young (30 years) ... was a real challenge to me.

7) Did you ever have the impression that it would be easier/harder if you were male?

Yes, I believe so. I also think being recognized as a scientist and achieving higher positions is harder for women than men, especially for young woman. After 40 years-old, I guess we start having the courage of applying to higher positions (with less self-censorship) and giving our ideas or saying when we disagree. In my opinion this is true for many women in science but also elsewhere. I can't count the times I have seen a scene where a "good idea" exposed by a woman scientist (at the university for instance) is ignored while the same idea given by a man scientist is supported and highly considered. We will see if current and future initiatives for equality of men and women in science allow us to equilibrate the situation. This would be, in my opinion, an indicator of progress in our western democracies.

8) In your opinion, which changes, if any, are needed in the scientific system to be more attractive to women in science and possible future scientists?

At the PhD level, there are many examples applied in Northern European countries (Belgium, Denmark, Sweden...) which could help us to attract more woman in science. For example, in these countries, it occurs very often than woman decide to become mothers in the middle of their PhDs. This is not at all a source of pressure for the student or the advisor since both, the PhD salary and project associated are prolonged. In case woman attain a permanent position, they hesitate very commonly to occupy a position with more responsibilities partly because these will superimpose to home tasks. How could we attract these women to assume new responsibilities or to assume them for longer? The answer seems obvious to me. If we give them the possibility to economically afford hiring a third person who accomplish the home tasks, they will probably do the job. Unfortunately, most responsibility functions are not followed by any remuneration increase in France.

9) What advices would you give to young girls and women to encourage them in becoming researchers?

I would give them the same piece of advice an eminent professor gave to me in UCB 12 years ago. Research is like a marathon. So, if you never give up, one day the others will be behind you. But this can only work, if research is a passion.

**Meet with Maarit Liimatainen**



1) Briefly present yourself, what is your scientific background?

I am a research scientist working at Natural Resources Institute Finland (Luke) in the city of Oulu which is located in the northern part of Finland. My background is in environmental science and I defended in 2016 at University of Eastern Finland (UEF), Kuopio. In my doctoral thesis I studied the greenhouse gas (GHG) emissions of managed peatlands under different land-use and especially how wood ash fertilization affects GHG emissions of peatland forest.

2) How did you choose your field of study?

I have always been interested in environmental issues and environmental science seemed to be interdisciplinary research field where environmental effects are studied comprehensively from different angles. The GHG research was chosen by accident. I was moving to USA and I had to find quickly master thesis topic where I can do the experimental part before moving. On summer 2006 I was studying GHG emissions and methane dynamics of a wetland in a research site that was located in freshwater lake shoreline. I felt the topic was so fascinating that I have continued in the same research field studying GHG emissions in different ecosystems using different methods.

3) Which topic are you working on at the moment?

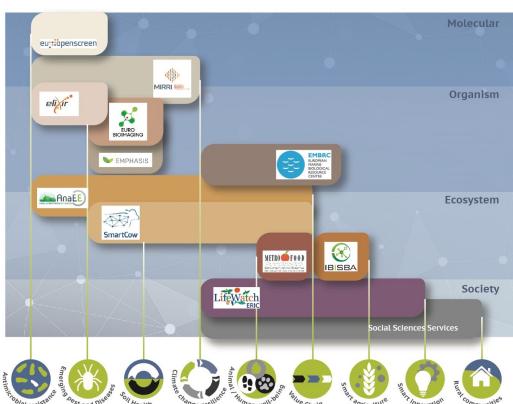
After UEF I worked at University of Oulu (OY) with my own post doc funding and quite quickly I started to work at Luke but continued at OY as a visiting researcher. At Luke I work at Production Systems unit in the group of Grasslands and Sustainable Farming and at OY I work at Technical Faculty in the research unit of Water, Energy and Environmental Engineering. At Luke I do agricultural research which is perfectly aligned with technical studies done at OY. At the moment, my research is related to climatic and leaching effects of cultivated peatlands. To understand the big picture, the causes and consequences, we also study other land uses and conduct the research at farm and catchment level involving also the farmers and landowners besides other stakeholders into the research projects so that the good practices can be implemented realistically into the actual farming.

4) Did you ever have the impression that it would be easier/harder if you were male?

I enjoy both workplaces and especially the diverse and interdisciplinary work that it enables from agricultural research to atmospheric sciences, from hydrology to soil science. The future of managed peatlands has been in Finland heavily under public discussion and I truly feel that there is a need for the research I do with my colleagues. I have never felt that my gender would have any kind of meaning in the work life. Many of the things that I deal with at my research projects are complicated and challenging but there is always the support of my colleagues and that is the beauty of working in a research group. You do not have to know everything yourself.

AgroServ proposal selected !

The proposal AgroServ, coordinated by AnaEE and CNRS, has been selected. This Horizon Europe project gathers more than 70 partners, and will be granted of 15M€ for a duration of 5 years, in order to boost the research for a resilient and sustainable European agriculture system, and the agroecological transitions. The overarching mission of AgroServ is to support research and innovation by providing customised and integrated RI services in view of achieving a sustainable and resilient agriculture and supporting agroecological transitions. This aim will take place in line with the One-Health approach, with particular regard to threats and risks on agroecosystems and to enhance new agroecological practices and their socio-economic benefits.



AgroServ, thanks to a large consortium of recognized European Research Infrastructures, features a vast offer of services at all scales, from the molecule, to the organism, to the ecosystem, and to the society. AgroServ goes beyond the state-of-the-art because it will allow users access, for the first time, to make use of a consistent, integrated, and customized offer of services from several RIs spanning all relevant disciplines: they will bring together several types of expertise, disciplines and technologies, integrating competences from chemists, biologists, agronomists, ecologists, bioengineers, analysts, sociologists, economists.

The transdisciplinary offer of services will have a high impact on the future of the food system, preserving biodiversity and reducing the impact of agriculture on climate. The consortium will work closely with partners from the society, farmers, industry, citizens and policy makers, through living labs and towards the establishment of evidence-based policy, and codeveloped practices in agriculture. By delivering a pan-European and inter/multidisciplinary data ecosystem, and providing state-of-the art services on agroecosystems, the project will enhance the society long-term capacity to respond to global challenges in the agriculture sector. It will also provide evidence-based policy making for a resilient and sustainable agricultural system and enable new discoveries and knowledge breakthroughs in the field of agroecology. Through user engagement and Living Lab activities, it will develop the agroecology research community, encourage cross-fertilisation and enable a wider sharing of knowledge.

The project is expected to start in September 2022.

Reminder: AnaEE Conference 2022 "Ecosystems services under pressure: the role of experimentation"



The first AnaEE Conference, organized in collaboration with CzechGlobe and the Czech University of Life Sciences, will be held in Prague, Czech Republic, from 27 to 30 June, 2022.

The goals of the AnaEE Conference 2022 are to discuss the role of agriculture, forests and natural ecosystems in reducing GHG emissions and increasing carbon sequestration, as well as to discuss the importance of holistic approaches that integrate across ecosystem boundaries spanning from terrestrial to freshwater ecosystems.

Program, registration and abstract submission at: <https://anaeeconf2022.sciencesconf.org/>

Reminder: 1st AnaEE Technology Foresight Workshop, 10-11 May 2022, France

AnaEE will hold its first official Technology Foresight Workshop in Montpellier, France, on 10-11 May 2022 under the title “**Using ecotrons in ecosystem research and integrating them in multi-site ecological experiments**”.

The aim of the first AnaEE Technology Foresight Workshop is therefore to learn about and explore the range of possible usages of ecotrons in experimental ecosystem research and to discuss the best ways to integrate ecotrons and open-air platforms in coordinated studies.

Registration is open: <https://atfw2022.sciencesconf.org/>

NEWS FROM NATIONAL NODES

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Original datasets on a paleoclimatic tracer of relative humidity were obtained in a collaboration between the enclosed Ecotrons Montpellier, and the *in natura*, O₃HP, AnaEE platforms ([ANR HUMI-17 2017-2022](#), led by CEREGE, CNRS-AMU). Growth chamber and field calibrations were elaborated to scale the triple oxygen isotope signature of plant silica to relative humidity of ambient air. For model-data comparison, these datasets were complemented by isotope measurements of all water pools at the soil-plant-atmosphere interface, as well as meteorological and plant physiological parameters. In addition, for the first time, simultaneous measurements of triple oxygen and hydrogen isotope ratios of atmospheric water vapor were performed by cavity ring-down spectroscopy in a natural ecosystem. The results provide insights into moisture sources and atmospheric transport processes, as well as the contribution of evapotranspiration to the atmosphere.

The study was presented by C Voigt, C Vallet-Couïm, C Piel, IM Reiter, J-P Orts, I Xueref-Remy, M Santonja, A Alexandre (2021) [Goldschmidt Conference](#), and by C Outrequin, A Alexandre, C Vallet-Couïm, C Piel, S Devidal, A Landais, M Couapel, J-C Mazur, C Peugeot, M Pierre, F Prié, J Roy, C Sonzogni, C Voigt (2021) [Climate of the Past](#).



OPEN CALLS

HORIZON EUROPE

INFRA Open calls - Submission until 20 April

[HORIZON-INFRA-2022-TECH-01-01: R&D for the next generation of scientific instrumentation, tools and methods \(RIA\)](#)

[HORIZON-INFRA-2022-DEV-01-02: Cooperation, synergies and networking between research infrastructures and technology infrastructures \(CSA\)](#)

[HORIZON-INFRA-2022-EOSC-01-03: FAIR and open data sharing in support of healthy oceans, seas, coastal and inland waters \(RIA\)](#)

[HORIZON-INFRA-2022-EOSC-01-04: Support for initiatives helping to generate global standards, specifications and recommendations for open sharing of FAIR research data, publications and software \(CSA\)](#)

Mission SOIL – Submission until 24 March

[8 open calls: click here](#)

Mission CLIMATE – Submission until 12 April

[5 open calls: click here](#)

Mission OCEAN incl. terrestrial waters - Submission until 12 April

[Open calls: click here](#)

Please, if you are aware of any announcement of opportunity, share with us. If you plan to participate to one of these calls and use the AnaEE RI, please, tell us in advance, and follow the AnaEE access rules.

EVENTS CALENDAR

AnaEE Technology Foresight Workshop, 10-11 May 2022, Montpellier (FR). [More information here.](#)

International Data Week, 20-23 June 2022, Seoul (KR). [More information here.](#)

AnaEE Conference 2022, 27-30 June 2022, Prague (CZ). [More information here.](#)

Summer school AnaEE France, 26-30 September 2022, Lautaret Garden (FR).

International conference on research infrastructures (ICRI 2022): 19-21 October 2022, Brno (CZ). [More information here.](#)



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