

## “EE Meets EP”

### Excursion of the Helmholtz Research Field Earth & Environment to the European Parliament in Brussels

*A report written by Dr. Marylou Athanase, Dr. Alison Beamish, Dr. Séverine Furst, David Mengen and further delegation members*

From December 4th to December 7th, 2023 Helmholtz SynCom traveled to Brussels alongside a delegation comprising selected scientists from the seven Helmholtz Earth and Environment Centres. The purpose was to engage in an exchange of ideas with the European Parliament and various stakeholders. This excursion was extended upon the invitation of Niklas Nienaß, Member of the European Parliament. The program included, amongst other things, meetings with Jutta Paulus, MEP, representatives from the European Commission’s Directorate-General for Defence Industry and Space (DG DEFIS), the European Commission’s Directorate-General for Climate Action (DG Climate Action), and the European Space Agency (ESA). In the subsequent text, we share insights into our successful trip!

#### Day 1: Icebreaker and dinner at Maison Antoine

Despite some train cancellations and snowy conditions, everyone arrived safely in Brussels! Our icebreaker kicked off in the hotel lobby with engaging games aimed at getting to know each other. Roles were assigned, with team members designated for navigation, documentation, and community management. Following this, we headed to Maison Antoine to enjoy the renowned Belgian fries.

#### Day 2: European Parliament, DG DEFIS, and Institute of Natural Sciences

##### 1. Meeting MEP Jutta Paulus

For each of the stakeholder exchanges, the seven researchers from the seven centers had prepared seven short presentations, providing insights into current research findings. During the discussion with Jutta Paulus, we presented these for the first time, and Ms. Paulus expressed keen interest in the current topics of environmental and climate research.



Presentation of current research findings by Dr. Marylou Athanase. © Helmholtz Earth and Environment

Amidst insightful discussions on methane and PFAS ‘forever chemicals’ legislation, MEP Jutta Paulus emphasized the imperative of the grouping approach aiming to restrict thousands of chemicals at once, stating that tackling the PFAS issue is fundamentally a “*public health concern*”. She aptly highlighted the challenge of industry critique, underscoring the necessity to shift focus from the irreplaceable 1% to the replaceable 99%. Additionally, the risk of revising regulations was underscored, acknowledging the potential for weakening rather than consolidating existing measures. Paulus advocated that regulation acts as a catalyst for innovation and emphasized the role of scientists in societal communication, underlining the need for public pressure over traditional lobbying efforts. She highlighted the impactful influence of initiatives like Fridays for Future on politicians.

*“We need public pressure to overcome the lobbies.”* (Léonie Bühler, Office of Jutta Paulus)

Paulus deplored that “*we are 25 years behind science*”, attributing this lag to the inherent delay between scientific discoveries and legislative updates.



Discussions on PFAS and methane with MEP Jutta Paulus. © Helmholtz Earth and Environment

## 2. Tour of the European Parliament

During our tour, we explored the Hemicycle plenary room, assorted meeting rooms and diverse facilities, each playing a pivotal role in the Parliaments functions. Among them was the bustling main hall, a hub for journalistic activities and information dissemination. Additionally, we walked across the half-moon closed bridge, spanning the Esplanade Solidarosc 1980.



Meeting room visited during our tour through the European Parliament. © Helmholtz Earth and Environment

### 3. Meeting MEP Niklas Nienaß

Efficient policymaking hinges on evidence-based strategies, prompting discussions on how to better communicate our findings to MEPs. As a potential solution, MEP Niklas Nienaß proposed establishing a dedicated channel for disseminating our results more effectively. Suggestions included hosting regular high-impact informational seminars offering comprehensive overviews of the latest scientific advancements. However, challenges arise as existing user-oriented platforms, although rich in valuable data, remain relatively obscure to MEPs. Nienaß expressed caution, citing the necessity for active participation, deeming it an excessive demand. These platforms, perceived as more suitable for one-time use, face barriers in uptake. Alternatively, a more pragmatic approach involves showcasing practical examples and referencing the data sources, advocating for informing MEPs through direct references to the platform, thereby simplifying their accessibility and utilization.



Interesting exchange with MEP Niklas Nienaß in his office in the European Parliament. © Helmholtz Earth and Environment

### 4. Meeting Hugo Zunker, European Commission DG DEFIS

In order to support evidence- and science-based policy decisions, the European Commission implements ambitious Earth observation programs. Hugo Zunker, policy officer in the Copernicus unit of the Directorate-General for Defense Industry and Space (DG DEFIS), presented the landscape of ongoing and future EU space programs addressing crucial gaps and specific needs across various domains.





Meeting with Hugo Zunker of the European Commission DG DEFIS © Helmholtz Earth and Environment

These programs encompass a wide array of missions, ranging from expanding capabilities to monitor CO<sub>2</sub> emissions, crucial for climate action, to specialized missions like sub-daily monitoring of Sea Ice Concentration (SIC) in the Arctic using Passive Microwave Radiometer technology, pivotal for supporting safe ship navigation in challenging conditions. Additionally, the programs focus on monitoring Sea Ice Thickness (SIT), snow depth, and land-ice elevation, pivotal for understanding and responding to environmental changes. Furthermore, they also focus on monitoring forest cover, ground deformation, crop-water use, and agricultural management, providing comprehensive insights crucial for land management and food security. Conjointly with Earth observations, the European Commission additionally fosters modeling efforts, such as the Destination Earth initiative to build digital twins of the Earth in a changing climate.

*“We have high expectations for the Destination Earth project.” (Hugo Zunker)*

Collectively, these programs underscore the EU's commitment to harnessing space technologies for societal and environmental benefits, emphasizing innovation and sustainability at their core.

## 5. Meeting the Institute for Natural Sciences

At the Institute for Natural Sciences, our Belgian peers shared their experience in bridging academic research and environmental policy making. After a concise overview of past and ongoing collaborations with Helmholtz Centres presented by Dr. Serge Scory, discussions turned towards the approach of the Belgian Institute for Natural Sciences regarding involvement in policy advice.



Helmholtz Earth and Environment representatives in the Institute for Natural Sciences. © Helmholtz Earth and Environment

The institute operates within a dynamic two-way process between academic research and stakeholders, fostering the active participation of scientists in negotiations on international treaties like the Convention on the Conservation of Antarctic Marine Living Resources (CAMLRL). Two crucial levels of engagement were outlined: political and technical negotiations, emphasizing the need to define focal aspects before presenting to decision-makers. Dr. Hendrik Segers highlighted the cyclical nature of the process: identifying policy questions, collecting and analyzing data, and providing information relevant to policy making. He stressed the importance of scientific projects being tailored not only to scientific inquiries but also to address pertinent policy questions, thus establishing a stronger connection between science and policy making. This science-policy interface emerged as a distinct research theme, underlining the importance of translating scientific inquiry into actionable policy decisions.



Exchange on European marine policy and joint dinner with Dr. Jella Kandziora, KDM and JPI Oceans. © Helmholtz Earth and Environment

## Day 3: DG Climate Action, Helmholtz Office Brussels, ESA, and Science Communication

### 1. Meeting Dušan Chrenek, European Commission DG Climate Action

Day 3 started at the Helmholtz Office Brussels where we were met with the most wonderful hospitality (an extra special thanks again to Alexandra Lawson). Our first meeting was with Dušan Chrenek, Principal Advisor of the European Commission Directorate-General Climate Action, to discuss the importance of Earth observation products to support policy implementation.



Presentation by Dr. Séverine Furst for the European Commission DG Climate Action. © Helmholtz Earth and Environment



Mr. Chrenek expressed his interest in the research we are doing and highlighted the recent cooperation with ESA and DG Climate Action to support better policy making through the availability of better data and applications. The focus of the cooperation is, among other things, on supporting science and related innovations, which can be used directly for political decision-making. Themes of particular relevance included land use, land-use change and forestry (LU-LUCF), carbon removal certification and greenhouse gas (methane) emission measurements and monitoring. Mr. Chrenek also talked about the current focus on AI as a tool to reduce emissions while also pointing out the importance of decreasing emissions from digital activities. In total, he expected the potential of GHG reduction due to digital transformation between 15% to 20%. With the future extension of emission trading to maritime as well as the building and transport sector, the goal of net zero EU countries as a whole in 2050 can be achieved, aiming at an intermediate step of a reduction of 45% already in 2030. To foster this development, part of the emission trading will be used for financing a 40 Billion Euro innovation fund.

Moreover, Mr. Chrenek shared his perspectives on more contentious climate interventions, including cloud brightening and stratospheric aerosol injection. This sparked specific inquiries regarding the safety and feasibility of approaches like solar radiation management.



Presentation by Dr. Alison Beamish at the meeting with Dušan Chrenek of the European Commission DG Climate Action. © Helmholtz Earth and Environment

## 2. Meeting Dr. Andreas Krell from the Helmholtz Office Brussels

For the remainder of the morning we had an interesting discussion with Dr. Andreas Krell about Helmholtz's strategic and technical activities in the Research Field Earth and Environment in Brussels. The Helmholtz Office Brussels represents the research policy interests of the Helmholtz Centres. The focus is on both strategic and technical support, so that corresponding



innovations from the six Research Fields i) Energy, ii) Earth and Environment, iii) Health, iv) Information, v) Aeronautics, Space and Transport, and vi) Matter receive more attention at the European level. The statement on Open Science by the G6 Taskforce, consisting of the i) Consiglio Nazionale delle Ricerche (CNR), ii) Centre national de la recherche scientifique (CNRS), iii) Consejo Superior de Investigaciones Científicas (CSIC), iv) Helmholtz Association, v) Max Planck Society, and vi) Leibniz Association, was cited as an example. In addition, a key part of the work done in Brussels is centered around communication with the Centres about European funding opportunities, for example within the Horizon Europe programme, including ERC grants. For many of us, this was the first time we became aware of the Helmholtz Office Brussels and its activities. We realized that there are many professional benefits of having this important connection to Andreas and the Helmholtz Office Brussels. Krell also stressed the importance of aligning Helmholtz activities to the European Parliament's Framework Programs for strategic success. Then we had what was arguably the most delicious food of the trip – a casual and delicious catered vegan lunch at the Helmholtz Office.



Meeting of the delegation with Dr. Andreas Krell at the Helmholtz Office Brussels. © Helmholtz Earth and Environment

### 3. Meeting the European Space Agency (ESA)

After lunch we made our way over to the European Space Agency in Brussels to meet with Jean-Christophe Gros and Mathilde Reumaux who, along with their colleagues, gave a very thorough overview of ESA as an organization as well as its missions and training activities.



Meeting of the delegation with the European Space Agency (ESA) in Brussels. © Helmholtz Earth and Environment

We began with a fascinating presentation by EUCLID mission leader Giuseppe Racca who introduced ESA's latest mission and its goals to explore the dark universe. This was followed by a presentation about ESA's training and educational programs. Especially the new ESA science hub, located in Esrin, Italy, was of particular interest, being a place to network with excellent scientists and discuss research ideas. Having access to the latest advantages in open data science, cloud computing, and HPC capabilities provides the opportunity to convert research into innovative solutions. The infrastructure of the ESA science hub can be accessed either by being a post-doctoral research fellow, having an ESA living planet fellowship as well as applying for visiting scientist opportunities. A further highlight was the new PUMAS initiative between ESA and CONAE, giving access to the L-band SAOCOM recordings.

#### 4. Afternoon in Brussels and Science Communication Evening with Dr. Sam Gregson

After our trip to ESA we had a free late afternoon to explore Brussels. Many visited the Christmas Markets in the city Centre. Our day ended back at the Helmholtz Office Brussels with an entertaining evening with particle physicist Dr. Sam Gregson. We had a lot of fun learning a bit about particle physics and working as a team on fun interactive games!

#### Day 4: Committee meetings and lunch debate in the European Parliament

##### 1. European Parliament committee meetings ITRE and AGRI

Our final day in Brussels brought us back to the European Parliament where we were able to listen to committee meetings of the European Parliament Committee on Industry, Research, Telecoms & Energy (ITRE) and the European Parliament's Committee on Agriculture and Rural Development (AGRI). Though we were not able to be present for the entire meeting we

were able to see some real debate and differences of opinion on common agricultural policy which was exciting.



Helmholtz Earth and Environment representatives in the European Parliament. © Helmholtz Earth and Environment

## 2. Lunch debate “Copernicus Data at the Service of the EU Arctic Policy”

The main event of the final day was the lunch debate Copernicus Data at the Service of the EU Arctic Policy. This even highlighted an effort by ESA to create a hub for remote sensing data related to the Arctic. This initiative is recognized as a key step in improving the accessibility and application of Copernicus data to address urgent questions of current and future climate change as well as mitigation and adaptation strategies. Much of the conversation centered around the importance of providing data and value-added data products to create actionable change. It is not enough to generate the data and say we are doing something for the protection of the Arctic, data needs to get into the hands of the people living there.



MEP Niklas Nienaaß opening the lunch debate “Copernicus Data at the Service of the EU Arctic Policy” in the European Parliament. © Helmholtz Earth and Environment



## “EE Meets EP” Summary

The Helmholtz Earth and Environment trip provided valuable insights and facilitated informative discussions with stakeholders from the European Parliament and various organizations in Brussels. It was evident that there is significant interest among different parties in engaging with scientific endeavors. We were able to establish various personal contacts with European institutions that we aim to leverage and sustain in the future. Determining the most effective means of communicating our scientific findings to stakeholders remains important. Research proposals should consider not only the scientific inquiry but also the science-policy aspect and efforts should be made to disseminate scientific knowledge in the most accessible manner possible. Finally, the connections we were able to establish among the seven Helmholtz Earth & Environment Centres are of special significance and will undoubtedly accompany us throughout our professional lives.



Group picture with MEP Niklas Nienaß and Stella Schübel. © Helmholtz Earth and Environment