



**Ocean Cryosphere Exchanges in Antarctica:
Impacts on Climate and the Earth system**

Report on First Policy Briefing

Deliverable D9.6



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<https://ocean-ice.eu/>

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Cover sheet: Photo credit to Renuka Badhe (EPB)

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1. Publishable summary

As part of the dissemination and outreach activities enumerated in Work Package 9 of the EU-funded Horizon Europe OCEAN:ICE project, the European Polar Board (EPB) organised a policy briefing to highlight the work, goals, and relevance of OCEAN:ICE to the public. The event was titled, “The Changing Poles: how Antarctic and Arctic science helps to inform and prepare the EU for changes in sea level rise and the global climate”. The event was held in the European Parliament’s main building on 24 January, 2024 from 14:15 to 16:00 CET. The aim of the policy briefing was to raise the profile of the project, as well as to signpost project progress, expected outcomes, and links to EU policy priorities. The policy briefing was held in-person and online. As such, the policy briefing’s main audience was the European Institutions, and several high-profile EU decisionmakers were speakers. The policy briefing was streamed online, ensuring a wide reach and dissemination.

The event was co-organised with two other partners. The first was the Arctic PASSION project, an EU-funded polar research project focused on observing systems in the Arctic region and, like OCEAN:ICE, a member of the EU Polar Cluster. The second partner was the European Bureau for Conservation and Development, which manages the European Parliament Intergroup on Climate Change, Biodiversity and Sustainable Development, and which assisted in booking the venue and speakers for the event. The European Polar Board organised the event as part of its deliverable and on behalf of the OCEAN:ICE project. This combination of partners provided a unique and well-attended event focused on a bi-polar perspective and the relevance of EU-funded polar research to broader EU policy.

The keynote speakers were OCEAN:ICE Project Coordinator Dr. Ruth Mottram (DMI), OCEAN:ICE initiator and Senior Scientist Dr. Andrew Meijers (BAS), and Arctic PASSION Project Coordinator Dr. Michael Karcher (AWI). Opening and closing remarks were given by MEP Urmaz Paet, who was hosting the event. MEP Paet is Co-Chair of the Arctic Working Group of the European Parliament Intergroup on ‘Climate Change, Biodiversity and Sustainable Development’. A panel was convened for the second half of the event with the Head of Unit for ‘Healthy Ocean & Seas’ DG RTD Elisabetta Balzi, EU Arctic Envoy Clara Ganslandt, and Head of Greenland’s Mission to the EU Inuuteq Holm Olsen. The panel was moderated by the keynote speakers.

2. Work performed and main achievements

2.1 Description of the work performed

The main Deliverable work was divided into three phases.

- The first phase consisted of outlining the shape and agenda of the policy briefing and finding relevant partners for the sake of visibility and scale. We settled on partnering with the Arctic PASSION project due to their similar task of presenting polar science findings and recommendations to the European Parliament. We also established a relationship with the European Bureau for Conservation and Development (EBCD), a Non-Governmental Organization (NGO) founded in 1989 and based in Brussels (Belgium), which specialises in gathering Members of the European Parliament for discussions around similar scientific and environmental topics. A series of meetings between partners established the project roles, timeline, and overall objectives of the policy briefing.
- The second phase included fine-tuning messages to be presented. This coincided with the drafting of a Concept Note, which went through several iterations and rounds of feedback

from both projects. This was then publicly disseminated by all three partners. This Concept Note gave a broad introduction to the projects and the major topics to be covered, and served as a ‘teaser’ for the potential audience. Shortly after this was released, registrations for in-person and online participation began.

- The third phase consisted of drafting the Policy Brief, a document that served to summarize and enhance the topics discussed during the policy briefing itself. This document went through multiple iterations and was expanded and filled out following multiple meetings between the project partners. This honed the message further, focusing it on the challenges and recommendations which have become apparent from the work of the projects. This flyer was then published and served as a background to the policy briefing, and as an enduring product which will continue to be available for public distribution.

Lastly, the policy briefing itself and the presentation preparations and review concluded the work performed on the event. This included a panel with pre-prepared questions, an intervention by our host MEP Urmaz Paet, and the two keynote scientific talks.

Work following the event itself includes wrap-up, collecting all materials to be put online, and the deliverable report.

Reference documents

The policy briefing resulted in several documents:

- The policy brief with key messages and project descriptions is fully public via Zenodo: <https://zenodo.org/records/10521785>. The policy brief was handed out in physical copies to in-person participants.
- Agenda of the briefing: <https://ebcd.org/events/hybrid-event-from-changing-polar-regions-to-policy-responses-strengthening-eu-and-global-climate-preparedness/>
- A recording of the event will be hosted on the EPB YouTube channel: https://www.youtube.com/channel/UCBZM37I_50Hb0g2AYcgqAsg and on project websites.
- The presentations shown at the event:
The presentation by OCEAN:ICE is available here: <https://zenodo.org/records/10581017>
The presentation by Arctic PASSION is available in the [Zenodo community](#) of the project.
- An event report will be prepared by the EBCD to summarize the day itself, and will be soon available on the EBCD webpage: <https://ebcd.org/events/hybrid-event-from-changing-polar-regions-to-policy-responses-strengthening-eu-and-global-climate-preparedness/>

3. Results

3.1 Achieved results

The policy briefing’s main objective was to raise the profile of the OCEAN:ICE project and communication Arctic PASSION results. This was accomplished through a dialogue with and presentation to several high-level European stakeholders. This allowed the project’s relevance and expected results to be put forth in policy-relevant detail, to stakeholders specifically

The policy briefing can be considered a success based on several factors. Attendance was high and included officials from the European Institutions, other EU-funded projects, and other interested academics and civil society stakeholders. The event was held in a hybrid format, with about 20 attendees in person and 89 attendees online. The audience consisted of policy makers and governmental representatives (40% together), representative of the civil society (NGOs 6%) and private businesses (5%). We also had a large number of representatives of research networks and academia (49%). This represented a very engaging intersection of Arctic and Antarctic stakeholders, representing the European institutions, national stakeholders, and polar scientists.

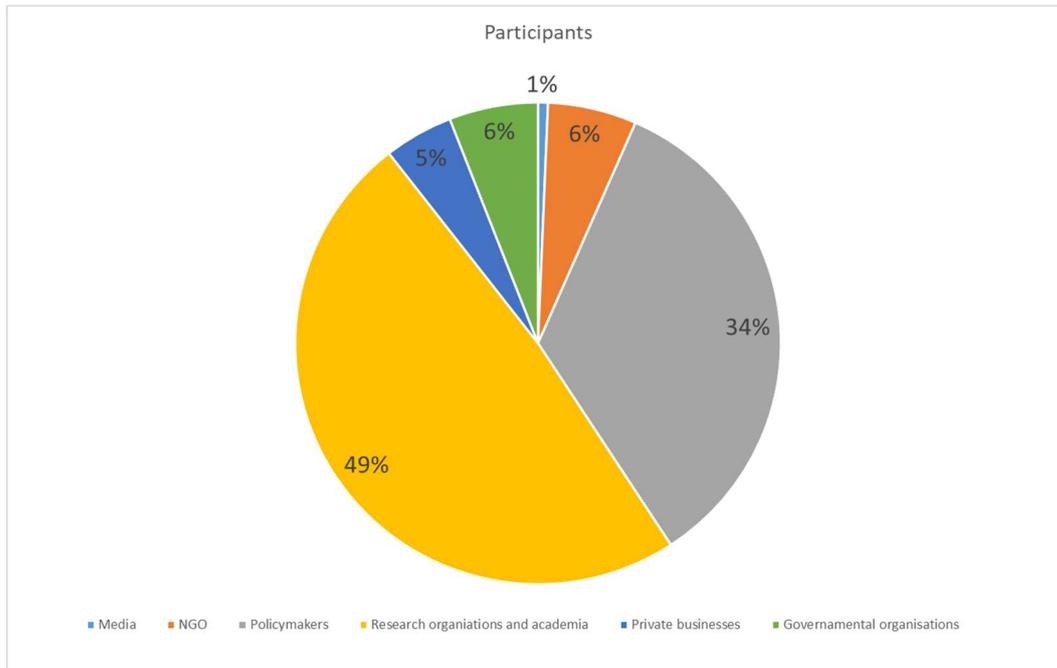


Fig 1: Composition of the audience

The audience had the opportunity to ask several questions to the speakers and panellists.

The keynote speakers asked several prepared questions of the panellists as well. Thus, the engagement between OCEAN:ICE representatives and top EU decision-makers, as well as with the wider public, can be considered to be very robust.

The event was also a success in that it involved another EU-funded Horizon2020 research project (Arctic PASSION), allowing a discussion on common issues and promoting the image of the European Union as a substantial contributor to research in both poles. Several EU initiatives were referenced by the speakers, including the EU Polar Cluster, the upcoming European Polar Coordination Office, the European Space Agency, and several other EU-funded projects.

The policy briefing itself provided an opportunity to engage on the topic of Antarctica's role in EU policymaking and priorities. Several talks, questions, and interventions featured the EU's role in Antarctica and future opportunities for engagement along current policy-lines. By linking OCEAN:ICE's focus on Antarctica and the Southern Ocean with Arctic PASSION's focus on pan-Arctic observations, the projects complemented one another and provided a complete picture of EU-funded polar research and priorities.

The format of the policy briefing allowed for scientific talks, political interventions, and discussion and so allowed for substantial exchanges. Many of the speakers and audience members expressed a desire for more frequent events of this sort.

Main outcomes of the discussion:

1. The importance of long-term, sustained funding for polar observations. Both OCEAN:ICE and Arctic PASSION emphasized the critical importance of funding that extends beyond project lifetimes, and supports polar observations in more scientifically relevant timescales – decades or more.
2. The direct links between the polar regions and European and global climate security. Both extreme weather events and sea level rise threaten European social, economic, and environmental health. The research being done at the poles and the predictions and models that arise from this are essential to understanding and planning for these impacts.
3. The need for continued EU engagement in the region. Clara Ganslandt described the ambition of the EU to increase its presence in the Arctic and Antarctic regions, following current strategy and policy layouts. This includes the need to continue funding polar research and encouraging and facilitating international cooperation in the sciences and beyond. Elisabetta Balzi added that the EU already funds many polar research projects, and is planning many more.
4. Involvement of local stakeholders. Inuuteq Holm Olsen spoke about the Greenland's recent National Research Strategy and the need for research to benefit local stakeholders through involvement and outcomes. This was supported by both projects.

4. Impact

4.1 Contribution to the project objectives

O7: Deliver free and open data access and contribute to international assessments, climate model development, observing initiatives and policymakers.

The Policy Briefing gave a high-level overview of OCEAN:ICE's data gathering thus far, including its dissemination strategy and links to European Union policy and priorities. The panel included several high-level EU decision-makers, and so the event could accurately be described as contributing to policy-making discussions, as well as informing future policy priorities. One of the main recommendations to be highlighted at the event was the need for long-term, sustained planning for observations networks, and so the topic of observation initiatives, both present and future, was also strongly represented.

Lastly, invitations to and advertisements for the project websites and associated materials helped with encouraging project access.

4.2 Contribution to the Expected Outcomes

EO2: Advanced understanding and science to support adaptation and resilience of natural and managed ecosystems, water and soil systems and economic sectors in the context of the changing climate.

Discussions of Sea Level Rise (SLR) directly contributed to advancing understanding of the science allowed for more accurate prediction and modelling of the associated effects. The economic aspect

was discussed, as well as the social aspect in the context of Arctic communities and European coastal communities. Points made by the OCEAN:ICE project included graphs indicating potential SLR and maps of affected areas.

EO3: Efficient monitoring, assessment and projections related to climate change impacts, mitigation and adaptation potential in order to bring out solutions for tackling emerging threats and support decision-making in climate change mitigation and adaptation policies at European and global levels.

As in EO2, assessments and projections of SLR and ice sheet melt were shown, with linked recommendations on long-term observing needs, funding, and policy prioritization.

EO6: Better managed scarce resources, in particular soils and water, thus mitigating climate related risks, in particular desertification and erosion, thanks to informed decision-makers and stakeholders and integration of adaptation measures in relevant EU policies.

EU priorities and policies were referenced, including the EU Arctic Strategy, the Northern Dimension, Greenland's National Research Strategy, the EU Green Deal, and the All-Atlantic Ocean Alliance. All of these reference the need for sustainable resource use, and all of them are informed by science. OCEAN:ICE can consequently, with further contact with policymakers, help to shape the future of these policies through concrete results and recommendations.

4.3 Policy relevance

OCEAN:ICE is still in its early stages, and so presenting results to inform policy decisions was not yet possible. The goal of OCEAN:ICE was to raise awareness and attention on the changes happening in Antarctica and in the Southern Ocean. However, the background research and findings that underpin the project's importance are still worth mentioning, and the goals of the project can interlink with future EU priorities.

The event comes in the context of rising political importance for both poles. While the Arctic is a more direct geopolitical priority for the EU, the Antarctic is becoming more relevant as an area of engagement. This is emphasised by recent European Parliament resolutions, including the formation of a Friends of the Arctic group by MEP Urmas Paet, host of the event. The recently released "Joint Communication on a stronger EU engagement for a peaceful, sustainable and prosperous Arctic", and the European Parliament-commissioned report "Antarctica: What role for the European Union?" are further evidence of the increasing need for building awareness of and engagement with ongoing polar research and experts.

Together with Arctic Passion, OCEAN:ICE drafted several of the recommendations which were shared in the briefing document and were delivered in the format of solutions to current challenges. For the sake of this report, the topic, challenge, and solutions are listed.

Long-term funding to support knowledge-based decision-making

- Challenge: A lack of long-term financial and political support for polar observations and information services which serve the needs of local inhabitants, science and policymakers globally.

- Calls for: Sustained support for long-term observations and information services based on the needs and requirements of inhabitants, stakeholders, and scientists by supporting actions initiated by the European Parliament and the European Commission.

Integrated Southern Ocean and Antarctic observing system

- Challenge: The present observational network in the Antarctic and Southern Ocean is ad hoc, has significant spatial and technical gaps and struggles to maintain ‘baseline’ coverage.
- Calls for: Sustained funding and political support for long term observations, the development and deployment of enabling technologies, and support for the implementation of the Southern Ocean Observing System future observing network.

Integrated Arctic observing system

- Challenge: The present Arctic observing system is too fragmented and there is no clear governance structure.
- Calls for: Sustained funding and political support by the European Union for better coordination of pan-Arctic Ocean observations and the dissemination of relevant data.

Inclusion of Indigenous Peoples and local communities

- Challenge: Limited inclusion of Arctic Indigenous Peoples and local communities.
- Calls for: Changes in the funding and decision-making structure for a more equitable and inclusive Arctic observing system

Implications of geo-politics on Arctic science

- Challenge: The current geopolitical situation prevents access and collaboration on a pan-Arctic scale.
- Calls for: To become more resilient to changes in the collaboration of states.

Accessibility and standardisation of data

- Challenge: The lack of easy access to data, as well as the inability to integrate datasets (data interoperability) to develop meaningful information services.
- Calls for: An agreed framework for harmonised data and the enhancement of data-interoperability and accessibility.

Sustainable development goals (SDGs)

The policy briefing touched on the following SDGs:

SDGs	Relevance	Insights
Climate neutrality	[Full relevant]	Sea Level Rise, a primary research objective, is a direct result of greenhouse gas emissions, and any addressing of SLR must address climate neutrality as well.
Clean Water and Sanitation	[Partially relevant]	SLR has the potential to inundate and infiltrate freshwater aquifers, treatment plants, and sewage systems, reducing water quality and availability for coastal communities.
Life Below Water	[Full relevant]	While not a major topic for this policy briefing, the warming oceans are of critical importance to marine biology.
Life on Land	[Partially relevant]	Coastal flooding and weather pattern changes driven by polar warming will have indirect effects on land-based life.
No Poverty	[Partially relevant]	Economic costs associated with a lack of preparedness and damage from coastal flooding and SLR will imperil the livelihoods of millions.
Decent Work and Economic Growth	[Partially relevant]	SLR and associated climate change effects will have negative physical and economic impacts on coastal communities. However, as was pointed out on the panel, this will also expose new areas for commercial utilisation.
Affordable and Clean Energy	[Partially relevant]	Connected to climate neutrality, clean energy is critical to mitigating SLR.
Industry, Innovation and Infrastructure	[Partially relevant]	Coastal infrastructure will need to be refitted, refurbished, and expanded to mitigate the worst effects of SLR.
Sustainable Cities and Communities	[Full relevant]	Sustainable cities depend on accurate forecasting for extreme weather events, SLR, and other climate-driven impacts. The ability of cities to address these impacts is a key factor in addressing the effects of climate change globally, especially given the increasing urbanisation in most countries, including Arctic areas. SLR models, arguably, impact coastal cities most of all.

International cooperation	[Full relevant]	In Antarctica, which has no national jurisdiction, international cooperation is of supreme importance to effectively set up and maintain observing systems and research on the continent and in the Southern Ocean. Positive international cooperation and strengthening of adjacent institutions is crucial for the long-term benefit of the continent, and with the robust and diverse scientific work arising from such a situation, international cooperation thus benefits the globe at large.
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4.4 Technology readiness level (if applicable)

N/A

4.5 Citizens and end-user entities' engagement (If applicable)

Addressed in Section 4.6.

4.6 Communication, Dissemination and Publications

Communication before the event was handled via all event partners: EPB, OCEAN:ICE, Arctic PASSION, and the EBCD. The EBCD led on generating advertising materials, including handling registration for the event itself.

Event promotion began on 15 September 2023 with the drafting of the Concept Note (Annex 1). This Concept Note was distributed through selected contacts, who were encouraged to further distribute it to interested parties. The Concept Note served as the basis for the event website: <https://ebcd.org/events/hybrid-event-from-changing-polar-regions-to-policy-responses-strengthening-eu-and-global-climate-preparedness/>

The event was advertised via X through the EPB (@eupolarboard), OCEAN:ICE (@OCEANICE_EU), Arctic PASSION (@arctic_passion), the EU Polar Cluster (@EUPolarCluster), and the EBCD (@EBCD_bxl).

The event was also advertised on LinkedIn by the EPB, OCEAN:ICE, and Arctic PASSION.

The event was advertised on Facebook by the EPB, OCEAN:ICE, Arctic PASSION, and the EU Polar Cluster.

The event was advertised on Mastodon by the EPB. The advertisements almost exclusively reposted the event banner generated by the EBCD (Annex 2) with relevant commentary by the project / organisation.

Social media engagement was largely in line with other posts on all channels. The event was first advertised to raise interest, and following the opening of registration on 5 December, the registration link was disseminated through all available channels.

The flyer has been distributed to all project partners and was available for those attending in-person at the event. An online copy is linked from all project websites and is hosted at Zenodo: <https://zenodo.org/records/10521785>

As mentioned, the event was livestreamed via a link sent to all those who registered online participation. A recording of the event is available on the event website: <https://ebcd.org/events/hybrid-event-from-changing-polar-regions-to-policy-responses-strengthening-eu-and-global-climate-preparedness/> and will soon be available on all project partner YouTube channels.

Annexes

Annex 1: Concept Note



OCEAN:ICE, Arctic PASSION, European Polar Board Policy Briefing Concept Note

Title: From Changing Polar Regions to Policy Responses: Strengthening EU and Global Climate Preparedness

Location: European Parliament

Date: Mid/Late January 2024

This event will showcase the latest findings of [OCEAN:ICE](#) and [Arctic PASSION](#) on how changes in the polar regions impact European climate, infrastructure and livelihoods. Both the Arctic and Antarctic play a pivotal role in regulating the global climate. Changes at the Poles are having direct impacts on communities around the world. In Europe, an increased number of recent extreme events has shown the urgency of mitigation and adaptation strategies that are based upon multiple disciplines and knowledge systems.

Advancing polar scientific research and well-coordinated observations, dissemination and open access to knowledge are key components of the decision making process. This is emphasised by recent [European Parliament resolutions](#). As attention in Europe and across the globe turns increasingly towards the Poles, European projects including OCEAN:ICE and Arctic PASSION aim to present/illustrate status and implications of their current research and observation activities to highlight impacts on the European Union and beyond.

The work of both projects will contribute to future EU engagement with the polar regions and inform future EU policy and are relevant to the recently released "[Joint Communication on a stronger EU engagement for a peaceful, sustainable and prosperous Arctic](#)", and the European Parliament-commissioned report "[Antarctica: What role for the European Union?](#)"



OCEAN:ICE is co-funded by the European Union, Horizon Europe Funding Programme for Research and innovation under grant agreement Nr. 101060452 and by UK Research and Innovation.

Arctic PASSION has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101003472.

Further information regarding the Organising team:

The **OCEAN:ICE** project focuses on understanding how the Antarctic Ice Sheet and the surrounding Southern Ocean influence our global climate. The data and models of the project will ultimately be able to reduce the level of uncertainty around how much the Antarctic Ice Sheet will melt in the near and far future, and provide information about potential tipping points, changes to sea level rise, and the potential impacts of sea level rise on European coastal areas.

Arctic PASSION aims to contribute to the international effort for the co-creation and implementation of a more coherent, integrated Arctic observing system. Main actions include to extend and better coordinate pan-arctic observations to close gaps and overcome fragmentation, to strengthen inclusion of science, Indigenous and local knowledge, to streamline access to and interoperability of Arctic data, and to develop services tailored to Arctic stakeholders and right holders' needs.

European Polar Board is an independent organisation focused on major strategic priorities in the Arctic and Antarctic. EPB Members include research institutes, logistics operators, funding agencies, scientific academies and government ministries from across Europe.

Annex 2: Online Advertisement Banner

FROM CHANGING POLAR REGIONS TO POLICY RESPONSES - STRENGTHENING EU AND GLOBAL CLIMATE PREPAREDNESS

24 JANUARY 2024
14:15 - 16:00 CET
HYBRID EVENT:
EUROPEAN PARLIAMENT
ROOM: ASP 5G1 / ONLINE



HOSTED BY MEP URMAS PAET

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JOIN THE DISCUSSION:

TWITTER:
@EPINTERGROUP_SD
@ARCTIC_PASSION
@OCEANICE_EU
@EUPOLARBOARD



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OCEAN:ICE

Annex 3: Final Agenda



FINAL AGENDA:

- 14:00 – 14:15:** Welcome of participants – Networking coffee
- 14:15 – 14:25:** Opening remarks by **MEP Urmas Paet**
- 14:25 – 14:50:** Presentations by:
- **Dr. Michael Karcher**, Project Coordinator of Arctic PASSION and Senior Scientist at the Alfred Wegener Institut
 - **Ruth Mottram**, Project Coordinator of OCEAN:ICE, Danish Meteorological Institute and the initiator of OCEAN:ICE, and **Andrew Meijers**, Senior Scientist at British Antarctic Survey
- 14:50 – 15:20:** Panel discussion with the participation of:
- **Elisabetta Balzi**, Head of Unit 'Healthy Ocean & Seas' (RTD.B.4), DG RTD, European Commission
 - **Clara Ganslandt**, Special Envoy for Arctic matters, European External Action Service (EEAS)
 - **Inuuteq Holm Olsen**, Head of Mission / Minister Counsellor, Greenland Mission to the EU
- 15:20 – 15:50:** Q&As with the audience
- 15:50 – 16:00:** Closing remarks by **MEP Urmas Paet**

Contact: [Ilias Grampas](mailto:ilias.grampas@ebcd.org), Deputy Director, EBCD
 Secretariat of the EP Intergroup on "Climate Change, Biodiversity and Sustainable Development"
 E-mail: ilias.grampas@ebcd.org – Tel: +32 2 234 50 14

Annex 4: Policy Brief “The Changing Poles: how Antarctic and Arctic science helps to inform and prepare the EU for changes in sea level rise and the global climate”

Link: <https://zenodo.org/records/10521785>

Annex 5: Presentation by Drs. Ruth Mottram and Andrew Meijers, “Impact of ocean ice interactions on climate”

Link: <https://zenodo.org/records/10581017>

Annex 6: Presentation by Dr. Michael Karcher, “Collaborating towards an Observing System that serves society’s needs in a future Arctic”

Available on the [Zenodo community](#) of the project.