EP Intergroup Climate Change, Biodiversity & Sustainable Development

Science advances at the ocean-climate-biodiversity nexus: Highlights from the Atlantic

Thursday 2nd March 2023, 14:15 – 16:00 CET

Hosted by MEP Isabel Carvalhais

Speakers:

- **MEP Isabel Carvalhais**
- **Prof. Murray Roberts**, iAtlantic Coordinator
- **Szilvia Nemeth**, Deputy Head of B4 Unit on "Healthy Ocean and Seas", DG RTD, European Commission
- **Noel Keenlyside**, Research project TRIATLAS coordinator
- **Daniele Iudicone,** Research project AtlantECO coordinator
- **Monica Verbeek**, Executive Director, Seas At Risk
- **Aurélie Spadone**, Senior Programme Officer, Ocean Governance, IUCN
- **Paul Thomas**, Policy Officer, European Association of Fish Producer Organisations

Opening Remarks

MEP Isabel Carvalhais

> *"Without serious commitments and true conversation goals, we will enter an irreversible turning point in human history"*

As an opening statement, **MEP Carvalhais** underlined the **main issues for oceans**: excess marine litter, plastic waste, overfishing, acidification of waters, mining activities, and increase of water temperatures. These drivers represent a **challenge to the long-term implementation of innovative measures.** This challenge means that there is a call for everyone to take action. Without a commitment to true conservation goals, we may enter a **point of no return in history**. There is a need to highlight science. The role of the latter is important and programmes like the iAtlantic are fundamental to **delivering knowledge on the impacts of the drivers of ocean depletion**. It is crucial to support its action before entering a point of no return. Listening to scientific advice is therefore key.

Presentation of the iAtlantic project and emerging results by Prof. Murray Roberts, iAtlantic Coordinator

> *"We need to take pressures like industrialisation of oceans and human activities seriously and listen to science in order to take action into our own hands"*

Professor Roberts started his contribution by explaining the **role of the iAtlantic project**. Pressures like **industrialisation** of the ocean, **deep sea mining**, **acidification**, **deoxygenation** and

warming of the seas are all pressures that our oceans are dealing with. As a matter of fact, most of the global warming has been absorbed by the water; if not managed well, the deep ocean is going to change, supporting less oxygen and more carbon dioxide. Indeed, **the abyssal ocean**, making up 60% of planet earth, is **increasing in temperature** with dramatic consequences for food supply. Many scientists are involved in current projects trying to come together to find a solution to this crisis. One of these projects is the iAtlantic project, which works **across multiple jurisdictions**, actors and industries. The project aims to **build capacity and manage expeditions across the Atlantic**. It works in a very wide geographical area, engaging with many different sectors. **Partnerships**, he underlined, are important to build capacity and foster **research** and **implement new practices.** Transferring knowledge and technologies are therefore key within science-based projects. Overall, the project integrates **work across modelling, experimentation and monitoring**.

Panel discussion

Speakers that took part in the panel discussion:

- **Szilvia Nemeth**, Deputy Head of B4 Unit on "Healthy Ocean and Seas", DG RTD, European Commission
- **Noel Keenlyside**, Research project TRIATLAS coordinator
- **Daniele Iudicone**, Research project AtlantECO coordinator
- **Monica Verbeek**, Executive Director, Seas At Risk
- **Aurélie Spadone**, Senior Programme Officer, Ocean Governance, IUCN
- **Paul Thomas**, Policy Officer, European Association of Fish Producer Organisations

The panel discussion started by giving some opening remarks about the previous presentation. **Ms. Nemeth** inquired about the importance of the project as **addressing policy-makers** with science-based solutions. **Mr. Keenlyside** highlighted the **importance of the challenges** that the oceans are facing, especially in regard to climate change, and what the needs are for modelling

and competencies in order to address these challenges and issues. **Mr. Iudicone** addressed the need to **understand the biology of the stressors** and **how ecosystems will change** in response to climate change and get into the ecological processes. **Ms. Verbeek** stated that tipping points were already reached in the Atlantic in the late nineties and the fact that **tropicalisation** is taking place. **Ms. Spadone** emphasised that oceans are dealing with **human-made stressors** and it is essential to integrate knowledge and capacity into the project. Lastly, **Mr. Thomas** focused on the amount of **monitoring** that the project is able to do to observe human impacts on oceans. These outcomes will help to move towards a more sustainable use of oceans.

Following in the discussion, **Ms. Nemeth** addressed the question of **why cooperation in the Atlantic is important** and how to promote cooperation with the global south. She answered by stating that **previous frameworks focused more on the northern areas**, and slowly expanded to other areas. She underlined how in the EU there is the opportunity to **link its work with international work** thanks to the **Horizon Europe Programme**. More than 40 projects have been supported by the EU, and some of them are linked with each other and are **feeding back into policy-making.**

Mr. Keenlyside was asked **how the TRIATLAS project complements other research activities**, like the one on the iAtlantic project. He stated that these **projects need to be complementary** in order to address this complex problem. In order to predict changes, it is important to **monitor change**. To do so, data is needed and coordinated measurements are needed to compile the data and **assess ecosystem variabilities**. Overall, he mentioned that he is **bringing together modelling with predicting frameworks**.

Mr. Iudicone intervened by answering a question about **his project and his expeditions**. He stated that his project **analysed microbiomes** which are crucial for life in oceans. There is a need

to **translate tools developed in human health** like DNA **into monitoring the health of ocean ecosystems**. He also touched upon **science diplomacy** and how it is useful to have a presence in the EU. On the use of the ocean as a sink for carbon, Mr. Iudicone stated that we are not ready to use oceans as ecosystems to store carbon, since we do not know the vulnerability of oceans and their species.

Ms. Verbeek was asked **which measures**, based on the results of these projects, **would be best to deal with deep sea mining and fishing** and what further research is needed, in her opinion. Since the phenomenon of **tropicalization** will bring different, **more resilient species** of fish to our seas, new measures will need to be adopted; at the same time, there's a need for **overfishing to be tackled by scientific advice**. On deep sea mining, she remarked that rather than destroying the planet's last frontier for resources, it would be ideal to **reduce demand in the first place**. Overfishing also releases significant masses of carbon into the atmosphere, weakening the capacity for carbon mitigation. **Bottom trawling is particularly impactful** in this sense.

Ms. Spadone was inquired on the **contribution that**, in her opinion, **basin-wide projects like iAtlantic can have on the issues** analysed compared to more local initiatives. She underlined that such wide projects can help address scientific questions on migratory species thanks to their **connectivity value**. On the **transfer from science to policy**, she underlined the clear **importance for knowledge sharing** of the project. Considering the **BBNJ agreement**, she is convinced of the importance of iAtlantic for the implementation of what has just been decided in New York.

Finally, MEP Carvalhais then asked **Mr. Thomas** if there has been **evidence of repercussions on local coastal communities** because of the ecosystemic issues identified by these projects. He mentioned that the impact has indeed been seen, as the **raise in seawater temperatures have impacted the fish population**. **Deforestation** is, however, also constituting a significant issue: the

amount of **nutrients going into the ocean has reduced** dramatically. A good strategy for fisheries management is therefore necessary. Asked **how the fishing sector is working to reduce its ecological footprint** and what could it do more in this regard, he then underlined how the carbon footprint of the sector has already been reduced by 40% since 1990.

Q&A session

From the audience, **Mr David Johnson,** professor at Seascape Consultants Ltd, underlined the role of **science diplomacy** in these projects but also the need for continuity. This has to translate in **regulatory respect of scientific advice**, which is often overtaken by political interests. The regional fisheries management organisations need an upgrade, which could happen through the **scientific and technical committee of the BBNJ**.

Mr. Paul Webb, from the European Research Executive Agency (REA), asked if the support is currently sufficient for these projects to have continuity, and in case there is a lack of it, what the REA can do to contribute. **Professor Roberts** replied underlining the **issues in funding a powerhouse in North America**, for which the help suggested by Mr. Webb could be crucial. **Ms. Nemeth** then stressed the importance of the communities created through these initiatives; research alliances have a significant role to influence policy-making, and they represent important tools for communities to engage. **Mr. Keenlyside** mentioned the leadership role that the EU can play, for which forming alliances with the global south could be fundamental. The continuation of project funding is therefore necessary. **Mr. Iudicone** then intervenes stressing how the communities created through these projects need continuous support, and for further funding communication with these communities is needed not to adopt a top-down approach.

Ms. Spadone stressed that improving the science-to-policy communication involving scientists in policymaking is also crucial; Horizon 2020 comprises this dimension but more investment is still needed. **Ms. Verbeek** concluded the session by underlining the importance for scientists to

communicate, to warn and speak up; she is however aware that it can be problematic. Communication is therefore a point to be focused on, in order to create channels of information flow from science to politics and vice versa. **Ms. Aliyyah Ahad**, from the Brussels office of the government of Bermuda, suggested that connection with media and journalists can make science-based information more accessible to the wider public; **Mr. Iudicone** then intervened, revealing the issues for the scientific community in communicating with the media. **Professor Roberts** agreed with this contribution, highlighting how working with educators has, instead, been a strategy adopted by iAtlantic. **Ms. Vikki Gunn** mentioned the relevance of projects related to deep sea mining even if those projects might have been conducted years ago. Finally, **Mr. Tim Collart**, from Seascape Belgium, mentioned the work of DG Mare to create visualisation tools for education, to better communicate science.

Concluding remarks

The closing remarks by MEP Isabel Carvalhais focused on the integrity of work between different actors, as well as on cooperation, to facilitate the spreading of knowledge. Complementarity is crucial to provide transparent science-based information. Continuity of funding is fundamental to building a stable research community focused on the important aspect: making science. Modelling and simulation are still subject to a great deal of unmotivated scepticism, which has to be solved. Trust in science, she underlined, has to go together with the will to change life habits.