





## **MARIPOLDATA Reading Group**

## **Science-Policy Interfaces in United Nations negotiations**

## 28.10.2020

**Guest Speaker: Christine Gaebel**, iAtlantic & ATLAS Policy Project Manager at the University of Edinburgh, presenting her recent paper Recognising Stakeholder Conflict and Encouraging Consensus of 'Science-Based Management' Approaches for Marine Biodiversity Beyond National Jurisdiction (BBNJ) (Gaebel et al., 2020).

#### Context:

Currently, the UN is negotiating a new legally binding agreement for the conservation and sustainable use of marine biodiversity beyond national jurisdiction. Oftentimes, there is the call for the use of "best available science" in decision-making.

- How can we make sense of science-policy interfaces in international negotiations, such as the BBNJ negotiations?
- How are different stakeholders in BBNJ perceiving the science-policy interfaces?

The two readings on the topic of science-policy interfaces in international negotiations offer insights on 1) a theoretical background of combining insights from International Relations and Science and Technology Studies to study science-policy interrelations and 2) the concrete example of the BBNJ negotiations and different stakeholder perspectives.

#### **Readings for this session**:

When does Science matter? International Relations Meets Science and Technology Studies (Lidskog & Sundqvist 2015) to provide some background knowledge on science-policy interfaces in international negotiations.

Recognising Stakeholder Conflict and Encouraging Consensus of 'Science-Based Management' Approaches for Marine Biodiversity Beyond National Jurisdiction (BBNJ) (Gaebel et al., 2020).

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## 1. <u>When does Science matter?</u>

## <u>Reading 1.</u> When does Science matter? International Relations Meets Science and Technology Studies (Lidskog & Sundqvist 2015)

#### **Overview**:

Oftentimes we hear the call for "science-based" approaches, or the use of "best available science" to guide decision-making. How can we study this interface in an international negotiation process, such as the UN negotiation for the conservation and sustainable use of marine biodiversity beyond national jurisdiction?

There are diverging understandings of how, when, and under what conditions science influences policy, and therefore also on how the interplay between science and policy should be best organized.

The authors provide a brief and clear overview of main insights from different school of thought on the science-policy interrelations and role of science in international policy-making.

International Relations		Science and Technology Studies
Liberal institutionalism (Regime Theory)	Constructivism (Epistemic Communities)	Concepts of coproduction, stage management, civic epistemologies
Science has no independent role relative to state interests	Emphasis on the importance of science, and in particular consensus-based knowledge in policy- making	Science and policy are understood as <b>intertwined</b> Science–policy relationship characterized as a process of <b>coproduction</b> , meaning that policy influences the production and stabilization of knowledge, while knowledge simultaneously supports and justifies policy
Science is understood as a <b>resource that</b> <b>nation-states can</b> <b>use</b> in their negotiations concerning international agreements		<b>Stage management</b> , as a form to study how actors, in practice, address the coproduction of science and policy : Backstage management refers to the process of knowledge production, which is uncertain, controversial, and risky; while in front-stage management, science becomes explicit and public, and is often portrayed as certain and independent of political considerations

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knowledge is but<br/>one of many<br/>resources that aSheila Jasanoff's concept of civic epistemologies:<br/>Accounting for differences in assessing the rationality<br/>and robustness of knowledge claimsbargaining over<br/>international<br/>cooperationAccounting for differences in assessing the rationality<br/>and robustness of knowledge claims

**Epistemic communities**: Knowledge-based, transnational networks of professionals holding political power through cognitive authority. They evolve and can successfully change the understanding of an environmental issue, thereby persuading policy makers to take action. Expert knowledge becomes an important explanatory factor for international cooperation, which implies that ideas can change a state's conception of its interests. However, it is the existence of an epistemic community as an agent that makes "speaking truth to power" possible.

Based on this approach, we can describe the role of science in policy formation as involving a three-step

process: separate science from policy; build consensual knowledge; and connect knowledge to policy.

Haas and Stevens (1992) argue that to be influential...,

- 1. Scientific knowledge should be separated from the policy process.
- 2. **Consensus-based** (then legitimate and credible)
- 3. Knowledge has to be **usable**

There are thus, quite **significant differences between the approaches** of International Relations scholars and Science and Technology (STS) Scholars. Whereas Haas and Stevens suggest that isolation makes scientific actors stronger, STS scholars claim the opposite: scientists can only be influential by building networks with other actors, and these are to be built in parallel with the development of scientific arguments. In the constructivist perspective of International Relations, science should be separated from policy in the beginning and speak as "one voice", as such, with consensus on scientific issues: "speaking truth to power". In contrast, researchers within the field of STS state that science is not as pure as it claims to be and that what makes science important is that it is messy, impure, and political. In this regard, there is no necessity for separation of science and policy.

Overall, the authors emphasise the **value in combining insights from IR and STS** for making sense of how science-policy interrelations unfold. STS research can be used to elaborate upon and deepen IR research regarding how and when science connects to policy. In this way, STS can supplement and deepen IR discussions on the use of science in policy.

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## 2. **BBNJ Science-Policy Interfaces**

<u>**Text 2:**</u> Recognising Stakeholder Conflict and Encouraging Consensus of 'Science-Based Management' Approaches for Marine Biodiversity Beyond National Jurisdiction (BBNJ) (Gaebel et al., 2020).

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# Recognising Stakeholder Conflict and Encouraging Consensus of 'Science-Based Management' Approaches for BBNJ

## 28 October 2020 – MARIPOLDATA BBNJ Reading Group

Christine Gaebel, The University of Edinburgh

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# **Overview**

- 1. Background
- 2. BBNJ and 'science'
- 3. Assessing stakeholder perceptions of 'science-based management' approaches for BBNJ
- 5. Results and implications

# Background

## The ATLAS Project (2016-20)

- Transatlantic assessment of deep-sea ecosystems
- 12 case study areas, 24 partners
- Galway Statement on Atlantic Ocean Cooperation



Service Layer Credits: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp

# Background

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# Background

## The ATLAS Project (2016-20)

- Transatlantic assessment of deep-sea ecosystems
- 12 case study areas, 24 partners
- Galway Statement on Atlantic Ocean Cooperation

## The iAtlantic Project (2019-23)

- Integrated assessment of Atlantic deep and open-ocean ecosystems
- 12 study regions, 35 partners
- Belem Statement on Atlantic Research and Innovation Cooperation



Service Layer Credits: National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, Increment P Corp.

# **Science & the BBNJ process**

- "...a science-based approach, using the best available scientific information and knowledge" -President's Aid to Negotiations
- *"In order to achieve the objective of this Agreement, States Parties shall be guided by... the best available [science]..."*

-BBNJ Revised Draft Text



# Assessing stakeholder perceptions of 'science-based management' of BBNJ

### Recognising Stakeholder Conflict and Encouraging Consensus of 'Science-Based Management' Approaches for Marine Biodiversity Beyond National Jurisdiction (BBNJ)

#### 🛐 Christine Gaebel<sup>17</sup>, 🔚 Corinne Baulcomb<sup>2</sup>, 📇 David E. Johnson<sup>1,3</sup> and 🌉 J. Murray Roberts<sup>1</sup>

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Areas beyond national jurisdiction (ABNJ) encompass the seabed, subsoil and water column beyond coastal State jurisdiction and marine biodiversity beyond national jurisdiction (BBNJ) is rich and varied. From providing sustenance and supporting livelihoods, to absorbing anthropogenic carbon dioxide emissions, ABNJ ecosystems are vital to the wellbeing of humankind. However, an enhanced understanding of BBNJ and its significance has not equated to its successful conservation and sustainable use. Negotiations for a new international legally binding instrument for the conservation and sustainable use of BBNJ have scoped applicable principles for a future agreement, including the use of best available science and science-based approaches. But there remains a lack of convergence on what science-based approaches would look like, or how they would be operationalised. In order to negotiate and implement a meaningful BBNJ treaty that can meet conservation and sustainable use objectives, stakeholder perceptions must be identified, and areas of divergence must be overcome. This study uses Q-methodology to reveal and analyse the diversity of perceptions that exist amongst key stakeholders regarding what it means to operationalise sciencebased approaches for the conservation and sustainable use of BBNJ. The Q-study features 25 stakeholder interviews and 30 Qstudy participants revealing four different perceptions, each of which represent a different interpretation of what science-based management means in the context of BBNJ. Across these perceptions, there were areas of stakeholder consensus (e.g., regarding the benefits of integrative management, the application of precautionary approaches when data are insufficient, and the issues pertaining to the trustworthiness and credibility of science) and areas of stakeholder conflict (e.g., regarding the definition, function and authority of science within current and future BBNJ governance processes). Key implications of this study include

• Corinne Baulcomb Scotland's Rural College

Prof David Johnson
The University of Edinburgh
& Seascape Consultants

• **Prof Murray Roberts** *The University of Edinburgh* 

# **Q-methodology**



## **Create the concourse**

Create the Concourse:

A collection of statements that reflect the discourse. Formulate the Qset:

A condensed representation of the discourse. Identify the P-set: Identification of purposely selected study participants.

?

### Undertake the Q-

sort: Participants 'sort' the statements on a predetermined grid.

#### Statistical analysis:

By-factor and byvariable analysis to identify correlations. Development of factor perceptions:

Quantitative data augmented with qualitative data to create a narrative.

![](_page_12_Picture_12.jpeg)

- Transcribed & coded
- 304 statements

## **Formulate the Q-set**

![](_page_13_Figure_1.jpeg)

# **Identify the P-set**

![](_page_14_Figure_1.jpeg)

## **Undertake the Q-sort**

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# **Statistical analysis**

![](_page_16_Figure_1.jpeg)

## **Factor development**

![](_page_17_Figure_1.jpeg)

## **Results: 4 factors**

## Factor 1: Enhancing, not undermining

We can operationalise science-based management by enhancing the sciencepolicy interface

## Factor 3: Trust in science

Science-based management means putting science on an equal playing field & basing our decisions on scientific evidence Science-based approaches need to consider more disciplines & socio-economic concerns

Factor 4: More than just science

Factor 2: The global idealist

Science-based management requires a

*qlobal science body* 

for global implementation & equality

# Selected results: conflict & consensus

![](_page_19_Picture_1.jpeg)

The definition, status and authority of science

![](_page_19_Picture_3.jpeg)

- The use of precautionary approaches
- > The benefits of integrative and holistic management

## Recommendations

1. Promote diverse knowledge systems that reflect the diverse values of stakeholders

2. Define and institutionalise a robust science-policy interface within the BBNJ Agreement

3. Promote participatory and highly integrative approaches that facilitate two-way dialogues both within the negotiations and under a future agreement

![](_page_21_Picture_0.jpeg)

# Thank you!

# Please get in touch with any questions or comments!

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## **Project Contact Details**

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## 3. Discussion

Christine Gaebel and her co-authors researched the stakeholder perspectives of science-based management approaches in the case of the ongoing BBNJ negotiations. Interviews with BBNJ stakeholders, namely people directly involved with the negotiations or research of BBNJ or work in an industry directly involved in BBNJ. While the results cannot be generalized, they provide a snapshot of stakeholder perceptions in the BBNJ process.

#### **BBNJ Stakeholders and their views on science**

While all BBNJ stakeholders are valuing science, there seem to be different definitions of what the "best available science and knowledge" is and therefore, what forms of knowledge and in what way such should be included into decision-making in the BBNJ process. This shows the diverse forms of knowledge systems and the various perceptions that will need to be brought together to inform decisions in BBNJ for governing the global commons. For Christine Gaebel, science does not only include marine science or ocean science, but also community-based knowledge.

#### **Data generation by Non-State Actors**

Data on the ocean, marine species, impacts of activities, changing marine environments, to name a few, are already being gathered by a number of actors, including non-state actors. Christine Gaebel indeed sees a value in including non-state actors, such as environmental non-governmental organisations or the business sector into data collection and sharing. There are many different kinds of data necessary to collect and industry vessels are already going to various areas of the ocean in their normal capacities. Therefore, it would be useful to have data generated by such actors and contribute to a larger database.

#### The "right science" for BBNJ

The multiple stakeholders in BBNJ value science and different knowledge systems differently. In the BBNJ negotiations, it remains to be seen which forms of knowledge will the agreement will be based on, who will be identified as experts in this regard and to what extent a potential Scientific and Technical Body will be provided with powers to influence policy-making in these areas that belong to all. Another issue is the level to which decisions should be based exclusively on science and if other values are to be allowed to guide policy, such as normative, moral claims. The group named and discussed the case of the International Whaling Commission, in which the Scientific Committee and the Technical Committee justified commercial whaling on scientific grounds as "sustainable", without addressing moral arguments that opposed whaling per se. The political body, however, nevertheless voted in favor of the whales, despite

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opposition from the scientific body, arguing that whales could be killed<sup>1</sup>. This encourages thoughts on science-policy interrelations and to what extent moral, normative human norms play a role in international policy settings.

#### **Institutional Setting**

Discussion within the group also surrounded other factors, including institutional settings and rules of procedure of the body to the regime in influencing the role of scientific uptake. This would particularly be important to consider when it comes to a potential Scientific and Technical Body to provide science input. The institutional setting plays a significant role in the power of scientific and technical bodies and can lead to a politicization. It is therefore particularly interesting to research options for the newly to be created Scientific and Technical Body for BBNJ.

#### The role of Social Media

Social media can play a significant role in bringing people into the conversation that are unaware of the BBNJ negotiations. In the climate change and biodiversity fields social media also served to put pressure on policy-makers. Analyses of twitter posts during negotiations guard valuable future research potential in this regard.

We are looking forward to the upcoming Reading Group Session and discussions!

<sup>&</sup>lt;sup>1</sup> See: A. W. Harris, The Best Scientific Evidence Available: The Whaling Moratorium and Divergent Interpretations of Science, 29 Wm. & Mary Envtl. L. & Pol'y Rev. 375 (2005), <u>https://scholarship.law.wm.edu/wmelpr/vol29/iss2/4</u>. Retrieved from: <u>https://scholarship.law.wm.edu/cgi/viewcontent.cgi?article=1128&context=wmelpr</u>. *The MARIPOLDATA Reading Group is part of the MARIPOLDATA project which has received funding from the European Research Council under the Horizon 2020 research and innovation programme (No 804599).*