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SCIENCE WITHIN THE FRAMEWORK OF THE UN CONVENTION ON THE LAW OF THE SEA

IDENTIFYING THE PROVENANCE OF SCIENTIFIC AUTHORITY

1. Introduction and Delineation of the Research Question
2. Paper Outline
3. Preliminary Conclusions

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INTRODUCTION AND DELINEATION OF THE RESEARCH QUESTION

UNCLOS AS A FRAMEWORK CONVENTION WHICH DELEGATES AUTHORITY

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I. Scientific claims as informing the facts (*Southern Bluefin Tuna Cases; Land Reclamation in and around the Strait of Johor)* v. **as informing the interpretation of a treaty term** (ITLOS *Climate Change Opinion)***;**

II. Theorization in view of the Convention's object and purpose → UNCLOS delegated the precising of science-based terms to then existing and future actors:

   a. Interpretive role of the Commission on the Limits of the Continental Shelf regarding Article 76, virtually authoritative?; (But *see Bangladesh/Myanmar*, para. 413)

   b. Role of (the) competent international organization(s) in laying down scientific-influenced "generally accepted international rules and standards";

   c. Role of the International Seabed Authority in further implementing, e.g., Article 139 (precautionary approach);

   d. BBNJ Agreement's Scientific and Technical Body & Conference of the Parties regarding ABMTs and EIA;

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   e. The impersonal "future interpreter", to precise the meaning of science-based terms in accordance with treaty interpretation rules?

INTRODUCTION AND DELINEATION OF THE RESEARCH QUESTION

THE ROLE OF THE "FUTURE INTERPRETER"

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III. "Future interpreter" of science-based terms in UNCLOS — Not all UNCLOS terms borrowing from "science" begs for ulterior precising (e.g., "low-water line" [hydrography] and "maximum sustainable yield" [biology]), but other terms do:

a. Science-based terms (*stricto sensu*) such as those in the definition of "pollution of the marine environment" in Article 1(4), "mineral" in Article 133;

b. Provisions containing obligations to take measures that are "necessary" to achieve a certain goal (E.g., Article 194(1));

c. Provisions directly referring to "best available science" or similar constructs (E.g., Article 234; BBNJ Article 7(i)).

INTRODUCTION AND DELINEATION OF THE RESEARCH QUESTION:
WHICH, OR WHOSE, SCIENCE SHOULD THE "FUTURE INTERPRETER" ADOPT?

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IV. Following customary treaty interpretation rules as codified in VCLT Articles 31-33, which *scientific claims* should inform the **"ordinary meaning"** of the science-based terms being interpreted? Possibilities:

a. Scientific considerations are within the discretion of the State performing the obligation concerned — and international courts and tribunals should not adopt a strict standard of review in this respect (UNCLOS delegates authority to each State);

b. The meaning of science-based terms is to be "objectively determined" (ITLOS *Climate Change*):

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b. The meaning of science-based terms is to be "objectively determined" (ITLOS *Climate Change*):

1. The scientific claim informing the "ordinary meaning" must be widely shared by States, that is, the relevant "interpretive community" infusing treaty terms with meaning (UNCLOS delegates authority to the "interpretive community");

2. The scientific claim informing the "ordinary meaning" must be that which is "best", according to methodological rigor, or more likely to be "correct", even if not widely shared by States (UNCLOS delegates authority to whomever presents the most compelling scientific claim — from a scientific perspective).

INTRODUCTION AND DELINEATION OF THE RESEARCH QUESTION:
THE POINT OF DEPARTURE (1)

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- ITLOS did not elaborate on which science is the "best available science", but some commentators have quoted Paragraph 208 of the Advisory Opinion to argue that it deferred to "scientific consensus" or to the "best" science:

> "With regard to climate change and ocean acidification, the best available science is found in the works of the IPCC which reflect the scientific consensus."

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> "With regard to climate change and ocean acidification, the best available science is found in the works of the IPCC which reflect the scientific consensus. As noted in paragraph 51 above, *most of the participants expressed the view that the IPCC reports are authoritative assessments of the scientific knowledge on climate change and referred to them in their pleadings in the present proceedings*. **In this regard**, the Tribunal considers that the assessments of the IPCC relating to climate related risks and climate change mitigation deserve particular consideration."

INTRODUCTION AND DELINEATION OF THE RESEARCH QUESTION:
THE POINT OF DEPARTURE (2)

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My reading of ITLOS's *procédé* (particularly in the interpretation of terms in the definition of "pollution of the marine environment", para. 172):

- Based on the general rule of interpretation, as codified in VCLT Article 31 (para. 129);
- Mindful of the Convention's object and purpose ("constitutional and framework nature", "living instrument", etc), which allows for evolutive interpretation (para. 130);
- Focused on finding the "ordinary meaning" of the terms;
- **Scientific claims (or evidence) informing the "ordinary meaning" of interpreted terms are either based on other *relevant* and *applicable* rules of international law or on widely endorsed IPCC reports (para. 49);**

OUTLINE OF THE PAPER

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- Considering *Climate Change*, what is the place of "scientific claims" in the general rule of interpretation? (Development of the point of departure, hypothesis)
- Challenging and complementing the finding above, can scientific claims that are not widely shared by the relevant interpretive community be integrated into the interpretive process?

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  - **What if UNCLOS's object and purpose orient the ordinary meaning of its science-based terms to be informed by the "most likely correct" scientific claims, not by the claims that are widely shared by the interpretive community?**

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  - **If reference is made to "best available science" and similar constructs, should the "widely shared" requirement be by-passed, and deference be given to purely scientific considerations?**

PRELIMINARY CONCLUSIONS

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- **(My reading of) ITLOS's approach was positively verified: The ordinary meaning of a term is infused by the *relevant* interpretive community;**

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- Non-widely shared scientific claims may play a role as supplementary means where the general rule leaves the meaning ambiguous or obscure (e.g., because there is no widely shared scientific claim);
- **"Best available science" is not a rule of reference to "more likely correct" or literally "best science". Its purpose is to debias the production of scientific evidence, leaving it not with the State under the relevant obligation, but with the international community (e.g., Article 234).**

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Thank you!

(This is a work-in-progress. Your comments, criticisms, and suggestions are of course very welcome!)

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