

# The Mesopelagic Zone

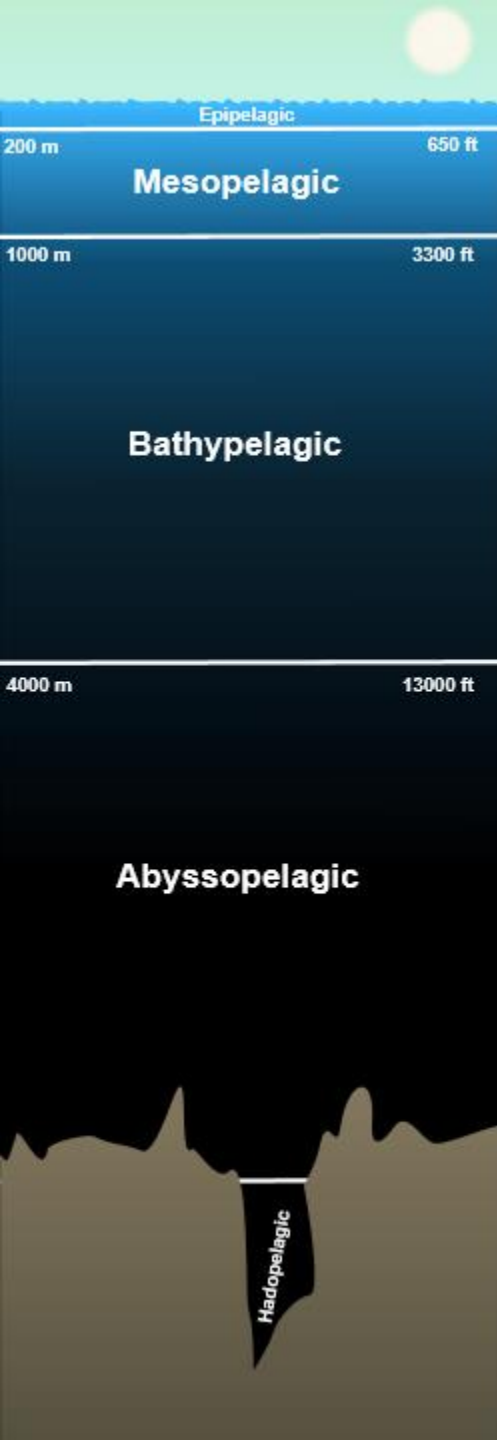
*IUCN webinar*

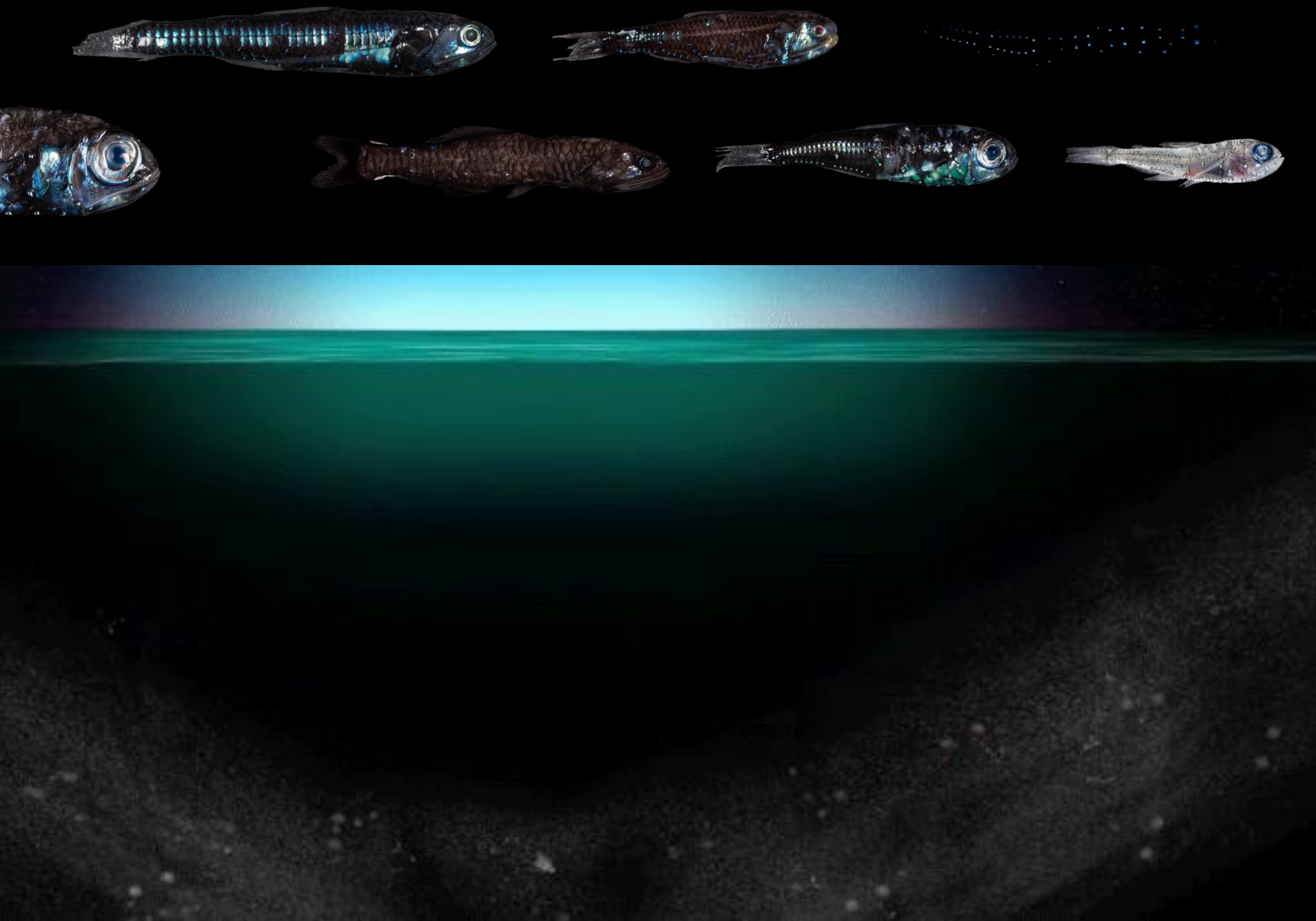
**Building ambition for the High Seas Treaty**

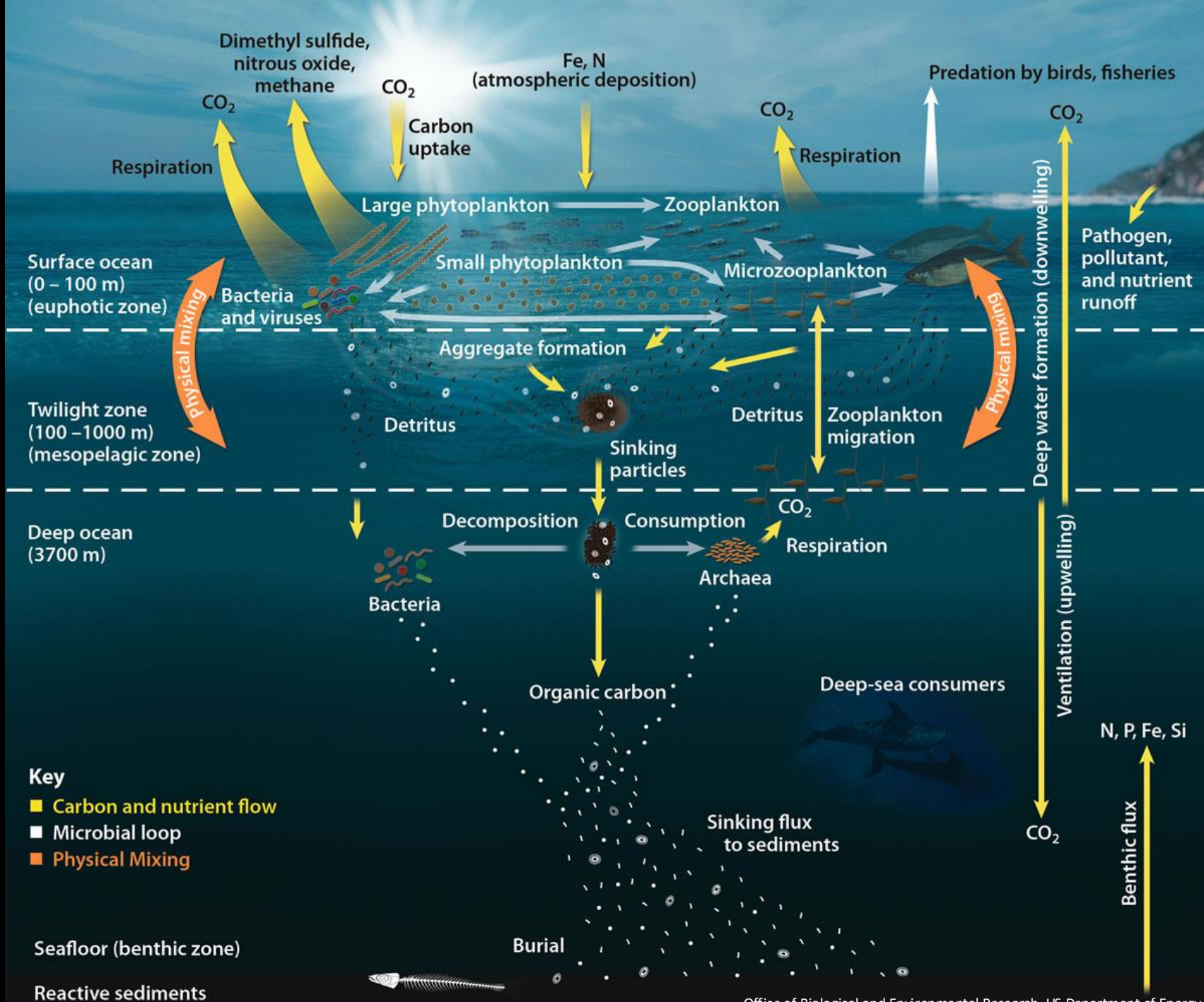
Integrating Climate Change into Environmental Impact Assessments

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**Glen Wright**







The mesopelagic zone is

***“still poorly understood from almost any perspective, whether physics, biochemistry or ecology”***

JETZON

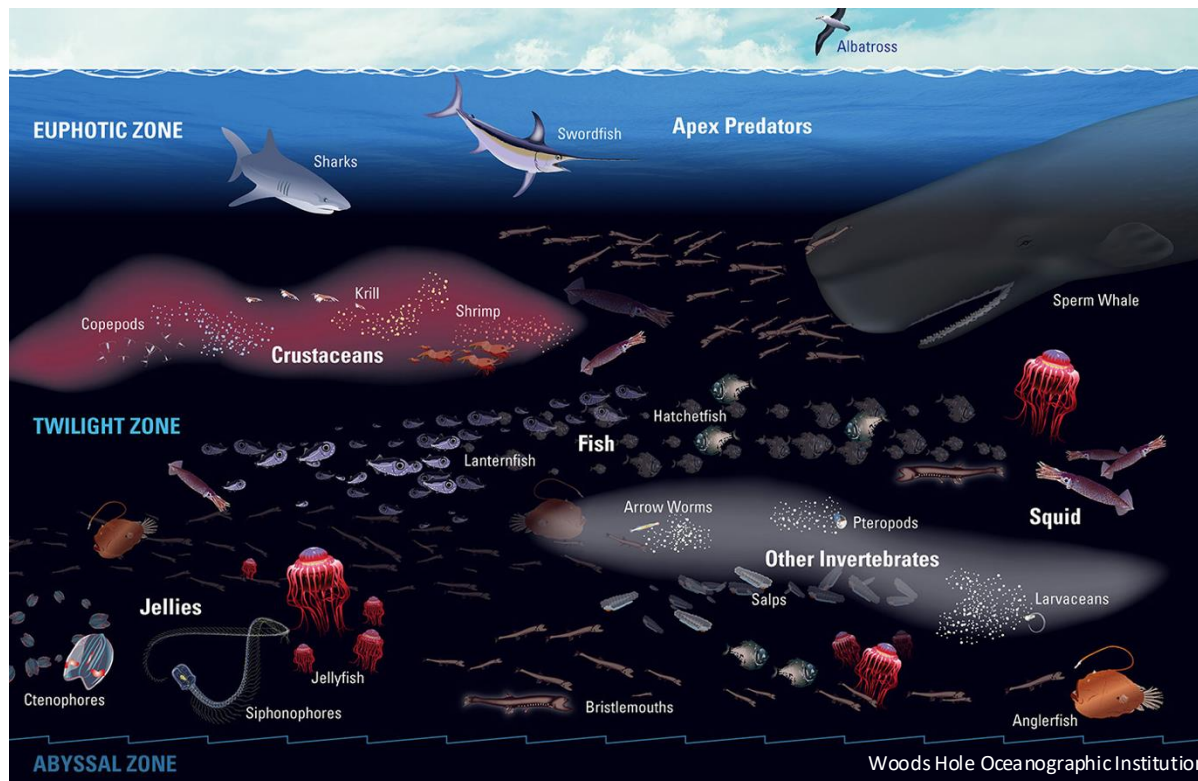
- Population data (e.g. recruitment, natural mortality, effects of stressors on growth/survival): the basis for stock assessment/ modelling
- Stock assessments: no existing data on which to base a conventional assessment
- Connectivity: links between oceanographic regimes and mesopelagic biomass and biodiversity
- Climate: the role of the mesopelagic zone in global carbon cycle

A range of projects ongoing, e.g.





- Critical component of **food web**: connects primary producers (e.g. plankton) to higher level predators (e.g. tuna)
- Integral in global **carbon cycle**: responsible for sequestering 2-6 billion metric tons of carbon annually
- **Limited scientific understanding**



## Growing interest in exploiting mesopelagic fisheries

*"...large-scale industrial actors outside the traditional fisheries domain are paying attention to the potential new fishery", especially big companies that "have the knowledge and needed resources (human capital and financial strength) to operate and further develop huge factory trawlers with full-fledged on-board processing plants".*

Standal and Grimaldo (2020)

## Growing concern among scientific community

*"The oceans' twilight zone must be studied now, before it is too late"*

Martine et al. (2020)

- Convention on the Law of the Sea (1982)
- Convention on Biological Diversity (1992)
- Fish Stocks Agreement (1995)
- General Assembly resolution 60/31 (2005)



- Conservation & sustainable use
- Precautionary principle
- Cooperation
- **Impact assessment**



States required to **cooperate to manage** mesopelagic fish stocks, either through a **Regional fisheries management organisation** (RFMO) or other arrangements, and apply the principles of the Fish Stocks Agreement



No requirement to conduct a **comprehensive environmental assessment** of the potential impacts of a proposed fishery on the **climate** or on **marine biodiversity**



## RFMOs

- Limited impact assessment provisions
- Mixed performance
- Slow progress addressing biodiversity impacts
- Only States with an interest in exploiting fisheries

## BBNJ Agreement

- Expected to strengthen existing provisions
- But not yet clear to what extent it will reflect accepted good practice
- No coherent approach to environmental assessment emerges from the current draft text



	RFMOS	Established good practice
<b>Objective</b>	<ul style="list-style-type: none"> <li>“evaluate the long-term potential of new and exploratory fisheries... possible impacts on target stocks and non-target” species (SPRFMO)</li> </ul>	<ul style="list-style-type: none"> <li>Avoid significant adverse impacts on biodiversity</li> <li>Maximize contribution to sustainability</li> </ul>
<b>Trigger</b>	<ul style="list-style-type: none"> <li>Proposal for exploratory fishery</li> </ul>	<ul style="list-style-type: none"> <li>General trigger based on clear criteria</li> <li>Proposed activity in poorly understood ecosystem</li> </ul>
<b>Impact assessment</b>	<ul style="list-style-type: none"> <li>Focus on targeted fish stock</li> <li>No broader assessment of biodiversity impacts</li> <li>No assessment of ecosystem services</li> <li>No assessment of climate impacts</li> </ul>	<ul style="list-style-type: none"> <li>Account for all environmental impacts</li> <li>Also consider benefits, risks, uncertainties</li> <li>Include social and economic aspects</li> </ul>
<b>Consultation &amp; participation</b>	<ul style="list-style-type: none"> <li>No provision for public consultation</li> <li>Limited transparency</li> <li>Limited participation of developing States</li> </ul>	<ul style="list-style-type: none"> <li>Meaningful public consultation</li> <li>Early and continuous engagement</li> <li>Transparent processes and decision-making</li> <li>Participation of international community</li> </ul>
<b>Review &amp; accountability</b>	<ul style="list-style-type: none"> <li>Review by Contracting Parties based on internal scientific advice</li> <li>Unclear if any process is in place for monitoring and follow-up</li> </ul>	<ul style="list-style-type: none"> <li>Independent review by authority/scientific body</li> <li>Recourse to challenge decisions</li> </ul>
<b>Strategic Assessment</b>	<ul style="list-style-type: none"> <li>No provision/mandate for strategic assessment</li> </ul>	<ul style="list-style-type: none"> <li>Strategic Environmental Assessment (SEA) and Regional Environmental Assessment (REA) emerging as key tools for ecosystem-based management</li> </ul>

**Critically important that climate is included in assessments**

- Limited understanding of global carbon cycle requires precaution
- Existing framework inadequate

**BBNJ Agreement could strengthen environmental assessment provisions**

- Enhance coherence by establishing global standards & procedures
- Require consideration of all impacts: biodiversity, cumulative, climate
- Ensure participation, transparency, accountability
- Provide for strategic assessments

**Mesopelagic fisheries demonstrate need for strong international process**

- Decisions of global importance currently rest with a few fishing States
- Cooperative effort required to understand mesopelagic ecosystems and develop effective management mechanisms

## CONTACT

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