

Conservation Action Café Restoring Ocean Health



TOPIC 1: Marine Noise Pollution

What is noise pollution in the ocean? Human-generated noise that negatively affects life in the ocean. Sources include shipping, offshore construction (including oil and gas, wind, tidal, and other energy facilities), seismic surveying (for various industrial or research purposes), and high-powered sonar systems (notably military).

Major issues:

- Anthropogenic underwater noise can disrupt vital life functions of many marine species, including communication, reproduction, foraging, predator avoidance, and navigation - its wise management benefits biodiversity.
- Effects of such noise have implications for regulatory compliance of major industries, including global food security
- Intense noise events (e.g., sonar, seismic surveys) can displace cetaceans from their preferred habitats and indirectly or directly induce a range of severe if rare outcomes, including temporary or permanent hearing loss, haemorrhaging and other kinds of tissue trauma, and injury or mortality from stranding events.
- The chronic issue of shipping is a major source to consider.

Role of IUCN and ongoing work:

- Motion 024 - Restoring a peaceful and quiet ocean <https://www.iucncongress2020.org/motion/024>
- Marseille Resolution WCC-2020-Res-026: Establishment of a mid-frequency active (MFA – 1 to 10 KHz) sonar moratorium for maritime military exercises conducted in Macaronesia <https://www.iucncongress2020.org/motion/026>
- Motion 118 - Reinforcing the protection of marine mammals through regional cooperation <https://www.iucncongress2020.org/motion/118/58313>
- Motion 021 - Planning [of maritime areas] [of the maritime area] and [biodiversity conservation] [conservation of natural diversity] (relevant in the context of addressing cumulative effects from all activities). <https://www.iucncongress2020.org/motion/021>
- Species Survival Commission (SSC) Cetacean Specialist Group and partners have identified that rising ocean noise threatens cetaceans <https://iucn-csg.org/>
- Western Grey Whale Advisory Panel monitoring and mitigation: <https://www.iucn.org/western-gray-whale-advisory-panel/panel/seismic-surveys-monitoring-and-mitigation>
- Renewable Energy: <https://www.iucn.org/theme/business-and-biodiversity/our-work/business-engagement-sector/renewable-energy>

Questions for café participants:

- How can we build on common ground from other conservation-science-industry collaborations to solve Marine Noise Pollution?
- What are the Regulatory/Guidance/Measures needed to manage noise pollution issues, including enforcement needs?
- What are the economic factors to consider in relation to Marine Noise Pollution?
- What are some successes to share and replication for the mitigation? ECHO. See <https://www.portvancouver.com/environmental-protection-at-the-port-of-vancouver/maintaining-healthy-ecosystems-throughout-our-jurisdiction/echo-program/>

Reference:

Nowacek, D.P. and Southall, B.L. (2016). *Effective planning strategies for managing environmental risk associated with geophysical and other imaging surveys*. International Union for the Conservation of Nature (IUCN), Gland, Switzerland. 42pp.

Topic 2: The High Seas



Big Picture – what are the high seas?

The high seas cover nearly ½ Earth's surface and 2/3 of the global ocean, and include some of the most diverse and ecologically important ecosystems that are critically important for a large number of species. The high seas and international seabed areas are areas beyond national jurisdiction (ABNJ), where the governance and legal frameworks are particularly weak in terms of conservation of marine biodiversity, with critically threatened and poorly protected ecosystems. The high seas and international seabed provide a wide range of ecological, economic, social, cultural, scientific and food-security benefits to humans. Ensuring effective protection of biodiversity in this area is critical for maintaining those benefits and protecting ocean health.

Following a two-year Preparatory Committee process, the United Nations General Assembly adopted [Resolution 72/249](#) (24 December 2017) to convene an intergovernmental conference (IGC) to develop an international legally binding instrument on marine biodiversity in areas beyond national jurisdiction (BBNJ). Three sessions of the IGC took place in New York between 2018 and 2019. The fourth and last session planned for March 2020 has been postponed until the first half of 2022 due to the pandemic situation.

Major Issues:

- There are growing threats to marine biodiversity and ecosystems that stem from fishing practices, shipping and land-based sources of pollution, nutrients and noise, climate change effects and ocean acidification, as well as the potential effects of deep sea mining.
- There is currently no legally binding instrument to protect biodiversity in ABNJ, and the current established legal framework is insufficient to address modern threats and governance issues.
- Climate change is having direct consequences on high seas and deep ocean biodiversity and processes, including displacement of species to poles as heat, driving migratory changes and food/breeding effects.
- The ocean is dynamic and changing. Many species migrate long distances and ecosystems shift based on winds, temperature, eddies, currents and other oceanographic processes, (shifting ecosystems like Sargasso Sea and the Costa Rica Dome). Climate change related effects will bring greater and often unpredictable shifts.
- The design, management, monitoring and enforcement of biodiversity related conservation measures including MPAs and other types of conservation tools needs to be discussed now to ensure the future agreement is fit for purpose.

Role of IUCN:

Motion for Marseille:

- 126 – Advancing conservation & sustainable use of marine biological diversity in the ocean beyond national jurisdiction
- <https://www.iucncongress2020.org/motion/126>

Questions for café participants:

- How can we feel more connected and encourage others to feel more connected and understand the relation between the high seas and our lives?
- What are the major challenges and needs of States in protecting the high seas?
- How will these challenges change once the emerging BBNJ Agreement (an international legally binding instrument on marine biodiversity in areas beyond national jurisdiction) enters into force?
- Beyond the development of the BBNJ Agreement, what are steps and actions that States can take right now to advance on the protection of the High Seas?

References:

- IUCN Marine Brief on High Seas Issues:
- <https://www.iucn.org/resources/issues-briefs/governing-areas-beyond-national-jurisdiction>
- Visit the High Seas Alliance Home page for more resources: <http://www.highseasalliance.org/> and <http://www.highseasalliance.org/resources/>



Topic 3: Bottom Trawling

Bottom trawling is a type of fishing technique. A bottom trawl is constructed like a cone-shaped net that is towed on the seafloor. It consists of a body ending in a “codend” to secure the catch. It is designed to catch demersal species living on or near the bottom. Seafloor contact with the gear is needed for successful operation. Three categories of bottom trawls exist: beam trawls, bottom otter trawls, and bottom pair trawls. Bottom trawling targets species such as anglerfish, hake, flounder, crabs, as well as untargeted species such as sharks, rays and sea turtles.

Major Issues:

- About 25% of the world's seafood caught in the ocean comes from bottom trawling. As much as 10% of yearly catches are discarded each year.
- The impacts of bottom trawling, whose footprint has not been quantified for many regions at a sufficiently high resolution, are very controversial.
- Bottom trawling is considered a very destructive method and its wide-ranging application for commercial fisheries causes a high impact on exploited marine ecosystems including the capture of small, non-target species, and vulnerable/endangered species, discarded at sea.
- Bottom trawling reduces the complexity, productivity, and biodiversity of benthic habitats and the status of trawled habitats, depends on their depletion rate, recovery rate and exposure to trawling. Furthermore, bottom trawling can alter the chemistry and geology of soft sediment habitats, and can impact the biological function and composition of the ecosystems.
- Bottom trawling may resuspend the carbon in marine sediments and could have an effect in short- or long-term carbon storage (recent 2021 research).

Role of IUCN and ongoing work:

Resolutions:

- 020 - Valuing and protecting inland fisheries
- 027 - Reducing impacts of incidental capture on threatened marine species
- 029 - Ecosystem conservation, restoration and remediation in the ocean
- 031 - Seascapes working for biodiversity conservation
- 124 - Reducing the impact of fisheries on marine biodiversity

Motions Accepted for voting in Marseille:

- 021 - Planning of maritime areas and biodiversity conservation
- 126 - Advancing conservation and sustainable use of marine biological diversity in the ocean beyond national jurisdiction

Questions for café participants:

- How can IUCN, its members and partner tackle this issue, with the fishery sector through marine conservation initiatives?
- What are the most effective solutions to mitigate or eliminate the impact of bottom trawling?
- What kinds of technical tools and innovations exist to improve the control and surveillance of Illegal, Unreported & Unregulated (IUU) Trawl Fishing?
- Subsidies: What do you think about fisheries subsidies?

References:

- Hiddink, J.G.; Jennings, S.; Sciberras, M.; Szostek, C.L.; et al. 2017. Global analysis of depletion and recovery of seabed biota after bottom trawling disturbance. *PNAS*, 114(31): 8301-8306. www.pnas.org/cgi/doi/10.1073/pnas.1618858114
- Puig, P., Canals, M., Company, J. et al. Ploughing the deep-sea floor. *Nature* **489**, 286–289 (2012). <https://doi.org/10.1038/nature11410>
- Amoroso, Ricardo & Pitcher, C. et al. (2018). Bottom trawl fishing footprints on the world's continental shelves. *Proceedings of the National Academy of Sciences*. 115. 201802379. [10.1073/pnas.1802379115](http://www.pnas.org/cgi/doi/10.1073/pnas.1802379115).
- Cashion, T., Al-Abdulrazzak, D., Belhabib, D., Derrick, B., Divovich, E., Moutopoulos, D.K., Noël,
- FAO. 2020. The State of World Fisheries and Aquaculture 2020. Sustainability in action. Rome. <https://doi.org/10.4060/ca9229en>

Topic 4: Deep Sea Mining



Ecological Context:

The deep sea is home to a significant proportion of Earth's biodiversity, with most species yet to be discovered. The richness and diversity of organisms in the deep sea support ecosystem processes necessary for the Earth's natural systems to function. The deep ocean also constitutes more than 90% of the biosphere, and plays a key role in climate regulation, fisheries production, and elemental cycling. It is an integral part of the culture and well-being of local communities and the seafloor beyond national boundaries forms part of the common heritage of humankind. However, deep-sea ecosystems are currently under pressure from a number of anthropogenic stressors including climate change, bottom trawling and pollution. DSM would add to these stressors, and is widely predicted to result in the loss of biodiversity and ecosystem functioning that would be irreversible on multi-generational timescales.¹

Potential impacts from DSM activities include loss of ecosystems associated with deep sea minerals, destruction of the seafloor and associated benthic life, production of large, persistent sediment collector (seafloor) and discharge (mid-water) plumes, the interruption of important ecological processes connecting midwater and benthic ecosystems, the resuspension and release of sediment/metals/toxins into the water column, and light and noise emissions. Research has only begun to shed light on many of these impacts.

The interaction between DSM and the regulation of our climate also needs further research, notably regarding the uncertain impacts on carbon sequestration dynamics and deep-ocean carbon storage.

Regulatory context:

DSM is regulated at the international level by the International Seabed Authority (ISA). The ISA's mandate under the UN Convention on the Law of the Sea (UNCLOS) includes organizing and controlling mineral-related activities in the Area beyond national jurisdiction (Area) on behalf of humankind as a whole, promoting marine research and ensuring the effective protection of the marine environment from harmful effects of mining-related activities.

The ISA has so far approved 31 contracts for the exploration of seabed minerals in the Area and is working to adopt commercial mining regulations to enable applications from sponsoring States for 30-year contracts for commercial mining in the Area.

The Republic of Nauru has recently triggered a two-year rule (pursuant to Section 1, paragraph 15 of the Annex to the 1994 Implementing Agreement to UNCLOS) on behalf of its sponsored entity, Nauru Ocean Resources, Inc. (NORI), a subsidiary of Deep Green, signalling NORI's intent to apply for a mining contract in 2 years. DeepGreen is itself undergoing a merger process to become a subsidiary of The Metals Company, which has declared an intention to engage in commercial mining in 2024.

Various stakeholder consultation processes are ongoing on the draft standards and guidelines to support the implementation of the Draft Regulations for Exploitation of mineral resources in the Area, however many issues and concerns remain to be addressed regarding both the Draft Regulations and the proposed draft standards and guidelines, as well as the benefit sharing regime.

Outstanding issues and concerns include the lack of 1) key concepts and commitments from other international instruments; 2) agreement on fundamental principles and/or policies; 3) scientifically-grounded definitions, thresholds, standards or indicators; and 4) safeguards to ensure activities in the Area are carried out for the benefit of mankind as a whole and can ensure effective protection of the marine environment, as required by UNCLOS.

Role of IUCN:

Motion for Marseille:

- Protection of deep-ocean ecosystems and biodiversity through a moratorium on sea mining <https://www.iucncongress2020.org/motion/069>



Questions for café participants:

- What are some of the key scientific issues that need to be better understood and how might these be pursued?
- What are some of the key governance/institutional questions and how might they be addressed?
- How might alternatives to DSM be prioritized as part of a strategic and complementary approach?
- What are some avenues to build wider public and political awareness of DSM?

References:

- [IUCN Motion 069 - Protection of deep-ocean ecosystems and biodiversity through a moratorium on seabed mining | IUCN World Conservation Congress 2020 \(iucncongress2020.org\)](https://www.iucn.org/press-releases/iucn-motion-069-protection-of-deep-ocean-ecosystems-and-biodiversity-through-a-moratorium-on-seabed-mining)
- Cuyvers, L. et al. (2018). *Deep seabed mining: a rising environmental challenge*. Gland, Switzerland: IUCN. <https://portals.iucn.org/library/node/47761>
- Battery alternatives:
 - [IUCN policy on biodiversity offsets WCC-2016-Res-059-EN \(2016\)](#)
 - [Amnesty International \(2021\) Powering Change: Principles for Businesses and Governments in the Battery Value Chain](#)
 - [IEA \(2020\) Innovation in batteries and electricity storage](#)
 - [RMI \(2020\) Breakthrough Batteries: Powering the Era of Clean Electrification](#)
 - [Matangi Tonga Online \(2021\) How to transition to clean energy future with the lightest possible impact](#)
 - [Clean Technica \(2020\) Why Lithium Iron Phosphate Batteries May Be The Key To The EV Revolution](#)