

REMPs, APEIs and the conservation of biodiversity in the marine environment

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Workshop on Protecting deep seabed ecosystems under the future Agreement on the Conservation and Sustainable Use of BBNJ and by the ISA – Perspectives of Government, Civil Society, Stakeholders, and Law and Science

Netherlands Institute for the Law of the Sea

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deepsea
conservationcoalition

The logo for the Deep Sea Conservation Coalition features the words "deepsea" in a bold, dark blue font above the words "conservationcoalition" in a lighter blue font. A stylized, white, wavy graphic element resembling a wave or a ribbon is positioned behind the text, extending from the bottom left towards the top right.

Members include

deepsea conservationcoalition



UNCLOS Part XI: Seabed Mining

Article 145

Protection of the marine environment

- **“Necessary measures shall be taken...to ensure effective protection for the marine environment from harmful effects”**
- “the [International Seabed] Authority shall adopt appropriate rules, regulations and procedures for:
 - “the prevention, reduction and control of pollution and other hazards to the marine environment
 - “[the prevention of] interference with the ecological balance of the marine environment;
 - “the prevention of damage to the flora and fauna of the marine environment”**

Additional obligations in Part XII: Protection and preservation of the marine environment (e.g. Art 194.5)

ISA Exploitation regulations / Mining Code under negotiation



Nauru triggered 2 year rule
“deadline” July 2023

A number of states and several companies
arguing for urgent/quick adoption of Code

... inter alia

- Relationship between contractors and ISA – contractual obligations
- Environmental regulations
- Finance, royalty and benefit sharing regime
- Mining inspectorate

ISA Council: 36 countries (5 Groups)

ISA Assembly: 167 countries + EU



ISA Exploitation regulations under negotiation

- Requirements for baseline information
 - species, ecosystems, ecosystem services
- EIAs – requirements, review procedures
- Connectivity; e.g. source & sink populations
- Identifying Vulnerable Marine Ecosystems (VMEs)
- Impact of sediment plumes to seabed life
- Impact of discharge of mining fines, sediment and wastewater on midwater, meso & bathypelagic species
- Cumulative impacts
- Biological carbon pump
- Preventing damage to flora and fauna; serious harm to the marine environment
- Measurable and manageable indicators and thresholds to measure ecosystem impact/change
- Preservation reference zones and impact reference zones
- Regional/Strategic Environment Management Plans

Biodiversity loss from deep-sea mining

Nature Geoscience June 2017

Biodiversity loss from deep-sea mining unavoidable, irreversible on human timescales and offsets in the deep-sea “scientifically meaningless”

Biodiversity of the Clarion Clipperton Fracture Zone

“Nodules and nodule-dependent animals may take millions of years to recover from the impacts of mining, and even the partial recovery of the animals living in the sediment may take hundreds to thousands of years.”

Kaiser, S., Smith, C.R. & Arbizu, P.M. Editorial: Biodiversity of the Clarion Clipperton Fracture Zone. *Mar Biodiv* 47, 259–264 (2017).

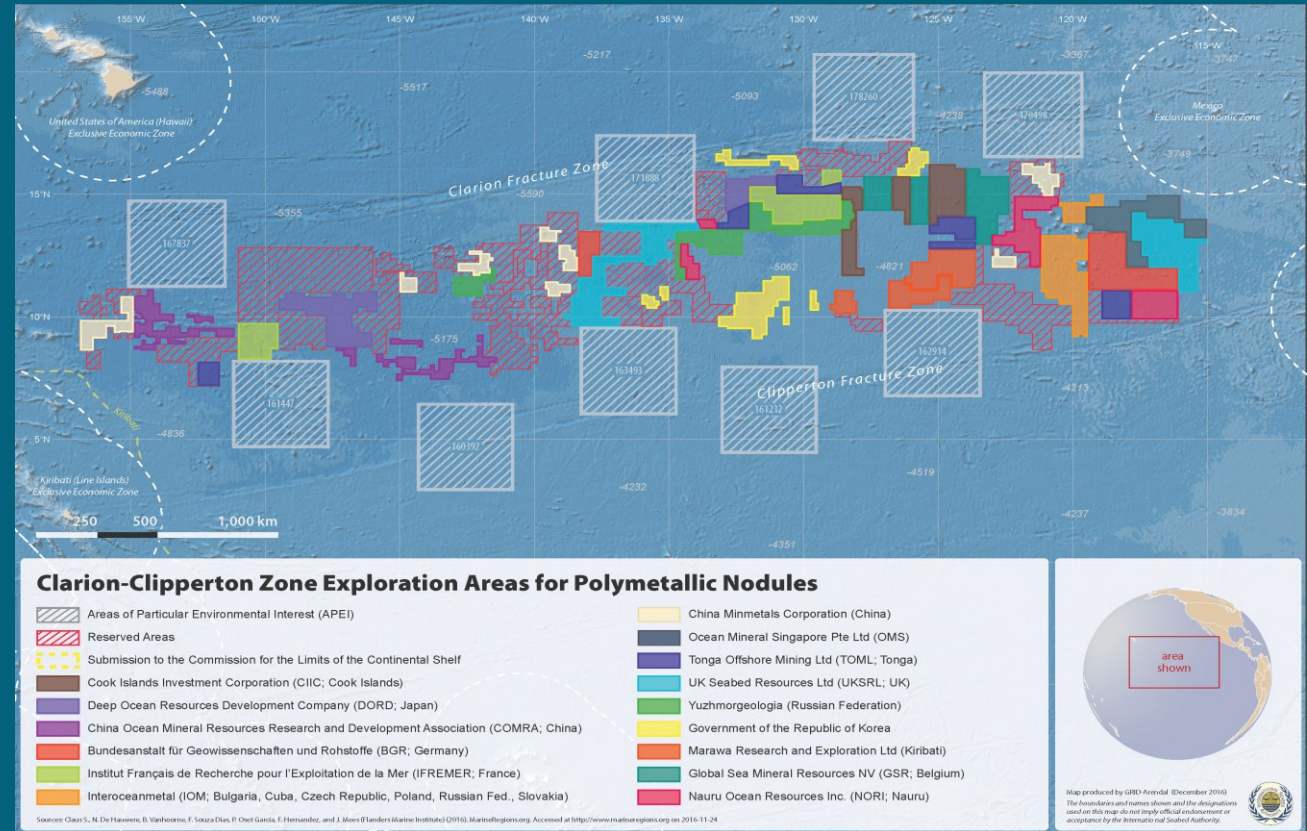
C. L. Van Dover, J. A. Aráon, E. Escobar, M. Gianni, K. M. Gjerde, A. Jaeckel, D. O. B. Jones, L. A. Levin, H. J. Niner, L. Pendleton, C. R. Smith, T. Thiele, P. J. Turner, L. Watling and P. E. Weaver

<https://t.co/2guyyvGfmC>



Clarion Clipperton Zone REMP

- 9 APEIs covering app 1.44 million km² = app 32% of CCZ (4.5 million km²)
- BUT APEIs only designed to protect core area (200x200km) of each APEI = app 360,000 km² or app 8% of CCZ
- 4 new APEIs adopted last week: total area app 44% of CCZ protecting app 11-12% from mining impacts



17 Exploration contracts: Belgium, China, Cook Islands, France, Germany, Jamaica, Japan, Kiribati, Korea, Nauru, Russia, Singapore, Tonga, UK & IOM - Bulgaria, Cuba, Czech Republic, Poland, Russian Federation and Slovakia = app 1.25 million km²

UN 1st World Ocean Assessment 2016

“This truly vast deep-sea realm constitutes the largest source of species and ecosystem diversity on Earth...evidence that the richness and diversity of organisms in the deep sea exceeds all other known biomes... and supports the diverse ecosystem processes and functions necessary for the Earth’s natural systems to function”

Deep sea already under stress:

- Climate change related impacts: deoxygenation, acidification, temperature, reduced food (POC flux) (Sweetman et al 2017; Levin et al 2016)
- Pollution: plastics, POPs in DS fish (Jamieson et al 2017)
- Fisheries impacts 200-2000m+ (1st UN WOA; ICES, others)



4,947 meters on canyon slope leading to Sirena Deep in Mariana trench / NOAA

If biodiversity loss inevitable then...

Rather than negotiate how much of a region an REMP should be designed to protect; States should ask:

- How much biodiversity loss should the ISA regulations/REMPs allow or permit, if any, and why?
- Over what time frame will the loss be permitted given that in many/most cases the loss will be irreversible on human timescales? Currently far from sufficient knowledge of biodiversity, ecosystems, ecosystem services – lack of baseline information.
- Can meaningful limits be placed and enforced to be sure that any 'permissible' loss is not exceeded?
- What about cumulative impacts and stressors on deep ocean ecosystems already occurring or foreseen to occur as a result of climate change, pollution, plastics etc?
- Can states justify the biodiversity loss – e.g. what is the benefit to humankind as a whole (the common heritage of mankind), as opposed to individual companies and countries, that would justify the loss of biodiversity in the Area?

Structural & political concerns regarding the ISA

- Lack of transparency (contracts, LTC meetings) – decision to grant mining contracts heavily influenced by LTC
- Decision-making weighted toward mining - even if a majority of the 167 member countries of the ISA do not want DSM to go forward, the ISA may still license deep-sea mining given the ISA voting/decision-making structure (at least 2/3rds vote of Council needed to 'overturn' recommendation from LTC to award a mining contract)
- Conflict of interest (ISA both regulator as well as beneficiary of licenses – UK House of Commons Environment Audit Committee 2019)
- Bureaucratic/institutional momentum to mine

Structural/political concerns re the ISA

- Use it or lose it incentives: mine or risk losing exploration claim/contract (15yr); 'perverse' incentive to mine?
- Sponsoring State can trigger '2 year' rule and may get a mining license if regulations not yet adopted
- All countries have equal opportunity to mine and/or become a Sponsoring State - Can the ISA just say no?
- Currently at least 25 of the 30 ISA exploration contracts in the hands of 7 countries - China, France, Germany, India, Japan, Korea, Russia - and 3 companies UKSR (UK), GSR (Belgium) Deep Green/The Metals Co (Canada)

Intergovernmental Conference underway to negotiate new UNCLOS Implementing Agreement conservation and sustainable use of marine biodiversity in ABNJ



© UN Photo

A Tale of Two Instruments

- On the one hand, States through UNGA IGC, negotiating new instrument under UNCLOS – an ‘implementing agreement’ - for the conservation and sustainable use of marine biological diversity in ABNJ;
- On the other hand, States through ISA, negotiating new instrument under UNCLOS – the Mining Code/exploitation regulations - that is likely to lead to biodiversity loss in deep-sea ecosystems systems already under stress;
- How do governments reconcile these two negotiating processes/instruments? Does the right hand know what the left hand is doing? A contradiction in terms in light of international agreements for marine conservation, sustainable development, biodiversity conservation, sustainable production and consumption, circular economy...?

Coherent, coordinated approach to the conservation of marine biodiversity in ABNJ:

The UNGA & deep-sea fisheries on the high seas

UNGA resolutions 59/25 & 61/105 (2004, 2006) thru 71/123 (2016):

- Manage deep-sea bottom fishing on the high seas to prevent significant adverse impacts on vulnerable deep-sea ecosystems (VMEs) or else “not authorize to proceed”
- Coldwater corals, deep-sea sponge, hydrothermal vent and other deep-sea ecosystems recognized as VMEs
- Deep sea bottom fishing pioneered in 1960’s/1970’s - few restrictions in place in ABNJ until early 2000s (Gianni, IUCN 2004)
- UNGA resolutions are in effect a commitment to ‘halt and reverse’ biodiversity loss in deep-sea on the high seas – a work in progress...

Compatibility with UN 2030 Sustainable Development Goals?

BBNJ vis a vis ISA, other instruments/regulatory bodies

SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development, Target 14.2: “By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans”

CCZ mining: likely to cause significant adverse impacts on marine ecosystems; weaken their resilience (e.g. to climate change impacts); & cause damage from which they may never recover even with 30-45% APEIs...

UN Biodiversity Summit September 2020

Leaders Pledge for Nature United to Reverse Biodiversity Loss by 2030 for Sustainable Development

Signed by over almost 100 Heads of State, including Mark Rutte, other 26 Heads of State of EU Member countries, President of the European Commission, Global Environment Facility; World Bank

<https://www.leaderspledgefornature.org/>

The End-Pleistocene Megafaunal Mass Extinction (the global spread of Homo Sapien hunter-gatherers)

“a geologically instantaneous ecological catastrophe that was too gradual to be perceived by the people who unleashed it”

John Alroy - A Multispecies Overkill Simulation of the End-Pleistocene Megafaunal Mass Extinction
SCIENCE VOL 292 8 JUNE 2001



The Anthropocene?

“Clearly we are in the midst of one of the great extinction spasms of geological history”

E.O. Wilson, *The Diversity of Life* (1992)

IPBES report (May 2019)/UNEP February 2021

A million species at risk of extinction, many within the next few decades

Policy developments since the Pleistocene

Code of Hammurabi, Magna Carta, Grotius Mare Liberum etc....

The precautionary approach: “The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures”

UN Fish Stocks Agreement Art 6.2 (Rio Principle 15)

Ignorance is no longer an excuse under international law

ISA: a test case of the collective decision-making of the international community of nations regarding the conservation of the global ocean commons. At a minimum until risks are understood and biodiversity loss prevented, deep-sea mining in the Area should not be permitted. Can BBNJ Agreement help ensure this?

Moratorium on deep-sea mining

- Yes – possible, legally defensible, required under the precautionary approach, consistent with contemporary commitments to protecting biodiversity and implementing UN SDGs
- Future role for the ISA? Critical to maintain ISA as a multilateral, global regulatory body with Authority over activities in the Area / CHM (but need reform)
- Instead of mining, ISA c/should promote/conduct marine science: the deep-sea and open ocean play major role in carbon sequestration and regulation of planetary climate processes (UN 1st World Ocean Assessment). We need to know more and understand how we can preserve and protect biodiversity, deep-sea ecosystems goods and services, the biological carbon pump – knowledge that would provide an incalculable benefit to humankind as a whole
- Examples of deep-sea science initiatives: EU funded iAtlantic, Atlas & other projects

Support for a moratorium

IUCN World Conservation Congress September 2021 - 44 government ministries and/or agencies from 37 countries voted to support DSM moratorium resolution 069, including

- Austria - Federal Ministry for Climate Action, Energy, Mobility, Innovation and Technology
- Germany - Federal Agency for Nature Conservation (BfN); Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)
- Italy - Institute for Environmental Protection and Research (ISPRA - part of the Italian Ministry for the Environment, Territory and Sea)
- Portugal - Institute for Nature Conservation and Forests
- Romania - Ministry of Environment
- Spain - Ministerio para la Transición Ecológica y el Reto Demográfico; Ministry of Climate Action, Food and Rural Agenda (Regional Government of Catalonia); Fundacion Biodiversidad
- Sweden - Regeringskansliet (Sweden); Swedish Species Information Centre (SSIC)
- Switzerland - Office federal de l'environnement

Along with over 530 NGOs and indigenous peoples' organizations

Growing support for a moratorium

European Parliament: “...calls on the Commission and the Member States to promote a moratorium, including at the International Seabed Authority, on deep-seabed mining until such time as the effects of deep-sea mining on the marine environment, biodiversity and human activities at sea have been studied and researched sufficiently and deep seabed mining can be managed to ensure no marine biodiversity loss nor degradation of marine ecosystems” (June 2021)

Over 600 marine science & policy experts from 44 countries

<https://www.seabedminingsciencstatement.org/>

The EU Long Distance (Fisheries) Advisory Council, Pelagic Advisory Council and Northwestern Waters Advisory Council (November 2021)

BMW Group, Volvo Group, Samsung SDI, Philips, Google, Volkswagen Group, Patagonia, Triodos Bank. Northvolt and Microsoft publicly stated they will avoid DSM metals in supply chains. More companies likely... (2021)

<http://www.savethehighseas.org/momentum-for-a-moratorium/>

Dank u/Thank you

