The pursuit of deep seabed mining in the face of uncertainties

What's happening at the International Seabed Authority and where are things headed?

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European Marine Board, Webinar, 5 April 2023

Outline

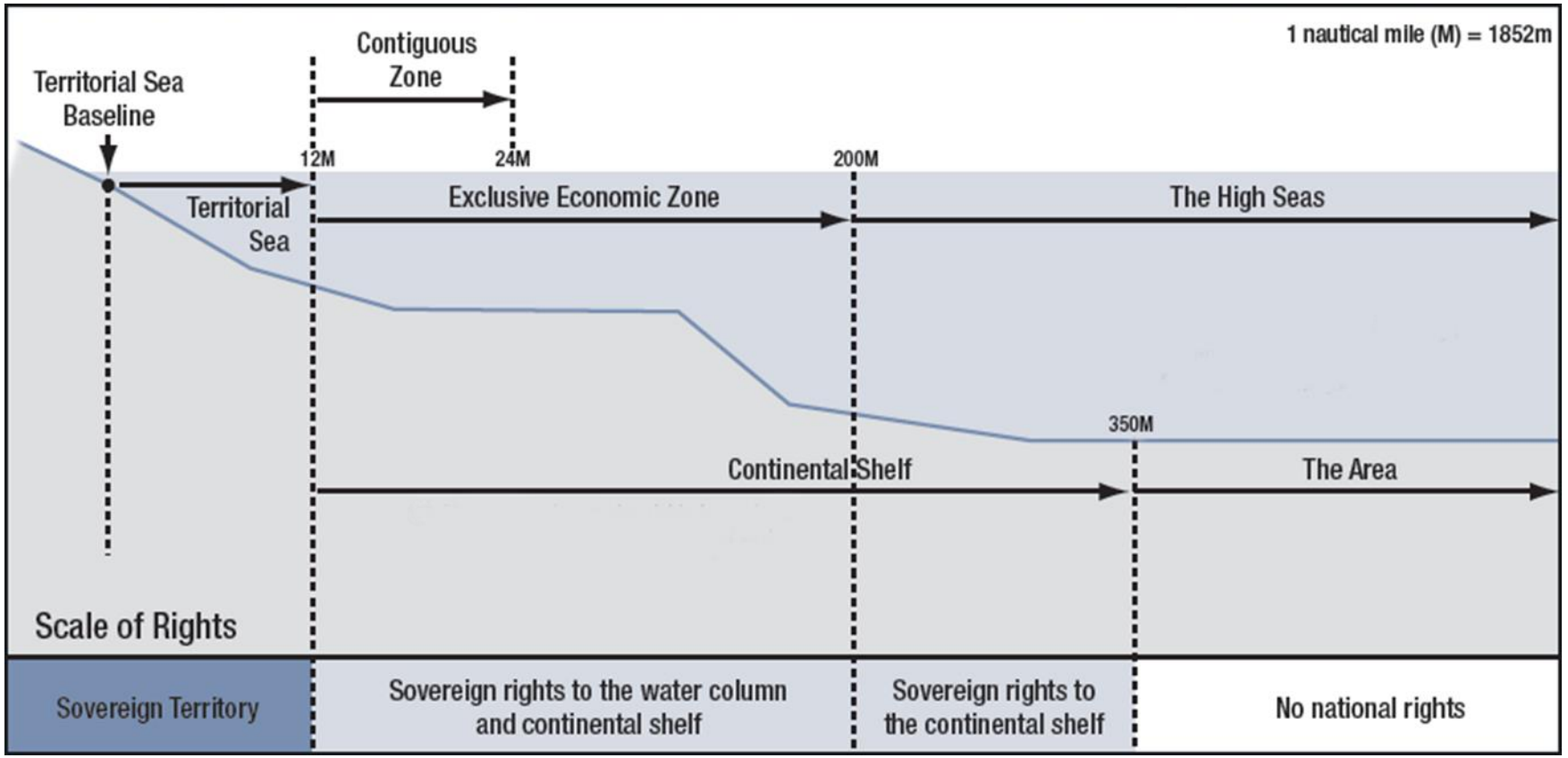
1. **Introduction**
   - The UN Convention on the Law of the Sea (UNCLOS) and ‘the Area’.
   - Deep seabed mining (DSM).

2. **DSM and the International Seabed Authority (ISA)**
   - Mandate, responsibilities and structures.
   - Current state-of-affairs at the ISA
   - Developments elsewhere in areas beyond national jurisdiction – BBNJ and CBD

3. **Conclusion / Where are things headed?**

1. INTRODUCTION

UN Convention on the Law of the Sea 1982



‘The Area’

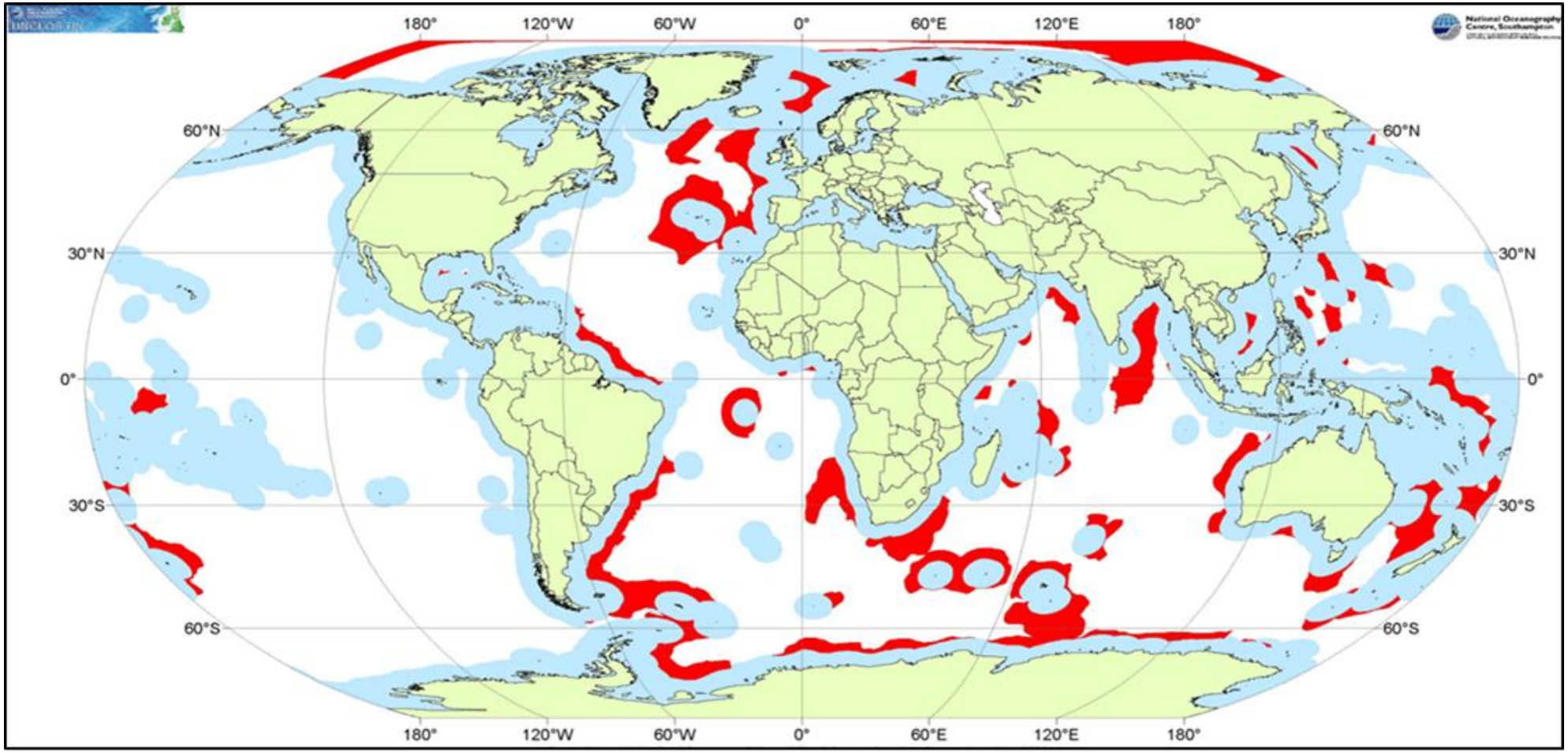


Chart showing the Area (spaces in white). Source: NOC/UNCLOS UK.

UNCLOS and Part XI

- Part XI of the ‘constitution for the ocean’: regime for ‘the Area’

Preamble
Part I: Introduction
Part II: Territorial Sea and Contiguous Zone
Part III: Straits Used for International Navigation
Part IV: Archipelagic States
Part V: Exclusive Economic Zone
Part VI: Continental Shelf
Part VII: High Seas
Part VIII: Regime of Islands
Part IX: Enclosed or Semi-enclosed Seas
Part X: Right of Access of Land-locked States […]
Part XI: The Area
Part XII: Protection and Preservation of the Marine Environment
Part XIII: Marine Scientific Research
Part XIV: Development and Transfer of Marine Technology
Part XV: Settlement of Disputes
Part XVI: General Provisions
Part XVII: Final Provisions

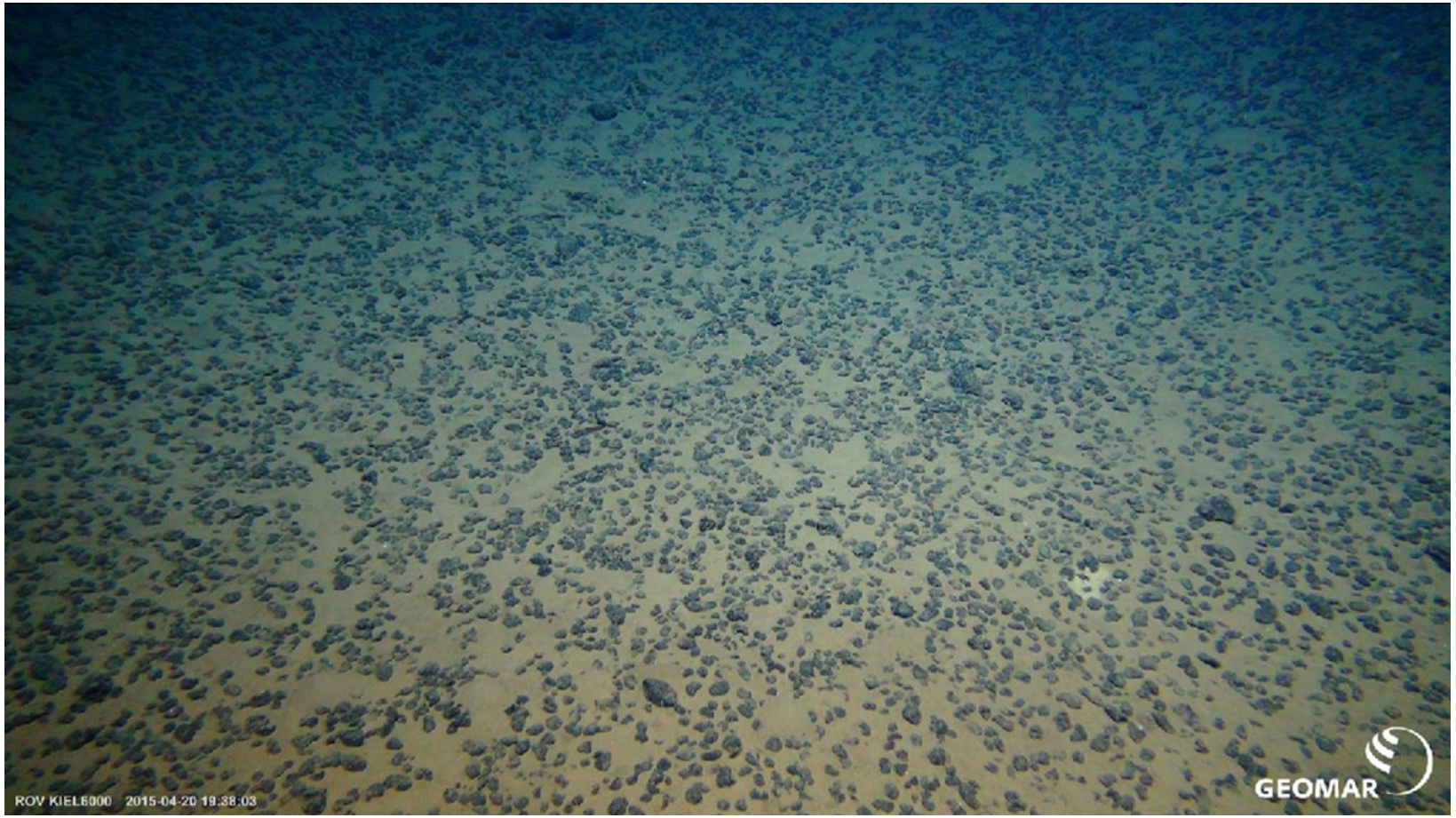
Fundamental principles under Part XI

UNCLOS Article	Provision
Art. 136	The Area and its mineral resources are the **common heritage of mankind**.
Art. 137	**No claims or exercise of sovereignty or sovereign rights** over the Area or its mineral resources. All rights in the mineral resources are **vested in mankind as a whole, on whose behalf the ISA shall act** in accordance with Part XI and the applicable RRPs adopted by the ISA.
Art. 138	The conduct of States in relation to the Area shall be in accordance with Part XI.
Art. 139	States can be held **responsible under international law** for any damage caused by the failure to carry out its responsibilities under Part XI.
Art. 140	Activities in the Area shall be carried out for the **benefit of mankind as a whole**. Financial and other economic benefits derived from such activities shall be **distributed equitably** through an appropriate mechanism designed by the ISA.
Art. 141	The Area shall be used exclusively for peaceful purposes.
Art. 143	The conduct of marine scientific research in the Area shall be promoted.
Art. 145	Necessary measures shall be taken to ensure the **effective protection of the marine environment** from the harmful effects of activities in the Area.
Art. 147	Activities in the Area shall be carried out with reasonable regard for other activities in the marine environment and *vice versa*.
Art. 148	The effective participation of developing States in activities in the Area shall be promoted.

What is deep seabed mining (DSM)?

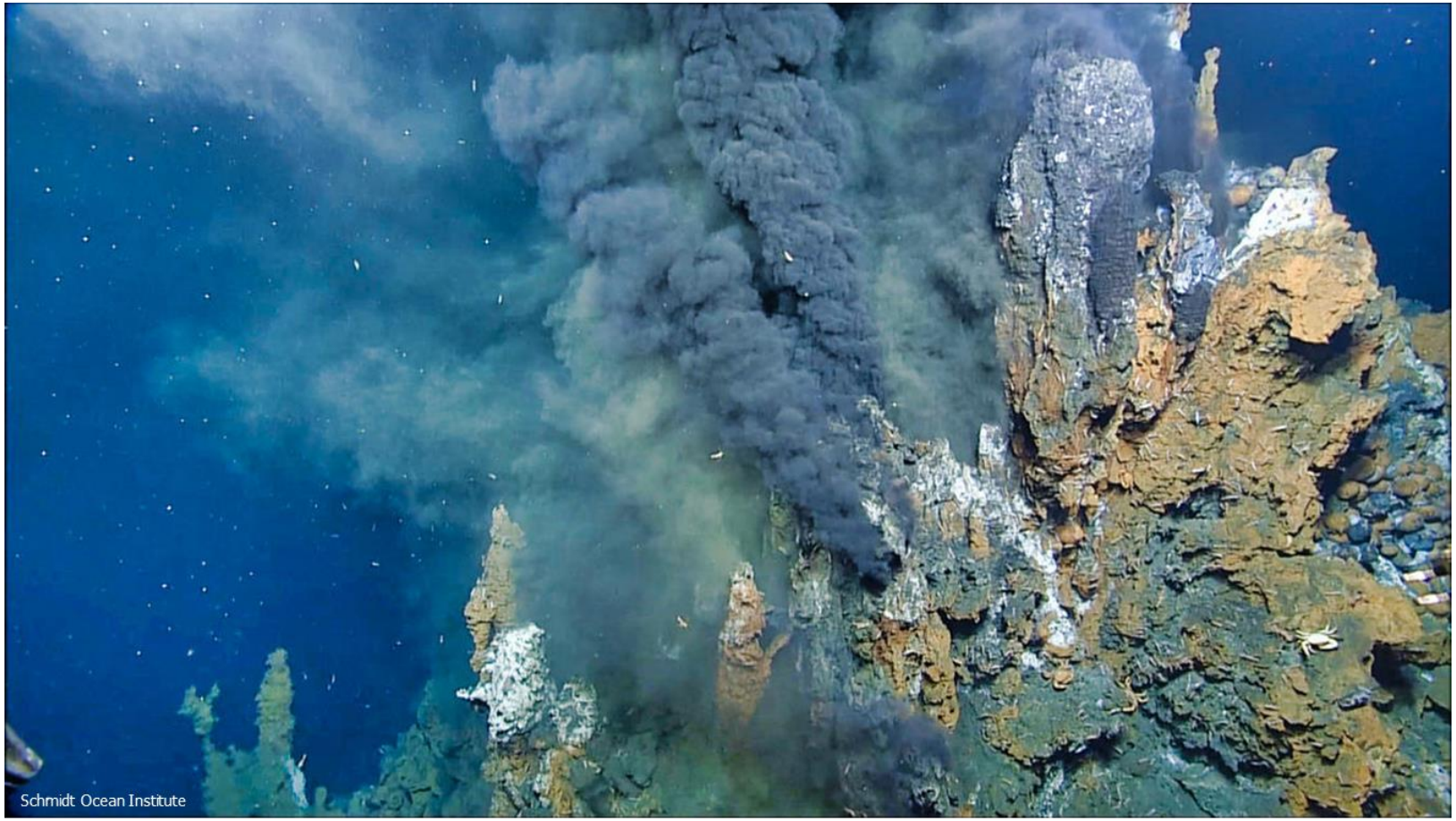
- Exploration and exploitation of mineral deposits at depths greater than 200 m.
- Minerals found in seabed areas within national jurisdiction, as well as seabed areas beyond national jurisdiction (‘the Area’).
- Minerals on the continental and extended continental shelf – sovereign rights of coastal states.
- Minerals in the Area – access only via the International Seabed Authority (ISA) and benefits to be shared equitably.

Polymetallic nodules



Polymetallic nodules
Location: Abyssal plains.
Av. depth: 4,000 – 6,000 m .
Main contents: Nickel, copper, cobalt and manganese.

Polymetallic sulphides – hydrothermal vents

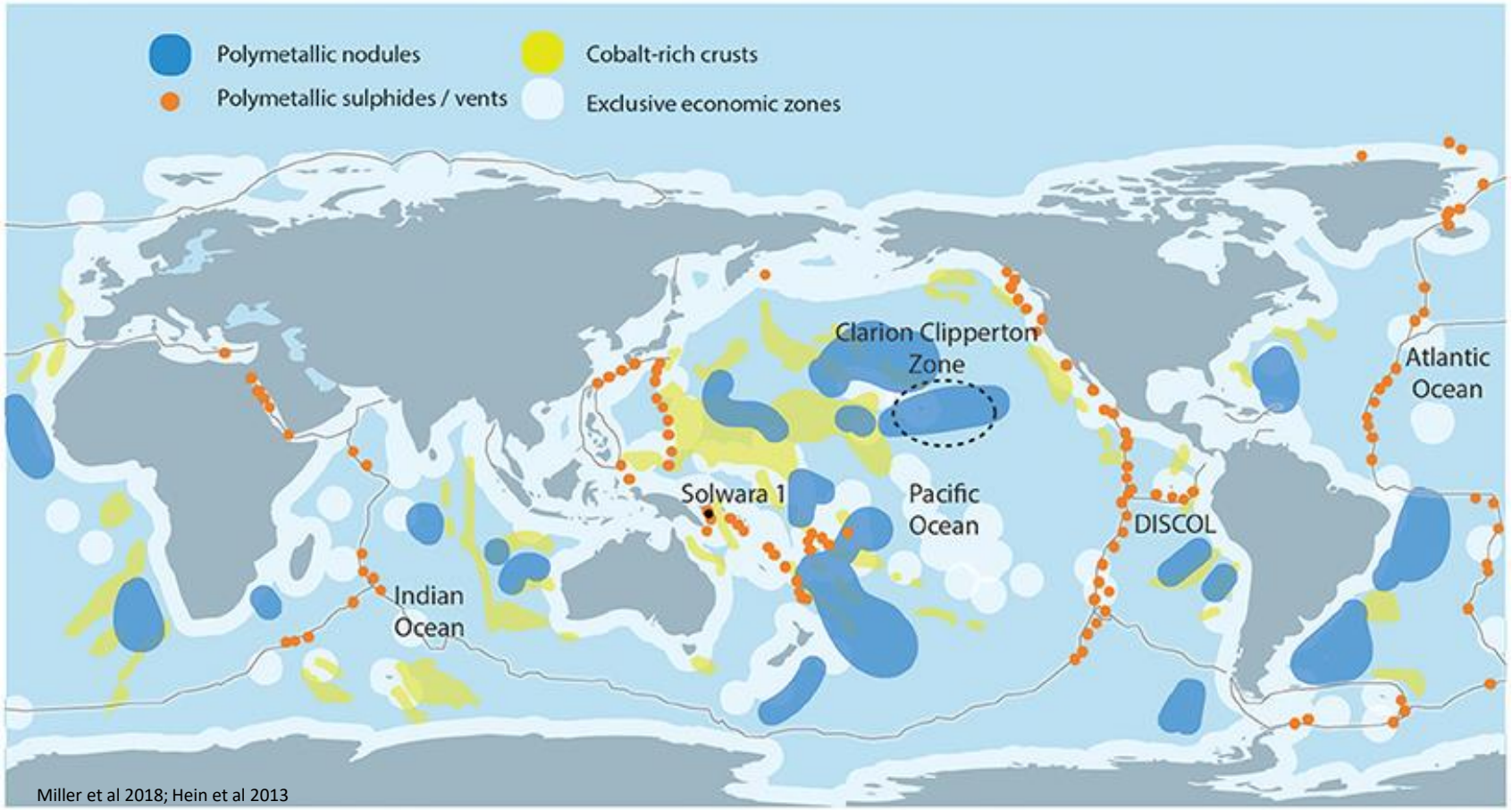


Polymetallic sulphides
Location: Hydrothermal vents.
Av. depth: 1,400 – 3,700 m.
Contents: Copper, lead, zinc, some gold and silver.

Cobalt-rich ferromanganese crusts – seamounts

Cobalt-rich ferromanganese crusts
Location: Seamounts.
Av. depth: 800 – 2,400 m.
Contents: Mainly cobalt.

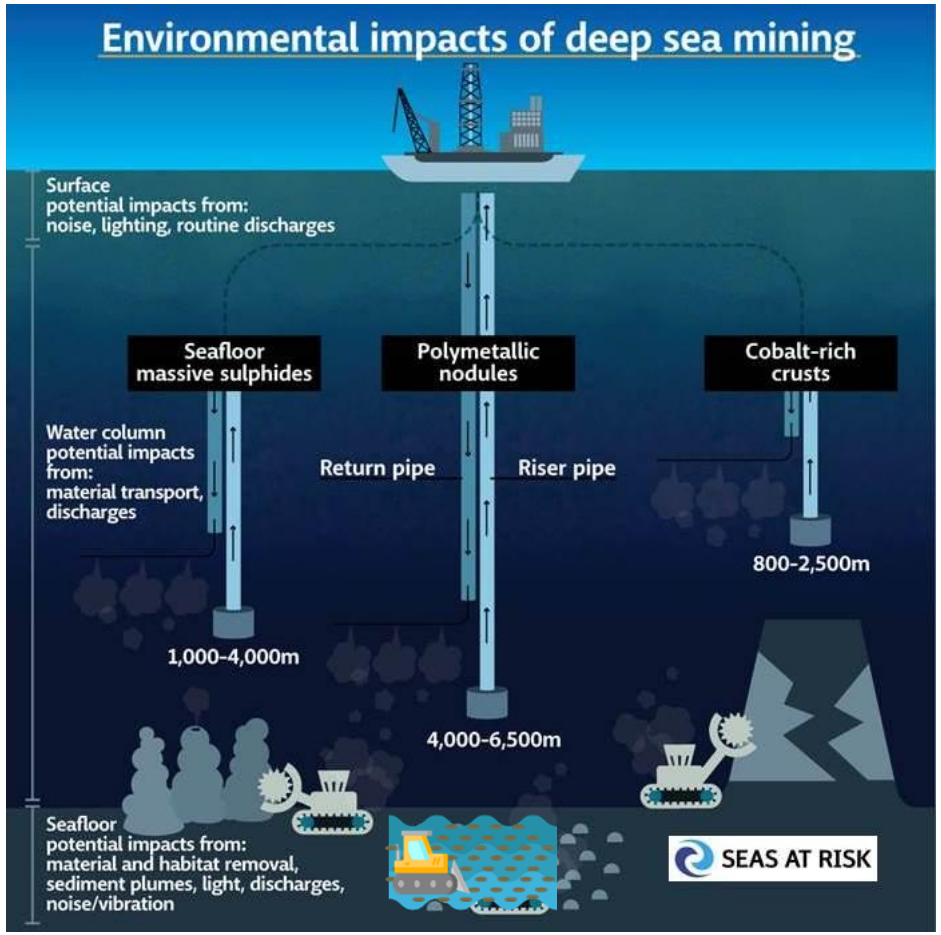
Location of mineral deposits



Miller et al 2018; Hein et al 2013

Environmental issues of DSM

- Deep-sea minerals take centuries to form.
- Organisms are dependent on the minerals (nodules).
- Vents and seamounts are full of life.
- Deep ocean not used to direct human disturbances.
- Current extractive methods are highly destructive.
- Current knowledge indicate restoration not possible.
- Noise/light impact on marine life and mammals not known.
- Impacts are 3-D and plumes will spread quite a distance.
- “Benefits” of natural capital not yet quantified.
  - Climate regulation and carbon storage.
  - Provision of key ecosystem services/sustaining marine food web.
  - Potential source for future medical and pharmaceutical needs.
- Current environmental baseline data still poor.



2. DSM AND THE INTERNATIONAL SEABED AUTHORITY

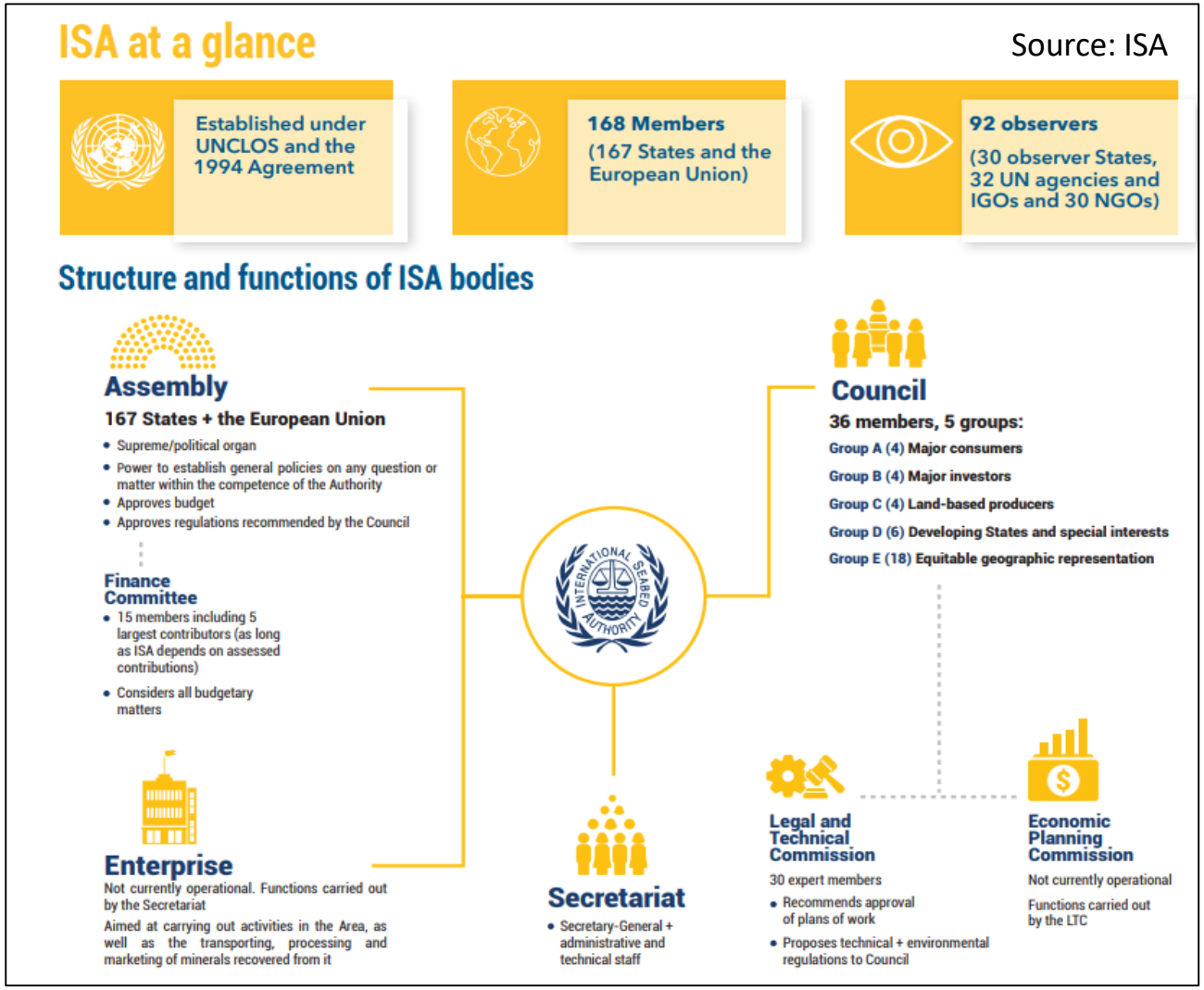
Overview

- ISA is an autonomous international organization established under Part XI of the UN Convention on the Law of the Sea 1982 (UNCLOS). Mandate over mineral resources of the Area, with ISA acting ‘on behalf of [hu]mankind as a whole’.

- The ISA is responsible for:
  - establishment of policies to govern the mineral resources of the Area;
  - development of regulations for mineral exploration and exploitation;
  - considering and awarding mining contracts;
  - collecting payments from contractors;
  - facilitate equitable sharing of financial and other economic benefits derived from mining in the Area;
  - compensating land-based mining developing countries for adverse economic impacts;
  - **whilst** ensuring the effective protection of the marine environment from harmful effects of mining; and
  - promoting marine scientific research.

Who is the ISA

- UNCLOS: The body through which *member states* organize and control activities in the Area.
- All contracting parties to UNCLOS are automatically member states to the ISA = 167 states + EU.
- Primary organs: Assembly and Council (political bodies) and Secretariat (administrative body).



Current state-of-affairs at the ISA

- ISA turning 30 in 2024.

- Exploration have been going on for two decades
  - Nodule exploration regulations: adopted 2000 (revised 2013).
  - Sulphides exploration regulations: adopted 2010.
  - Crusts exploration regulations: adopted 2012.

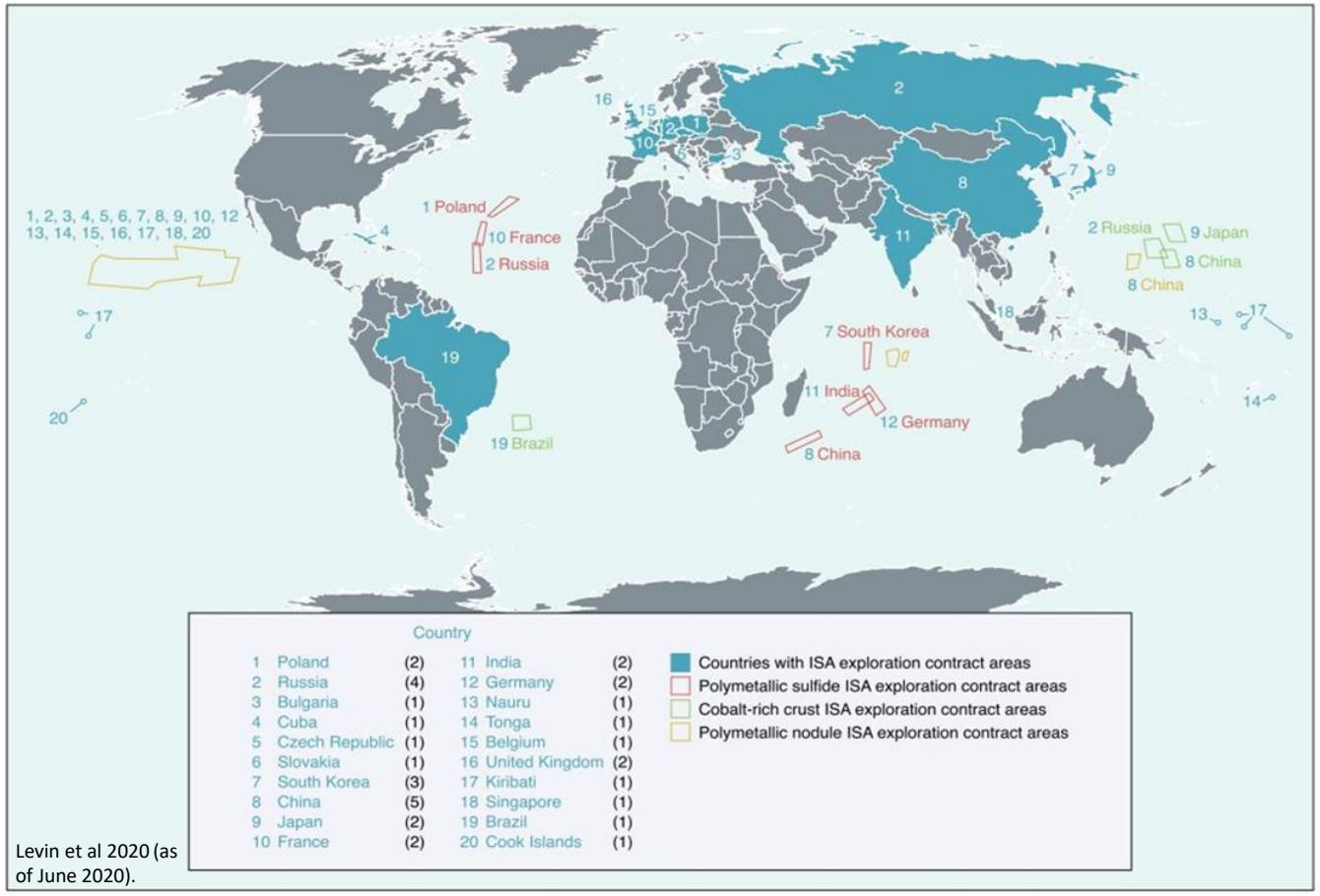
- A total of 31* exploration contracts awarded.
  - Nodules: 19
  - Sulphides: 7
  - Crusts: 5

  (* Contract with Brazil being revoked.)

IISD/RS

Current status of ISA Exploration contracts (as of September 2021). Source: ISA

Location of existing ISA exploration contracts



Levin et al 2020 (as of June 2020).

The current push towards exploitation …

TECHNOLOGY

Deep-sea mining rules to be fast-tracked in push from Nauru

June 29, 2021
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Last Updated 5 months ago

Environment

Pacific island of Nauru sets two-year deadline for U.N. deep-sea mining rules

5 minute read

By Helen Reid

Deep-sea mining could start in two years after Pacific nation of Nauru gives UN ultimatum

The International Seabed Authority has two years to finalise regulations governing the controversial industry

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About this content

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Wed 30 Jun 2021 07.04 BST

Why Nauru Is Pushing the World Toward Deep-Sea Mining

A small South Pacific nation gave the International Seabed Authority a two-year deadline to finalize the rules for mining the deep sea, but the jury is still out on when, exactly, deep-sea mining will begin.

by Elham Shabahat

July 14, 2021 | 950 words, about 4 minutes

BBC NEWS

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Science

Deep sea mining may be step closer to reality

David Shukman
Science editor

1 July

Pacific island of Nauru presses UN to approve deep-sea mining

Deep-sea mining could proceed in two years causing "irreversible" damage to biodiversity and the marine ecosystem, say scientists.

The Republic of Nauru sets Deadline for Ocean Mining Rules

INDUSTRY | OCEAN MINING INTEL | 26 JULY 2021

… while calls for pause/moratorium grow

Governments turn against deep-sea mining as EV boom drives demand for metals

EUROPEAN PARLIAMENT CALLS FOR A MORATORIUM ON DEEP-SEA MINING

IUCN Congress votes for a global moratorium on deep seabed mining

March 31, 2021
7:18 AM CEST
Last Updated 8 months ago

Sustainable Business

Google, BMW, AB Volvo, Samsung back environmental call for pause on deep-sea mining

Marine Expert Statement Calling for a Pause to Deep-Sea Mining

Signed by 622 marine science & policy experts from over 44 countries

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 supports 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 forms part of the common heritage of humankind. However, deep-sea ecosystems are currently under stress from a number of anthropogenic stressors including climate change, bottom trawling and pollution. **Deep-sea mining would add to these stressors, resulting in the loss of biodiversity and ecosystem functioning that would be irreversible on multi-generational timescales. Amongst the specific concerns over the impacts of deep-sea mining are:**

February 11, 2022
12:59 PM GMT+1
Last Updated 3 months ago

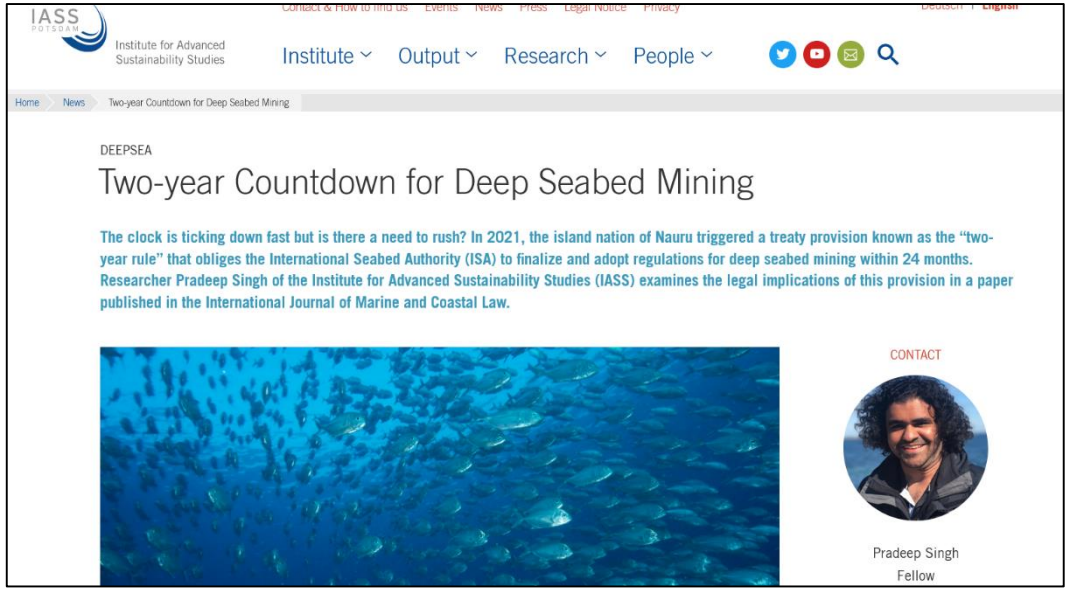
Autos & Transportation

Renault and U.S. carmaker Rivian back moratorium on deep-sea mining

‘Roadmap’ for the ISA’s Mining Code

- Recently concluded Council meeting: 16 – 31 March.
  - Negotiations of draft text through working groups
    - Protection of the marine environment
    - Inspection, compliance and enforcement
    - Institutional matters
    - Financial terms
    - President’s text
- Next Council meetings for 2023: 10 – 21 July and 30 October – 8 November.
- “Deadline” for adoption of the exploitation regulations is 9 July 2023.
  - If incomplete and an application is submitted, it will have to be considered and can be approved notwithstanding the absence of regulations.

No need to rush!



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Home › News › Two-year Countdown for Deep Seabed Mining

DEEPSEA

Two-year Countdown for Deep Seabed Mining

The clock is ticking down fast but is there a need to rush? In 2021, the island nation of Nauru triggered a treaty provision known as the "two-year rule" that obliges the International Seabed Authority (ISA) to finalize and adopt regulations for deep seabed mining within 24 months. Researcher Pradeep Singh of the Institute for Advanced Sustainability Studies (IASS) examines the legal implications of this provision in a paper published in the International Journal of Marine and Coastal Law.

CONTACT

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BRILL NIJHOFF

THE INTERNATIONAL JOURNAL OF MARINE AND COASTAL LAW 37 (2022) 375–412

THE INTERNATIONAL JOURNAL OF MARINE AND COASTAL LAW

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The Invocation of the 'Two-Year Rule' at the International Seabed Authority: Legal Consequences and Implications

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Marine Policy 134 (2021) 104804

Contents lists available at ScienceDirect

Marine Policy

journal homepage: www.elsevier.com/locate/marpol

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The two-year deadline to complete the International Seabed Authority's Mining Code: Key outstanding matters that still need to be resolved

Pradeep A. Singh [1]

BRILL NIJHOFF

THE INTERNATIONAL JOURNAL OF MARINE AND COASTAL LAW 37 (2022) 152–165

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Current Legal Developments

International Seabed Authority

∴

What Are the Next Steps for the International Seabed Authority after the Invocation of the 'Two-year Rule'?

Pradeep A Singh | ORCID: 0000-0002-2944-8541

Developments elsewhere – BBNJ final text

Article 4
Relationship between this Agreement and the Convention and relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies

1. This Agreement shall be interpreted and applied in the context of and in a manner consistent with the Convention. Nothing in this Agreement shall prejudice the rights, jurisdiction and duties of States under the Convention, including in respect of the exclusive economic zone and the continental shelf within and beyond 200 nautical miles.

2. This Agreement shall be interpreted and applied in a manner that does not undermine relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies and that promotes coherence and coordination with those instruments, frameworks and bodies.

3. The legal status of non-parties to the Convention or any other related agreements with regard to those instruments is not affected by this Agreement.

Article 6
International cooperation

1. Parties shall cooperate under this Agreement for the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, including through strengthening and enhancing cooperation with and promoting cooperation among relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies in the achievement of the objective of this Agreement.

2. Parties shall endeavour to promote, as appropriate, the objectives of this Agreement when participating in decision-making under other relevant legal instruments, frameworks, or global, regional, subregional or sectoral bodies.

3. Parties shall promote international cooperation in marine scientific research and in the development and transfer of marine technology consistent with the Convention in support of the objective of this Agreement.

Key components that overlap – BBNJ and ISA

- Marine genetic resources
  - Access and benefit sharing under BBNJ vs responsibilities of ISA contractors.
- Environmental impact assessments
  - Requirements under BBNJ vs regulations developed by the ISA.
- Area-based management tools, including protected areas
  - ABMTs under BBNJ vs AMBTs adopted by ISA and mining areas approved by ISA.
- Capacity building
  - Requirements under BBNJ vs training programs at ISA.
- Cross-cutting/clearing house mechanism
  - Information under BBNJ vs information under ISA (and confidentiality thereof).

Other relevant developments in ABNJ – CBD

- BBNJ as a platform to help achieve the Sustainable Development Goals, as well as for the 30 x 30 target under the Kunming-Montreal Global Biodiversity Framework adopted by the CBD COP in December 2022, in the context of ABNJ.

- CBD COP decision 15/24 (also adopted in December 2022):
  - *"Encourages Parties and invites other Governments to ensure that, before deep seabed mineral exploitation activities take place, the impacts on the marine environment and biodiversity are sufficiently researched and the risks understood, the technologies and operational practices do not cause harmful effects to the marine environment and biodiversity, and appropriate rules, regulations and procedures are put in place by the International Seabed Authority…".*

3. CONCLUSION / WHERE ARE THINGS HEADED?

What next?

- Intersessional work between now and July meeting.

- Informal dialogue on “what if” scenario (post-deadline) to continue.
  - Areas where consensus emerging.
    - No obligation to provisionally approve any application – Council can reject applications.
    - Mining cannot commence without regulations being in place.
  - Areas of diverging views have been narrowed down.
    - Role of the Legal and Technical Commission in evaluating applications.
    - Implications of provisionally approved plan of work.

- July is a crucial meeting, though still a long way to go in the negotiations.
  - Not just within the regulations … but also beyond.
  - E.g. developing thresholds, necessary standards and guidelines, benefit sharing, liability …

What still needs to be resolved/agreed on?

Outstanding Matters Within the Exploitation Regulations
1. Necessary standards and guidelines that are to accompany the regulations.
2. Overarching environmental goals and objectives.
3. Threshold of environmental harm to apply when assessing applications.
4. Processes relating to the preparation and evaluation of Environmental Plans.
5. Status of regional environmental management plans (REMPs).
6. Compulsory test mining.
7. Aspects related to the progression of contractors into commercial production.
8. Financial terms of exploitation contracts.
9. The inspectorate vs compliance committee.
10. ISA monitoring programmes.
11. Insurance and environmental performance guarantees.
12. Environmental compensation fund.
13. Adjacent coastal states and transboundary harm.

Outstanding Matters Intrinsically Related to Exploitation
1. Mechanism for the equitable sharing of benefits.
2. Compensation for developing States whose economies are dependent on terrestrial mining and suffer adverse consequences due to mining activities in the Area.
3. Constituting the Economic Planning Commission (EPC).
4. The operationalisation of the Enterprise.
5. Enhancing ISA environmental and scientific capacities.
6. Access to reserved areas and 'sponsorship of convenience'.
7. Broader reflections on the legitimacy of activities in the Area and ongoing negotiations of the 'BBNJ Instrument'.

Other Matters
1. Division of responsibilities (esp. sponsoring States).
2. The liability regime.

Singh, P. 'The two-year deadline to complete the ISA's Mining Code: Key outstanding matters that still need to be resolved'. Marine Policy 134 (2021).

Conclusion

- “Ocean facing unprecedented levels of threat” – UN Secretary-General.
  - DSM occurs in the midst of the urgent need to protect the marine environment, eliminate the loss of marine biodiversity, improve ocean health and reverse ocean degradation.

- DSM is at odds with other ocean ambitions.
  - Not a “sustainable” option.
  - More scientific information is needed to close knowledge gaps.
  - Requires more time and more debate: hence, growing calls for a pause/moratorium.

- “Common heritage” and “for the benefit of [hu]mankind as a whole”
  - Looking beyond legalities: Questions of equity and legitimacy.

THANK YOU

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