

On-going developments of seabed mining regulation

13th Ocean Dialogue - DAV & KAS

Exploring new frontiers of the high and deep sea- Session 2

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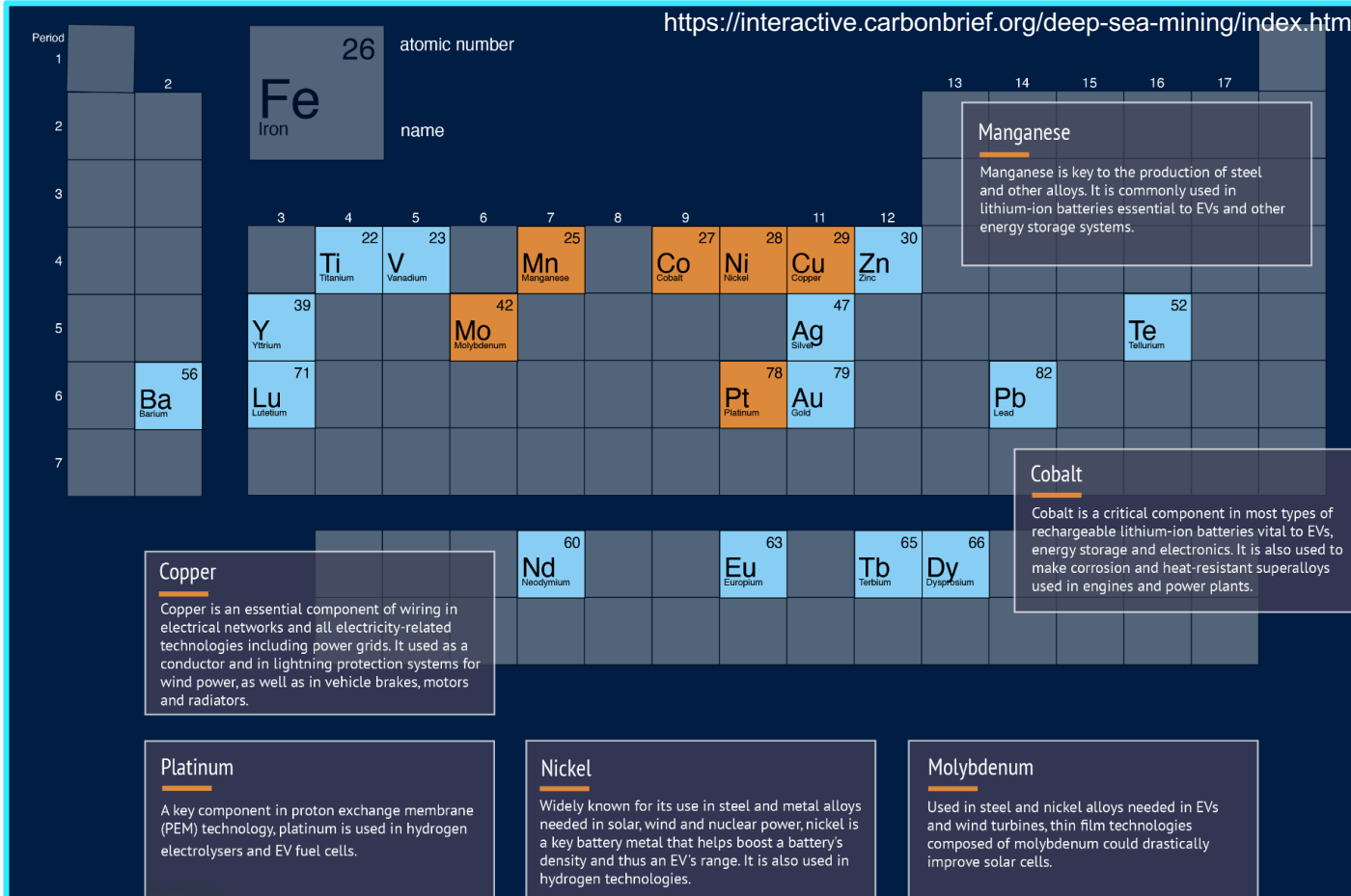
Outline

What are we talking about?

1. Changes in discourse and in the related Overton window of public acceptability
2. Stocktake of declared positions
3. Status of developments beyond national jurisdiction
4. Status of developments within national jurisdiction
5. Application of the BBNJ Agreement
6. Looking forward

What are we talking about?

<https://interactive.carbonbrief.org/deep-sea-mining/index.html>






What are we talking about?

Polymetallic Nodules	Polymetallic Sulphides	Cobalt-Rich Crusts
Lay on the Seabed	Hydrothermal vents	Seamounts & Submerged Volcanic Mountain Ranges
4000 – 6000 m	1000 – 4000 m	400 to 3000 m
Manganese Copper Nickel Cobalt Iron Rare Earth Materials	Copper Zinc Silver Gold	Cobalt Rare Earth Materials



Exploration type

-  Polymetallic nodule (PMN)
-  Polymetallic sulphide (PMS)
-  Cobalt-rich ferromanganese crusts (CFC)



Contracts held by country

1. CCZ

- | | | | |
|---|---|--|---|
|  Germany |  Japan |  France |  Tonga |
|  Jamaica |  China |  Czech Rep. |  Singapore |
|  Cook Islands |  Slovakia |  Cuba |  Bulgaria |
|  Russia |  Poland |  Kiribati |  Nauru |
|  UK |  Belgium |  Korea | |

2. Mid-Atlantic Ridge

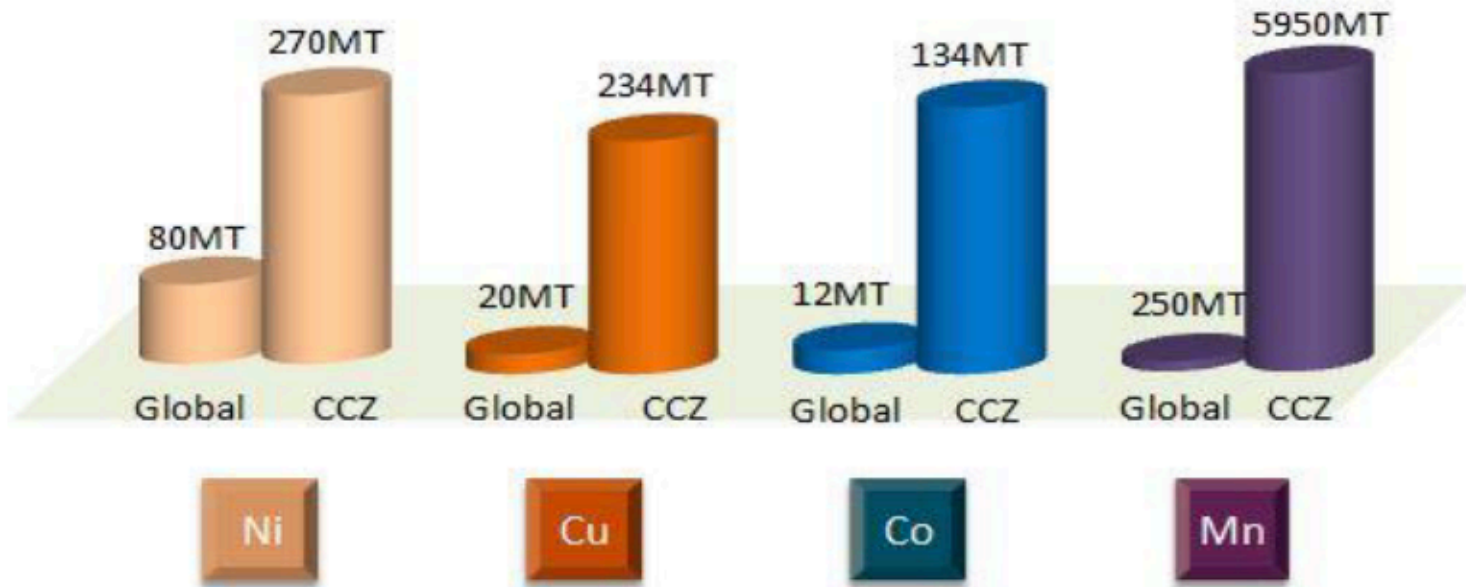
- | |
|--|
|  Poland |
|  France |
|  Russia |

3. Indian Ocean

- | |
|---|
|  India |
|  Germany |
|  Korea |
|  China |

4. Northwest Pacific

- | |
|--|
|  China |
|  Korea |
|  Japan |
|  Russia |



Based on US Geological surveys before the early 80s

Increased demand for minerals, tightening of land-based supplies and advance in mining technology



1. Changes in discourse & in Overton window

Seabed mining (SBM) exploration in ABNJ since the 90s unknown to the public

In favour

Against

Start of SBM reg. for exploitation @ ISA in 2014

Seabed mining is necessary for the energy transition
→ Critical minerals

Seabed mining exploitation is unacceptable given its irreversible environmental impacts on biodiversity

Seabed mining has less adverse environmental effects than terrestrial mining

Last frontier slow system

Geopolitics

2-year-rule trigger by Nauru (TMC) in 2021

Projection of demand in critical minerals are excessive → new technologies + recycling

Greater social acceptance

Insufficient scientific knowledge of deep sea

No capacity for recycling at this stage + insufficient quantities

ISA plan for mining code by 2025

Dark oxygen production hypotheses



2. Stocktake of declared positions

IN FAVOUR

Sponsoring state	<u>On land</u>	<u>On the seabed</u>
... with resources under nat'l jurisdiction	China Russia	Cook Is. Nauru India Japan
... with no prospective resources under nat'l jurisdiction	Bulgaria Czech Rep Cuba	Poland RO Korea Singapore
Slovak Rep Tonga	Jamaica Kiribati	Unclear position: Belgium
Not sponsoring state	Unclear position: Australia	
... with possible resources under nat'l jurisdiction	Norway, Argentina, Chile?	

CAUTIOUS OR MORE but with varied and nuanced language ranging from the precautionary principle to a ban, through precautionary pause and moratorium

Sponsoring state	Not sponsoring state
... with possible resources under nat'l jurisdiction	... with no prospective resources under nat'l jurisdiction
France (New Caledonia - land & Polynesia -sea)	Costa Rica Chile Dominican Rep. Ecuador Guatemala Honduras Mexico Peru Switzerland
Germany UK	Fiji Micronesia Palau PNG Solomon Is. Samoa Tuvalu Vanuatu

Not sponsoring state ... with possible resources under nat'l jurisdiction Brazil, Canada, New Zealand.

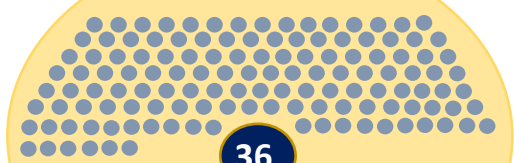
3. Status of developments in the Area



169 States*
+ EU

**All state parties to the UN LOS Convention are a member of the ISA. Only 152 states (+ EU) have adopted the 1994 Implementation Agreement on Seabed Activities beyond national jurisdiction*

Assembly



36

Council

Indonesia, Singapore + China, Japan, RO Korea

Haryo NUGROHO, Indonesia

Mario Juan A. AURELIO, Philippines

Dao Viet HA, Vietnam

13

Finance Committee

Financing and financial management of ISA incl. for administration and budget

41

Legal and Technical Commission (LTC)

Recommendations to Council for exploration and exploitation, review of applications and supervision

Economic Planning Commission*

**To be moved out when commercial mining starts*

Shengxiong YANG, China Se-Jong JU, Republic of Korea

Ramesh SETHURAMAN, India Tomohiko FUKUSHIMA, Japan

1

Secretary General + staff

Secretariat

Executive Office of the Secretary General

Legal Affairs

Evt'l Mgt & Mineral Resources

Administrative Services

Working Groups, Workshop reports, etc

3. Status of developments in the Area



Box 3

Exploration in the Area in figures

The Area covers around **54%** of the world's seabed



Areas being explored
1.47 million km²



The percentage was derived based on the area of the ocean's surface

0.584%
PMN

0.021%
PMS

0.004%
CFC



30

active exploration contracts in the Area



233

exploration cruises between 2001 and 2022



1.8B USD

spent in exploration activities between 2001 and 2022



3. Status of developments in the Area

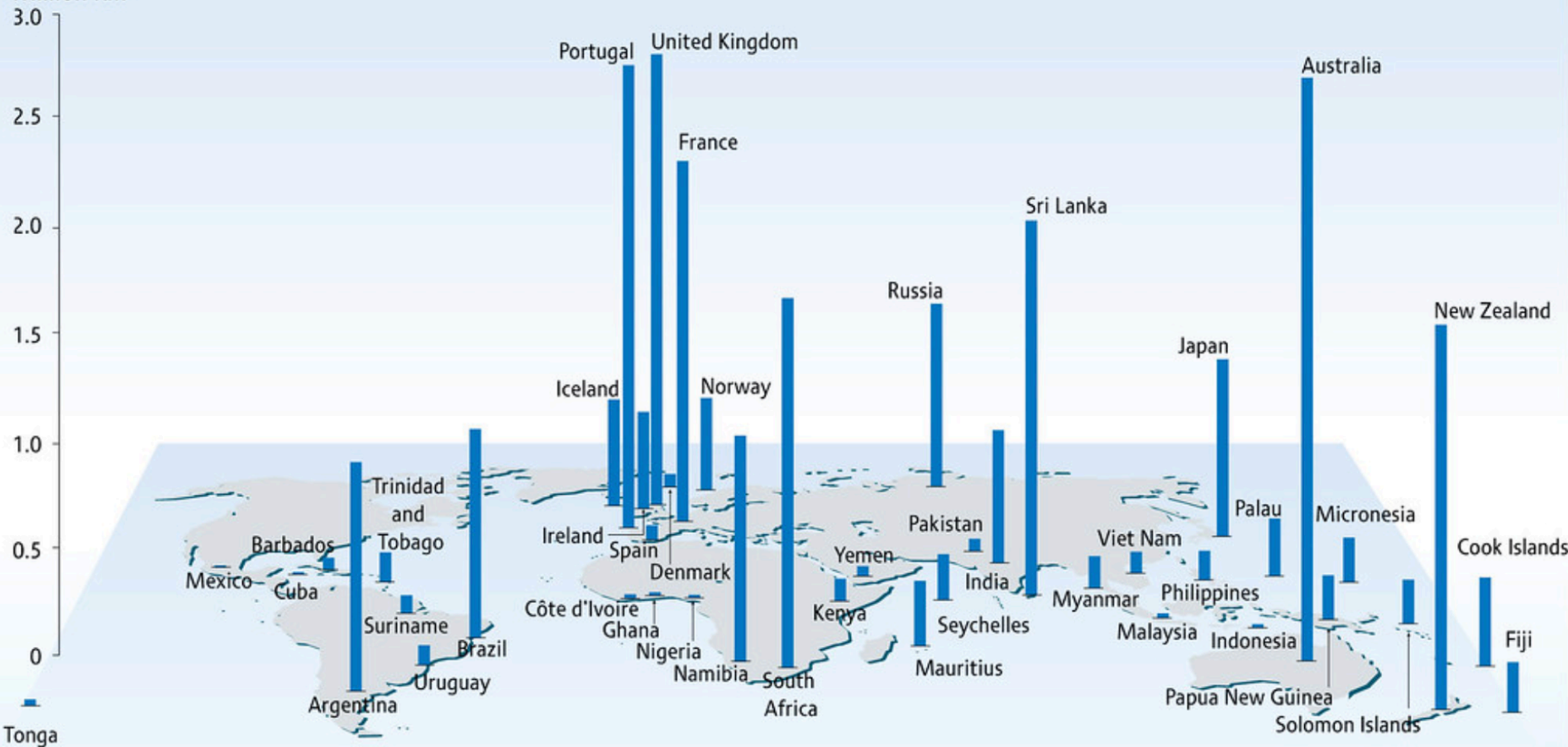
- Only exploration
- Not application for exploitation made yet (though TMC has announced it)
- Objective of a code in 2025
- Next meetings: Council Session 30 Part 1 (March) and Part 2 (July) 2025
- A large number of ICGs and intersessional work, including on thresholds value, EIA guidelines, reg'l envt'l impact monitoring, etc

Open-ended working group on the financial terms of a contract and other related economic issues			
Payment Regime			
System of Compensation for Land-Based Mining Developing Countries			
Operationalization of the Economic Planning Commission			
Equitable sharing of Financial and Other Economic Benefits			
Informal Working Group on the Protection and Preservation of the Marine Environment			
Elaboration of Permissible Levels of Environmental Harm			
Translation of Environmental Harm Criteria into Environmental Thresholds			
Environmental Baseline Data			
Test Mining			
Contractor Environmental Impact Monitoring			
Environmental Compensation Fund			
Regional Environmental Management Plans			
Regional Environmental Impact Monitoring			
Underwater Cultural Heritage			
Informal Working Group on Inspection, Compliance and Enforcement			
ICE Structure and Mechanism			
Role, Power, and Appointment of Inspectors			
Jurisdictional Issues			
Informal Working Group on Institutional matters			
Effective Control			
Process and Criteria for the Review of an Application for a Plan of Work for Exploitation			
Confidentiality			
Dispute Resolution			
Independent Expertise			
Public Participation			
Technology Transfer			
Other matters discussed in Plenary (and the 'President's Text')			
Liability			
Insurance Requirements			
Environmental Performance Guarantee			
Feasibility Study			
Reasonable Regard for Other Marine Users			
Monopoly			
Operationalization and Regulation of the Enterprise			
Standards and Guidelines			



Total area of outer continental shelf by State

Million Km²



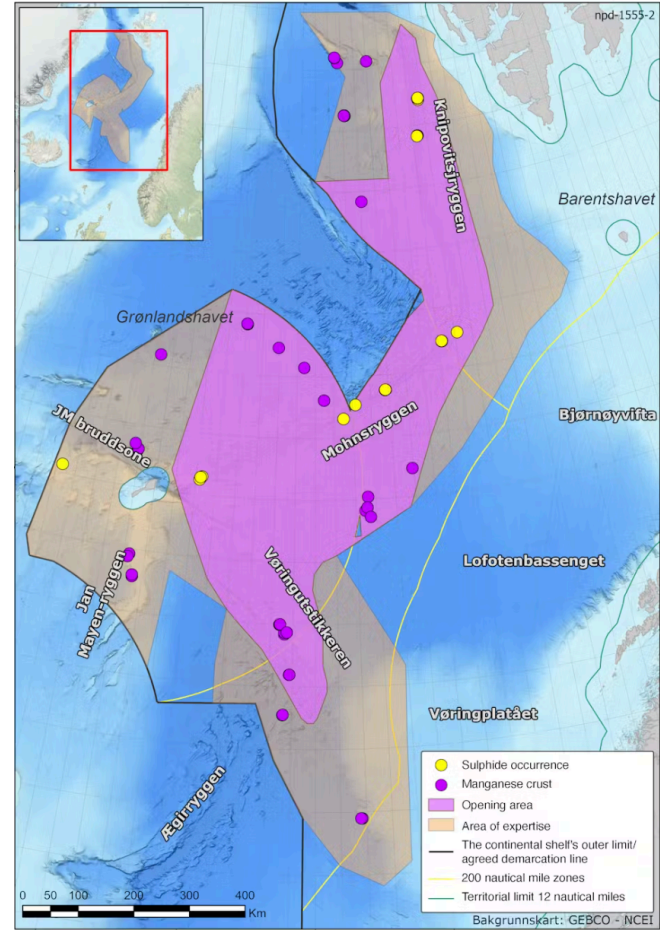
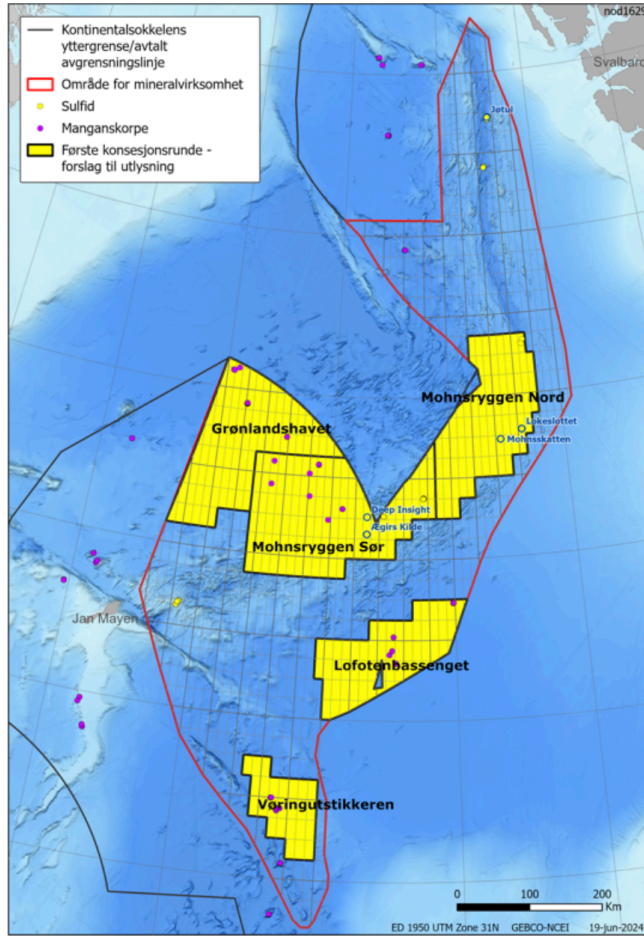
Note: not including outer continental shelf generated from Antarctic Territories

Source: executive summaries of submissions.

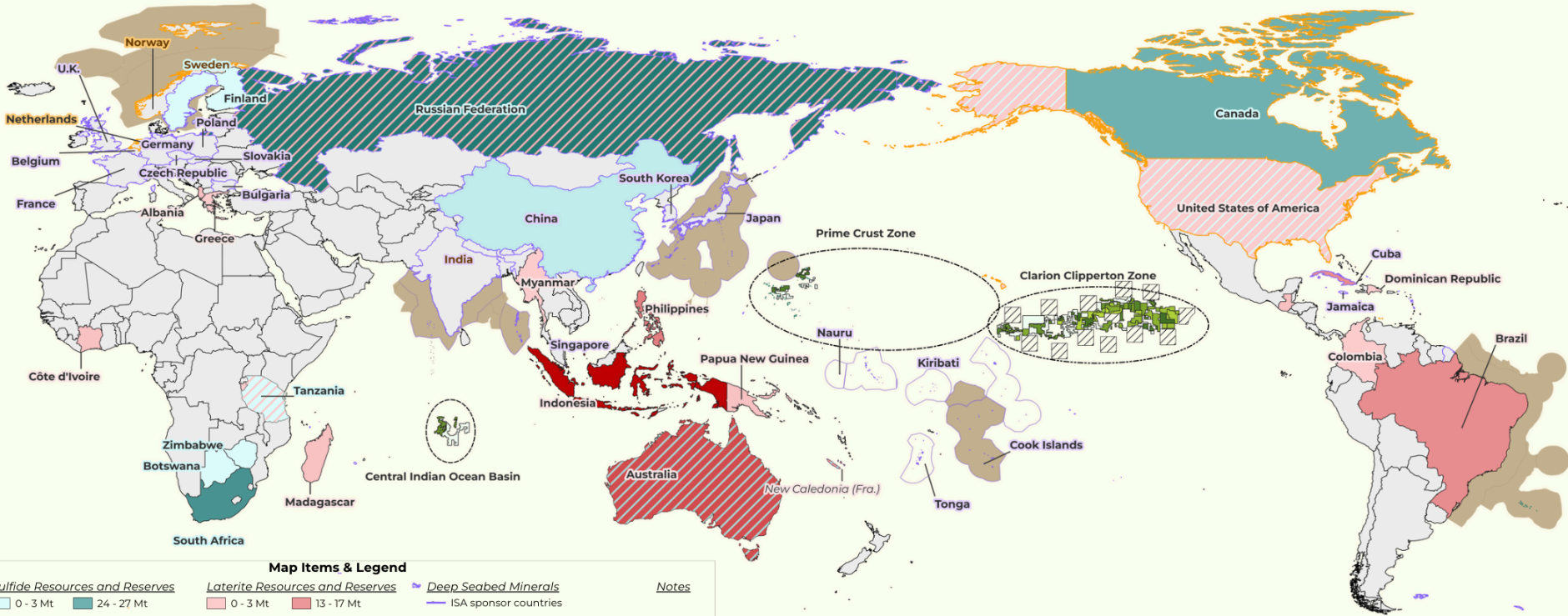
4. Status of developments within national jurisdiction



... early days



Nickel: Sulfides, Laterites, Cobalt-Rich Crusts (CRCs), and Polymetallic Nodules (PMNs)



Map Items & Legend

Sulfide Resources and Reserves

- 0 - 3 Mt
- 6 - 9 Mt
- 9 - 12 Mt
- 12 - 15 Mt
- 24 - 27 Mt
- 33 - 36 Mt
- 42 - 45 Mt
- Significant Laterite Deposits

Laterite Resources and Reserves

- 0 - 3 Mt
- 3 - 7 Mt
- 7 - 10 Mt
- 10 - 13 Mt
- 13 - 17 Mt
- 20 - 23 Mt
- 33 - 37 Mt
- 53 - 57 Mt
- Significant Sulfide Deposits

Deep Seabed Minerals

- ISA sponsor countries
- Non-sponsors with significant private actors
- Regions known for occurrence of CRCs and PMNs
- Continental shelf and extensions containing CRCs and PMNs
- PMN exploration contract areas
- CRC exploration contract areas

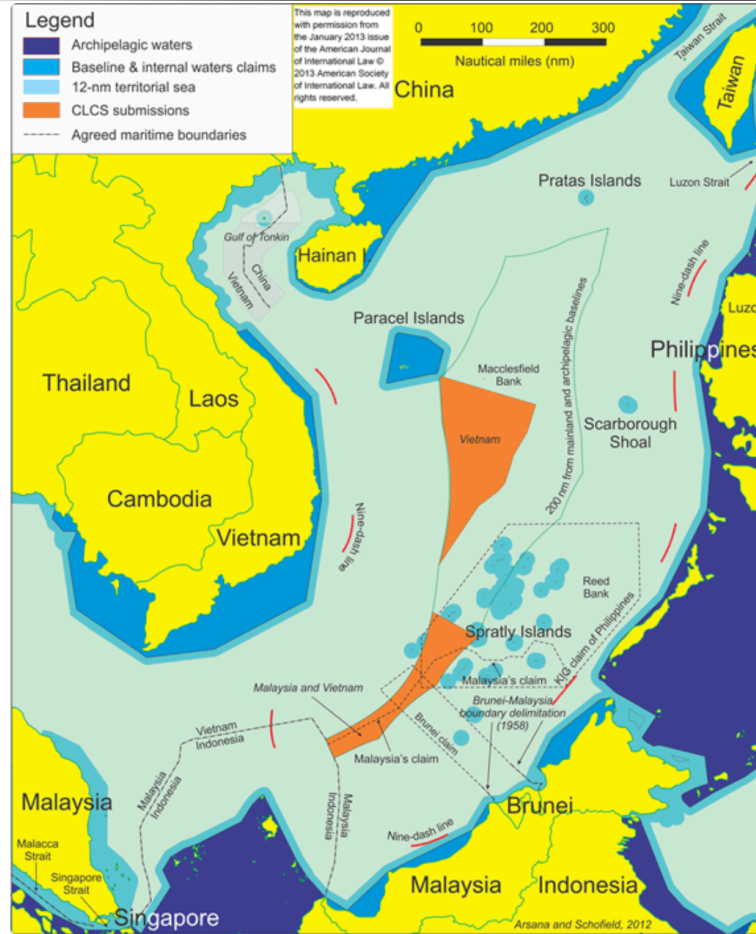
Notes



5. Application of the BBNJ Agreement

- Adopted on 19 June 2023
- 3rd implementation agreement of the UN Convention the law of the sea (UNCLOS) on the conservation and sustainable use of marine biodiversity of areas beyond national jurisdiction (ABNJ)
- 3 substantive parts on access and benefit sharing of MGRs, the adoption of area-based management tools (including MPAs) and a minimum set of principles for EIAs
- Art 5: must not undermine relevant legal instruments and frameworks, e.g. the ISA
- Art 8(2): Parties must promote the BBNJ Agreement in other bodies
- Report of the ISA on interlinkages with the BBNJ Agreement:
<https://www.isa.org.jm/news/independent-report-a-review-of-the-contribution-of-the-international-seabed-authority-to-the-implementation-of-the-objectives-of-the-2023-agreement-under-the-united-nations-convention-on-the/>

Looking forward ...





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