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Thank you.





The Resource Regime of the Deep Seabed Area

Neil Craik

International Boundaries and Transboundary Resources

25-27 October 2023

Offices of Freshfields Bruckhaus Deringer, New York

Why the sudden interest in seabed mining?

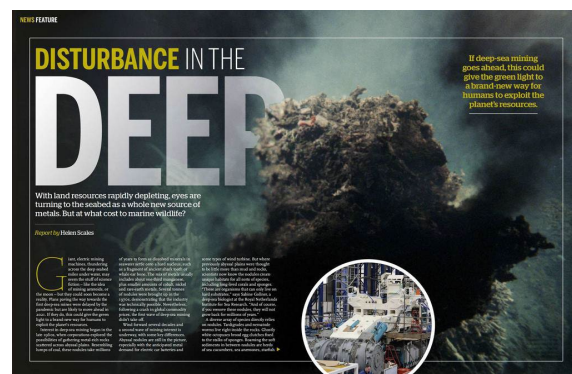


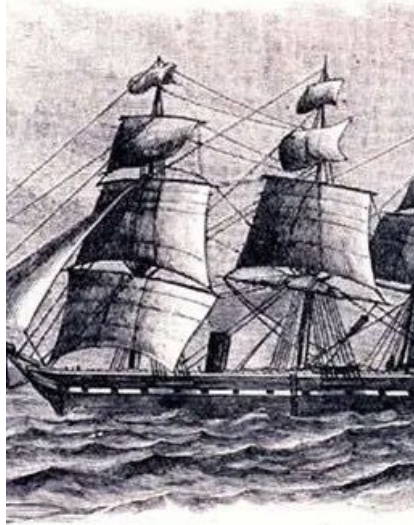
France Puts Future of Deep Sea Mining in Doubt

The country's call for an international ban on mining fragile ocean ecosystems disrupts negotiations to allow exploitation of the seabed to begin by 2025.



At COP27 on Nov. 7, French President Emmanuel Macron advocated a complete ban on deep

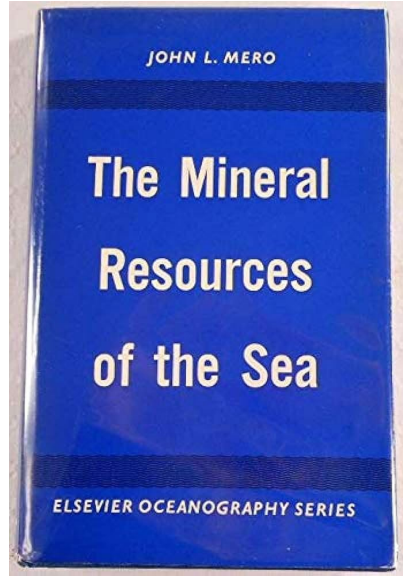




U.S. CHALLENGER PREPARING TO SOI

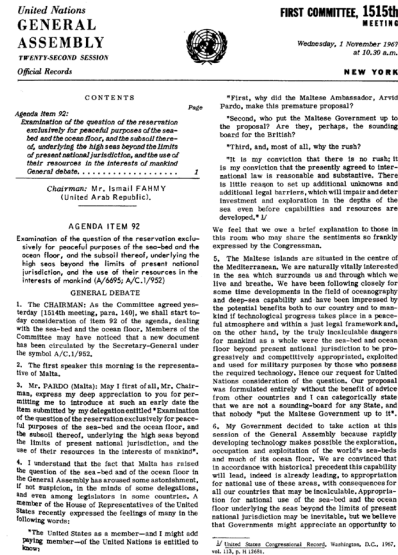
1873

HMS Challenger discovers manganese nodules



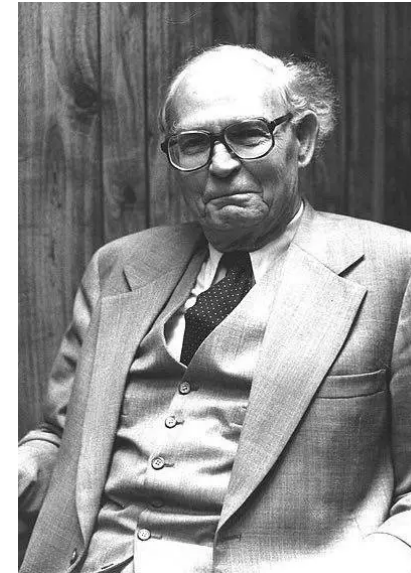
1960

Geologist John Mero reignites interests with publication of *The Mineral Resources of the Sea*



1967

Arvid Pardo addresses UNGA on the question of seabed resources and advocates that seabed by considered “the common heritage of mankind”



1982 UNCLOS adopted

1994 Implementing Agreement adopted

1996 UNCLOS came into force



UNITED NATIONS



General Assembly

Forty-eighth session
Agenda item 36

RESOLUTION ADOPTED BY THE GENERAL ASSEMBLY
[without reference to a Main Committee (A/48/L.

48/263. Agreement relating to the implementation of the United Nations Convention on the Law of the Sea of 10 December 1982

The General Assembly,

Prompted by the desire to achieve universal participation in the Convention on the Law of the Sea of 10 December 1982 (hereinafter referred to as the "Convention") and to promote appropriate institutions established by it,

Reaffirming that the seabed and ocean floor and the limits of national jurisdiction (hereinafter referred to as the resources of the Area) are the common heritage of mankind,

Recalling that the Convention in its Part XI and its Annex (hereinafter referred to as "Part XI") established a regime for the Area,

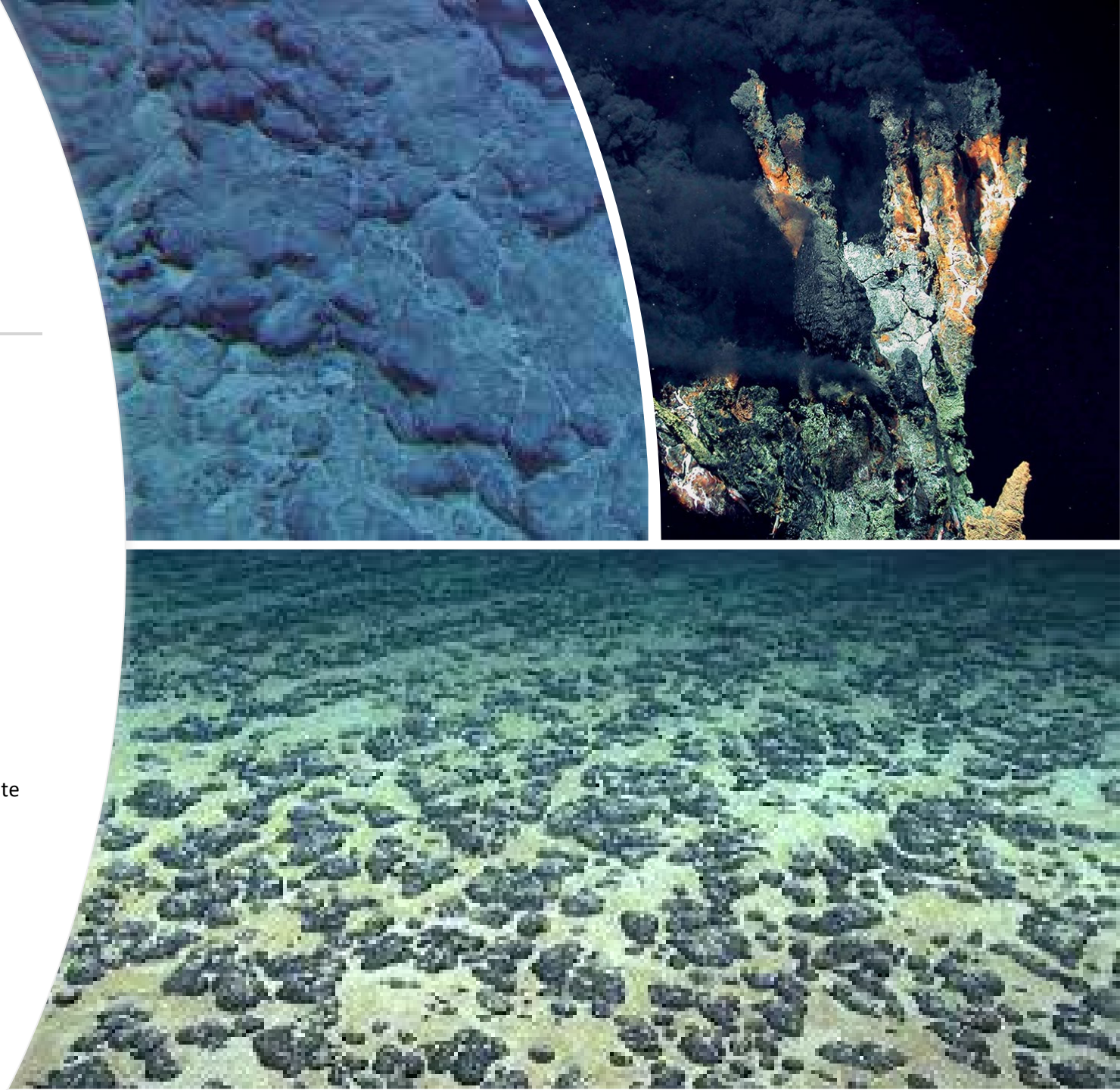
A brief history

1973 Third UN Conference on the LOS convened

Deep Seabed Resources

Three principal resource types

- polymetallic nodules – rest on seafloor
 - Source of critical minerals
 - Nickel, copper, cobalt, molybdenum, titanium, lithium
 - Located in abyssal plains 4-6,000 m below surface
 - CCZ deposit – 21.1 billion dry tons
- Cobalt-rich ferromanganese crusts
 - Associated with seamounts flanks
 - Part of topography of seafloor
- Massive sulfide deposits
 - Associated with active and inactive hydrothermal vents located at plate margins and volcanic areas, such as central Indian Ridge, East Pacific Ridge
 - Ore bodies contain copper, gold nickel
- Methane hydrates??



Resources ISA Contracts

Exclusive Economic Zones



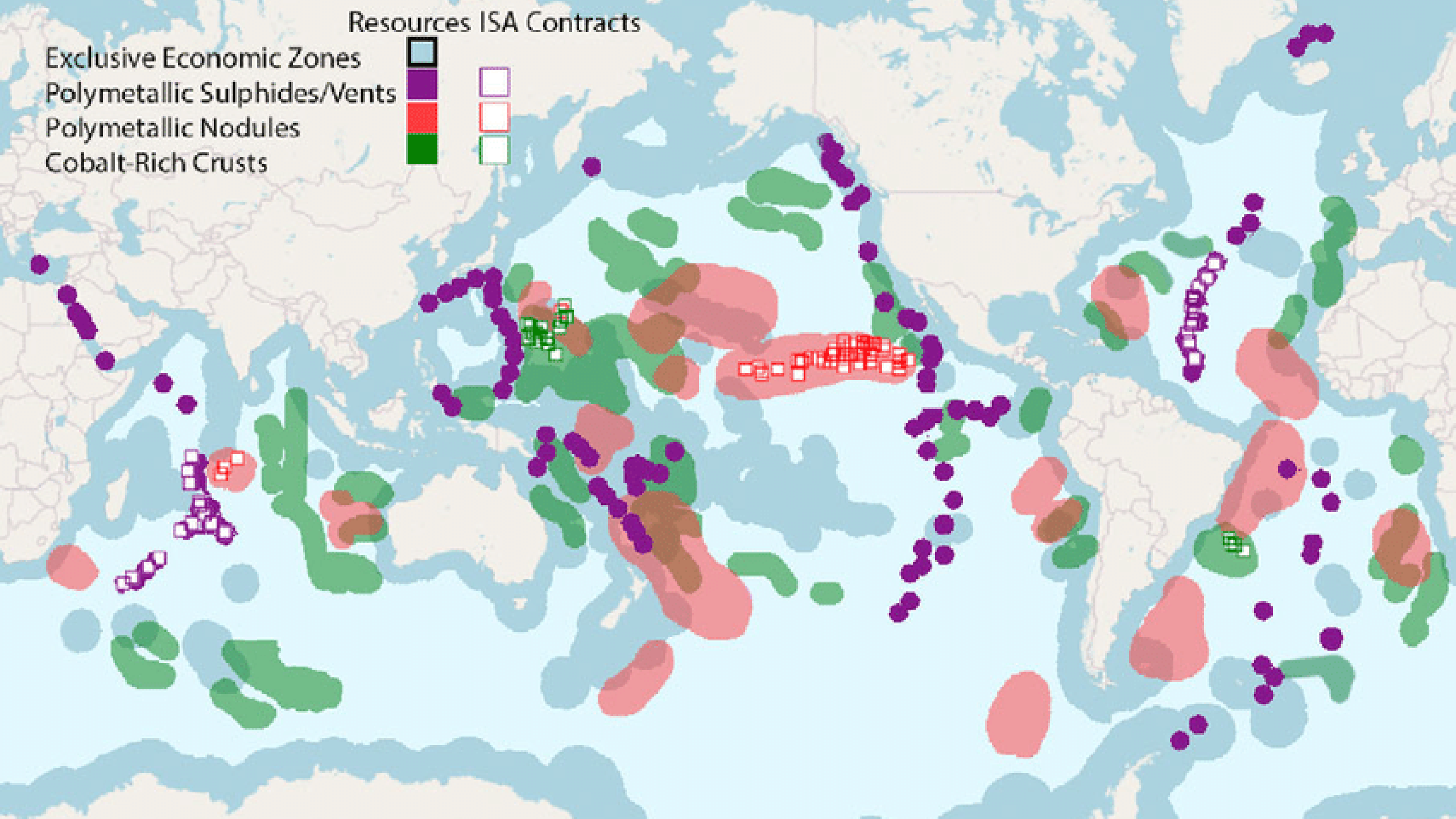
Polymetallic Sulphides/Vents

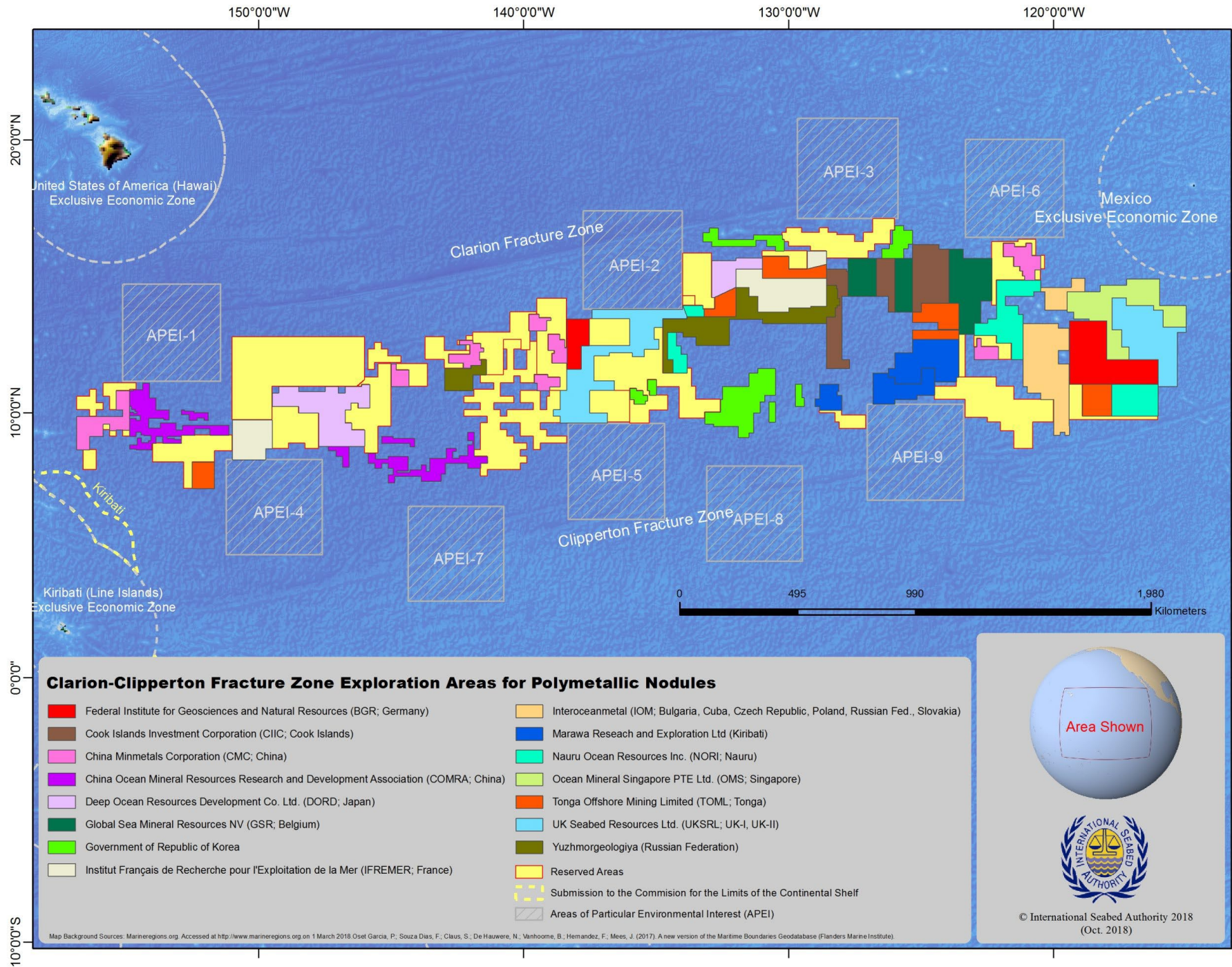


Polymetallic Nodules



Cobalt-Rich Crusts





Clarion-Clipperton Fracture Zone Exploration Areas for Polymetallic Nodules

- | | |
|---|---|
| Federal Institute for Geosciences and Natural Resources (BGR; Germany) | Interoceanmetal (IOM; Bulgaria, Cuba, Czech Republic, Poland, Russian Fed., Slovakia) |
| Cook Islands Investment Corporation (CIIC; Cook Islands) | Marawa Reseach and Exploration Ltd (Kiribati) |
| China Minmetals Corporation (CMC; China) | Nauru Ocean Resources Inc. (NORI; Nauru) |
| China Ocean Mineral Resources Research and Development Association (COMRA; China) | Ocean Mineral Singapore PTE Ltd. (OMS; Singapore) |
| Deep Ocean Resources Development Co. Ltd. (DORD; Japan) | Tonga Offshore Mining Limited (TOML; Tonga) |
| Global Sea Mineral Resources NV (GSR; Belgium) | UK Seabed Resources Ltd. (UKSRL; UK-I, UK-II) |
| Government of Republic of Korea | Yuzhmorgeologiya (Russian Federation) |
| Institut Français de Recherche pour l'Exploitation de la Mer (IFREMER; France) | Reserved Areas |
| Submission to the Commision for the Limits of the Continental Shelf | Areas of Particular Environmental Interest (APEI) |

Map Background Sources: Marineregions.org Accessed at <http://www.marineregions.org> on 1 March 2018 Oset Garcia, P.; Souza Dias, F.; Claus, S.; De Hauwere, N.; Vanhooime, B.; Hernandez, F.; Mees, J. (2017). A new version of the Maritime Boundaries Geodatabase (Flanders Marine Institute)

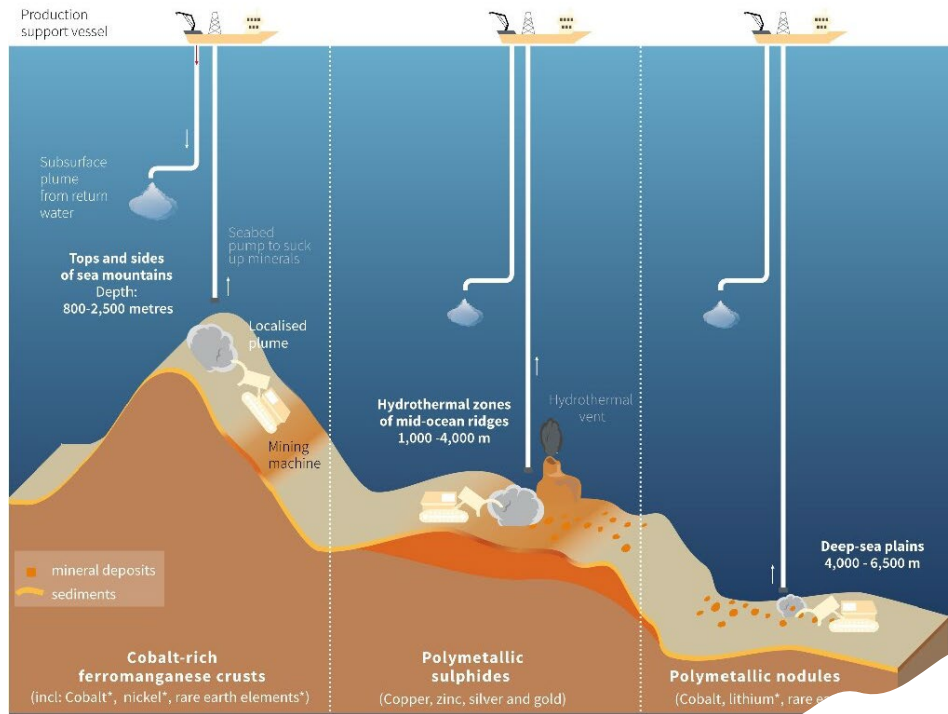


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Seabed mining

Three types of seabed zones, rich in valuable minerals used in high-tech products*, are being explored for potential seabed mining



Source: Pew Charitable Trusts, US GAO, IEA. *Necessary components for mobile phones, electric car batteries, wind turbines and renewable energy



Mining Processes and Technologies

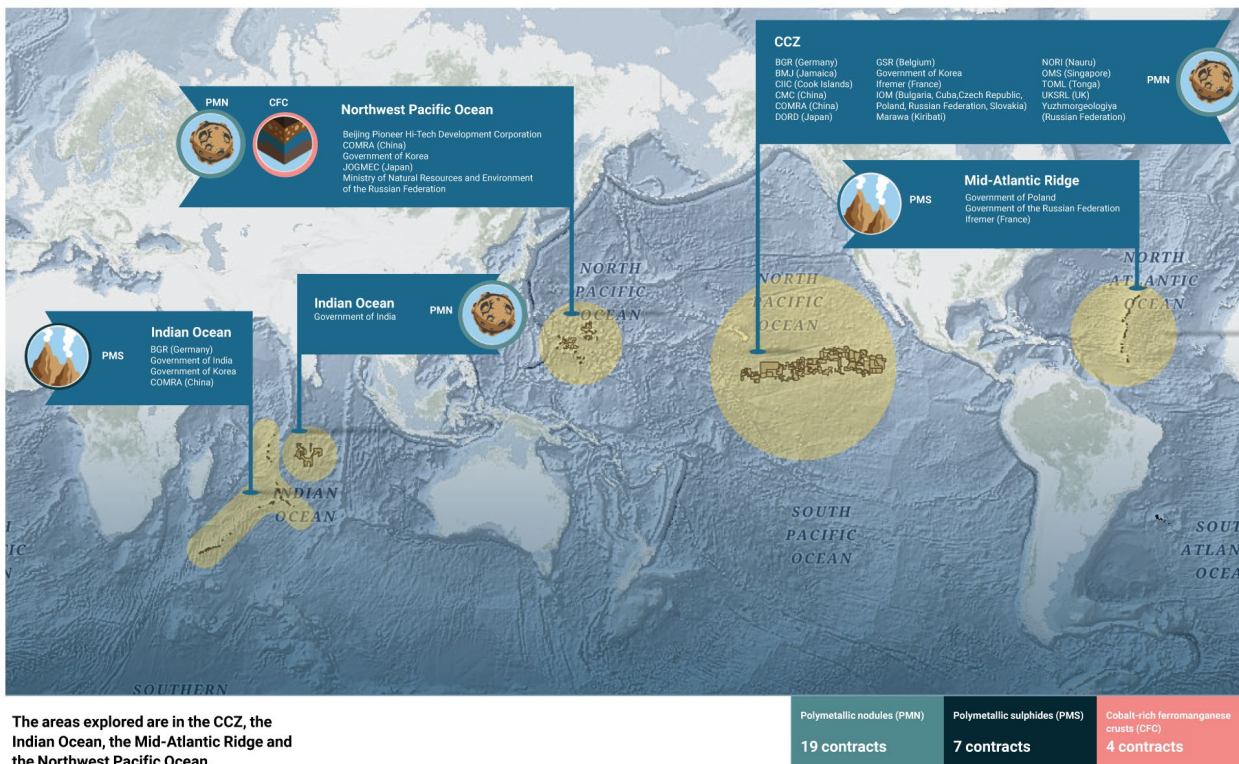
Who are mining?

DSM Contracts

Contracts

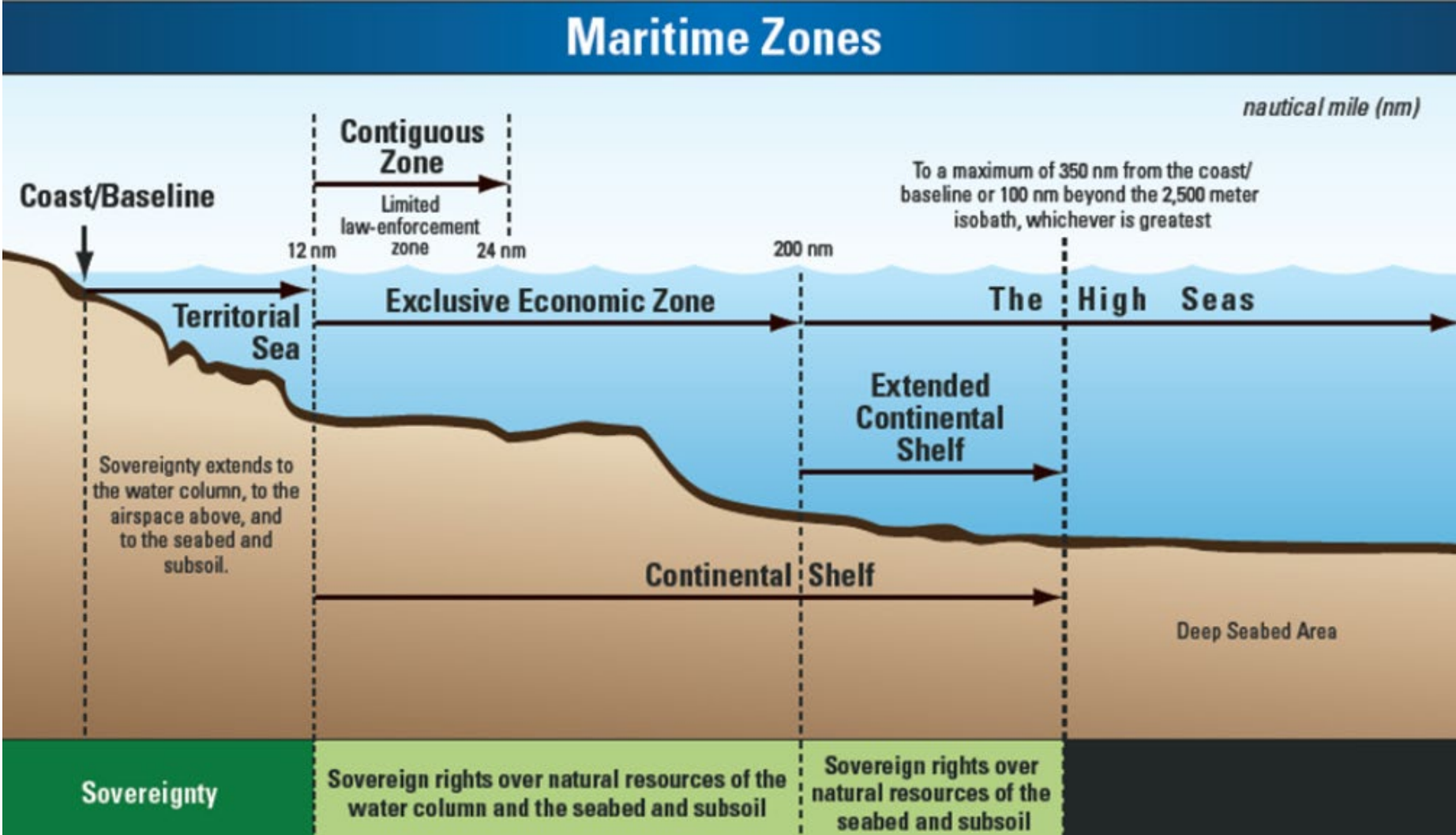
ISA has entered into 15-year contracts for the exploration for polymetallic nodules (PMN), polymetallic sulphides (PMS) and cobalt-rich ferromanganese crusts (CFC) in the deep seabed with **22** contractors.

	CONTRACTOR	CONTRACTS			
		PMN	PMS	CFC	Total
1	Interoceanmetal Joint Organization	1			1
2	ISC Yuzhmoregeologiya	1			1
3	Government of the Republic of Korea	1	1	1	3
4	China Ocean Mineral Resources Research and Development Association	1	1	1	3
5	Deep Ocean Resources Development Co. Ltd.	1			1
6	Institut français de recherche pour l'exploitation de la mer	1	1		2
7	Government of India	1	1		2
8	Federal Institute for Geosciences and Natural Resources	1	1		2
9	Nauru Ocean Resources Inc.	1			1
10	Tonga Offshore Mining Limited	1			1
11	Global Sea Mineral Resources NV	1			1
12	UK Seabed Resources Ltd.	2			2
13	Marawa Research and Exploration Ltd.	1			1
14	Ocean Mineral Singapore Pte. Ltd.	1			1
15	Cook Islands Investment Corporation	1			1
16	China Minmetals Corporation	1			1
17	Beijing Pioneer Hi-Tech Development Corporation	1			1
18	Ministry of Natural Resources and Environment of the Russian Federation		1	1	2
19	Government of Poland		1		1
20	Japan Organization for Metals and Energy Security			1	1
21	Companhia de Pesquisa de Recursos Minerais S.A.*			1	1
22	Blue Minerals Jamaica Ltd	1			1
		19	7	5	31



The areas explored are in the CCZ, the Indian Ocean, the Mid-Atlantic Ridge and the Northwest Pacific Ocean.

Defining the Area



Legal Status

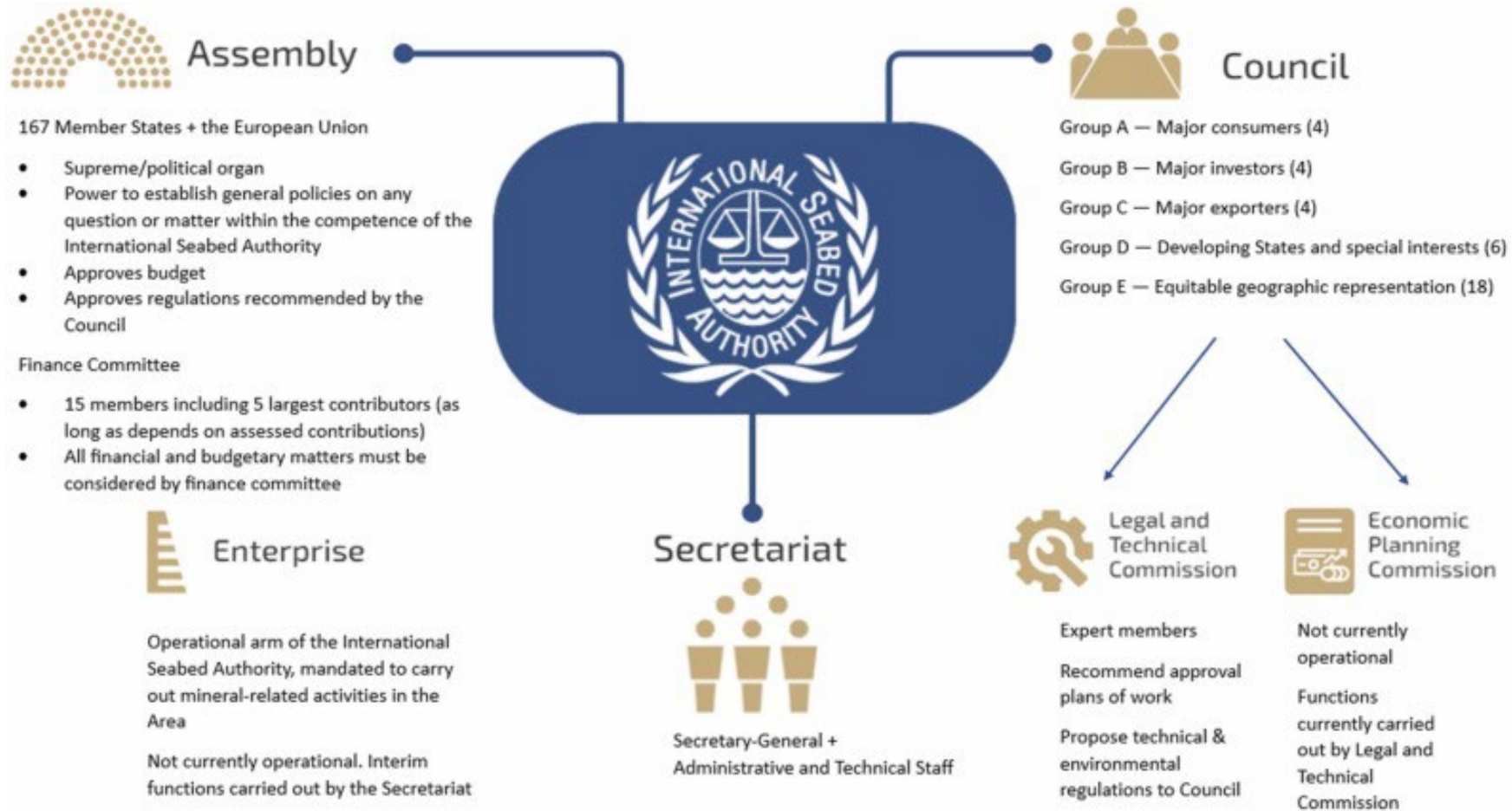
UNCLOS, Art. 136

“The Area and its resources are the common heritage of mankind.”

- Cannot subject to appropriation by any state or private actor (art 137(1))
 - Neither *res nullius* or *res communis*
- Collective management – on behalf of humankind (art. 137(2))
 - International Seabed Authority created for this purpose
- Must be exploited for the benefit of humankind (art 140)
 - Equitable benefit sharing
- Exclusively for peaceful purposes (art 141)
- Freedom of scientific research (art 143)
- Obligation to protect marine environment (art 145)



The International Seabed Authority



Key responsibilities of ISA

- promulgates rules/guidelines governing activities
 - Mining Code (A/C/LTC)
- Oversees approvals process / issues contracts (C/LTC)
- Environmental oversight/compliance responsibilities (C/LTC)
- Sets/collects royalties (A/C/FC)
- Distributes benefits (A/C/LTC)
- Establish internal rules, procedures, budgets (A/C/FC)
- Oversees MSR / data sharing
- Responsibilities under art 82 (A/C/LTC)

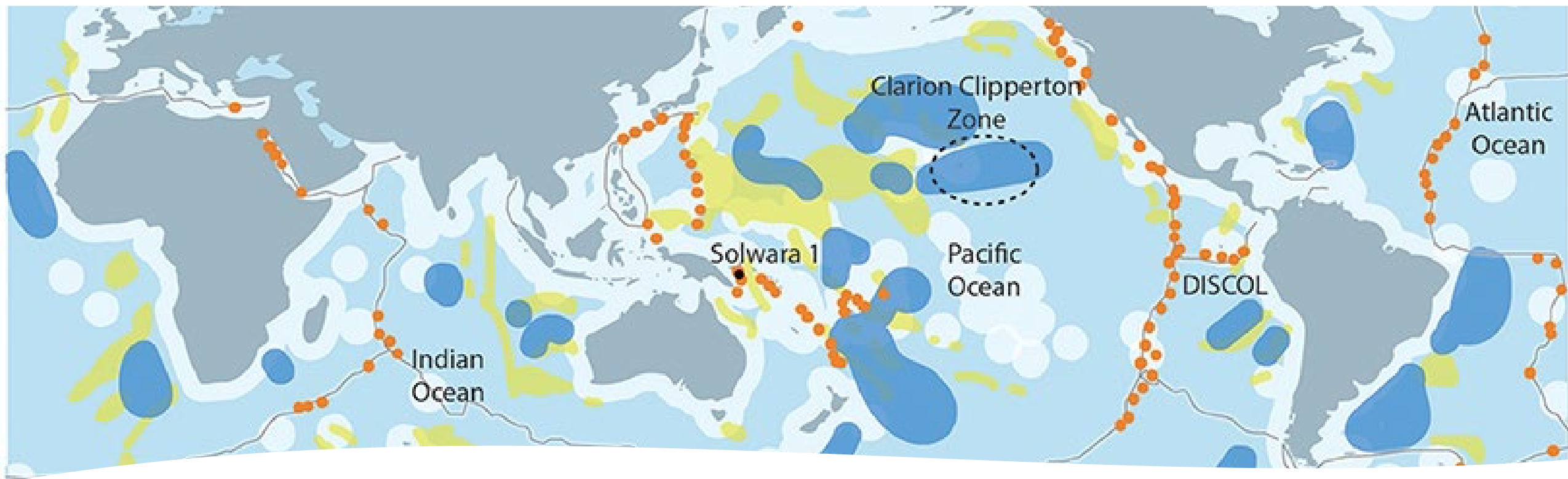


Sponsoring States and Contractors

- Mining may be carried by
 - State Parties
 - State Enterprises
 - Private entities, possess nationality or effectively controlled State Parties and sponsored by them
 - Effective control means (formal) legal control
 - The Enterprise (but 1994 Agreement restricted ability of Enterprise to Act independently)
- Sponsoring States
 - Shares oversight responsibilities
 - Dual responsibilities
 - May set internal requirements
- Contractors
 - Contract creates legal link to ISA authority
 - Responsible for damages arising from wrongful acts

Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, Case No. 17, Advisory Opinion (ITLOS - seabed Disputes Chamber)

- affirmed responsibilities and liability for breach of SS
- Due diligence standard (not strictly liable)
- Key duties
 - Assist ISA
 - Apply precaution
 - Best environmental practices
 - Recourse
 - EIA
- No differential standards for developing countries



Coastal State Rights – art 143

1. Activities in the Area, with respect to resource deposits in the Area which lie across limits of national jurisdiction, shall be conducted with due regard to the rights and legitimate interests of any coastal State across whose jurisdiction such deposits lie.
2. Consultations, including a system of prior notification, shall be maintained with the State concerned, with a view to avoiding infringement of such rights and interests. In cases where activities in the Area may result in the exploitation of resources lying within national jurisdiction, the prior consent of the coastal State concerned shall be required.
3. Neither this Part nor any rights granted or exercised pursuant thereto shall affect the rights of coastal States to take such measures consistent with the relevant provisions of Part XII as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline, or related interests from pollution or threat thereof or from other hazardous occurrences resulting from or caused by any activities in the Area.

The Regulatory Framework

- Three phases
 - Prospecting
 - Requires permission
 - Exploration
 - Exploitation
- Governed by
 - UNCLOS, Part XI
 - 1994 Implementing Agreement
 - [Mining Code](#)
 - Exploration regs x 3
 - By mineral type
 - Exploitation Regs – under negotiation
 - Guidance documents (issued by LTC)
 - Other sources of international law?
 - Customary IL
 - BBNJ Agt – but
 - HR norms?



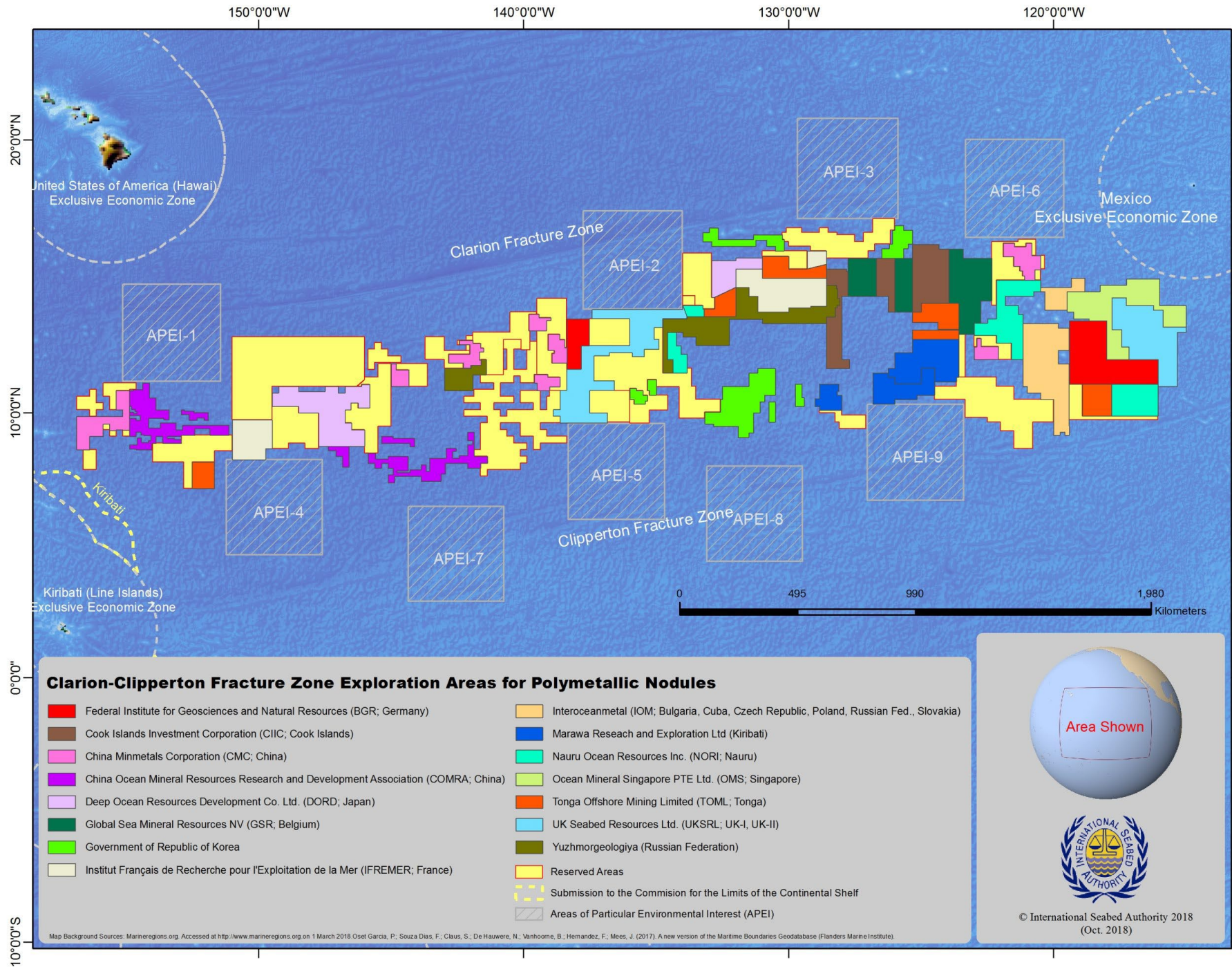
Prospecting

- Can commence with notice of prospecting to ISA
 - Identifies location and program
 - Provides undertaking to comply with training; environmental; data sharing requirements
 - received by S-G
 - Once received – obligation to file annual reports



Key Regulatory Elements - Exploration

- Applicants need to provide certificate of sponsorship and demonstrate financial and technical capability
 - Evidenced by expenditures (US\$ 30 mill)
- Identifies exploration and reserve blocks (up to 150,000 km² total)
 - Developing State Applicant provides data for two viable mining areas – Contractor relinquishes 50%
 - System of reserves ensures viable mining areas remain for developing states and Enterprise
- Application accompanied by plan of work
 - Reviewed by LTC – recommends to Council for approval
 - Preliminary EIA
 - Undertaking
- Where approved Contractor enters into Contract with ISA
 - 15 year term (renewable) with security of tenure
 - Contract contains approved plan of work – which details environmental and other requirements
- Subject to periodic review (by SG)
 - Five year plans
 - But limited authority to alter approval
- Limited compliance/enforcement
 - Emergency orders
- Emerging environmental regime
 - Regional environmental management plans
 - Identification of Areas of Particular Environmental Interest
- Confidentiality requirements



Clarion-Clipperton Fracture Zone Exploration Areas for Polymetallic Nodules

- | | |
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| Global Sea Mineral Resources NV (GSR; Belgium) | UK Seabed Resources Ltd. (UKSRL; UK-I, UK-II) |
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Key Regulatory Elements – Exploitation (draft)

- Application accompanied by detailed plan of work
 - EIA
 - Environmental management and monitoring plan
 - Financial plan
 - undertakings
 - LTC reviews and recommends to Council
 - Criteria include:
 - Compliance with legal requirements - undertakings satisfactory
 - Avoidance of environmental harm (effective protection)
 - Economic and technical viability
 - 30 year lease – exclusive right to exploit
 - Lease transferable
 - Rules on change of control/termination of sponsorship
 - Contract provides legal basis for transfer of title of minerals
-
- Subject to royalty (tbd)
 - Contractor provides performance guarantee
 - Insurance requirement
 - Subject to standards and guidelines

Dispute Settlement

- Special Chamber of ITLOS (Seabed Disputes Chamber) created (art 186)
- Jurisdiction to hear disputes between (art 187):
 - States v. state
 - re: interpretation/application of Part XI
 - State v. ISA
 - re: wrongful acts under regime;
 - exceedances of jurisdiction – but see art 189
 - Between parties to Contact (i.e. Contractors/ISA)
 - Interpretation/application of contract or plan or work
 - Wrongful acts?
 - ISA v. prospective contractor
 - Re: refusal of contract/negotiation
 - Liability claims against ISA



Outstanding Issues

- Two-year rule
 - Nauru – triggered provision to accelerate exploitation process
- Moratorium
 - Precautionary pause
- Royalty scheme
 - Amount
 - basis
- Benefit sharing
 - Basis – equitable
 - Per capita
 - Development status
- Environmental management and oversight
 - Liability
 - Inspectorate
 - Role of sponsoring states

Art 82 – Extended Continental Shelf

Article 82 - Payments and contributions with respect to the exploitation of the continental shelf beyond 200 nautical miles

1. The coastal State shall make payments or contributions in kind in respect of the exploitation of the non-living resources of the continental shelf beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.
2. The payments and contributions shall be made annually with respect to all production at a site after the first five years of production at that site. For the sixth year, the rate of payment or contribution shall be 1 per cent of the value or volume of production at the site. The rate shall increase by 1 per cent for each subsequent year until the twelfth year and shall remain at 7 per cent thereafter. Production does not include resources used in connection with exploitation.
3. A developing State which is a net importer of a mineral resource produced from its continental shelf is exempt from making such payments or contributions in respect of that mineral resource.
4. The payments or contributions shall be made through the Authority, which shall distribute them to States Parties to this Convention, on the basis of equitable sharing criteria, taking into account the interests and needs of developing States, particularly the least developed and the land-locked among them.

- Who responsible for payment - resource developer or state?
- Benefit sharing
 - Will benefit sharing follow same approach as DSM?
- Canada likely to be first contributor

ISA Council Chambers

GROUP A (four members)

2021	2022	2023	2024	2025	2026
China	China	China	China		
Italy	Italy	Italy ³	Italy	Italy	Italy
Japan	Japan	Japan	Japan		
Russian Federation	Russian Federation	Russian Federation	Russian Federation	Russian Federation	Russian Federation

GROUP B (four members)

2021	2022	2023	2024	2025	2026
France	France	Netherlands ⁴	France	France	France
Germany	Germany	Germany	Germany	Netherlands ⁵	Germany
India	India	India	India		
R.O. Korea	R.O. Korea	R.O. Korea	R.O. Korea	R.O. Korea	R.O. Korea

GROUP C (four members)

2021	2022	2023	2024	2025	2026
Indonesia	Australia	Australia	Australia	Australia	Australia
Chile	Chile	Chile	Chile	Chile	Chile
Canada	Canada	Canada	Canada		
South Africa	South Africa	South Africa	South Africa		

GROUP D (six members)

2021	2022	2023	2024	2025	2026
Bangladesh	Bangladesh	Bangladesh	Bangladesh		
Brazil	Brazil	Brazil	Brazil		
Fiji	Fiji	Fiji	Fiji	Nauru ⁶	Nauru
Jamaica	Jamaica	Jamaica	Jamaica	Jamaica	Jamaica
Lesotho	Lesotho	Lesotho	Lesotho	Lesotho	Lesotho
Uganda	Uganda	Uganda	Uganda		

GROUP E (18 members)

2021	2022	2023	2024	2025	2026
Argentina	Argentina	Argentina	Argentina		
Australia	Indonesia	Nauru ⁷	Indonesia	Indonesia	Indonesia
Cameroon	Cameroon	Cameroon	Cameroon	Cameroon	Cameroon
Costa Rica	Costa Rica	Costa Rica	Costa Rica		
Czech Republic	Czech Republic	Czech Republic	Czech Republic		
Ghana	Ghana	Ghana	Ghana	Ghana	Ghana
Mauritius	Mauritius	Mauritius	Mauritius		
Mexico	Mexico	Mexico	Mexico	Mexico	Mexico
Morocco	Morocco	Morocco	Morocco		
Mozambique	Mozambique	Sierra Leone	Sierra Leone	Sierra Leone	Sierra Leone
Netherlands	Netherlands	Belgium ⁸	Norway ⁸		
Nigeria	Nigeria	Nigeria	Nigeria	Nigeria	Nigeria
Poland	Poland	Poland	Poland		
Sierra Leone	Sierra Leone	Algeria ⁹	Algeria		
Singapore	Singapore	Singapore	Singapore	Singapore	Singapore
Spain	Norway	Spain	Spain		
Tonga	Tonga	Tonga	Tonga	Tonga	Tonga
Trinidad and Tobago	Trinidad and Tobago	Trinidad and Tobago	Trinidad and Tobago		
United Kingdom	United Kingdom	Norway	United Kingdom		