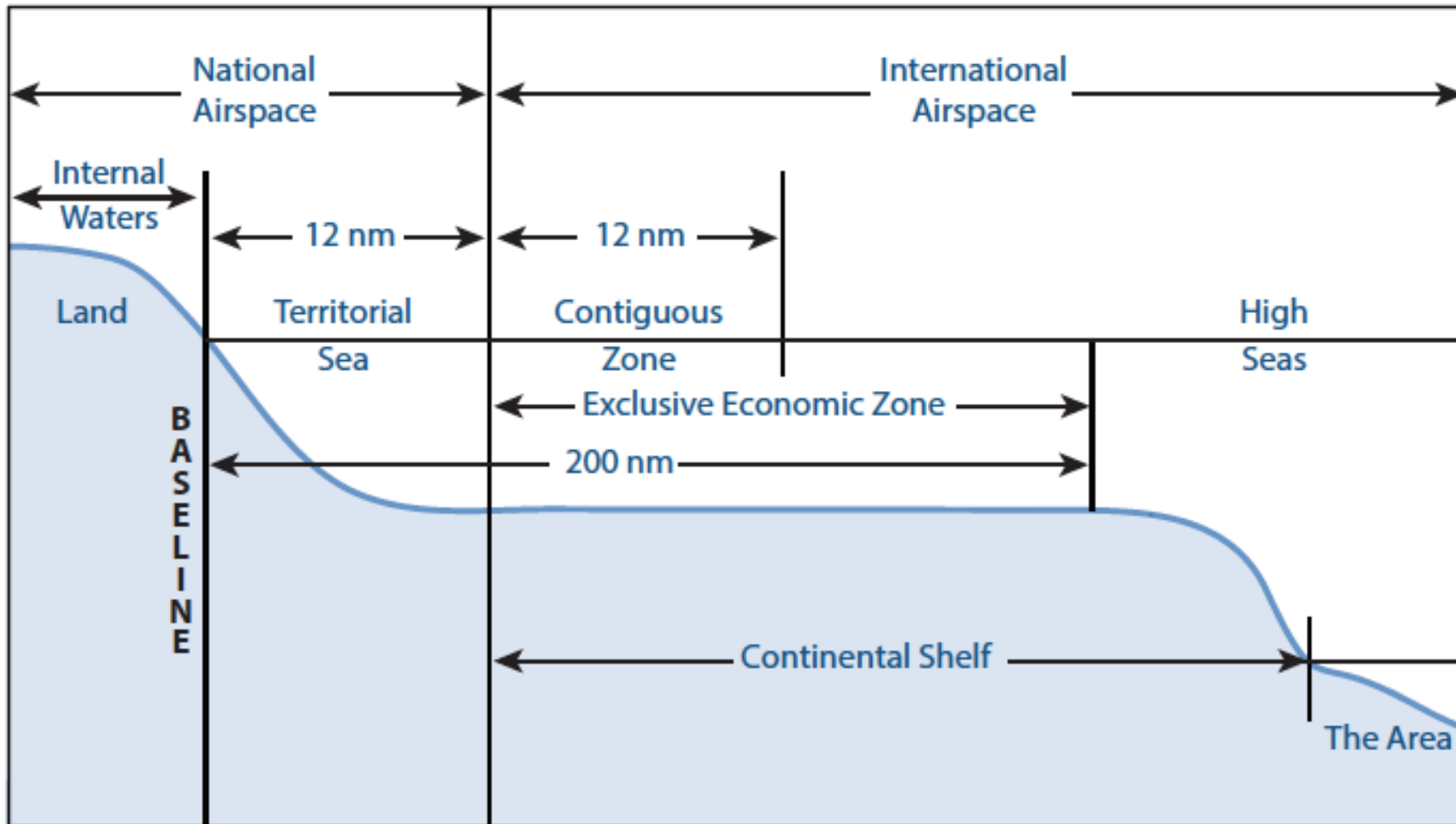


THE UNDERWATER DIMENSION

New Issues, New Challenges from a Legal and Geospatial Perspective

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**Legal
Boundaries of
the Oceans and
Airspace**

nm – nautical mile



**THE LAW
OF THE SEA**

1. CIVILIAN UNDERWATER TRAFFIC

The safety of navigation has traditionally been addressed having almost exclusive regard to maritime activities undertaken by **surface** vehicles.

The deployment of **submarines** has been for decades an exclusive domain of the military sector.

This context is undergoing profound changes today.



INTERNATIONAL MARITIME ORGANIZATION
4 ALBERT EMBANKMENT
LONDON SE1 7SR

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IMO

E

Ref. T4/3.01

MSC/Circ. 981
29 January 2001

GUIDELINES FOR THE DESIGN, CONSTRUCTION AND OPERATION OF PASSENGER SUBMERSIBLE CRAFT

CIVILIAN MANNED UNDERWATER VEHICLES (UVs)

- 1 The Maritime Safety Committee, at its seventy-third session (27 November to 6 December 2000), having considered a proposal by the Sub-Committee on Ship Design and Equipment, approved the annexed Guidelines for the design, construction and operation of passenger submersible craft which have been developed to provide international standards for these craft and to facilitate their international movement, acceptance and safe operation as well as providing the highest practical standards of safety for passengers and crew on such craft.
- 2 The Guidelines are applicable to submersible craft adapted to accommodate passengers and are intended for underwater excursions with the pressure in the passenger compartment at or near one atmosphere.

CIVILIAN UNMANNED UVs



MARITIME SAFETY COMMITTEE
107th session
Agenda item 5

MSC 107/5/1
2 May 2023
Original: ENGLISH
Pre-session public release:

DEVELOPMENT OF A GOAL-BASED INSTRUMENT FOR MARITIME AUTONOMOUS SURFACE SHIPS (MASS)

Report of the MSC-LEG-FAL Joint Working Group on Maritime
Autonomous Surface Ships (MASS) on its second session

Note by the Secretariat

SUMMARY

Executive summary: This document provides the report of the MSC-LEG-FAL Joint Working Group on Maritime Autonomous Surface Ships (MASS) on its second session.

*Strategic direction,
if applicable*

Output

Action to be taken:

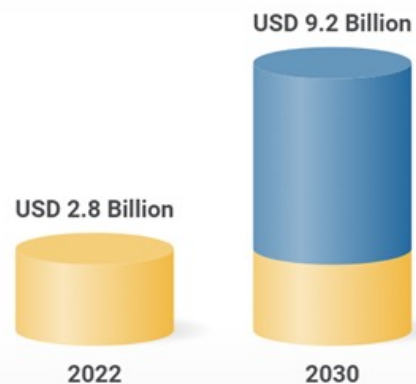
Related document:





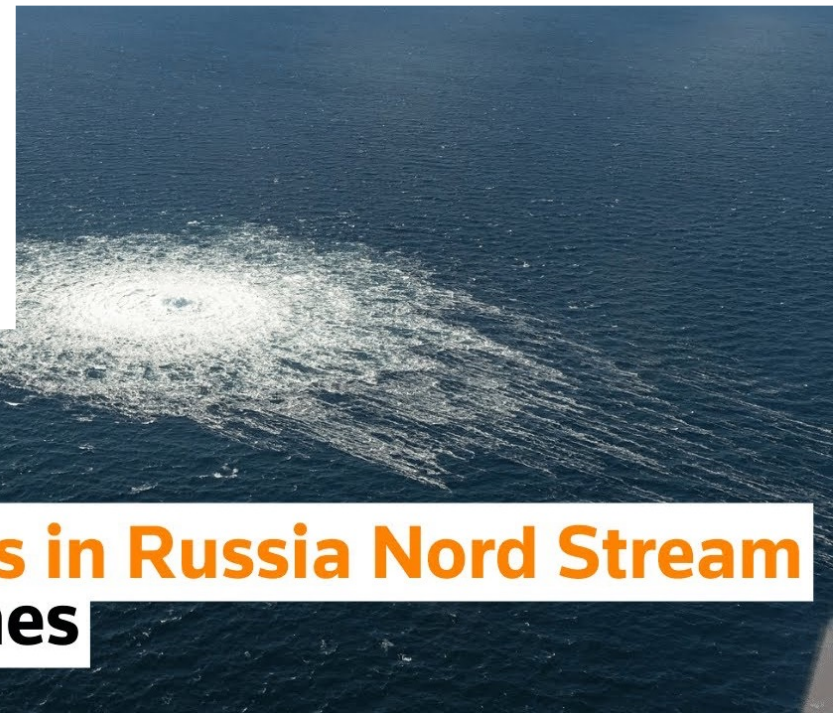
Global Market for Unmanned Underwater Vehicles (UUV)

Market forecast to grow at CAGR of 16.3%



[://www.researchandmarkets.com/reports/4806390](https://www.researchandmarkets.com/reports/4806390)

RESEARCH AND MARKETS
THE WORLD'S LARGEST MARKET RESEARCH STORE



Major leaks in Russia Nord Stream gas pipelines

Geospatial information is **key to decision-making** and the development of appropriate sets of regulations addressing the constantly increasing civilian underwater traffic.

- Avoid collisions
- Plan activities (distance, time)

2. SUBMARINE ESCAPE AND RESCUE (SMER)

United Nations

A/RES/78/69



General Assembly

Distr.: General
11 December 2023

Seventy-eighth session

Agenda item 75 (a)

Oceans and the law of the sea: oceans and the
law of the sea

**Resolution adopted by the General Assembly
on 5 December 2023**

[without reference to a Main Committee (A/78/L.15)]

78/69. Oceans and the law of the sea



MISSING SUBMARINE

TITANIC TOURISM

**International Convention on maritime search and rescue,
1979 (with annex). Concluded at Hamburg on 27 April
1979**

Authentic texts: Chinese, English, French, Russian and Spanish.

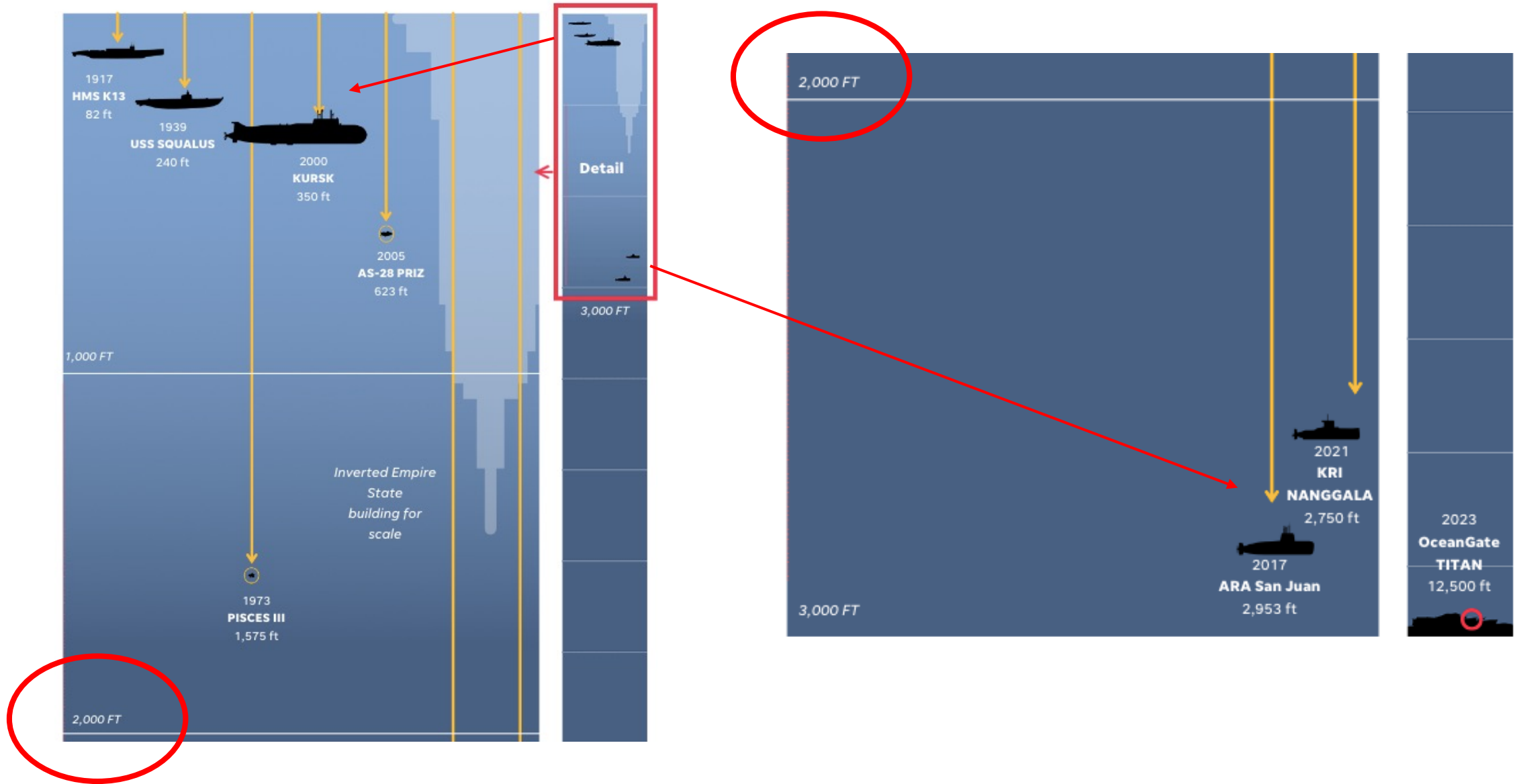
Registered by the International Maritime Organization on 27 August 1985.





NOTICE: This map represents the lines resulting from the relevant national legislation and does not imply the expression of any opinion on whether they comply with the applicable provisions of international law.

Depth of underwater rescue attempts



INTERNATIONAL SUBMARINE ESCAPE AND RESCUE LIAISON OFFICE

The International Submarine Escape and Rescue Liaison Office (ISMERLO) is an organisation that aims to facilitate an international response for a distressed submarine (DISSUB) and to improve the ability to respond to a call for assistance through its coordination role. Although established by NATO, ISMERLO supports all nations and pursues the involvement of global submarine-operating nations. ISMERLO is a military organisation operating in an international environment focused on the humanitarian objective of saving lives at sea.



Rescue Systems



AUSTRALIA



BRAZIL



CHINA



FRANCE



INDIA



ITALY



JAPAN



NSRS



KOREA (ROK)



RUSSIA



SINGAPORE



SPAIN



SWEDEN



TÜRKIYE



USA

3. SUBMARINE CABLES

Resolution adopted by the General Assembly on 5 December 2023

[without reference to a Main Committee (A/78/L.15)]

78/69. Oceans and the law of the sea

The General Assembly,

175. *Recognizes* that submarine cables and pipelines are vitally important to the global economy and the national security of all States, conscious that these cables and pipelines are susceptible to intentional and accidental damage, and calls upon States to take measures to protect submarine cables and pipelines and to fully address issues relating to these cables and pipelines, in accordance with international law, as reflected in the Convention;

CABLES' POSITION:



MEMORANDUM OF UNDERSTANDING
BETWEEN
THE INTERNATIONAL HYDROGRAPHIC
ORGANIZATION
AND
THE INTERNATIONAL CABLE
PROTECTION COMMITTEE LIMITED



CABLE-LYING VESSELS AND REPAIR BUOYS' OPERATION:



**Convention on the International
Regulations for Preventing
Collisions at Sea, 1972
(COLREGs)**

**Convention for the Protection of Submarine Telegraph Cables
(Paris, 14 March 1884)**



Working Group on Marine Geospatial Information Work Plan for 2023 - 2024

Submit a joint proposal to the IHO-Singapore Innovation and Technology Laboratory together with Expert Group on Land Administration and Management, the IHO-MSDIWG and OGC-MDWG exploring the land-sea interface and the integration of terrestrial, maritime and cadastral domains

Engages Member States to coordinate and address key global geospatial challenge on the integration of relevant domains at the land-sea interface.

Ad hoc Task Group

4. DEEP SEABED MINING

Draft exploitation regulations

In accordance with UNCLOS and the 1994 Agreement, since 2014, ISA has undertaken work to develop regulations for the exploitation of mineral resources in the Area. The process, which started with preliminary work in the context of **expert workshops** and involved the preparation of a number of expert **studies** and **discussion papers**, culminated in the development of draft regulations considered by the Legal and Technical Commission and the Council. Open stakeholder consultations have been undertaken throughout the process.



Current status of the draft exploitation regulations

International Seabed Authority		ISBA/25/C/WP.1
Council		Date: Revised 22 March 2019
ISBA/25/C/WP.1		Original: English
Draft regulations on exploitation of mineral resources in the Area		
Prepared by the Legal and Technical Commission		
Contents		
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Part II	Exploitation of mineral resources in the Area	2
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The LTC has prepared draft exploitation regulations following a transparent process and broad public consultations.

The draft exploitation regulations will now need to be adopted by the Council before any contract for mineral exploitation can be issued.

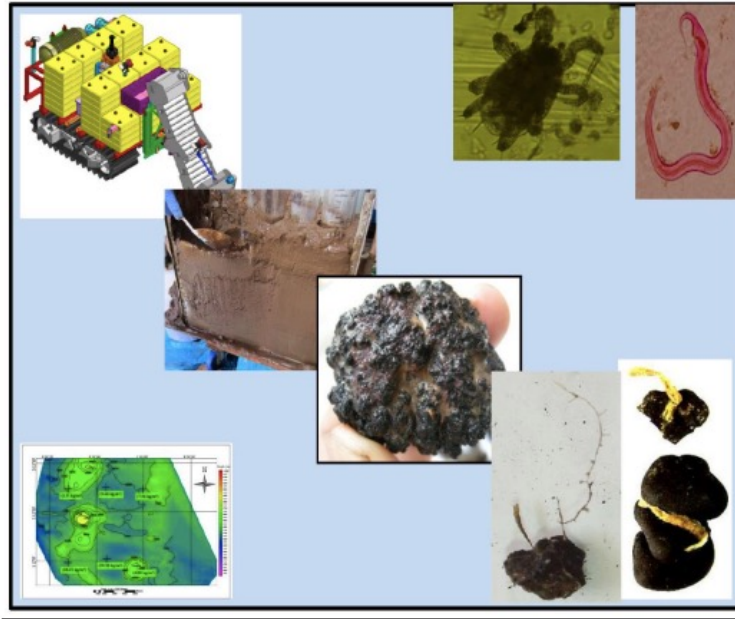
Draft Regulations on Exploitation of Mineral Resources in the Area – ISBA/25/C/WP.1



**Ministry of Earth Sciences
(Government of India)**

ENVIRONMENTAL IMPACT STATEMENT

Environmental conditions and likely impact in the area selected for nodule collection trials at the Indian PMN site in the Central Indian Ocean Basin



Report submitted to

The International Seabed Authority, Jamaica

Jan 2020



BGR Bundesanstalt für
Geowissenschaften
und Rohstoffe

Federal Institute for Geosciences and Natural Resources
Stilleweg 2
D-30655 Hannover
Germany

International Seabed Authority
The Secretary-General
14 - 20 Port Royal Street
Kingston
Jamaica
West Indies

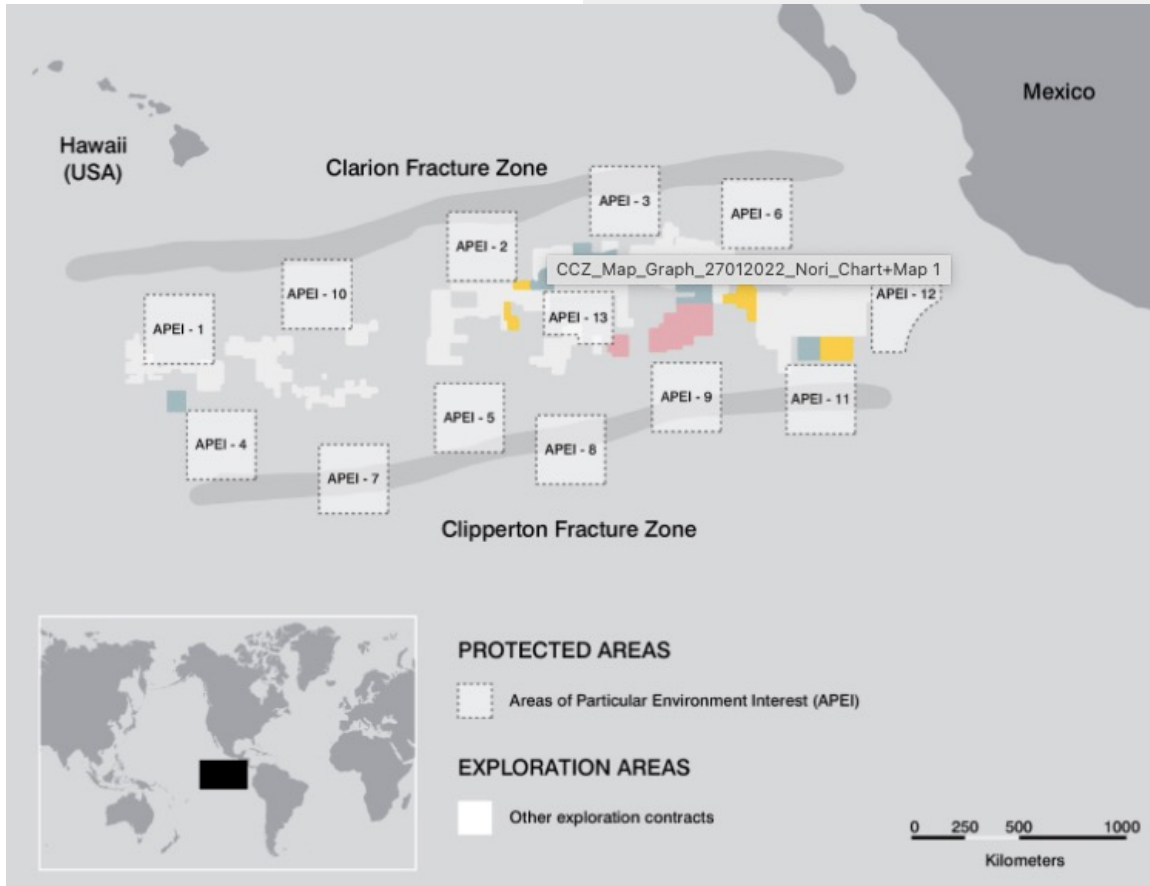
Environmental Impact Assessment

for the testing of a pre-prototype manganese nodule collector vehicle in the Eastern German license area (Clarion-Clipperton Zone) in the framework of the European JPI-O MiningImpact 2 research project

NORI-D Project – Nauru Ocean Resources Inc.

Nauru Ocean Resources, Inc., is a wholly-owned subsidiary of The Metals Company.

In 2011, the International Seabed Authority (ISA) granted a polymetallic nodule exploration contract in the Clarion Clipperton Zone (CCZ) to NORI, sponsored by the government of the Republic of Nauru. Since then, in close partnership with Nauru and working with leading researchers and institutions, NORI has progressed with a comprehensive seabed-to-surface research program in one of its designated areas, NORI-D. Representing 22% of The Metals Company's estimated resource in the CCZ, the NORI license area is ranked as having the largest undeveloped nickel deposit in the world.



5. BBNJ AGREEMENT

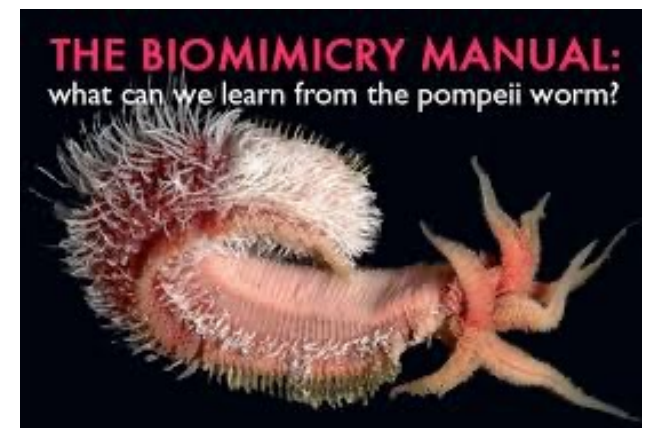
AGREEMENT UNDER THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA ON THE CONSERVATION AND SUSTAINABLE USE OF MARINE BIOLOGICAL DIVERSITY OF AREAS BEYOND NATIONAL JURISDICTION



Article 1 Use of terms

For the purposes of this Agreement:

1. “Area-based management tool” means a tool, including a marine protected area, for a geographically defined area through which one or several sectors or activities are managed with the aim of achieving particular conservation and sustainable use objectives in accordance with this Agreement.
8. “Marine genetic resources” means any material of marine plant, animal, microbial or other origin containing functional units of heredity of actual or potential value.
9. “Marine protected area” means a geographically defined marine area that is designated and managed to achieve specific long-term biological diversity conservation objectives and may allow, where appropriate, sustainable use provided it is consistent with the conservation objectives.



Article 12

Notification on activities with respect to marine genetic resources and digital sequence information on marine genetic resources of areas beyond national jurisdiction

1. Parties shall take the necessary legislative, administrative or policy measures to ensure that information is notified to the Clearing-House Mechanism in accordance with this Part.
2. The following information shall be notified to the Clearing-House Mechanism six months or as early as possible prior to the collection in situ of marine genetic resources of areas beyond national jurisdiction:
 - (c) The geographical areas in which the collection is to be undertaken;
 - (j) A data management plan prepared according to open and responsible data governance, taking into account current international practice.

CONCLUSION

surface / sum of layers —————> three-dimensional unity

'OCEAN' SPATIAL PLANNING

- **HARMONIZATION**
- **PRIORITIZATION**

Dependency analysis should include activities taking place both within and beyond national jurisdiction, both in the water column and on the seabed.

“NAVIGATION” (CONDUCT, SAFETY, RESCUE) REINTERPRETED.