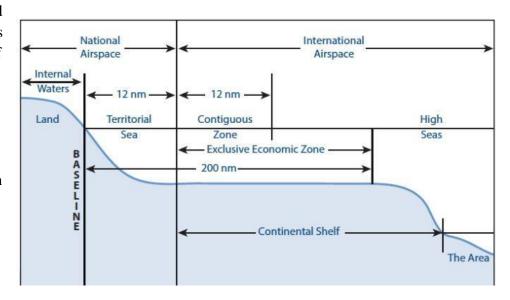
# Strengthening Rules and Regulations Overseeing Deep Sea Mining of Rare Earth and Manganese Nodules – Managing Natural Resources for Renewable Energy through a New Ocean Treaty

## **Background & Historical Reference:**

### **United Nations Convention on the Law of the Sea (UNCLOS)**

UNCLOS serves as the primary international treaty that establishes the basis for international maritime law and territorial integrity. As of 1982, the third iteration of UNCLOS established new international norms related to national territorial integrity over the seas.

The third treaty established Exclusive Economic Zones (EEZ,) which is the area of sea in which a sovereign nation has sovereign rights to economic activity and the exploration and use of maritime resources. This includes energy production from water/wind, the exploration of hydrocarbons, and the drilling of oil. An EEZ stretches from the outer limit of a nation's



territorial sea to 200 nautical miles from the coast of the nation. UNCLOS also established norms for deep sea mining in the high seas, protection of the maritime environment, continental shelf jurisdiction, and for the settlement of disputes.

The third treaty also established Internal Water which are considered all waterways of the landward side of the coastal state. The state is given sovereign rights to regulate use and set laws relative to any resource. Foreign naval entities have no right of passage within a sovereign state's internal waters.

The third treaty also established the concept of the Territorial Sea which is 12 nautical miles from the state's baseline. The nation is free to set laws and regulate use of resources within its territorial sea. Essentially the coastal state is entitled to sovereign jurisdiction of its territorial sea as though it is a part of the nation as well. However, non military vessels such as commercial

vessels are allowed the "right of innocent passage" through a nation's territorial sea. Strategic straits within a nation's territorial sea are also obligated to allow safe transit for military vessels as well. "Innocent passage" in this situation is defined by the convention as passing through a nation's territorial sea expeditious and continuously which is not "prejudicial to the peace, good order or the security" of the state of which the territory belongs. Nations can also temporarily suspend innocent passage in specific areas of their territorial sea, if doing so is essential for the protection of their security.

In international waters the International Seabed Authority (ISA) governs all deep sea mining affairs within the confines of the United Nations Convention on the Law of the Sea.regulating any mining activities and overseeing the effective protection of the marine environment from harmful effects. All applications for DSM in international waters must be approved by the SIA. The ISA is also tasked with ensuring that DSM in the deep sea is undertaken in accordance with the common heritage of humankind principle, including equitable sharing of financial benefits. There are significant bilateral and multilateral disputes regarding the legality and environment of deep sea mining in international waters and the legitimacy and efficacy of UNCLOS itself. The principle of "common heritage of mankind" is an ideal in international law that claims that elements of international territorial areas are a part of mankind's shared heritage and should be protected for future generations and protected from corporate or national exploitation. This principle is extremely relevant to debates regarding mining in international waters and anti-

mining advocates claim that the risk to mankind's common heritage is at risk if mining operations go awry.

### International Tribunal for the Law of the Sea

The ITLS serves as the primary intergovernmental organization established by UNCLOS III to resolve disputes between states over violations of UNCLOS. There are currently 167 member states as signatories to UNCLOS and to abide by the decisions of ITLS. As of 2023 the 2 major holdouts are the Islamic Republic of Iran and the United States. Delegates must consider what role the ITLS may play in any future international laws regarding maritime territory and mineral exploration/extraction.

## 2023 High Seas Treaty

On March 4 2023, the United States drafted and subsequently adopted the High Seas Treaty, a legally binding agreement under UNCLOS. It is also known as the Biodiversity Beyond National Jurisdiction Treaty

The treaty establishes
Marine genetic resources
(MGRs) and the equitable
sharing of benefits from
them. MGRs could
potentially be used for
cosmetics,
pharmaceuticals and food
supplements. The value of
the investment in MGRs
so far remains unclear,
therefore there has been
increased interest in the

# Where the Nodules Are Polymetallic nodules—small rocks containing valuable minerals—can be found in abundance on various regions of the deep seafloor. The U.S. Geological Survey has identified four zones where prospects are high. Each zone represents a unique combination of the likely concentration of nodules and the likely density of metals in them, extrapolated from samples and seafloor characteristics. The International Seabed Authority has granted 17 of its 30 exploration licenses in the Clarion-Clipperton Zone. Nodule Zones Atlantic Ocean Clarion-Clipperton Zone - Central Indian Ocean Basin Clarion-Clipperton Zone - Penrhyn Basin Clarion-Clipperton Zone - Central Indian Ocean Cocean - Penrhyn Basin

exploration and extraction of MGRs. There was significant debate about whether MGR extraction should be considered "fishing" under UNCLOS and subject to the same regulations in international waters. The committee eventually decided that MGR extraction is not fishing.

The treaty also detailed environmental impact surveys which have the ability to conduct analysis to reduce human impact on biodiversity. While the institutional framework for such surveys in territorial waters is already established in UNCLOS, the High Seas Treaty 2023 obligates participating parties to conduct such surveys when planned activity may have an environmental impact on marine life.

### The Debate about Deep Sea Mining in International Waters

The global community's demand for rare earth minerals such as cobalt, nickel, copper, and manganese have exploded, especially as these products are necessary from smartphones and electric car batteries. Deep sea mining involves heavy machinery essentially pushing large rocks from the ocean floor to the surface to then be extracted. These minerals have built up on the ocean floor for millions of years. Detractors of DSM claim that these deposits serve as crucially important habits for marine life and that removing them could contribute to violating mankind's common heritage. Companies in favor of deep sea mining claim that doing so would be less environmentally impactful than land mining which oftentimes infringes on humans living on land.

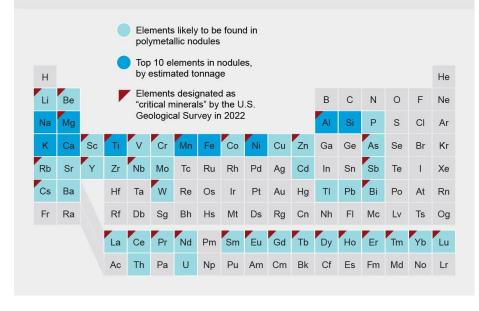
The ISA has issued 30 licenses for exploration thus far but 0 for actual mining as of 2023. Most of the exploration currently going on is in a 4.5 million square kilometer region between Mexico and Hawaii known as the Clarion-Clipperton Zone. A significant portion of the dispute for potential DSM operations in international waters will consist of how/why mining operations should be approved and what the regulations should be. In July 2021 Nauru announced the intention to begin DSM operations. That announcement triggered a policy that obligated the ISA to provisionally approve Nauru's application by July of 2023 and that's whether the ISA can approve regulations or not. Which means that mining the seafloor for clean energy resources could begin rather soon. However, as of August 15, 2023, the ISA announced that it will not issue extraction permits in international waters until it finalizes mining regulations, which it has indicated may take up to summer of 2025. The ISA missed the deadline to establish a regulatory framework and could not bridge the gap between nations cautious about the environmental impact of DSM and those nations eager to get started on large scale operations. Delegates in the committee must consider what it will take to establish such a framework.

The Clarion-Clipperton Zone is one of the least explored regions of our planet. It is home to trillions of misshapen black rocks known as nodules, which contain precious rare earth minerals which may be critical to mankind's survival. These nodules offer lifeforms in the ocean a surface to cling to as a habitat. Therefore activists argue that mining operations threaten habitats for critical species in this area. Therefore delegates in the committee may be tasked with developing regulations for deep sea mining operations. However nations like Nauru and companies affiliated

such as The Metals Company (TMC,) which has partnered with Nauru, do not want to wait. They wish to start extraction missions right away due to the unmeasured economic advantages of beginning to mine. However, it's not just environmentalists who are worried. Entire nations such as France. Germany, Chile; BMW, Google; and over 700 experts have called for a moratorium on mining until the potential impacts of deep sea mining can be properly assessed. China, Norway, Nauru, Mexico, the UK and others on the other hand are in favor of fast tracking mining operations. Delegates must consider their own nation's policies regarding DSM and

# **Elements of Interest**

Seafloor nodules can contain numerous metals and other elements (*light blue*), although some of the concentrations may be small. Many of the top 10 most abundant materials (by weight) are commercially important (*dark blue*). Many of them are in the U.S. Geological Survey's most recent list of critical minerals—those considered essential to the economy and at risk of reliable supply—and minerals important to clean energy, such as cobalt, lithium and nickel, may abound. These characterizations are based on limited nodule samples and could vary widely across ocean floors.



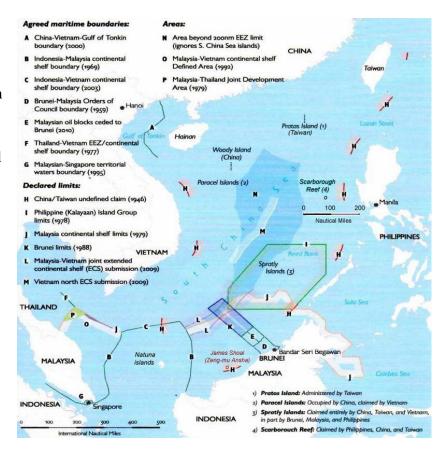
as to how quickly it is in their nation's government's interests to begin these mining operations.

Gerard Barron, CEO of TMC, and other pro-DSM advocates argue that this is humanity's chance to wean itself off of fossil fuels. He claims that his company has discovered enough minerals in several tracts of the CCZ to power 280 million cars, the equivalent of the entire American car fleet. Other pro-DSM advocates argue that this could usher in an era of ethical mining operations, doing away with child labor that is seen commonly in land mines, and to develop profit-sharing methods with developing nations.

### **Disputes With Existing Maritime Law Regulating Mining**

Many nations are not parties to UNCLOS. Some nations, even though they partied, are considered to violate the treaty. Inconsistencies regarding UNCLOS pose great risks for DSM operations but also for international peace and security. For example, The People's Republic of China was found to have violated UNCLOS in 2013 by prohibiting fishing in the Philippine

EEZ, claiming that it is actually within Chinese territorial waters. The Chinese Government claims to have complete maritime sovereignty over the South China Sea in accordance with the 9-dash line. Within the 9-dash line the Chinese government claims that a significant majority of the hydrocarbon and mineral resources within the resource rich area are within their exclusive rights as it is within their territorial waters, or so they claim. The Chinese claim and UNCLOS are directly contradictory. Delegates must consider what the committee and the international community must do when a nation claims resources in international law despite UNCLOS stating otherwise. In the case of these disputes, how they must be handled must be addressed by the committee to avoid confusion in mining operations or even a military conflict over resources by parties in the region.



### **Regulatory Needs Regarding Deep Sea Mining Operations**

Legal experts associated with the United Nations have determined that the seabed mining moratorium is legally required until the international community can determine the prerequisites until deepsea mining operations can be conducted following the establishment of a proper regulatory framework. The ISA has been working to establish regulations for the launch of new DSM operations, however significant gaps remain. There is no clear guidance on how environmental obligations established in UNCLOS will actually be applied. Regulations must include limitations on what level of environmental harm is considered acceptable when DSM operations are underway? Delegates must consider what punitive measures may be established for companies and states that violate limitations on environmental harm during DSM operations. Delegates must also consider what regulations must exist to ensure the equitable distribution of the benefits of DSM operations. Delegates must consider how to compensate nations and corporations that are home to land mining operations and corporations that may lose profit and market share, especially in nations where mining is the backbone of the economy. Without properly considering these questions DSM poses an opportunity to enrich a limited number of

countries and corporations with specific private interests while failing to abide by the original sentiments of UNCLOS which obligates nations to use sea resources for the benefit of mankind as a whole. Delegates must consider all of these regulator needs before DSM operations in international waters can properly be authorized en masse.

### **Guiding Questions:**

- In the case where a nation's territorial claim to resources and international law contradict, how should disputes be handled in a way that prevents bilateral conflict?
- What should the guidelines and preconditions be for the ISA approving mining operations in international waters?
- What kinds, if any, of environmental impact surveying should be done before approving mining operations in international waters?
- How should the regulation of private corporations engaging in DSM be operated?
- What kinds of measures can be taken to prevent environmental degradation of DSM?
- How can the international community monitor DSM in a way that preserves mankind's common heritage?
- If DSM does threaten marine life and mankind's common heritage, does the potential gain outweigh the environmental degradation?
- What kinds of regulations should exist for nations and companies engaged in DSM operations within a nation's territorial waters?
- What kind of legal or environmental framework is necessary to govern the approval of future mining operations?
- The ISA is currently finalizing mining regulations, what should these regulations look like?
- What should be the timeline for the approval of mining operations?
- How should we bridge the gap between nations nervous about the environmental impact of DSM and those willing to get started immediately?