



ISSUE BRIEF

DEEP-SEA MINING

2023



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In 2020, the nation of Nauru triggered (though contentiously) a two-year rule under the 1994 Implementing Agreement, which initiated a rush for the International Seabed Authority (ISA, or Authority) to finalize regulations that will allow exploitation of the seabed, or deep-sea mining (DSM), within two years. This activity could begin in 2023, despite the growing calls for transparency, science, and a precautionary pause or moratorium. Oceanic and coastal peoples are on the frontlines of the climate crisis, and deep-sea mining is the newest threat that is already proving harmful to Pacific communities, their livelihoods, cultural practices, and their wellbeing.[1]

The international community acknowledges there is limited knowledge regarding the ecosystems targeted by DSM, the mining process, and resulting ecological impacts. Without such knowledge, not only can the Authority NOT create the required rules, regulations, and procedures to ensure ‘healthy development,’[2] but ensure State obligations are adhered to, namely to protect and preserve the marine environment and the human right to a healthy environment. Therefore, we must support and urge a global ban on DSM globally and within our Exclusive Economic Zones (EEZs). There is no other choice.

BASELINE SCIENTIFIC UNDERSTANDING

Deep-sea mining would disrupt the seabed by extracting mineral nodules from beneath the ocean floor. These nodules take millions of years to form, and their extraction could cause the extinction of thousands of species.[3] Far from being an empty space, the deep sea is teeming with marine life, ranging with rich biodiversity from bacteria to megafauna. One study revealed 330 species living in just 30 square kilometers of the deep sea.[4] In this study, more than two-thirds of the species recorded were previously unknown to science. Despite growing research, little is known regarding deep-sea ecosystems and mining impacts [5] to the deep-sea and Ocean as a whole, but what we do know is that a healthy Ocean is vital to our lives; the oxygen we breathe, sequestration of carbon, protection from severe storm events, and food and jobs for billions of people.

The ecosystems targeted for deep-sea mining (currently the area known as the Clarion Clipperton Zone) are highly vulnerable to long-term damage. Though the impacts and severity of impacts of DSM remain largely unknown, initial studies have indicated that the effects of deep-seabed mining on the seafloor could persist for hundreds if not thousands of years.[6] Some ecosystems may be particularly vulnerable, such as hydrothermal vents, which are hyperlocalized and unaccustomed to changes in pressure and temperature.[7]

In addition to harming deep sea ecosystems, deep sea mining could create disruptions in the water column that affect the pelagic food system and cause sediment plumes that alter the nutrient composition of the water.[8] The ecology of the deep sea impacts the health of the entire ocean. Thus, destruction of the deep sea will likely create irreparable harm not only in a localized environment but across the Ocean.

Despite strong criticisms regarding the lack of transparency of the decision-making process, test mining was given the green light by the Authority in late 2022. In fact, the Legal and Technical Commission of the ISA was asked to approve NORI's collector test EIS under a silence procedure despite research showing that "small-scale trials cannot accurately predict the full consequences of commercial-scale mining." [9] This rush to commence test mining has been highly concerning due to its potential harmful impacts on the environment, including the release of toxic elements, the destruction of hydrothermal vents and seamounts, biodiversity loss, noise and light pollution, and increased temperature amongst others.[10] Development of deep-sea mining technology is still underway, but most proposed systems involve using mechanical or pressurized water drills to extract mineral deposits from the sea floor.[11] Additionally, a video captured from Nauru's test mining venture showed wastewater from the seafloor being released at the surface, which has not yet been publicly reported by Nauru, has the potential to cause sediment plumes that smother ocean life.[12] Anonymous scientists also reported poor sampling practices and equipment failure made the data collected meaningless.[13] However, perhaps this has helped to prove that "that the mining equipment is [not] technically applicable, the operation [not] economically efficient and that the effective protection of the marine environment from harmful effects is [not] ensured" as were the reasons why test mining was introduced.[14]

Finally, proponents of DSM argue that in order to curb greenhouse gas emissions into the atmosphere and transition the global economy to more sustainable transportation, mining of the deep-sea is required. This is a myth, and more studies are emerging showing that deep sea minerals will not be necessary by 2050 and car manufacturers such as Volkswagen and BMW have voiced they will not be using these minerals in their supply chain.[15, 16] Far from supporting "green" energy, DSM is just as destructive as traditional mining, if not more so.

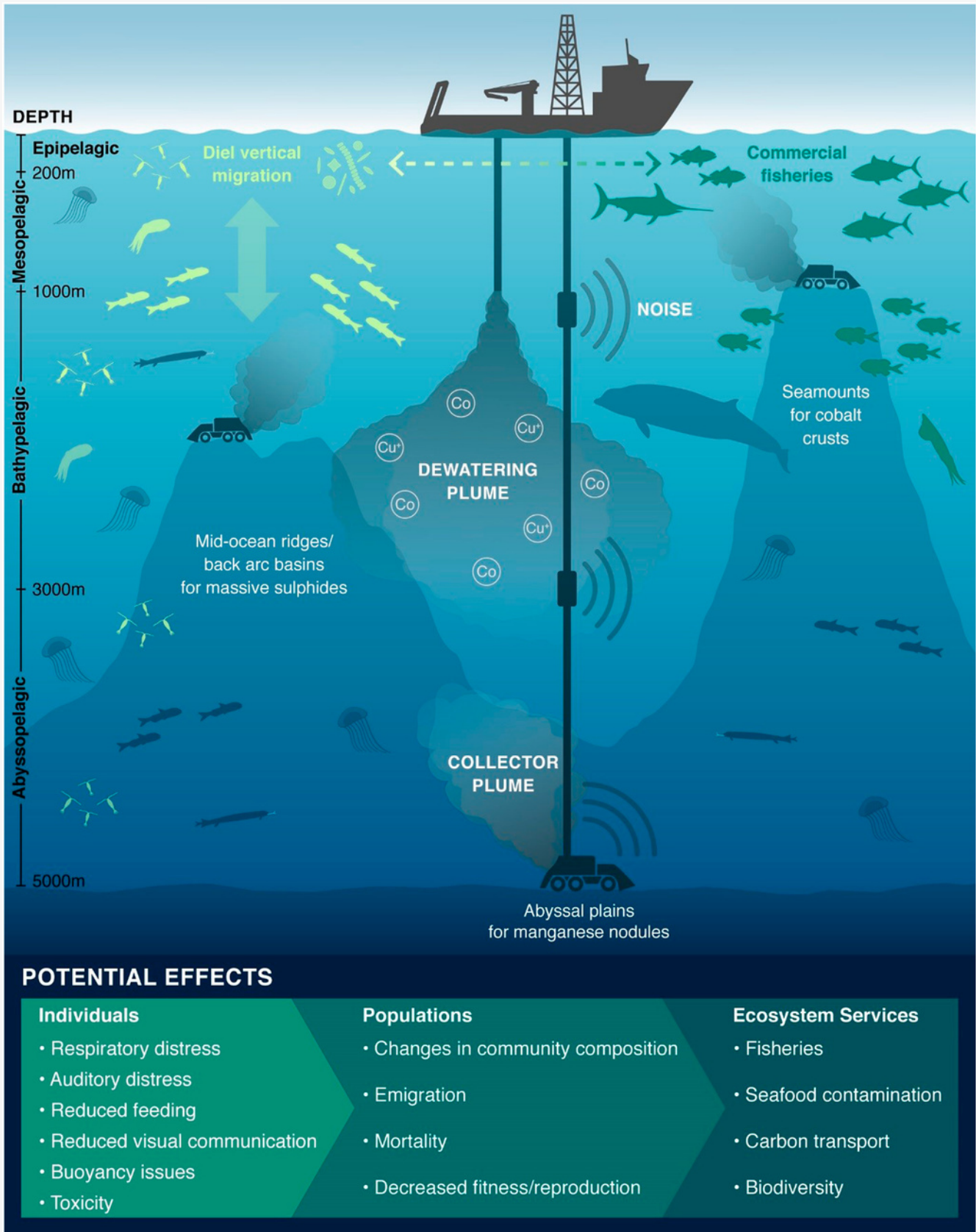


Image credit: Amanda Dillon, <https://doi.org/10.1073/pnas.2011914117>

OBLIGATIONS UNDER THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA (UNCLOS)

Under the United Nations Convention on the Law of the Sea (UNCLOS), the International Seabed Authority is responsible for regulating human activity in the seabed beyond national jurisdiction, known as “the Area.” Deep-Sea Mining is contrary to many international obligations under UNCLOS, and here is why:

Common heritage:

As noted by UNCLOS Art. 136, the Area and its resources are the common heritage of mankind and the ISA is to act on all mankind’s behalf as a trustee, not just for a select few. This principle was originally put forward by the Maltese delegation to the General Assembly as a means to protect areas beyond domestic jurisdiction from exploitation or appropriation by a single state or corporation, and is generally accepted to be inclusive of future generations.[17] We must stay true to its original purpose. To do so, the ISA must act with more transparency and in good faith, consulting all stakeholders and taking into account the diverse values and knowledge from scientists, geologists, lawyers, youth, and Indigenous peoples and coastal communities. We must ensure a decision making process that allows all humankind to be represented and participating in this debate.[18]

Protect and preserve the marine environment and the precautionary principle:

Of paramount importance is the obligation of States, and the Authority and potential contractors, to protect - and preserve - the marine environment (UNCLOS Art. 145 and 1994 Implementing Agreement). DSM is entirely contradictory to this mandate especially in light of the transboundary impacts, endemism and fragility of deep-sea ecosystems. As noted by both the 2011 ITLOS Advisory Opinion and the South China Sea Arbitration, under this obligation, the ISA is to create the highest standards for protection, where “protection” is defined as protecting the marine environment from future damage and “preservation” is defined as maintaining or improving its present condition. There is currently no proven pathway that allows us to maintain and improve the health of the deep while commencing mining.

Additionally, though the precautionary principle is itself not explicitly mentioned in UNCLOS, the ISA has included it in the Draft Regulations to guide exploitation and acknowledges that precaution is a binding obligation in which to ensure the effective protection of the marine environment.[19] As such, the highest form of protection that we can currently provide is the implementation of the precautionary approach, and restricting DSM in the absence of scientific certainty of the impacts, not allowing exploitation in such absence. As a result, deep-sea mining should not commence in absence of rules and regulations that will guarantee the protection of marine environment and ecosystems.

Due diligence/duty of care:

Though UNCLOS does not specifically mention 'due diligence,' the Convention is indeed a due diligence test in which States have various obligations and duties as signatories to the Convention. States have many responsibilities or duties under UNCLOS, and they include:

- Taking all measures as “necessary to prevent, reduce, and control pollution of the marine environment;”[20]
- Ensuring activities taken within the Area do not harm the rights of others, including Coastal States;[21]
- Taking measures to “protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life;”[22] and
- Implementing the precautionary approach and applying the best environmental practices.[23]

Despite these obligations, Nauru nevertheless triggered the two-year rule during Covid-19 knowing full well that the structure for operational deep-seabed exploitation is far from ready, thus risking egregious and irreversible harm to the marine environment. Supporting DSM at this time constitutes a breach of States' obligation of due diligence by disregarding the potential risks and negative impacts of DSM.

Human rights, Indigenous rights and the right to a healthy environment:

In 2022, the United Nations General Assembly adopted a resolution that recognized the importance of a clean, healthy, and sustainable environment for the enjoyment of all human rights. This resolution is not legally binding, but is a relevant international norm and guiding vision for States to consider and implement nationally, including the Authority. In fact, UNCLOS Part XI Art. 146 requires the Authority to “ensure effective protection of human life.” Deep-sea mining is contradictory to this obligation with the potential to disrupt not only the seabed for millions of years, but the entire water column and its quality and composition, and as a result, interfere with the delicate and life-affirming ecological balance of the marine environment. The harmful impact of mining would be far-reaching across the ocean and for all communities that rely on the sea. Any harm to the deep-sea, given the risk of transboundary harm, has the potential to negatively impact and weaken the abilities of Indigenous communities to fully exercise their rights, including the exercise of culture and spiritual relationship with the Ocean.

WHAT CAN YOU DO ABOUT IT?

- 1. Support a global ban or moratorium on DSM and/or create a national moratorium on DSM within State waters.** Fourteen States have taken positions against deep-sea mining in international waters including Palau, Fiji, Samoa, Federated States of Micronesia, Germany, Costa Rica, Chile, Spain, Panama, Ecuador, France, New Zealand, New Caledonia, Finland and French Polynesia.[24]
- 2. Request a Periodic Review of the ISA.** Every five years, the Assembly is required to undertake a general review of the operations of the regime of the Area and provide recommendations for improvements to the Assembly (Part XI, Art. 154). The first review since the Authority's creation occurred in 2016. Given this obligation and the timeframe, it is important for the Assembly to consider beginning a second review. At the upcoming 28th Session in July 2023, the Authority can elect to appoint a Review Committee to oversee and commence the review process. The procedures of the ISA in light of the 2-year trigger, is inconsistent with many principles governing the Area, and warrants a review and amendments to change and modify their operations as necessary.
- 3. Highlight the inconsistencies with the 2-year trigger and do not support the approval of a plan of work.** It can be argued that Nauru had no legal authority to trigger the two-year rule by invoking Sec.1 par.15 of the Implementing Agreement since the Council had already undertaken their elaboration and prepared Draft Regulations prior to Nauru's invocation.[25] The Council is under no obligation to approve a plan of work, with or without the regulations being complete. According to the Implementing Agreement, the Council is to consider the approval of plans of work for exploitation based upon not only the rules and regulations adopted by the Authority, but on the basis of UNCLOS norms. This means such approval is subject to the obligations listed above, amongst others, and we must ensure accountability to them.



Deep Sea Corals credit: NOAA

4. Request the inclusion of environmental costs, future generations and the intrinsic value of a healthy deep-sea and Ocean into the financial mechanism discussion. Before any exploitation can begin, the ISA is to develop a benefit-sharing mechanism that ensures mining activities in the Area must benefit humankind as a whole.[26] This has not been done, and the MIT report the Authority commissioned to facilitate its development, failed to take into account environmental costs, opportunity costs, the intrinsic value of the deep-sea to help internalize direct and indirect benefits of services provided, and intergenerational equity to ensure benefits are shared with future generations.[27] In order for the Authority to ensure that activities in the Area are conducted in a manner that benefits mankind as a whole, the equitable sharing of financial and other economic benefits derived from activities in the Area must not only be finalized before the approval of a plan of work, but move beyond traditional economic models in order to ensure that benefits derived are equitably shared with all humankind.

TAKE ACTION NOW!

To reiterate, **concrete and effective actions must be taken with the tendency towards the responsibility and obligation to protect and preserve the marine environment, thus supporting a moratorium or pause on DSM.** The Council must not consider applications for exploitation until consensus is reached on the regulations and that they are fully adopted, though this may prove politically challenging.[28]

A precautionary pause or moratorium is supported by the ISA's mandate to protect and preserve the marine environment (Articles 145 and 196), along with the Authority's obligation to apply a precautionary approach.[29] In fact, the ISA Secretary-General stated: "environmental protection is front and center of the [ISA's] responsibilities under [the UNCLOS]. Seabed mineral exploitation cannot be permitted to proceed unless the [ISA] is satisfied that rigorous environmental safeguards are in place through globally applicable regulations that are binding upon member States." [30] This was further supported by States, including Belgium, who noted that "the regulations should be based on the precautionary approach which does not allow for artificial deadlines." [31]

General enquiries please email media@pang.org.fj
and visit <https://www.pacificblueline.org/> to learn more.



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