

UNCHARTED WATERS: THE URGENT NEED FOR CANADA TO BAN DEEP-SEA MINING

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Executive Summary

Deep-sea mining is an evolving practice that involves extracting minerals and resources from the ocean floor at depths of over 200 meters. While the promise of these valuable resources has attracted the interest of mining corporations, the potential negative consequences for our oceans are significant. This policy brief argues that Canada should ban deep-sea mining due to the wide-spread and devastating environmental impacts.



NAUTILUS EQUIPMENT TO MINE HYDROTHERMAL VENTS FROM "MINING WATCH CANADA"

What is the deep-sea and why is it important?

While once thought void of life, it is clear now that deep-sea ecosystems are teeming with a vast diversity of organisms, many of which have yet to be discovered. Deep-sea ecosystems act as a carbon sink by capturing and sequestering carbon that comes from the surface of the ocean and the atmosphere(6). Less than 10% of the deep sea has been explored, meaning that there are many things we still don't know about deep-sea ecosystems and their role in the global carbon cycle(6).

What is deep-sea mining?

Deep-sea mining is the extraction of mineral deposits from ocean floor that is at least 200 meters deep(1). Many mining companies, such as Canada's The Metal Company (TMC), are pushing for permits to retrieve these deep-sea mineral deposits(5). They say that as the world shifts towards battery power, and terrestrial sources of necessary minerals begin to deplete, there will be an increased need for minerals that deep-sea mining can provide(5). However, the fact that deep-sea mining is required to satisfy our need for minerals has been disputed (1). Research suggests that deep-sea mining will destroy vital habitats for benthic organisms and could even wipe out species that have not been discovered yet(1). Existing research on the environmental impacts of deep-sea mining is limited and the extent of many of the consequences are not yet known.

Some potential environmental risks:

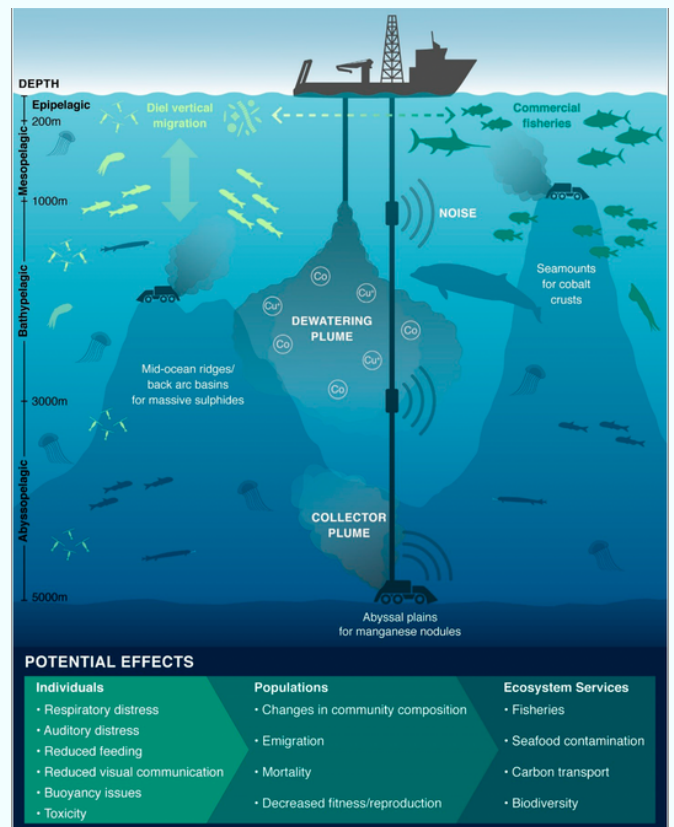
Destruction of vital habitat:

Deep-sea ecosystems provide habitat to unique and fragile species that are adapted to extreme conditions. The deposits of mineral themselves act as habitat for many organisms(2). Mining will destroy these one-of-a-kind habitats. There has not been enough research done to know what impacts losing these organisms will have on the ecosystems services that the ocean provides, such as fisheries, carbon sequestration and biodiversity.

Physical disturbances:

Scientists have raised concerns about the plumes of sediment that will be created from deep-sea mining(2). These sediments could remain suspended in the water column for long periods of time and disperse hundreds of kilometers, impacting organisms, many of which are of economical importance, such as filter feeders (oysters, mussels, etc) (2).

Mining will also create noise, vibrations, and other physical disturbances that can affect marine life. For example, noise pollution can harm species that rely on sound for communication, navigation, and finding prey(3). According to a study done in 2022, a single mining operation would generate noise levels that are known to disturb whales up to a distance of five kilometers, while also surpassing ambient noise levels up to 500 kilometers away(3).



Graphic from Drazen et al. (2022)

Global context

In areas outside of national jurisdiction, the International Seabed Authority (ISA) regulates deep-sea mining. The ISA has allowed for exploration of potential mining sites but have stopped short of issuing mining permits(5). However, growing pressure from companies and some nations may change this. It is estimated that the ISA is currently creating regulations that would allow mining on the international seabed to commence as early as 2026(5). Canada is currently a member of the ISA and sits on the council. There have been many calls for Canada to strongly oppose deep-sea mining internationally and urge the ISA to prioritize protecting marine environments. So far, Canada has repeatedly failed to submit comments on the evolving regulations or call for an international ban on deep-sea mining.

What is Canada's position right now?

On February 9th, the Canadian government announced that it currently does not have a domestic legal framework that permits deep sea mining(7). Without the creation of a framework, Canada will not allow deep sea mining to occur in areas under the federal government's jurisdiction(7). While this is a step in the right direction, this is not a permanent ban and leaves the door open to potential deep-sea mining permits in the future.

Policy Recommendations

Enact a permanent ban on deep-sea mining in areas under Canadian jurisdiction:

As one of the largest oceanic countries, Canada has a significant responsibility to protect the world's oceans and their biodiversity. Canada should ban deep-sea mining in its waters. Instead, Canada should focus on extracting and gathering these minerals in a sustainable and environmentally friendly way, such as recycling, reusing, and reducing the use of minerals where possible.

Strengthen regulations to protect deep-sea ecosystems:

Canada should provide more funding to researchers and institutions that are conducting deep-sea research. Canada should implement stronger regulations based on scientific data to protect deep-sea ecosystems from mining and prioritize protecting deep-sea ecosystems.

Advocate for a global ban on deep-sea mining:

Canada should play an active role in the ISA to promote protection of the seabed and ban deep-sea mining internationally.

Contact the Canadian government to tell them to ban deep-sea mines today!

Joyce Murray, Minister of Fisheries Oceans, and the Canadian Coast Guard:
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Jonathan Wilkinson, Minister of Natural Resources:
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Contact your Member of Parliament:
<https://www.ourcommons.ca/members/en>

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