1. Mark your confusion.
2. Show evidence of a close reading.
3. Write a 1+ page reflection.

Deep-Sea Mining: Can It Help Solve Our Climate Problems?

Environmentalists claim mineral extraction could destroy ecosystems, while mining companies argue for its green potential

Source: Harriet Marsden, *The Week UK*, April 5, 2024

A growing controversy is swirling around deep-sea mining, which aims to extract valuable minerals from the ocean floor.

In July, the UN-affiliated International Seabed Authority (ISA) will start considering companies' bids to mine the world's sea beds, despite last week failing to agree on regulations. Earlier this week, an investigation by conservationists, published by wildlife charity Fauna & Flora, argued that seabed mining could cause "extensive and irreversible damage" to the planet.

The July deadline "doesn't necessarily mean mining is set to begin any time soon", said Bloomberg. Given the absence of regulations, as well as disagreement among the ISA's 167 member nations over the practice, "there are doubts about whether licenses will be issued and under what conditions."

But the failure to establish a regulatory framework "means that whatever happens next will take the ISA into unchartered territory."

So what's happened?

People started "dreaming of mining the deep seabed" 50 years ago, said New Scientist. "Since then, those dreams have turned into a dystopian nightmare as scientists have found diverse, interconnected ecosystems at the bottom of the ocean", the magazine added.

In 2021, the Pacific Island state Nauru turbocharged the debate by announcing that its seabed mining company intended to apply for a permit. That triggered a legal provision which gave the ISA two years to approve Nauru's mine. That time is nearly up.

In the same year, marine and science policy experts all over the world called for a moratorium on the practice, with more than 700 signatories saying that seabed mining would result in "irreversible" loss of biodiversity and ecosystems.

In September 2021, the International Union for Conservation of Nature voted to support a temporary ban on deep-sea mining until the risks were properly understood.

Who wants to do it?

A 2019 Greenpeace investigation found that the ISA had issued a total of 29 exploration licenses, to countries including the UK, China, Russia, France, Belgium, India, Germany and Japan, which are sponsoring corporate contractors.

The licenses apply to areas of the Pacific, Atlantic and Indian Oceans and cover a total of 500,000 square miles – "five times bigger than the UK" – reported The Guardian.

It also found that the British government held more licenses than any state apart from China and claimed that they were "riddled with inaccuracies."

As of January 2023, the ISA had entered into 31 contracts with 21 contractors; 19 of those apply to the Clarion-Clipperton Fracture Zone, a vast plain in the Pacific Ocean between Mexico and Hawaii.

Can it help us?

The minerals in the rocks, such as cobalt, nickel and manganese, are vital for green technologies like solar panels and wind turbines, as well as mobile phones. Supplies are running low, while demand is set to rise as efforts to replace carbon intensify.

"These metallic morsels could therefore help humanity save itself from the ravages of global warming, argue mining companies who say their extraction should be rated an international priority," said The Guardian. "By dredging up nodules from the deep we can slow the scorching of our planet's ravaged surface."

Mining companies argue that extracting the minerals from the seabed could help meet demand while factories on land are held up by permit delays and local nimbyism. They also say that drilling for reserves on land could be more damaging to the planet, although do not promise that deep-sea mining would reduce on-shore extraction.

In 2013, then-PM David Cameron promised that deep-sea mining would generate £40bn for the UK over the next 30 years. Greenpeace said it was unclear how this figure had been reached.

Hans Olav Hide, the new Norwegian owner of UK Seabed Resources, said that deep-sea mining could help make the UK and EU competitive "in the face of China's dominance of battery metal supply chains," according to the Financial Times (FT). The mineral race and global energy insecurity has been exacerbated by Russia's invasion of Ukraine and worsening relations with China.

Are there risks?

By dredging the ocean floor for the mineral-rich nuggets, "delicate, long-living denizens of the sea…would be obliterated," said The Guardian.

Deep-sea mining could also exacerbate the climate crisis, environmentalists argue. "The seabed stores the world's largest quantity of carbon," said the FT. If sediment starts to rise, the carbon balance could be upset, increasing pollution and toxic metals in the food chain.

Most experts agree that we don't yet have enough information on the risks, given that we know so little about the deep-ocean ecosystems.

Even from an investment perspective, deep-sea mining is muddy waters.

Nick Popovic, co-head of copper and zinc trading at Glencore, told the FT Commodity summit in March: "... It's so early in the game that without any meaningful examples, I would personally struggle to assess it."

"What we do know," said the FT, "is that studies indicate that we cannot extract minerals from the seabed without incurring a net biodiversity loss."

It is a highly polarized dispute, said *The Guardian*. "For better or worse, these mineral spheres are going to play a critical role in determining our future – either by extricating us from our current ecological woes or by triggering even more calamitous outcomes."

Possible Response Questions

- What are your thoughts about mining the ocean's floor? Explain.
- Did something in the article surprise you? Discuss.
- Pick a word/line/passage from the article and respond to it.
- Discuss a "move" made by the writer in this piece that you think is good/interesting. Explain.