APR 04
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International Seabed Authority decides future of clean energy and ocean ecosystems

Article

The news: As the race toward the clean energy transition accelerates, mining companies are eyeing the ocean's rare earth mineral wealth as a goldmine of opportunity.

The future of controversial **deep-sea mining** is in the hands of the **UN International Seabed Authority (ISA)**, which held meetings last week on the approval of deep-sea mining regulations for adoption by July 2023. The organization faces accusations of secrecy over the deliberations, per The Guardian.

- The talks follow an announcement by the island-nation Nauru about its plan to start mining in international waters.
- **Google**, **BMW**, **Volvo**, **Volkswagen**, and **Samsung**'s battery subsidiary **SDI** have sided with the **World Wildlife Fund** in calling for a moratorium on deep-sea mining.
- The EU and several countries have stated that there's not enough information about potential environmental damage to proceed with ocean mining activities, while the UK pushes for green-lighting regulations.
- Commercial deep-sea mining isn't yet happening. However, a subsidiary of **Lockheed Martin** submitted a renewal exploration license application in the US. State-owned entities in China, France, Germany, India, Japan, Russia, and South Korea have exploration licenses from the ISA, per Salon.

Why we're watching this: The decision about whether to mine the oceans will have major implications for mineral resources used in **batteries for EVs, renewable energy systems, and electronics**. It will also determine the trajectory of land-based mineral mining, which is ramping up in the US and elsewhere.

- Lockheed Martin's licenses are for exploration of the **Clarion-Clipperton Zone** in the Pacific—a treasure trove of **polymetallic nodules thought to contain millions of tons of copper, manganese, nickel, cobalt, and other rare earth minerals**. Cobalt-rich hydrothermal vents are also on the mining menu.
- The oceans are the world's largest ecosystems, with over **80% of it unexplored**, per NOAA. Seabeds contain an abundance of microbes and mysterious species like Dumbo octopuses (pictured below) that would likely be threatened by mining activities.

An ocean of problems: Minerals are the crux of the clean energy transition to **reduce foreign dependence on fossil fuels, tackle pollution, and curb climate change**. However, the question is whether the risks of deep-sea mining outweigh the benefits.

- The rush to secure minerals from the ocean as part of nations' climate strategies is counterproductive if mining diminishes the ocean floor's ability to sequester carbon.

- Bolstering battery and e-waste recycling efforts coupled with developing alternative battery technologies may reduce the need for new mining ventures.
- Companies like Google and Samsung pledging to abstain from deep-sea-sourced minerals could kneecap the ocean mining industry.

(Source: NOAA Office of Ocean Exploration and Research)