Clifford Chance

BRIEFING

The race to mine the seabed: Opportunities and risks

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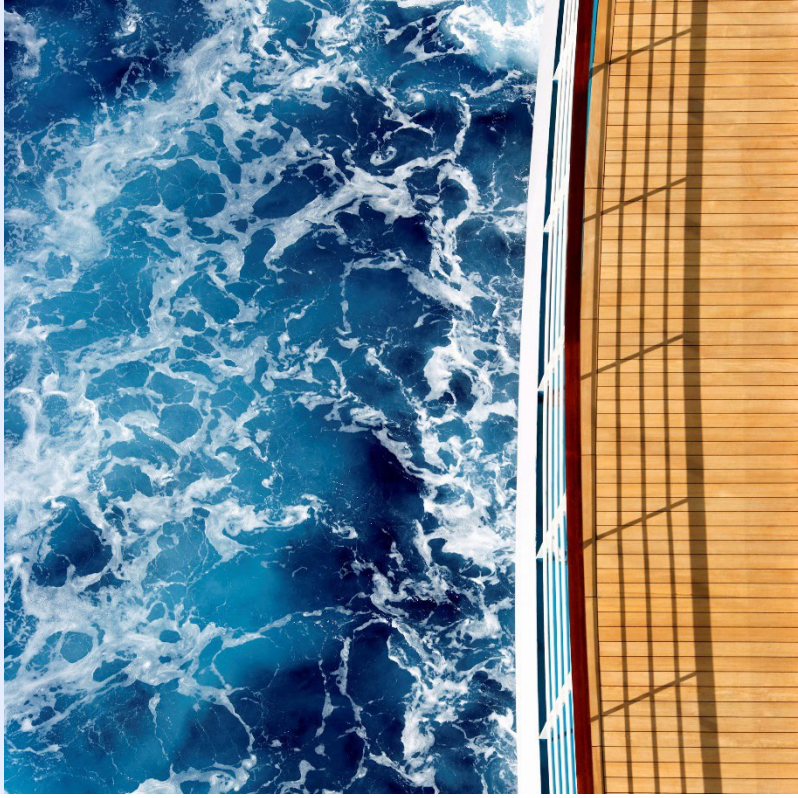

It is now almost trite to highlight the importance of critical minerals to the energy transition. The world's demand for critical minerals, including copper, cobalt, nickel and lithium, is soaring (with prices tipped to do the same). Less well known are the significant quantities of these minerals found deep in the ocean, lying on the seabed in the form of polymetallic nodules – small, solid, potato-sized balls of mineral-rich rocks. Over recent years, an area of the Pacific Ocean known as the Clarion-Clipperton Zone (**CCZ**), located between Mexico and Hawaii, has become the target of significant mineral exploration activities in this (until now) relatively unknown part of the earth.

Not surprisingly, the CCZ now lies at the heart of a geopolitical race to secure access to the metals needed to drive the energy transition forward. In this briefing we explore the significant opportunities – and risks – this race poses for investors.

Key issues

1. Intensifying global competition for critical minerals is driving renewed interest in deep-sea resources, particularly in the Clarion-Clipperton Zone (CCZ).
2. The US has established a parallel regulatory framework to UNCLOS through EO 14285 and the NOAA Final Rule, to support commercial deep-sea mining.
3. Competing international frameworks create uncertainty, with the ISA asserting that US-issued permits may infringe its authority over mining in the Area.
4. Investors face regulatory, sovereign, environmental, and litigation risks, however the scale and quality of CCZ resources present substantial commercial opportunities.

Background

The CCZ is an area of 4.5 million km^2 that lies at the bottom of the Pacific Ocean, at a depth of between 4,000–6,000m below sea level. Many millions of tonnes of polymetallic nodules lie on the seabed, rich in critical minerals such as manganese, nickel, copper, and cobalt.

Discovered in the 1950s, the CCZ has been the subject of intense mining exploration and scientific research works. To date, no commercial mining of the seabed in the CCZ has taken place. Early exploration results have confirmed that high ore grades are a characteristic of deep seabed mineral deposits. Coupled with relatively low infrastructure requirements for accessing those resources, this makes seabed mining an attractive and highly economic proposition compared with traditional terrestrial mining.

The international regulation of deep-sea mining

Under international law, the CCZ lies beyond national jurisdiction. The United Nations Convention on Law of the Sea (**UNCLOS**), which entered into force in 1982, defines the rights and responsibilities of States with respect to the use of the ocean (including by codifying certain norms of customary international law). In particular, UNCLOS establishes a legal framework aimed at regulating the "High Seas"; that is, the ocean beyond national jurisdiction, including the seabed, which is referred to in UNCLOS as the "*Area*".[1] UNCLOS designates the Area and the resources found there as "*the common heritage of mankind*"[2] and states that "*no State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources*".[3]

In addition to regulating the Area, UNCLOS established the International Seabed Authority (**ISA**) to "*organise and control activities in the Area, particularly with a view to administering the* [mineral] *resources of the Area*". In this respect, the ISA is charged with establishing a regulatory framework to govern mineral exploration and exploitation in the deep seabed.

Since its inception, the ISA has been negotiating a regulatory framework to govern mining in the deep sea. From 2010 to 2013, the ISA issued a series of regulations covering the exploration for polymetallic nodules. The ISA has since issued over 30 exploration contracts under these regulations. The ISA is now locked in negotiations for a deep-sea Mining Code, which would regulate exploitation of deep-sea resources. That process has been ongoing for some 15 years, and it is unclear when the ISA will be able to finalise the Mining Code.

One hundred and seventy States, plus the EU, have ratified UNCLOS, including almost all the world's major powers. Notably, the US has not ratified UNCLOS, but in 1980, the US enacted the Deep Seabed Hard Mineral Resources Act (**DSHMRA**), 30 U.S.C. 1401 *et seq.*, which was originally intended to create a temporary framework regulating deep seabed mining pending final agreement on the terms of UNCLOS. The DSHMRA assigns the US National Oceanic and Atmospheric Administration (**NOAA**) authority to grant licenses to US companies for exploration and permits for the commercial extraction of polymetallic

[1] UN General Assembly, *Convention on the Law of the Sea*, signed 10 December 1982, entry into force on 16 November 1994, '**UNCLOS**', Part XI.
[2] UNCLOS Art 136.
[3] UNCLOS Art 137.

nodules from the deep seabed located outside national jurisdiction.[4] While NOAA has issued exploration permits pursuant to its regulations under the DSHMRA, it has yet to approve a permit for the commercial mining of metals from the deep seabed.

President Trump issues Executive Order 14285 on Unleashing America's Offshore Critical Minerals and Resources

On 24 April 2025, US President Trump signed Executive Order (**EO**) 14285 ("*Unleashing America's Offshore Critical Minerals and Resources*") to accelerate development of an offshore critical minerals mining sector, including in areas beyond US national jurisdiction (including in the CCZ).

EO 14285 seeks to establish the US as a first mover in commercial deep-sea mining by expediting the issuance of commercial exploitation licences in furtherance of the Trump Administration's policy of:

- promoting investments in deep-sea mining, including in research and mapping of deep-sea deposits; and
- creating a streamlined permitting framework supported by an efficient bureaucracy.

EO 14285 directs the Secretary of the Interior to establish an expedited process to review and approve prospecting permits and to grant leases for seabed mineral exploration, development and production on the US Outer Continental Shelf under the Outer Continental Shelf Lands Act (**OCSLA**). Importantly, EO 14285 also directs the Secretary of Commerce to expedite the review and issuance of seabed mineral exploration licences and commercial recovery permits in areas beyond national jurisdiction.

On 21 January 2026, pursuant to EO 14285, NOAA issued a new final rule ("*Deep Seabed Mining: Revisions to Regulations for Exploration License and Commercial Recovery Permit Applications*") governing deep seabed mining (**NOAA Final Rule**). The NOAA Final Rule creates a consolidated application process that allows an applicant to seek an exploration licence and a commercial recovery permit simultaneously, rather than sequentially, under the DSHMRA. It accelerates review by modernising and standardising application requirements, including electronic submission and updated regulatory criteria, while also allowing a single environmental impact statement to cover both exploration and recovery activities.

The US now has a regulatory framework, underpinned by an express national policy, to support deep-sea mining. As a non-party, the US regime is entirely separate to and independent of the anticipated regulatory regime under UNCLOS. Consequently, if and when the ISA completes work on the Mining Code, there will be parallel and competing regulatory frameworks.

In late January 2026, The Metals Company USA LLC became the first company to submit a consolidated application for both an exploration licence and a commercial recovery permit under the DSHMRA, marking a pivotal test case that interested investors should follow.

[4] For areas of the ocean floor within US national jurisdiction, the legal framework governing offshore mining operations is the Outer Continental Shelf Lands Act. The US Bureau of Ocean Energy Management, within the US Department of the Interior, administers the OCSLA.

Risks and opportunities for investors

The US Government has clearly signalled its intent with respect to commercial mining in the deep sea. This comes against the backdrop of intensifying global competition for critical minerals and the US announcement that it intends to develop a USD 12 billion critical minerals stockpile. Recently, on 26 February 2026, the US Trade Representative issued a Notice of Request for Comments (**Notice**) concerning the potential establishment of "*a resilient and non-distorted marketplace among aligned trading partners, including in the context of a legally binding plurilateral agreement*". The Notice states that this plurilateral agreement would likely involve the implementation of "minimum prices or other price mechanisms" for critical minerals and their derivatives. As deep-sea mining has the potential to become a significant new source of critical minerals, the contemplated plurilateral agreement and associated price mechanisms could directly impact the commercial viability and attractiveness of US-based deep-sea mining projects for investors.

In circumstances where an international regulatory framework for commercial exploitation remains stalled, the US regulatory regime presents a potential pathway for mining investors seeking to commercially explore and exploit deep-sea resources. Notably, even if the ISA eventually does finalise a Mining Code for exploitation, the NOAA Final Rule may provide a more efficient permitting process insofar as it is shielded from (sometimes divergent) State interests. Moreover, these recent developments signal to the market that the US desires to be seen as a willing jurisdiction through which mining investors can seek access to deep-sea resources. We are already seeing these developments generate a high degree of interest (ultimately to be converted to investment) from the mining sector.

As ever, no investment is without risk. The relevant US licensing system is in its infancy, and deep-sea mining carries with it regulatory, sovereign and environmental risks. That said, there may be mitigants available. For example, in the context of the new US regulatory framework, investors may be able to mitigate sovereign risk vis-à-vis the US to some degree by leveraging the protections of the many international investment treaties to which the US is a party. These treaties protect foreign investors in the US from unlawful State acts, including the unlawful expropriation of foreign investments, and guarantee to foreign investors certain standards of treatment, including fair and equitable treatment, non-discrimination and due process. Rights acquired by investors under permits issued by the US authorities may qualify for protection under these treaties (even though they permit mining in geographical areas beyond US jurisdiction), which may insulate investors to some degree from the risk of an abrupt change of US policy and/or the withdrawal of those permits – although the possibility of such action cannot be discounted under the present or a future Administration.

There is also potential domestic litigation risk within the US. EO 14285 and the NOAA Final Rule have generated concern on environmental grounds among various interest groups – reflecting the potential for strategic and NGO-driven impact litigation. Indeed, the DSHMRA creates a private right of action, 30 U.S.C § 1427(a)(1), that enables parties with appropriate standing to bring suit for equitable relief (not damages) against permit-holders and licensees for failure to comply with the DSHMRA. Parties may also sue the NOAA Administrator for failing to perform any non-discretionary duty under the DSHMRA. And third parties such as NGOs may seek to block EO 14285 and/or the NOAA Final Rule altogether on administrative law, international law, and process-related grounds.

Another challenging risk to navigate is the jurisdictional clash between the US and UNCLOS/the ISA in the regulation of deep-sea mining activities. While the US Government may issue permits under its own framework, the ISA has expressed the view that the US has no power to do so and is encroaching on the ISA's authority to manage mining activities in the Area. It is not yet known what steps (if any) the ISA (or other States that are Parties to UNCLOS) might take when faced with mining in the CCZ under the US regulatory framework, and the interaction of UNCLOS with the DSHMRA will need to be tested. Likewise, there is a risk that litigants such as NGOs might seek to challenge the United States' issuance of permits and the conduct of mining activities in the Area before international fora (such as before international human rights bodies), including based on environmental and/or human rights concerns.

Time will tell how things will play out. In the meantime, investors seeking to capitalise on these new opportunities in deep seabed mining need to ensure they are well-advised to navigate this new landscape. While the risks are complex, the potential opportunities are substantial, with the value of resources in the CCZ estimated to be in the trillions of dollars.

Clifford Chance brings deep bench experience across all aspects of the mining project lifecycle, including regulatory and environmental law advice, investment protection and sovereign risk mitigation advice, public international law advice (including under UNCLOS) and international dispute resolution. If this experience is of interest, please contact any of the Clifford Chance contacts listed below.

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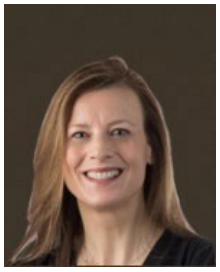

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