Emerging Regimes

International and domestic regulations for deep-sea mining

BY LOUISE WOODS AND ELENA GUILLET

Two parallel regulatory regimes for deep-sea mining have begun to emerge in recent years. On the one hand, the International Seabed Authority (ISA), an autonomous international organization established under the 1982 United Nations Convention on the Law of the Sea (UNCLOS), is in charge of regulating the deep seabed beyond national jurisdiction (the area). The ISA successfully enacted exploration regulations in 2013, but has since reached an apparent stalemate in finalizing the Rules, Regulations and Procedures on Exploitation (exploitation RRP) for commercial production of marine minerals.

On the other hand, in recent years, a number of states have been working on establishing their own domestic legal frameworks to regulate exploration and exploitation activities within their exclusive economic zones (EEZ). While the focus has historically been on the ISA, this domestic push has the potential to accelerate the establishment of the nascent industry. Our purpose here is to explore the status of the international and domestic regimes, and to learn what developments to look for in 2025.

INTERNATIONAL REGIME

The ISA has been working for the past two decades on the development of the Mining Code—a set of rules, regulations, and procedures covering the prospecting, exploration, and exploitation of minerals in the deep seabed. The ISA is made up of different organs and subsidiary bodies: one, the Assembly, the ISA's supreme

Ore terminal in China.

organ consisting of one representative from each state party; two, the Council, the ISA's executive organ, made up of 36 members that are elected by the Assembly; three, the Legal and Technical Commission, an independent expert subsidiary organ of the Council specializing in oceanography, protection of the marine environment, or economic or legal matters relating to ocean mining; and four, the Finance Committee, a body made up of 15 members that deals with the administration of the ISA's financial and budgetary arrangements.

From 2002 to 2012, the ISA's Council developed regulations on the prospecting and exploration of deep-sea minerals (polymetallic nodules, polymetallic sulphides, and cobalt-rich ferromanganese crusts). As part of these exploration regulations, the ISA published its first environmental management plan for the Clarion Clipperton Zone, defining nine areas of particular environmental interest and twelve areas of exploration. The ISA also has granted 31 contracts for exploring for polymetallic nodules, polymetallic sulphides, and cobalt-rich ferromanganese crusts.

In 2011, the ISA started work on developing a regulatory framework for exploitation activities. During the latest ISA's Council session, the 29th in August 2024, the ISA's Council completed a first reading of the consolidated text of the draft exploitation RRPs. That was a major breakthrough. After ten years of work, the draft exploitation RRPs have been read in full. However, this does not mean that the draft exploitation RRPs are final—far from it. The consolidated text still contains a number of different outstanding issues, including the elements of the royalty mechanism, the categories of financial incentives, insurance requirements, and intangible cultural heritage, to name a few.

There are potentially a couple of significant developments to look for in 2025. One is new leadership at the ISA. On January 2, 2025, Leticia Carvalho, the newly elected secretary-general of the ISA officially assumed her role. Carvalho's predecessor, Michael Lodge, had been accused during his time as secretary-general of advocating for mining companies, which perhaps led to a breakdown of trust, increased resistance from NGOs and, ultimately, a stalemate in the negotiations. Carvalho, however, has emphasized her commitment to the four core objectives central to the ISA's work: sustainable resource management, environmental protection, scientific advancement, and equitable benefit sharing. She has noted in interviews that she is keen to rebuild the trust between the international community and the organization. There is a shared optimism that new leadership will breathe fresh air and direction into the negotiations of the exploitation RRPs.

The other potential development relates to paragraph 15(c) of section 1, Annex, Agreement relating to the Implementation of Part XI of UNCLOS dated July 1994 (the "1994 Implementation Agreement"). Could this finally be in play? In November 2024, The Metals Company (TMC) announced that its subsidiary NORI-D (which currently holds an exploration contract sponsored by Nauru, the island country in Micronesia) would submit its application for a plan of work for exploitation activities in June 2025. While there is a further Council session scheduled for March 2025, it is unlikely that the exploitation RRPs will be finalized during that session. In 2021, Nauru invoked a provision in the 1994 Implementation Agreement (paragraph 15(c) of section 1) that essentially compelled the ISA to complete the elaboration and adoption of the exploitation RRPs within a prescribed period of two years. This did not happen.

As a result of Nauru triggering that rule, despite the ISA's failure to finalize the exploitation regulations, prospective contractors can nevertheless submit applications for the approval of a plan of work for exploitation, which the Council now has to consider. This will be the legal basis on which TMC is intending to submit its application in June 2025. Significantly, during

its 28th session, the Council reiterated that commercial exploitation in the area should not be carried out in the absence of RRPs. But the Council decided that, in the event that an application for a plan of work for exploitation was submitted before the RRPs were finalized, it would consider the understanding of paragraph 15(c) of section 1 and the procedures to put in place to review such application (ISBA/28/C/25 and ISBA/28/C/24). This scenario is soon to step out of the theoretical realm, and the world will be watching the Council's response.

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DOMESTIC REGIME

Significant and promising deposits of seabed resources have also been identified in the EEZs of the Cook Islands, Papua New Guinea, Norway, Japan, India, Oman, and several other states. Recovery and commercial use of resources from EEZs is governed by the domestic legislation and regulatory regime of the relevant coastal state.

Recent years have seen active preparations by several coastal states to enable the exploration, and subsequently, the

exploitation of mineral resources from their EEZs. This includes the Cook Islands, which have already granted three exploration licences in 2022. Also, in January 2024, Norway's parliament voted for commercial deep-sea mining. Twelve months later, it decided to postpone the first licensing round for exploration licences.

Additionally, in 2024, the Indian Ministry of Mines introduced certain rules to expedite offshore mining. The Existence of Mineral Resources rules set down the procedure for identifying areas for auctions of production leases and composite leases, and the Offshore Areas Mineral (Auction) rules lay down the procedure for conducting competitive bidding through electronic auctions for the grant of production leases and composite leases. In November 2024, India launched its first auction of offshore critical mineral blocks.

These domestic activities will be governed by their respective national legal frameworks. However, while coastal states have sovereign rights regarding the mineral resources on the seabed within their EEZ, these domestic frameworks do not exist independently from the international law framework. For example, pursuant to article 208 of UNCLOS, the laws and regulations of coastal states "... shall be no less effective than international rules, standards and recommended practices and procedures." Therefore, once the ISA enacts the exploitation RRPs, UNCLOS member states, that are coastal States, may have to amend their regulations to ensure they align with the ISA's regulations.

There are potentially a couple of significant developments on the domestic side to look for in 2025. One relates to the new U.S. administration. The Trump administration, which includes a number of supporters of deep-sea mining (namely Elise Stefanik, Marco Rubio, Howard Lutnick, and William McGinley), coupled with new defense legislation focused on critical minerals security, could boost the deep-sea mining industry. In December 2024, the House of Representatives passed its annual defense funding bill, which included an order that the secretary of defense provide a feasibility study on whether minerals procured from deep-sea mining could be processed in the U.S.

Another possible development is more funding for the deep-sea mining race. In January 2025, Saudi's Mekyal Financial Technologies and Marine Mining Company signed a memorandum of understanding with Atlantis Blu Mining GmbH to create a US $1.44 billion fund to support deep-sea mineral exploration projects.

Recent years have seen an acceleration in the creation of domestic regulatory frameworks. Compared to the ISA, it is easier for domestic legislatures to draft and introduce new legislation. These states nonetheless face difficulties in ensuring the robustness of the framework. States will be aware that, to attract investment from companies operating or engaging in activities in multiple jurisdictions, their framework must align with the international requirements and standards. Yet, ensuring alignment with the international framework is a complex task when such framework is still under negotiation. States will also want to ensure that their domestic processes are at least as attractive as other jurisdictions for international investors, in terms of approval processes, timeframes, documentary requirements and financial, insurance or indemnity requirements. Finally, any regulatory framework must be established in consultation and early engagement with affected communities and organizations to ensure the industry secures its social licence to operate.

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FRAMEWORK FOR TRANSPORT AND PROCESSING

There has been intense debate regarding the emerging regulatory framework and standards for the collection/harvesting of minerals from the deep seabed. However, the collection is only the first step of this nascent industry. The lifecycle of

a deep-sea mining project will usually involve the following steps: offshore minerals collection, shipping to the onshore facility, and processing of the minerals. While there may soon be an established framework for investors to apply, obtain, and work an exploitation licence, there are considerable gaps, at the international and domestic levels, on regulating the process of getting the minerals from the offshore area to the ultimate customer.

For example, the second step after collection of the minerals entails: the dewatering and storing of the nodules or other minerals on the production-support vessel, and the shipment of the nodules from the offshore production site to the onshore location for processing. (For more on collecting and transporting of nodules, see "Seabed to Shore," starting on page 30 in this issue.) There is a general absence of literature on whether existing maritime safety standards—covering areas like ship design, equipment, and crew training—could apply to the transport of offshore minerals, or whether they need amending.

There are also questions surrounding customs regulations. While offshore minerals collected from EEZs would be considered to originate from the corresponding state, offshore minerals collected from the area would need specific rules to determine origin for export purposes. The absence of a completed regulatory framework covering the whole lifecycle is likely to raise concerns with investors, as sustainability, feasibility, and profitability can only be assessed once all the parameters and costs of (among other things) transportation, insurance, permits, export licences, and refining are scoped and understood.

We are likely to see a continued rise in activity in 2025 on both the international and domestic levels. But it is clear that, while the regulatory framework is slowly being built up, there remain significant gaps that will need to be addressed for any commercial activity to commence. **MT**

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