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U.S. Interest in Seabed Mining in Areas Beyond National Jurisdiction: Brief Background and Recent Developments

In 1980, Congress passed the Deep Seabed Hard Mineral Resources Act (DSHMRA; P.L. 96-283) as an interim measure to allow U.S. citizens to proceed with seabed mining activities in areas beyond national jurisdiction (ABNJ) until an international regime was in place (i.e., the United Nations Convention on the Law of the Sea [UNCLOS]). DSHMRA established a framework for authorizing U.S. citizens (e.g., companies and other entities) to explore for and recover minerals from the seabed in ABNJ. In general, *exploration* means the at-sea observation and evaluation of seabed mineral resources and the taking of the resource as needed to design and test mining equipment, and *commercial recovery* (or exploitation) means the actual at-sea mining and processing of seabed minerals for the primary purpose of marketing or commercial use (30 U.S.C. §1403).

Congress authorized the National Oceanic and Atmospheric Administration (NOAA) to issue exploration licenses and commercial recovery permits to U.S. citizens for seabed mining activities in ABNJ (30 U.S.C. §1412). By contrast, for areas within national jurisdiction (i.e., on the U.S. outer continental shelf), the Department of the Interior's Bureau of Ocean Energy Management (BOEM) regulates mineral-related activities. At a time when many countries are investing in deep seabed mining activities (i.e., taking place at water depths greater than 200 meters), U.S. access to seabed mining in ABNJ remains uncertain.

Background on UNCLOS and the International Seabed Authority

UNCLOS was adopted in 1982, establishing a comprehensive international legal framework to govern activities related to the global ocean, including deep seabed mining. In 1994, the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea (commonly known as the 1994 Agreement) substantially modified the deep seabed mining provisions of UNCLOS to address concerns held by many industrialized nations. After the adoption of the 1994 Agreement, UNCLOS received the necessary number of signatories for the agreement to enter into force. The United States is not a party to UNCLOS or the 1994 Agreement.

UNCLOS also established the International Seabed Authority (ISA), an autonomous organization that regulates parties to UNCLOS conducting mineral-related activities in ABNJ. The ISA came into existence with the adoption of the 1994 Agreement and became fully operational in 1996. The United States participates as an observer state in the ISA but has no vote in the ISA Assembly or Council and

cannot apply for or obtain a contract for seabed mining exploration or exploitation through the ISA. To date, the ISA has issued 31 exploration contracts; China holds 5 contracts, the most of any country party to UNCLOS. The ISA has not issued any contracts for exploitation because it has yet to finalize regulations for seabed mineral exploitation.

The ISA is working toward finalizing exploitation regulations (anticipated 2025). ISA draft exploitation regulations state that exploitation applications will be examined in the order in which they are received. At least one mining company (The Metals Company [TMC]) has announced its intention to apply for an exploitation contract following the ISA's summer 2024 session. TMC, a Canadian company, has acquired three ISA exploration contracts through sponsorships with Nauru, Kiribati, and Tonga, all parties to UNCLOS.

Exploration Licenses Issued Under DSHMRA

In 1984, NOAA issued exploration licenses for four sites located beyond U.S. jurisdiction within a 1.7-million-square-mile-area of the seafloor in the Pacific Ocean, known as the Clarion-Clipperton Zone (CCZ). The CCZ is estimated to contain more cobalt, copper, manganese, and nickel than all known land deposits combined. NOAA issued exploration licenses to four U.S. mining consortia, three of which were multinational private-sector consortia with participating American companies. Under DSHMRA, exploration licenses are issued for 10 years (30 U.S.C. §1417(a)). NOAA issued

USA-1 to Ocean Minerals Company, comprising Cyprus Minerals and Lockheed Martin Corporation (both American companies);

USA-2 to Ocean Management, Inc., comprising Schlumberger Technology (an American company) and Canadian, German, and Japanese companies;

USA-3 to Ocean Mining Associates, comprising Essex Minerals Co. and Sun Ocean Ventures, Inc. (both American companies) and Belgium and Italian companies; and

USA-4 to Kennecott Consortium, comprising Kennecott Utah Copper Corporation (an American company) and British, Canadian, and Japanese companies.

NOAA issued these four exploration licenses 10 years before UNCLOS entered into force and 12 years before the ISA became operational. NOAA has not issued any exploration licenses since 1984, although the agency has approved extension requests. A license can be extended by

five-year periods (30 U.S.C. §1417(a)). NOAA has not issued any commercial recovery permits.

Two of the four exploration licenses issued by NOAA have been surrendered. In 1997, Ocean Mining Associates relinquished USA-3. In 1999, Ocean Management, Inc., the holder of USA-2, dissolved and, because the conditions for holding an exploration license were no longer met, NOAA considered USA-2 relinquished. On July 1, 1999, NOAA published a notice about the relinquishment of USA-2 and USA-3 (64 *Federal Register* 3563).

To date, USA-1 and USA-4 remain the only active exploration licenses issued by NOAA pursuant to DSHMRA. Lockheed Martin currently holds both exploration licenses; it became the sole holder of these licenses by different means. In 1993, Kennecott Consortium relinquished USA-4 to NOAA (58 *Federal Register* 33933, June 22, 1993). Ocean Minerals Company, the consortium including Lockheed Martin, applied for USA-4 (58 *Federal Register* 34782, June 29, 1993) and was issued the license by NOAA in 1994 (59 *Federal Register* 66942, December 28, 1994). In 1995, Cyprus Minerals withdrew from Ocean Minerals Company, leaving Lockheed Martin as the sole company overseeing USA-1 and USA-4.

USA-1 and USA-4 will remain in effect through June 2, 2027 (87 *Federal Register* 52743, August 29, 2022). However, the ISA designated an area of the CCZ that partially overlaps with USA-1 as an *Area of Particular Environmental Interest* (APEI 13), thereby precluding seabed mining activities from taking place in the area. This APEI designation demonstrates that NOAA-issued seabed mining exploration licenses for ABNJ do not have international recognition. This likely would be true for any future NOAA-issued commercial recovery permits, as well. As a non-party to UNCLOS, U.S. citizens may face challenges to protect their claim to explore and/or recover seabed minerals in ABNJ.

Recent actions taken by Lockheed Martin suggest the company may be divesting from seabed mining. On March 16, 2023, a Norwegian company (Loke Marine Minerals) acquired 100% of UK Seabed Resources, a subsidiary of the United Kingdom-based arm of Lockheed Martin. This acquisition also included the transfer of UK Seabed Resources' two ISA-issued exploration contracts for polymetallic nodules in the CCZ to Loke Marine Minerals.

To extend USA-1 and USA-4 beyond June 2, 2027, Lockheed Martin would need to submit an extension request to NOAA at least six months prior to the expiration date. NOAA communicated to the Congressional Research Service that if Lockheed Martin does not request an extension, the agency would consider USA-1 and USA-4 lapsed and relinquished. At that time, U.S. entities could request a transfer of USA-1 and/or USA-4 and NOAA would process the request pursuant to the requirements of 15 C.F.R. §970.516. According to NOAA, the agency may choose to not actively solicit offers for the transfer of these licenses. Congress could consider whether to direct NOAA regarding the solicitation of DSHMRA exploration licenses. Congress also could consider whether to seek information

from NOAA, the U.S. Department of State, and/or other stakeholders on NOAA's interpretation of its regulatory role in seabed mining activities as a non-party to UNCLOS.

Recent Congressional Interest

Members of Congress have considered the potential environmental impacts of seabed mining as well as the additional supply of critical minerals that could be achieved through seabed mining. In the 118th Congress, H.R. 4537 would prohibit NOAA from issuing licenses and permits for seabed mining activities in ABNJ and would prohibit BOEM from issuing leases for hardrock mineral mining activities on the U.S. outer continental shelf. H.R. 4537 also would direct NOAA, with the National Academies of Science, Engineering, and Medicine, to study the environmental impacts of mining activities.

In the 118th Congress, both chambers have considered seabed mining as a strategy for potentially addressing national security concerns related to critical minerals. S.Res. 466 calls for the Senate to take up UNCLOS. The resolution contends that as a party to UNCLOS, the United States would be able to participate directly in setting and voting on ISA policies related to mineral-related activities in ABNJ. Also, H.Rept. 118-125, the House Armed Services Committee report accompanying its reported version of the National Defense Authorization Act for Fiscal Year 2024 (H.R. 2670), directs the U.S. Department of Defense (DOD) to submit a report to the panel assessing the processing of polymetallic nodules domestically. The committee report notes that while the United States holds no ISA contracts, "there remains opportunity to evaluate domestic processing and refining of seafloor resources from the contracts held by allied [UNCLOS] parties and domestic partners in international waters." H.R. 7636 would direct the U.S. government to coordinate the development of infrastructure to process and refine polymetallic nodules within the United States, among other actions. For example, TMC has expressed interest in the feasibility of seabed mineral processing along the Texas Gulf Coast. Congress could consider seeking feedback from Lockheed Martin and/or other U.S. entities with seabed mining interests on financial and technological capabilities for the exploration, exploitation, and/or processing of seabed minerals. In addition, in a December 7, 2023, letter to U.S. Secretary of Defense Lloyd Austin, 31 Members expressed concern over potential pressure from China on the ISA to adopt regulations for the exploitation of mineral resources in ABNJ. They called on DOD to work with allies to "ensure that China does not seize unfettered control of deep-sea assets." Congress also may weigh the advantages and disadvantages of giving U.S. entities access to ISA contracts through U.S. accession to UNCLOS as a strategy to help achieve critical mineral supply chain independence. For further reading, see CRS In Focus IF12608, *U.S. Interest in Seabed Mining in Areas Beyond National Jurisdiction: Brief Background and Recent Developments*.

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