



**SCIENTIFIC COMMITTEE
TWENTY-FIRST REGULAR SESSION**

Nuku'alofa, Tonga
13 –21 August 2025

Update on Secretariat Taskings Relating to Deep Sea Mining

WCPFC-SC21-2025/EB-IP-15_Rev1¹

17 July 2025

I. Purpose

The purpose of this information paper is to provide an update on the Secretariat's engagements in the first half of 2025 to respond to a tasking by the Commission at WCPFC21 for the Secretariat to engage with a broad range of stakeholders to gain awareness and understanding of deep sea mining (DSM) activities and their potential direct or indirect impact on tuna fisheries in the WCPF Convention Area.

Key aspects of the International Seabed Authority's (ISA) role in regulating mineral activities on the international seabed beyond national jurisdiction are also provided for information, as well as an update on WCPFC's request to the ISA for Observer status.

II. Background

WCPFC21 Decisions and Taskings

WCPFC21 considered the potential connection between international activities including DSM and the work of WCPFC² and adopted the following decisions and taskings³:

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| 792. | <i>The Commission approved the WCPFC seeking observer status with the International Seabed Authority.</i> |
| 794. | <i>The Commission tasked the Secretariat, as recommended by SC20, to engage with a broad range of stakeholders to gain awareness and understanding of deep seabed mining activities and their potential direct or indirect impact on tuna fisheries in the WCPFC Convention Area.</i> |
| 795. | <i>The Commission tasked the Secretariat with maintaining engagement with international ocean conservation initiatives, including the Preparatory Conference for the Agreement on</i> |

¹ Updated information on the ISA Assembly consideration of the WCPFC request for observer status and their adoption of a standardised procedure relating to REMPs.

² [WCPFC21-2024-25](#) International Ocean Conservation: Implications for WCPFC.

³ [WCPFC21 Summary Report](#) paragraphs 792, 794, and 795.

the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction, and to report back to the Commission on a regular basis on international developments which may impact on WCPFC and its activities.

III. Update on Secretariat Engagement with Stakeholders

Engagement with RFMO's and interested stakeholders

The Secretariat engaged with the Pacific Community (SPC) in June 2025 and SPC provided further insight into the status of ISA's work in the Northwest Pacific. SPC has observer status at ISA and as such attends Council and Assembly meetings. Furthermore, SPC's Geoscience Energy and Maritime Division (GEM) participated in a 2024 workshop on the development of a regional environmental management plan (REMP) for the Northwest Pacific; the SPC Oceanic Fisheries Programme (OFP) is not involved in any direct advisory role to ISA. The discussion provided insights into how the ISA operates to develop and implement REMPs and regulatory frameworks and explored how existing scientific advice - such as regular reports on tuna fishery trends, the effects of events like El Niño and La Niña, and climate change risk assessments - could provide valuable insights to inform future WCPFC contributions to ISA processes.

In addition, the Secretariat's ongoing engagement with other Regional Fisheries Management Organizations (RFMOs) and Regional Fisheries Body Secretariats and stakeholders continues to foster shared understanding and alignment on issues related to deep-sea mining and its potential impact on marine ecosystems.

The Secretariat's regular dialogue with the Secretariat of the Inter-American Tropical Tuna Commission (IATTC) has contributed to shared awareness of ISA processes and opportunities for the two organizations to engage. In 2023, the IATTC Secretariat was tasked by its Scientific Advisory Committee (SAC) with monitoring developments in deep-sea mining for potential impacts on tuna species and ocean ecosystems. This included participating in relevant ISA discussions and supporting related research within the scope of IATTC's mandate and resources. In 2025, the IATTC submitted a formal request for observer status with the ISA - similar to the WCPFC's request - which will be considered at the July 2025 ISA Assembly meeting.

WCPFC and IATTC collaboration through existing coordination mechanisms, such as joint working groups on South Pacific Albacore and Pacific Bluefin Tuna, provide valuable platforms for information exchange and consistent messaging based on shared experiences, including in relation to DSM activities in areas that overlap with shared tuna fisheries.

The North Pacific Fisheries Commission (NPFC) has similarly expressed interest in engaging with ISA, reflecting growing recognition among RFMOs of the need to coordinate fisheries management with emerging seabed mining governance frameworks. The NPFC Secretariat was the first to alert the WCPFC Secretariat of ISA's activities taking place in the Northwest Pacific.

Beyond RFMO collaboration, the Secretariat has benefited from opportunistic, informal engagements with stakeholders to strengthen awareness of ISA-related developments, including informal discussions at WCPFC21, the first BBNJ Preparatory Committee, the Honiara Summit, and the Third UN Oceans Conference.

To support internal understanding, the Secretariat arranged a dedicated two-day virtual seminar featuring legal, scientific, and conservation experts with experience and involvement in ISA and DSM discussions. The seminar covered ISA’s legal and institutional framework, current scientific challenges, and its intersections with biodiversity, climate, and food security, as well as linkages with broader international agreements such as the BBNJ Agreement and the Convention on Biological Diversity.

The Secretariat will continue to gather information from relevant stakeholders and experts and update the Commission, including through the Scientific Committee, to support better informed decision making.

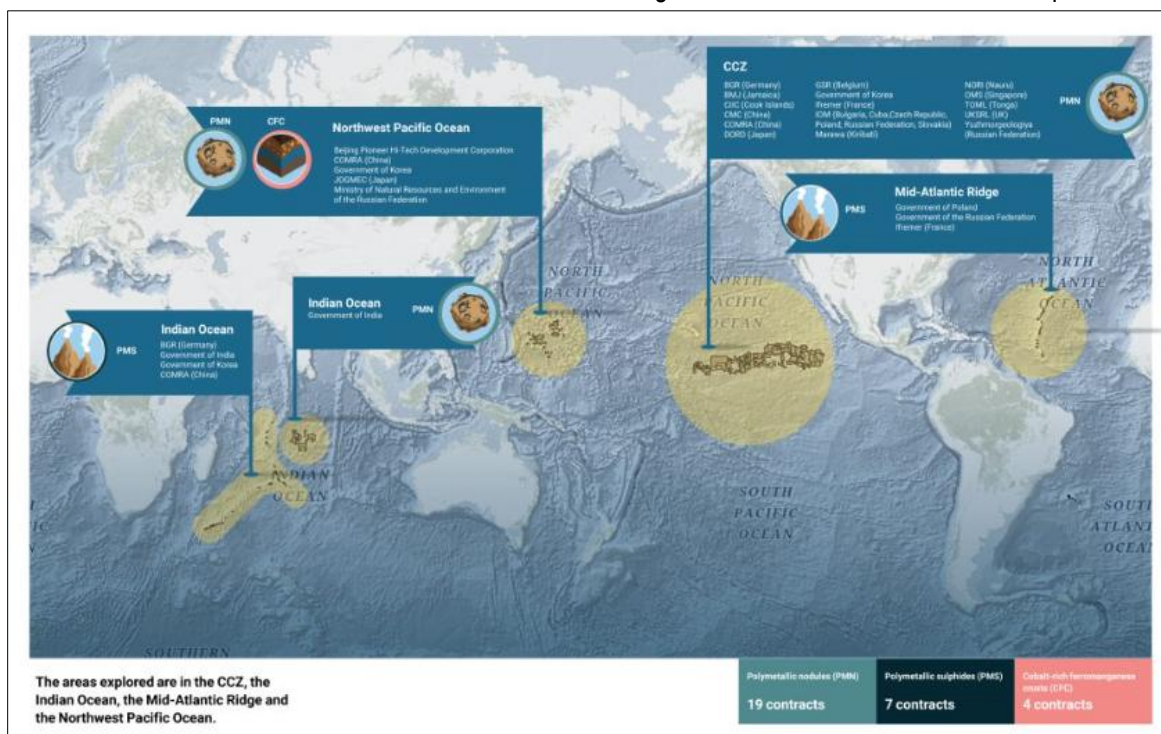
Update on WCPFC Request for Observer Status to ISA

In early 2025, the Secretariat consulted informally with the ISA Secretariat to prepare WCPFC’s request for observer status. On 5 March 2025, the Secretariat submitted a formal request for observer status to the ISA, outlining WCPFC’s objectives and their relevance to ISA activities, particularly in light of potential interactions between tuna fisheries and deep-sea mining in areas beyond national jurisdiction. The ISA Assembly considered the request in July 2025 and the WCPFC Secretariat has been informally advised by some participants that this was approved.

IV. Status of DSM Exploration in the Pacific Ocean Region

Exploratory DSM activities in areas beyond national jurisdiction (ABNJ) are underway in two areas of the Pacific Ocean: the eastern Clarion Clipperton Zone (CCZ), and the Northwest Pacific. Figure 1 shows the general location of these two zones as part of the broader global network of DSM exploration areas managed by the ISA.

Figure 1: Location and status of ISA Exploration Areas



Source: [International Seabed Authority](https://www.isa.org)

Within the framework of ISA, DSM activities are broadly characterised as ‘exploration’ and ‘exploitation’. The ISA defines ‘exploration’ as:

- the searching for mineral deposits in the Area with exclusive rights.
- the analysis of mineral deposits.
- the use and testing of recovery systems and equipment, processing facilities and transportation systems.
- the carrying out of studies of the environmental, technical, economic, commercial and other appropriate factors that must be taken into account in exploitation.

As of July 2025, there are a total of 30 active ISA exploration contracts, of which 22 are in the Pacific Ocean (as shown in Figure 1 above).⁴

The ISA defines ‘exploitation’ as:

- the recovery for commercial purposes of mineral deposits in the Area.
- and the extraction of minerals there from.
- including the construction and operation of mining, processing and transportation systems, for the production and marketing of metals.

To date the ISA has not issued any exploitation contracts, and no DSM projects have started commercial mining anywhere in the world.

The current ISA exploration contracts focus on three different resource types, namely polymetallic nodules (PMN)⁵, polymetallic sulphides (PMS) and cobalt rich ferromanganese crusts (CFC)⁶. In the Pacific Ocean, the ISA has currently only issued exploration contracts for PMN and CFC.

a. Status of DSM Activities in the CCZ

An REMP for the Clarion-Clipperton Zone⁷ was established and implemented in [2012](#) and updated in [2021](#). The CCZ is largely within the IATTC Convention Area with the western most portion extending into the WCPFC Convention Area. The CCCZ zone is adjacent to the EEZs of Mexico, Kiribati and a French Territory (Clipperton Island).

⁴ [ISA Frequently Asked Questions: Has ISA approved any deep-sea mining operations?](#)

⁵ Polymetallic nodules (PNM) are golf-ball to tennis-ball sized concretions found on the abyssal plains in water depths typically between 4,000 and 6,000 m. PMN are found directly on the seabed, typically half buried in the bottom sediment, but they can also be completely covered in sediment.

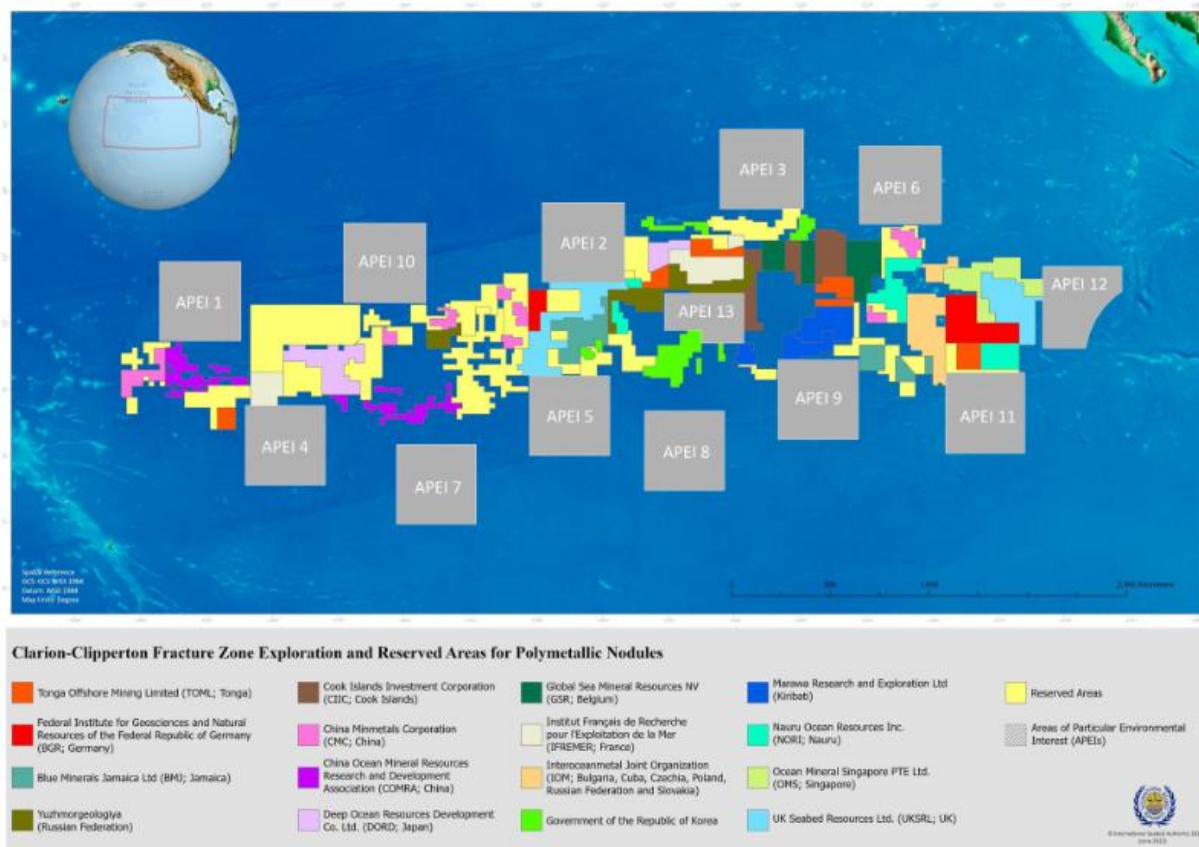
⁶ CFC precipitate onto nearly all rock surfaces in the deep ocean. Their thickness varies from less than 1 mm to about 260 mm. They form at water depths of 400 to 7,000 m as a crust on the flanks of seamounts, knolls, ridges, and plateaus, with deposits of greatest economic interest typically occurring at depths of 800 to 2,500 m.

⁷ [ISA decision relating to an environmental management plan for the Clarion-Clipperton Zone](#)

Figure 2 below shows the CCZ with designated Areas of Particular Environmental Interest (APEI's)⁸ which are protected from future exploitation of mineral resources (grey boxes), areas under 17 exploratory contracts focused on polymetallic nodules⁹ (coloured areas) and reserved exploration areas which can be accessed by developing countries or the Enterprise (yellow areas)¹⁰. Contracts were first agreed in 2001 for 15-year periods and have been extended, with new contracts also signed, most recently in 2021. Current contract end dates range between 2026 and 2036.

Figure 2: The eastern Pacific Ocean Clarion Clipperton Zone

Exploration Area



Source: [International Seabed Authority](#)

All exploratory contracts are held by ISA member States, state-owned, or private entities, and each has one or more State sponsor. The sponsoring States associated with each contract are: Bulgaria, Cuba, Czechia, Poland, Russian Federation, and Slovakia; the Russian Federation; the government of Korea; China; Japan; France; Germany; Nauru; Tonga; Belgium; United Kingdom of Great Britain and Northern

⁸ APEIs are seabed areas closed to mining activity that protect representative habitats and facilitate research.

⁹ [Polymetallic Nodules - International Seabed Authority](#) – includes a list of contractors

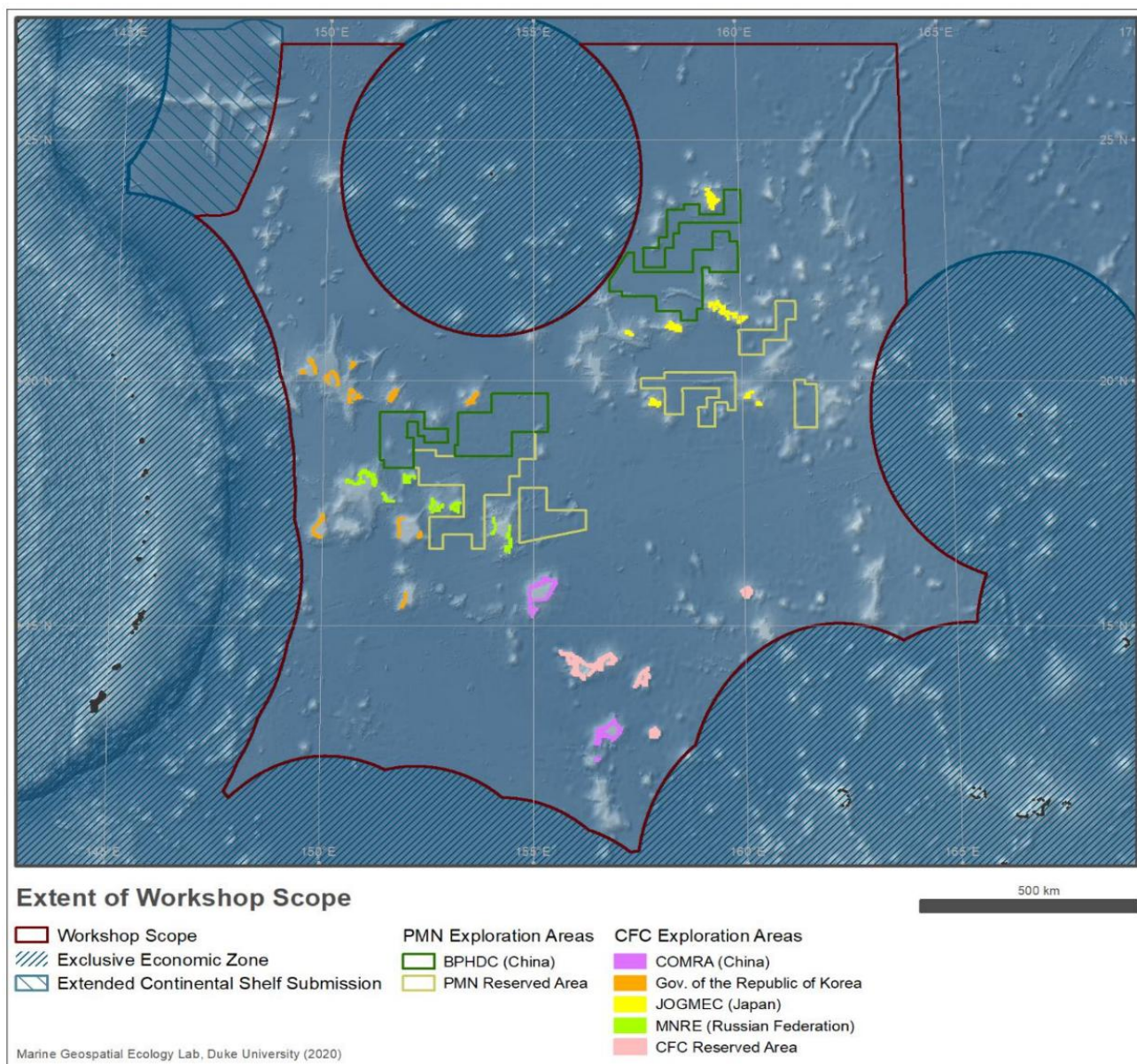
¹⁰ [The Enterprise](#) is an organ of the ISA that can carry out certain activities including transporting, processing and marketing of recovered minerals, in accordance with Assembly general policies and Council directives)

Ireland; Kiribati; Singapore; Cook Islands and Jamaica. Two of these sponsoring States are associated with two contracts.

b. Status of Development of DSM Activities in the Northwest Pacific

A proposed Northwest Pacific REMP is currently under development by the ISA and covers an area that is adjacent to the exclusive economic zones (EEZs) of the Commonwealth of the Northern Mariana Islands, Guam, the Federated States of Micronesia, and the Republic of the Marshall Islands, as shown in Figure 3 below. The REMP will also define APEI's for the proposed Northwest Pacific REMP.

Figure 3: Approximate area of Northwest Pacific REMP outlined by the maroon-coloured line



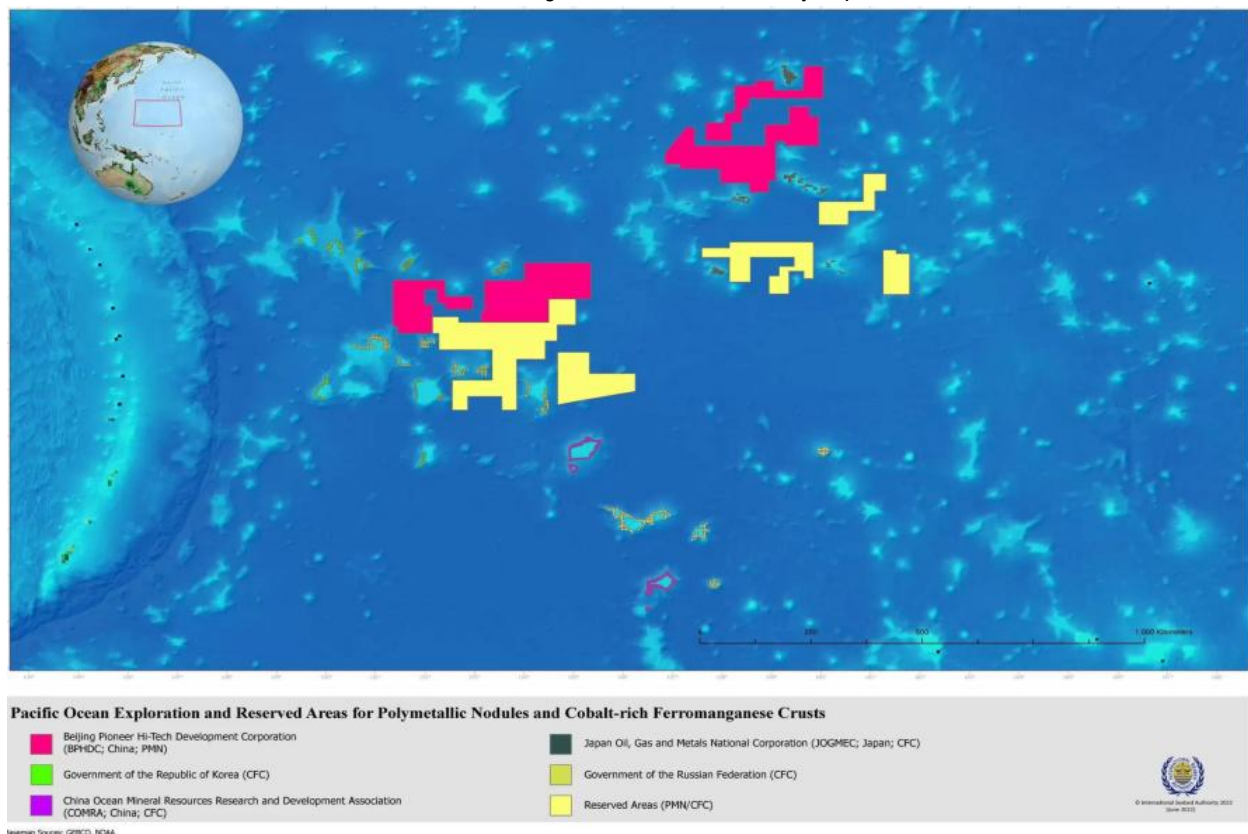
Source: Duke University

Workshops were held in 2018, 2020, and 2024 to discuss the REMP. A workshop focused on management issues may be considered in 2026. To ensure wider representation in REMP development, workshop invitations are expected to representatives of fisheries, shipping, and subsea cables sectors, as well as adjacent coastal State and territory representatives to contribute to the process. A timeline to complete all future work - including the REMP - is expected to be agreed this year.

The ISA has issued six exploration contracts in the Northwest Pacific area for polymetallic nodules¹¹ (1 contract) and cobalt rich ferromanganese crusts¹² (5 contracts) as well as reserved areas that ensure developing countries can access mineral resources, as shown in Figure 4. The exploratory contracts were agreed in 2014-2019 with end dates ranging between 2029 and 2034. More specific public information on contracts issued is available on the [ISA/Our Work](#) webpages.

The sponsoring States associated with current Northwest Pacific exploration contracts are China, Japan, the Republic of Korea, and the Russian Federation.

Figure 4: Areas covered by exploration contracts and reserved areas



Source: [International Seabed Authority](#)

¹¹ [Polymetallic Nodules - International Seabed Authority](#) – describes polymetallic nodules and lists those contractors involved in exploratory contracts with ISA.

¹² [Cobalt-rich Ferromanganese Crusts - International Seabed Authority](#) – describes ferromanganese crusts and lists those contractors involved in exploratory contracts with ISA.

V. Information on Potential Direct or Indirect Impacts of DSM on Tuna Fisheries in the WCPF Convention Area

The Attachment to this paper provides select references to studies that collectively explore potential interactions between deep sea mining activities and marine ecosystems - including high seas pelagic fisheries, including midwater and deepwater fisheries such as tuna. These studies emphasize the value of careful, coordinated, and evidence-informed management in ABNJ. They also highlight the uncertainties and knowledge gaps in the potential impacts on pelagic fisheries, given that the technology and regulations around extraction are still being developed. Broadly, these studies:

- highlight the value of early planning, monitoring, and robust environmental assessment.
- support the need for coordinated approaches that align conservation, fisheries, and resource use objectives.
- recognise the need for additional data and research to inform monitoring and management practices in deep sea environments.
- emphasise the benefits of ongoing dialogue and cooperation between relevant international bodies, including RFMOs and scientific institutions that can balance economic, environmental and cultural goals.
- suggest approaches to managing certain effects of DSM.
- indicate specific elements to consider including in environmental evaluations.

VI. Opportunities for WCPFC Engagement on ISA Work Priorities for 2025

In 2025, ISA priorities are focused on continuing progress in three key areas¹³:

1. Contractor compliance and progressing environmental standards: assessing contractor compliance and progressing procedural work such as developing environmental threshold values (e.g. for toxicity, turbidity, and sediment settling).¹⁴
2. Regulations for mineral extraction: continuing negotiations on the draft exploitation regulations, a key step toward ensuring that the ISA has rules in place to regulate potential future exploitation activities.
3. Standardised approach to REMPs: Developing a consistent method for creating, reviewing, and updating REMPs,¹⁵ which was adopted at the July 2025 ISA Assembly meeting.¹⁶

Each of these priorities provides an opportunity for WCPFC to engage with a view to ensuring that its interests relating to WCPO fisheries are considered alongside development of the Northwest Pacific REMP

¹³¹³ [ISA Presidents Briefing Paper on work for Part II of the 30th Session of the Council](#)

¹⁴ 30th Session of the LTC followed by the Council Part I and Part II - March (Council [17 – 28 March 2025](#)) and July (Council [17 – 18 July 2025](#)).

¹⁵ Webpage outlining progress and giving access to papers relating to the [standardised approach to REMPs](#)

¹⁶ [Decision of the ISA Council](#) to adopt the revised standardised REMP procedure

and APEI's. Maintaining awareness of exploratory activities in the CCZ and their potential overlap or impact on WCPO fisheries will also be important.

Further, WCPFC's participation presents valuable opportunities to help shape a better coordinated environmental governance framework that will underpin DSM activities in areas adjacent to or overlapping with key Pacific tuna ecosystems and CCM fisheries activities that rely on them economically and for food security.

By participating in the developing frameworks and principles that underpin ISA's proposals for seabed mineral resource management, WCPFC could consider engagement that:

- promotes connectivity across ecosystems that includes considerations of the conservation and sustainable use of highly migratory tuna stocks.
- provides a more integrated and widely informed approach to regulatory and environmental management policies of areas of shared activities.
- provides input to raise awareness of potential impacts of environmental factors affecting pelagic fisheries to inform discussion on environmental thresholds such as available food sources, modelled impacts of climate change.
- influences REMP design based on wider scientific and fisheries management-based data and monitoring experience and to support deliberations that recognise the cultural connection of WCPFC's Pacific Island members to the sea and its resources.

As noted above, the ISA is expected to hold a management-focused discussion on the Northwest Pacific REMP in 2026 and has shown interest in broader participation, including from RFMOs such as WCPFC.

VII. Recommendation

SC21 is invited to note the following:

- A selected sample of additional resources is available in the Attachment to this paper.
- The Secretariat will provide updates to the Commission at WCPFC22 on WCPFC's request for observer status with ISA.
- The Secretariat will continue to engage with relevant stakeholders, including SPC and IATTC, and provide an update at SC22 and WCPFC23 in 2026.

Attachment 1

The Secretariat has identified several references spanning scientific, planning, and management research, to support further understanding and awareness of potential interactions and impacts of deep sea mining on WCPFC-managed fisheries.

1. ISA Technical Study 33: [Potential interactions between fishing and mineral resource-related activities in areas beyond national jurisdiction: a spatial analysis](#)
2. ISA Fact-check 2024/2: [Status of fishing activities in the Area](#)
3. Jones, D.O.B., Arias, M.B., Van Audenhaege, L. et al. [Long-term impact and biological recovery in a deep-sea mining track](#)
4. Frazão Santos, C., Wedding, L.M., Agardy, T. et al. [Marine spatial planning and marine protected area planning are not the same and both are key for sustainability in a changing ocean](#)
5. Amon, D.J., Palacios-Abrantes, J., Drazen, J.C. et al. [Climate change to drive increasing overlap between Pacific tuna fisheries and emerging deep-sea mining industry](#)
6. Jeffrey C. Drazen, Craig R. Smith, Kristina M. Gjerde, Hiroyuki Yamamoto et al. [Midwater ecosystems must be considered when evaluating environmental risks of deep-sea mining](#)
7. J,M,A, van der Grient, J.C. Drazen. [Evaluating deep-sea communities' susceptibility to mining plumes using shallow-water data](#)
8. J.M.A. van der Grient, J.C. Drazen, [Potential spatial intersection between high-seas fisheries and deep-sea mining in international waters](#)
9. Malcolm Clark, Peter Horn, Di Tracey, Simon Hoyle, Kim Goetz, Matthew Pinkerton, Philip Sutton, Vijay Paul, NIWA. Prepared for Pacific Community, [Assessment of the potential impacts of deep seabed mining on Pacific Island fisheries](#)