

Deep sea mining—can it sink the visions in Pacific regionalism?

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REGIONAL OUTLOOK

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Introduction

Pacific island states have custodianship over some of the richest and most extensive Exclusive Economic Zones (EEZs) in the world. These prized swatches of ocean seabed will be the likely source of minerals in the gradual global transition to clean energy. Though relatively new, deep-sea mining (DSM) presents opportunities for Pacific islanders, in their diplomacy and economic potential. DSM can be characterised as involving “a range of practices including the exploration, extraction, transportation, and processing of minerals retrieved from the ocean floor and transiting through the water column to the surface”.¹ Since DSM is a new industry and its impact on the ocean is still not fully understood, it is a potential point of tension in frustrating regional solidarity on other shared priorities—the adverse effects of climate change, the regional commitments to ocean sustainability and marine conservation, among others.²

Global developments are also primed to addressing ocean management, a useful context for understanding the rapid pace at which DSM is progressing. Global policy-making efforts are embracing the ocean and propelling the International Seabed Authority (ISA) into the limelight. In the process, the mandate of the ISA coalescing with global agendas such as the Sustainable Development Goals (including the United Nations Decade of Ocean Science for Sustainable Development 2021—2030)³ is generating intense interest in the exploration of the ocean floor.⁴ With greater accumulation of knowledge of the deep-sea environment, untapped economic opportunities are also envisaged in industries ranging from medical science to clean energy. Pacific island states can benefit from their association with the ISA, notably, the rules that it is mandated to oversee, and especially if their perspectives on matters of ocean governance are part of the conversations that are evolving and escalating.

There are two layers to DSM. Firstly, in the Area,⁵ on the seabeds of international waters. The ISA has regulatory and oversight mandate in the Area. State parties to the ISA engage in this space under the parameters of global oceans regime, notably the *United Nations Convention on the Law of the Sea 1982 (UNCLOS)* and the *1994 Agreement*.⁶ Secondly, the EEZs where State jurisdictions and sovereign rights entitle States to exploit and manage through domestic laws and regulations. Some Pacific island states are engaged in both layers, with likely varying consequences. The Pacific finds itself as a testing ground, not only of the technological and scientific application of deep-sea mining practices,⁷ but also, the applicability of global policy and rules regulating this nascent area of resource extraction.⁸

This discussion uses the DSM issue to illuminate the convergences of global, regional, and local interests, and how these are understood and most importantly, negotiated. The discussion will begin with a general overview of the global oceans regime, the mandate of the ISA and the activities thus far of Pacific island countries in this international arena. Next, the paper addresses some of the key developments relating to DSM regulatory preparedness in the Pacific. This will be followed by addressing issues civil society organisations face in the Pacific in counteracting the pro-DSM narrative. Finally, observations about the implications of the DSM issue for the region will conclude the discussion.

Amidst the rhetoric of the Blue Pacific—a regional framework integrating sustainable co-existence with the oceanic environment, some Pacific island states are looking to DSM as an alternative sector to meet their immediate development prospects, despite the risks to the health of the ocean.⁹ When a call for a moratorium on DSM was made recently, there were divergent responses from Pacific leaders. DSM has the potential to undermine

certain regional efforts. For instance, the Blue Pacific may lose credibility as a galvanising theme for the Pacific islands, if political leaders in the region have polarising views and priorities about DSM and sustainable ocean management.

Cook Islands' representative to the Pacific Islands Forum, Tapaeru Herrmann, in July 2022 illustrated the tension between regional and national interests: "the need to work collectively across the region [on DSM frameworks] does not trump the sovereign interests of each Forum member state to address its own development needs".¹⁰ Cook Islands has issued three exploratory licences to contractors to conduct studies in its waters. The first exploration vessels arrived in Cook Islands in July 2022.

Permitting extraction of resources within one's jurisdiction is a state sovereign decision, and DSM is an expressed priority of some states, acting within their national interest. How DSM is managed, and what motivations drive this agenda will shape the contours of regional cooperation for the foreseeable future. DSM is emboldening small states in the Pacific. They can see potential wealth on their seabeds, and with it, the possibilities of leveraging this for diplomatic outcomes in the global and regional setting.

For instance, Nauru is enjoying global visibility in its triggering of the two-year rule requirement of the ISA.¹¹ A feat in and of itself, the message from Nauru and other small island states advocating for DSM is the assertion of their national interest and sovereignty, even if it means going it alone on a controversial agenda.¹² In DSM, small Pacific island states are not only using their comparative advantage in setting the agenda, but also contracting out some of their primary competencies to non-state actors, a privilege they enjoy as sovereign states. The use of multilateral forums is a diplomatic success, providing the visibility and renewed assertiveness of small states in global affairs. Other countries in the Pacific, with more elaborate diplomatic resources may need to adjust to this new reality.

There are also insidious effects to this global campaign for DSM. The CEO of mining start-up company The Metals Company,¹³ Gerard Barron, found himself entangled in Nauru's bid for the mining licences raising a question about the possible conflation of industry interests and the sovereignty of State Parties to the ISA.¹⁴ The ISA is an important global platform, and it is seen by some as setting the agenda for DSM, and having a pervasive influence into the domestic sphere of State parties.

Ocean governance regime and Pacific island countries

The ISA was proposed under Articles 156 and 157 of the *UNCLOS* and the *1994 Agreement*, with a membership of 158 Member States (inclusive of the European Union). It became a functional entity on the 16th of November 1994, with actual office space in Jamaica. Avowedly an autonomous intergovernmental organisation, the ISA coordinates State parties' activities in the international seabed area (the Area). Its mandate is "to ensure the effective protection of the marine environment from harmful effects that may arise from deep-seabed related activities".¹⁵ The Area being outside of the jurisdiction of states is part of the global commons and constitutes 54 per cent of the world's ocean seabed. One of these sites, designated as an "Area" is the Clarion-Clipperton Fracture Zone (CCFZ), a highly lucrative Area where seabed mineral wealth has been surveyed.¹⁶ The CCFZ is situated in the central Pacific Ocean, east of Kiribati.

The importance of having some of the largest maritime areas in the world means that Pacific island countries can also participate in setting the agenda for the potential exploitation of the resources on the seabed. In addition to Australia and New Zealand, fourteen Pacific island states are member states of the ISA. (Refer to Table 1).

Table 1: Pacific Island states membership in ISA

Pacific Island Country	Party to LOSC Date:	Party to Agreement Date:
Australia	5 October 1994	5 October 1994
Cook Islands	15 February 1995	15 February 1995
Fiji	10 December 1982	28 July 1995
Kiribati	24 February 2003	24 February 2003
Marshall Islands	9 August 1991	Not yet a signatory
Federated States of Micronesia	29 April 1991	6 September 1995
Nauru	23 January 1996	23 January 1996; Permanent Mission to ISA
New Zealand	19 July 1996	19 July 1996
Niue	11 October 2006	11 October 2006
Palau	30 September 1996	30 September 1996
Papua New Guinea	14 January 1997	14 January 1997
Samoa	14 August 1995	14 August 1995
Solomon Islands	23 June 1997	23 June 1997
Tonga	2 August 1995	2 August 1995
Tuvalu	9 December 2002	9 December 2002
Vanuatu	10 August 1999	10 August 1999

International Seabed Authority, 2022

The ISA is proving a useful platform for Pacific island countries. This can be attributed to the global commitments to Blue Growth, and the expertise and technical assistance for capacity development needs of Pacific island countries provided.¹⁷ Key provisions in the *UNCLOS*, notably Articles 140 (1) and 148, and ISA's mandate in the Area privileges developing countries.¹⁸ Earmarked as reserved areas of ocean seabed when it was first proposed in 1967 by a delegate from Malta, the Area would be used "for the exclusive benefit of mankind as a whole,"¹⁹ with developing states accorded "preferential

consideration in the event of financial benefits”²⁰ when resource exploitation happens in the seabeds of the Area. Using these rules in the *UNCLOS*, Tonga, Nauru, Cook Islands and Kiribati are some of the first sponsors and applicants for exploration permits in the CCFZ.

International non-government organisations have, however, queried the wisdom of the open-ended granting of exploration licences without adequate knowledge of the ocean environment²¹ and “due diligence” capacity in these Pacific states. Pacific islanders working in the civil society and environmental advocacy space make use of cornerstone principles of multilateral agreements. The precautionary principle is one such example. Civil society organisations are using this principle to advocate for comprehensive understanding of the nature of the ocean environment before large-scale DSM operations are undertaken.²² Through membership of the ISA, Pacific island countries are not only active users of the global ocean governance regime, but are contributing to refining and clarifying the existing rules governing seabed mining.²³

In early September 2022, Nauru sponsored the “Nauru Ocean Resources Inc., (NORI), a subsidiary of Canadian-owned The Metals Company (TMC)” to undertake exploration, with a possible exploitation licence to be granted in 2023, if approved by the ISA.²⁴ Nauru’s bid has been delayed pending ISA’s development of a set of deep-sea mining regulations. Nauru’s application has opened conversations about the ISA’s mandate, and allegations of corporations muscling Pacific island states into acquiescence over contract issuing schemes of the ISA.

There are also adverse effects on the credibility of small states in its dealings with ISA and non-state contractors. Nauru’s courting of TMC CEO Gerard Barron is an example of how a small Pacific island country delegates sovereign areas of its competence, possibly without full appreciation of its implications. In February 2019, “Nauru allowed DeepGreen CEO Gerard Barron to take Nauru’s seat during a plenary session at the ISA in February 2019”.²⁵ Speaking from the platform of a State party to the ISA, Barron used this to his advantage, by pitching the benefits of DSM for Pacific island countries.

The robust manner in which contractors and the ISA execute their dealings with sovereign Pacific island states is an ominous sign. Pacific island leaders extol Pacific values such as respect, inclusivity, and relationships built on trust. When dealing with business corporations from the Global North, Pacific island states may well accept the usual indignities and risks associated with the murky world of corporate strong armed tactics. Indeed, this may seem a small price to pay on the road to riches for Pacific states.

In initial interactions with DSM players, targeted narratives may have some appeal to domestic audiences in the Pacific and cultivate some receptiveness to DSM ventures. Whilst deep sea exploration and scientific knowledge of the ocean are perceived as having the potential to accumulate ground-breaking discoveries to benefit humanity, some Pacific island communities have long-standing suspicions of such grandiose promises, given their own history of exploitation. Inhabitants of some island communities will find such narratives eerily like previous dealings with external powers.²⁶ For instance, in Marshall Islands, prior to a major atom bomb test on Bikini atoll in 1946, 167 islanders agreed to leave their homes temporarily after assurances by the military governor, Commodore Ben H. Wyatt, that the tests would “turn this great destructive force into something good for mankind”.²⁷

Assurances that the Pacific is playing its part in humanity’s overall progress is also demonstrated in how DSM is packaged in elaborate public relations campaigns by developers.²⁸ This includes talking up the ‘bragging rights’ that would be associated with being a ‘world first’. When the failed Solwara One project in the Bismarck Sea of Papua New Guinea (PNG) was publicised, for instance, Mel Togolo, the then country manager of Nautilus Minerals (PNG) in a television interview stated: “this project is going to put Papua

New Guinea in the world map as the first country to venture into this area”.²⁹ Selling deep sea mining as a project in one-sided, rosy terms is done intentionally to elicit much-needed support, playing on some unquantifiable notion of national pride.³⁰

Marine research is another responsibility the ISA has undertaken to coordinate in the Area, with specific focus on research capacity development programmes targeting developing states. This mandate supports SDG 14 (“Life below water”). In 2017, the ISA registered Voluntary commitments in support of the SDG. One of these Voluntary Commitments was the SG’s Award for Excellence in Deep-Sea Research which “recognizes the achievements of young researchers from developing States who have made an outstanding contribution to humankind’s understanding of deep-sea environments or to the development of regulatory frameworks which protect these environments”.³¹ This is another way of building support for DSM, by associating it with research prestige and acclaim.

Other metropolitan powers have long-standing connections to ocean research in the Pacific. Nic Maclellan documents how France has appropriated the Blue Pacific narrative in its foreign policy in the region, with strong emphasis on ocean scientific research.³² Emerging powers such as India, undoubtedly recognising a niche in marine research and the potential role of the ocean research in the knowledge-based economy, are proposing the establishment of a “Sustainable Coastal and Ocean Research Institute” with the goals of “building up a network of marine biology research stations in various island nations in the Pacific Ocean to collaborate on research and capacity building with institutions in India”.³³ Capacity building and climate resilience are two of the stated goals of this proposal.

Conversely, the Pacific islands region is yet to tap into this growing area of interest. Pacific island leaders envisaged the Blue Pacific rhetoric, but this framework is yet to gain traction in the domestic development priorities of member states of the Pacific, in areas such as ocean research. Whilst there is concerted effort to prepare countries for DSM, the same level of regional cooperation may also be needed to prepare Pacific island countries to access external assistance and participate in the specialised area of ocean and marine research.

Essentially, Pacific islanders ought to use their own expertise and knowledge to guide how they manage and exploit the resources in their ocean, and not be mere spectators or end-users of the by-product of ocean research. The potential for bioprospecting and discoveries for medical and scientific applications can add value to economies of the Pacific. This painstaking investment does not seem to be the focus, on the same level as mining the seabed of its existing mineral wealth. Nevertheless, some Pacific island states are pre-empting the importance of this knowledge-based industry and creating policies and legislation for future use.³⁴

The current state of legal/regulatory structures and mechanisms

DSM is uncovering patterns of asymmetric power relationships between non-state actors and citizens of small Pacific island states.³⁵ However, this does not mean Pacific island states do not have agency. Collectively, Pacific states consistently demonstrate a level of maturity in presenting unified positions on matters affecting the region. This was recently illustrated when Pacific island leaders rejected the proposed comprehensive agreement on security and economic cooperation proposed by China earlier this year.³⁶ However the motivations to unilaterally exercise sovereign states rights will be much more compelling with DSM.

The interest in DSM puts Pacific island states in the enviable position to leverage the potential resources on their ocean floor.³⁷ However, DSM will demand equally robust regulatory standards in enforcement of DSM laws and policies. The World Bank Group (2017) has noted that “[s]pecialised technical capacity of government personnel dealing with DSM issues is limited at best in most PICs”.³⁸

Because of the apparently inevitable momentum towards DSM and the fact that states in the Pacific have differing domestic regulatory capacities, regional bodies in the Pacific islands are acting as convergence points to coordinate the development of DSM policy and legislation frameworks for member states. The Secretariat of the Pacific Community (SPC) in a project entitled “Deep Sea Minerals in the Pacific Islands Region: A Legal and Fiscal framework for Sustainable Resource Management”, initiated a stakeholder meeting in June 2011.³⁹

From 2011 to 2016, SPC’s Applied Geoscience and Technology Division implemented the Deep Sea Minerals Project. The project was a joint initiative between the SPC and the European Union, with the stated objective to provide “technical advice and assistance to enable the 15 member countries⁴⁰to make informed decisions about deep sea mining within their national jurisdictions”.⁴¹ In the Pacific Forum Leaders’ Meeting in Rarotonga in August 2012, the Regional Legislative and Regulatory Framework (RLRF) was launched and endorsed by all 15 participating member states from the Pacific Islands Forum.⁴²

Described as a “world first”, the RLRF guides “countries to develop the national law and policy frameworks needed to improve the management of their marine mineral resources”.⁴³ Moreover, the Deep Sea Minerals Project is touted as a success story in regional cooperation, seeking “to enhance regional harmonisation of policies, laws and practices, where, to do so, is in the Pacific islands’ best interests”.⁴⁴

Through the Deep Sea Minerals Project Cook Islands, Federated States of Micronesia, Fiji, Niue, Republic of Marshall Islands, Tuvalu and Tonga were able to review existing legislation and policies or enact legislation to undertake DSM (Refer to Table 2). With the rapid pace at which DSM-preparedness is happening, a pattern of global-regional convergence is apparent. This flurry of activity was triggered by several landmark decisions made in rulings by the Seabed Disputes Chamber of the International Tribunal on the Law of the Sea of February 1, 2011.

Table 2: Summary of current legal/regulatory mechanisms on DSM for Pacific island countries

Pacific island country	DSM-related legislation	National competent authorities
Nauru	International Seabed Minerals Act 2015, No. 26 of 2015	Nauru Seabed Minerals Authority
Tonga	Tonga Seabed Minerals Act 2014, Act 10 of 2014	Tonga Seabed Minerals Authority
Kiribati	Seabed Minerals Act 2017	Kiribati's Seabed Minerals Secretariat
Cook Islands	Seabed Minerals Act, No.5 of 2019—amendments plus precautionary principle	Cook Islands Seabed Minerals Authority
Fiji	International Seabed Mineral Management Decree 2013 (Decree No. 21 of 2013)	Fiji International Seabed Authority
Tuvalu	Tuvalu Seabed Minerals Act 2014	Tuvalu Seabed Minerals Authority
Vanuatu	n/a	
Papua New Guinea	n/a	

International Seabed Authority, 2022

For instance, to sponsor a contractor for DSM activities in the Area, a “sponsoring States should make ‘best possible efforts’ in taking ‘reasonably appropriate’ measures, which must consist of laws, regulations and administrative measures”.⁴⁵ Furthermore, although “administrative measures is not a condition for concluding the contract with the Authority; it is, however, a necessary requirement for carrying out the obligation of due diligence of the sponsoring State for seeking exemption from liability”.⁴⁶ Several sponsoring States in the Pacific—Tonga, Cook Islands, Nauru and Kiribati (DSM-related activities on the deep seabed of the CCFZ)—have specific provisions in their seabed mining legislation making reference to “liability” from costs associated with DSM.

Although Pacific countries have promptly domesticated provisions of the *UNCLOS*, the true test of domestic legislation and regulations will be in their enforcement, and independent monitoring. Pacific governments, already burdened with providing public goods—are unnecessarily propelled into responsibilities they may not be adequately prepared to handle. One can understand why the New Zealand government has called for a regional moratorium on DSM.⁴⁷

However, some Pacific island states such as Cook Islands see the benefits of DSM from a national development perspective, and are unlikely to decline the opportunity to exploit seabed resources. Cook Islands Seabed Minerals Authority estimates that “12 billion tonnes of mineral rich manganese nodules, found at a depth of 5,000m are spread over some 750,000 square kilometres of Cook Islands’ Continental Shelf”.⁴⁸ Cook Islands naturally sees the exploitation of these resources as an opportunity to diversify its economic base post-COVID 19, and beyond the sole dependence on the tourism sector. It is also an expressed assertion of sovereign, foreign affairs powers (as a member of multilateral organisations such as ISA), disentangling itself from New Zealand.

Curiously, PNG and Vanuatu, have no DSM legislation or policy framework yet. Much of the discussions about DSM going awry in Vanuatu and PNG may be attributed to the domestic priorities of these two countries—in the case of PNG, existing problems with land-based

mining and, the strong positions on climate change and ocean sustainability in the case of Vanuatu.

Because of the top-down nature of DSM planning, regional bodies will also be under significant scrutiny from civil society organisations in the Pacific. Regional organs (such as the SPC) are delicately positioned, and expectations are that these regional organisations are not seen as “lobbying” at the behest of DSM industry interests. There have been allegations of corporate interests encroaching into the mandate of intergovernmental agencies in the Pacific.⁴⁹

The corporate capture of regional organisations in the Pacific can weaken the credibility and sense of ownership of regional institutions. In close-knit Pacific communities, perceptions of regional organisations are useful for the work of advocacy groups. Any smear can have long-lasting effects on the reputation of regional bodies whose mandate is to represent the interests of Pacific communities. At the global level, the ISA has been accused of appearing compromised by corporate agendas, by apparently taking pro-DSM positions against the consensus from State parties to the ISA.⁵⁰ Regional institutions would do well to listen and adhere to the concerns of Pacific islanders.

How effective are civil society organisations?

The disparate localities and linguistic and cultural diversity in the Pacific can present a challenge for coordination of like-minded groups engaged in the civil society space. One can understand why the DSM agenda seems disconnected from discussions in the Pacific. Historical lessons in the Pacific demonstrate that region-wide coordination of advocacy work is dependent on significant levels of awareness of the issue, direct mobilisation of communities and availability of resources.

The Nuclear Free and Independent Pacific movement in the mid-1970s,⁵¹ provides useful starting points. The anti-nuclear movement was “the region’s first grassroots political movement”,⁵² with a wide array of connections built across the region, facilitating what Michelle Keown called “creative dialogue”.⁵³ The anti-nuclear movement of the 1980s, effortlessly coalescing with the decolonisation process in the Pacific allowed for healthy dialogue about the future of the Pacific.

The Pacific is a borderless world connected through ocean. Any claims of sovereign national interest disregard the intensive linkages that island communities are connected by ocean.⁵⁴ It is in all Pacific islanders’ interest to be fully cognisant of the likely impact of DSM on their livelihood and way of life. DSM is a frontier industry and, understandably, the preparatory work towards DSM has exclusively been directed at the bureaucratic and legislative echelons of decision-making for countries in the Pacific. The unintended consequence is that it may have been at the expense of holistic domestic consultations within and across all island communities.

In the 2050 Strategy for the Blue Pacific, one of the seven key themes listed is “People-Centred Development”. If the Blue Pacific framework is the basis for regional cooperation, does DSM enhance People-Centred Development? Disconnection between the aspirations of the peoples of the Pacific and the successive regional visions of their leaders is at the core of unsuccessful attempts to drive any sense of ownership of regional aspirations. The official positions and decisions of political leaders is one thing—the creative dialogue that includes the participation of Pacific islanders is missing in the debate on DSM.

A likely benefit of invoking a 10-year moratorium is that it provides a window for creative dialogue, allowing Pacific islanders to learn as much about their ocean and the many alternative ways of seeing it. Within the 10-year period, consistent within the time allotted as the Decade of Ocean Science for Sustainable Development 2021–2030, more information will have been generated from ocean research, and this scientific evidence could serve as basis for updated knowledge of the ocean environment, translated appropriately for use in the Pacific and help people make informed choices about DSM in their communities.⁵⁵

Serious conversations can also be had about the economic alternatives to DSM, and most importantly, the economic resilience of Smaller Island States within the Pacific Islands Forum during times of major global uncertainties. If “People-Centred Development” is what the region aspires to attain, Pacific island leaders should give effect to this ideal through their handling of complicated regional issues such as DSM.

Civil society groups and activists on the DSM issue have sought to reframe the narrative that looks at the ocean as some infinite source of material riches. At its core, the DSM

campaign is a contest of counteracting narratives about the value of a space long considered empty, devoid of life and readily available for exploitation by humans. Contrary to the notion that the Pacific Ocean is any empty space, modern science is proving that the ocean and its sustainability regulates climatic conditions.

The DSM debate provides a useful starting point to illuminate Pacific islanders' connections to their oceanic environment.⁵⁶ For example, ocean custodianship is an evocative narrative. It portrays the image of an inclusive and collective effort aimed at "protecting" the ocean, not because of some abstract feel-good environmental crusade, but because for thousands of years islanders have had a symbiotic relationship with the ocean.

Juxtaposing the Pacific world-view with science-based knowledge systems is finding its place in the scholarship surrounding DSM.⁵⁷ Civil society groups in the Pacific, growing transnational linkages and informed by painstaking research work into the ocean, are seeing indications that the DSM issue, even if rushed in official circles, is gradually a topic of import for creative dialogue in Pacific communities.

The wider implications of DSM for the Pacific

DSM has multiple implications for Pacific regionalism. Having committed the region to the *2050 Strategy for the Blue Pacific Continent*, Pacific leaders need to reconcile DSM with regional commitments, including conservation and sustainable use of the ocean.⁵⁸ Deep sea mining is already testing the capacity of Pacific island states to speak with one unified voice.⁵⁹ In a region on the frontline of the adverse effects of climate change, collective diplomacy and regional positions may be difficult to sustain.

States exercise jurisdictional sovereignty and prioritise domestic development of resource management to meet growing demands for economic growth. However, for Pacific states the added challenges of immediate national development priorities may undermine any regional efforts. The different positions are worth summarising.

Within the domestic arena, some of Cook Islands' major political parties have unanimously supported DSM within the EEZ. Recent reversal of policy position by its Opposition Democratic Party confirms the position of Cook Islands.⁶⁰ It has the added advantage of having two Cook Islanders—Mark Brown and Henry Puna—both strong supporters of DSM as incoming chair and Secretary General of the Pacific Islands Forum, respectively. Brown's chairmanship of the Pacific Islands Forum may further upgrade DSM as a regional priority.

Certain long-established relations in the Pacific islands may also be reconfigured. Cook Islands, one of two Polynesian countries (Niue being the other) in free association with New Zealand is at odds with New Zealand. New Zealand has officially supported a moratorium on DSM in international waters, but also within "national jurisdictions" until "robust legal frameworks, effective governance structures and high standards of environmental protection" are in place.⁶¹ It is from a strong and consistent track record on regional issues that New Zealand speaks from (at least since the days of the anti-nuclear movement in the 1980s).

Cook Islands, Nauru and Tonga have publicly supported DSM. Other Pacific island states are opposed. During the 2019 Pacific Leaders' Meeting in Tuvalu, Vanuatu and Fiji unsuccessfully pushed for a 10-year moratorium across the region. Federated States of Micronesia has also supported the calls for a moratorium. The economic vulnerabilities Pacific island economies were exposed during the COVID-19 episode, and the troubled levels of the economies of smaller countries in the region, mean that the incentives for sponsoring contractors to exploit deep sea resources of Pacific island countries are significant. A moratorium will be a hard sell to all member states of the Pacific Islands Forum.

DSM is the latest disruptor in the dynamics of regional politics. The abundance of mineral resources on their seabeds finds the Smaller Island States grouping (within the Pacific Islands Forum) assertive of their sovereignty and ability to shape regional agendas. Vanuatu or Fiji may have the luxury of a diversified economy and their positions on DSM may not appeal much to other countries with much smaller economies. DSM will not only boost the economies of countries such as Cook Islands, but also diminish reliance on sectors of the economy vulnerable to global disruptions, such as tourism.

Equally, Vanuatu, a country that is making important strides through raising the profile of climate change and environmental sustainability on global platforms, will realise that its

efforts are not matched in its own immediate neighbourhood. To be taken seriously on global agendas consistency is needed in the region. Countries may reconsider their part in supporting regional positions on matters that are not consistently addressed across the region. More importantly, the regional visions to which Pacific island leaders commit their countries need to be realistically connected to the aspirations of Pacific islanders.

Finally, the 10-year moratorium is a possible middle-ground in the short-term. Pacific island states can utilise the moratorium period to address regional concerns, domestic capacity, and renewed consultations, as well as promote ocean scientific research. The moratorium can also allow breathing space to rework a collective framework for a resource benefit/cost-sharing arrangement. Hon. Ralph Regenvanu (currently the Minister for Climate Change in Vanuatu) suggested “a regional approach to deep sea mining, a regional governance mechanism, regional regulations”.⁶² As demonstrated in some of the diplomatic blunders and outmuscling that some Pacific island states have endured during the ISA licence-approval episodes, Pacific island states cannot act single-handedly on DSM ventures in the Area. A regional coalition of sponsoring States can collectively act and use their power in numbers to deal with contractors and other DSM players.

Notes and references

- 1 Tilot, V, Willaert, K, Guilloux, B, Chen, W, Mulap, CY, Gaulme, F, Bambridge, T, Peters, K, and Dahl, A, 2021, 'Traditional Dimensions of Seabed Resource Management in the Context of Deep-Sea Mining in the Pacific: Learning From the Socio-Ecological Interconnectivity Between Island Communities and the Ocean Realm', *Frontier in Marine Science*, vol. 8, no. 637938, pp.1-27. doi: 10.3389/fmars.2021.637938
- 2 For the purposes of this discussion, deep sea "starts where the sunlight starts to fade, around 200m below the surface of the ocean" see Fauna and Flora International, 2020, *An Assessment of the Risks and Impacts of Seabed Mining on Marine Ecosystems*. FFI: Cambridge. www.fauna-flora.org. Even without sunlight, life forms exist, and a complex array of natural phenomena occur in this zone.
- 3 In 2017, the United Nations General Assembly resolution 72/73 proclaimed the decade 2021–2030 as the United Nations Decade of Ocean Science for Sustainable Development, emphasising the scientific study of the oceans as central to their sustainable management. This resolution was informed by the 2016 World Ocean Assessment; see, United Nations, 2016, *The First Global Integrated Marine Assessment World Ocean Assessment I*, United Nations General Assembly, <https://www.un.org/regularprocess/content/first-world-ocean-assessment>.
- 4 International Seabed Authority, 2021, *The Contribution of the International Seabed Authority to the Achievement of the 2030 Agenda for Sustainable Development*, International Seabed Authority: Kingston
- 5 The "Area", as defined under *UNCLOS* Preamble and Art.134 refers to "the seabed and ocean floor and the subsoil thereof, beyond the limits of national jurisdiction" United Nations Convention on the Law of the Sea.
- 6 In full, Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982. Both texts (UNCLOS and the 1994 Agreement) are read together in their application and the regulation of State parties' activities in the Area.
- 7 In an open letter to the International Seabed Authority and several government authorities, Tonga-based civil society group, The Civil Society Forum of Tonga aptly characterised the situation: "The Pacific is currently the world's laboratory for the experiment of Deep Seabed Mining," see Morse, I, 2021, 'Is the risk worth the reward for Pacific Island nations considering deep sea mining?', *The Pacific Advocate*, 8 October, <https://pacificadvocate.com/is-the-risk-worth-the-reward-for-pacific-island-nations-considering-deep-sea-mining/>. DSM has is defined in some instances as an "emerging resource frontier" see also Kung, A, Svobodova, K, Lebre, E, Valenta, R, 2020, 'Governing deep sea mining in the face of uncertainty', *Journal of Environmental Management*, vol. 279, pp.1-12, <https://doi.org/10.1016/j.jenvman.2020.111593>. The term frontier implies risky and at best an industry that is experimental in nature.
- 8 An example would be Nauru's sponsoring clarification on obligations and liabilities for sponsoring state parties of ISA for seabed mining ventures [see Seabed Disputes Chamber of the International Tribunal for the Law of the Sea, Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, Advisory Opinion, February 1, 2011.
- 9 McDonald, J, 2021, 'Pacific Island Nations Consider Deep-sea Mining, Despite Risks', *The Diplomat*, June 18, <https://thediplomat.com/2021/06/pacific-island-nations-consider-deep-sea-mining-despite-risks/>.
- 10 Maclellan, N, 2022, 'Cook Islands: "Uphold the decision-making process of our Forum leaders"', *Islands Business*, 14 July, <https://islandsbusiness.com/news-break/cook-islands-3/>

- 11 The rule states that, if asked, “the ISA must develop regulations within two years if a country intends to apply for approval to mine, and that if the regulations are not finalised in time, the mining application will be judged against whatever provisional rules have been discussed” see Crosse, G, 2022, Wealth in the water: the face-off over deep-sea mining in Oceania’, *Mining Technology*, 22 September, <https://www.mining-technology.com/features/deep-sea-mining-legislation-seabed-authority/>.
- 12 For a discussion on the legal implications in invoking the “two-year rule”, and thoughts on the way forward in the event of any foreseeable delay in adhering to the two-year timeframe, see Willaert, K, 2021, ‘Under Pressure: The Impact of Invoking the Two Year Rule within the Context of Deep Sea Mining in the Area’, *The International Journal of Marine and Coastal Law*, vol. 36, no. 3, pp. 505-513, <https://doi.org/10.1163/15718085-bja10068>.
- 13 DeepGreen, after combining businesses with Sustainable Opportunities Acquisition Corporation in 2021 was renamed as The Metals Company or TMC. TMC is successor to DeepGreen (formed in 2011), a company of which Barron was also the CEO.
- 14 Deep Sea Mining Campaign, 2019, *Why the Rush? Seabed Mining in the Pacific Ocean*, July, London Mining Network, Mining Watch Canada, <http://www.deepseaminingoutofourdepth.org/wp-content/uploads/Why-the-Rush.pdf>.
- 15 International Seabed Authority website, ‘About ISA’, <https://www.isa.org.jm/about-isa>.
- 16 The CCFZ is remarkably abundant in polymetallic nodules, containing “valuable rare earth minerals, and have become an attractive prospect for miners” see Crosse, G, 2022, Wealth in the water: the face-off over deep-sea mining in Oceania’
- 17 International Seabed Authority, 2019, ‘Pacific Small Island Developing States Capacity Building Workshop on Deep Seabed Mining’, *International Seabed Authority*, 7 February, <https://www.isa.org.jm/index.php/news/pacific-small-island-developing-states-capacity-building-workshop-deep-seabed-mining>.
- 18 *UNCLOS* for instance provides that: “exploration licenses for the Area are granted by the International Seabed Authority (ISA) and the ISA may only grant exploration contracts to state sponsored companies. Furthermore, *UNCLOS* gives preferential access to seabed minerals in the Area to developing States” see Deep Sea Mining Campaign, 2019, *Why the Rush? Seabed Mining in the Pacific Ocean*.
- 19 United National General Assembly, 1967, ‘First Committee 1515th Meeting, Twenty Second Session, Official Records’, https://www.un.org/depts/los/convention_agreements/texts/pardo_ga1967.pdf
- 20 Ibid
- 21 The delay in Nauru’s bid was partly to do with “ ... the increasing number of states and observers from civil society raising concerns about the safety and necessity of deep-sea mining. Some member states, including Palau, Fiji and Samoa, have even called for a moratorium on deep-sea mining until more is understood about the marine environment that companies want to exploit. Other concerns hinge upon an environmental impact statement (EIS) that NORI had to submit in order for mining to begin”, see Alberts, EC, 2022, Concerns over transparency and access abound at deep-sea mining negotiation’, *Mongabay*, 26 July, <https://news.mongabay.com/2022/07/concerns-over-transparency-and-access-abound-at-deep-sea-mining-negotiations/>.
- 22 The 1992 United Nations Rio Declaration on Environment and Development states that: “[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”
- 23 See for instance the landmark Seabed Disputes Chamber of the International Tribunal for the Law of the Sea, Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, Advisory Opinion, February 1, 2011.

- 24 Cook Islands, Kiribati, Tonga, and Nauru all act as sponsor states for exploration permits in the CCFZ.
- 25 Deep Sea Mining Campaign, 2019, Why the Rush? Seabed Mining in the Pacific Ocean
- 26 ABC News In-Depth, 2017, 'This Concrete Dome Holds A Leaking Toxic Time bomb', *Foreign Correspondent*, November 27, https://www.youtube.com/watch?time_continue=497&v=autMHvj3exA&feature=emb_title
- 27 See also, Niedenthal, J, 2001, For the Good of Mankind: A History of the People of Bikini and Their Islands, Majuro: Micromonitor Publishing
- 28 Matthew Gianni, co-founder of the [Deep Sea Conservation Coalition](#) states that "Mining companies are working hard to convince politicians of the potential benefits of deep-sea mining" see [Berger, A](#), 2021, 'Deep-sea mining: civil society highlights threat posed to biodiversity', *Equal Times*, 17 September, <https://www.equaltimes.org/deep-sea-mining-civil-society#.Y4Vdq3ZBzIU>. The resources and public relations efforts is intensive and is convincingly effective given the high stakes involved in this unknown area of resource extraction. Propping up shareholder confidence in a risky venture is also reason for the marketing of DSM as environmentally friendly.
- 29 EMTV Online, 2014, 'Mel Togolo On Solwara 1', August 29, <https://www.youtube.com/watch?v=3KioFog6oTc>
- 30 See for instance, Childs, J, 2019, 'Greening the blue? Corporate strategies for legitimising deep sea mining', *Political Geography*, vol. 74, pp: 1-11, doi:10.1016/j.polgeo.2019.102060
- 31 International Seabed Authority website, 'SG's Award for Excellence in Deep-Sea Research', <https://www.isa.org.jm/secretary-general-award-excellence-deep-sea-research>,
- 32 Maclellan, N, 2017, 'France and the Blue Pacific', *Asia and the Pacific Policy Studies*, vol. 5, no. 3, pp. 426–441, The Australian National University, doi: 10.1002/app5.228.
- 33 The Economic Times, 2022, 'India plans network of marine research stations in Pacific Island nations', *The Economic Times*, 29 June, <https://economictimes.indiatimes.com/news/india/india-plans-network-of-marine-research-stations-in-pacific-island-nations/articleshow/92544417.cms>.
- 34 It was reported that PNG's Department of Justice and Attorney General and stakeholders introduced new guidelines meant to regulate ocean research. The guidelines ensure PNG's "ownership over any future marine discoveries, the guidelines also require foreign researchers to partner with a higher education institute in the country in order to build local capacity and ensure the exchange of knowledge." see Maginde, L, 2022, 'Marine research guidelines set', *The National*, May 11, <https://www.thenational.com.pg/marine-research-guidelines-set/>.
- 35 Pacific leaders formally acknowledge the sovereign existence of their states in their dealing with external powers. The same levels of vigilance should also be expected in interactions with resourceful non-state actors and safeguarding Pacific island states from adverse effects associated with DSM. In 2011, Nauru when making its submission to the International Tribunal for the Law of the Sea, seeking an advisory opinion, stated: "Not only do some developing States lack the financial capacity to execute a seafloor mining project in international waters, but some also cannot afford exposure to the legal risks potentially associated with such a project. Liabilities or costs could, in some circumstances, far exceed the financial capacities of Nauru (as well as those of many other developing States)" (Seabed Disputes Chamber of the International Tribunal for the Law of the Sea, Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, Advisory Opinion, (Feb. 1, 2011), para 4). The reality of DSM is that Pacific island states acting as individual states may be more vulnerable from predatory players and unable to mitigate any damaging fallout from dealing with unfavourable outcomes of these unknown industry operators.

- 36 DW Global Media, 2022, 'China fails to strike security deal with Pacific nations', *DW Global Media*, May 30, 2022, available online: <https://www.dw.com/en/china-fails-to-strike-security-deal-with-pacific-nations/a-61971391>.
- 37 Pacific island countries have control over a combined 12 million square miles of ocean. Approximately 15 percent of surface of the planet is the combined EEZs of Pacific islands states.
- 38 The World Bank Group, 2017, 'Precautionary Management of Deep Sea Mining Potential in Pacific Island Countries', *Pacific Possible Background Paper Number 2*, The World Bank Group, <https://openknowledge.worldbank.org/bitstream/handle/10986/28298/119106-WP-PUBLIC-114p-PPDSMbackgroundfinal.pdf?sequence=1&isAllowed=y>.
- 39 Rosenbaum, H, 2011, Out of our depth – Mining the ocean floor in Papua New Guinea
- 40 The 15 participating countries are: Cook Islands, Federated States of Micronesia (FSM), Fiji, Kiribati, Republic of Marshall Islands (RMI), Nauru, Niue, Palau, Papua New Guinea (PNG), Samoa, Solomon Islands, Timor Leste, Tonga, Tuvalu, and Vanuatu. Although, Timor Leste, is a non-Member of the Pacific Islands Forum, Timor's Ministry of Finance organised a workshop and consultative meeting which was held in October 2012, with officials from the SPC-EU Deep Sea Minerals Project invited to participate.
- 41 Secretariat of the Pacific Community, (nd), 'Achievements of the SPC-EU Deep Sea Minerals Project Strengthening the Management of Deep Sea Minerals in the Pacific (March 2011-March 2014)', https://dsm.gsd.spc.int/public/files/Deep%20Sea%20Minerals%20Projects%20Achievements%20Brochure_V2.pdf.
- 42 '43rd Pacific Islands Forum Communique', *ABC News*, 31 August, 2012, <https://www.abc.net.au/news/2012-08-31/an-forum-communique/4237098>.
- 43 Secretariat of the Pacific Community, (nd), 'Achievements of the SPC-EU Deep Sea Minerals Project Strengthening the Management of Deep Sea Minerals in the Pacific (March 2011-March 2014).
- 44 Secretariat of the Pacific Community, (nd), 'Achievements of the SPC-EU Deep Sea Minerals Project Strengthening the Management of Deep Sea Minerals in the Pacific'
- 45 'Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area', *Jus Mundi*, 11 February, 2011, <https://jusmundi.com/en/document/decision/en-responsibilities-and-obligations-of-states-sponsoring-persons-and-entities-with-respect-to-activities-in-the-area-advisory-opinion-tuesday-1st-february-2011>.
- 46 'Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area'.
- 47 'New Zealand opposes seabed mining in international waters', *RNZ*, 28 October, 2022, <https://www.rnz.co.nz/international/pacific-news/477510/new-zealand-opposes-seabed-mining-in-international-waters>.
- 48 Cook Islands Seabed Minerals Authority website, <https://www.sbma.gov.ck/>
- 49 PNG Today, 2016, 'Seabed Mining hyped, but serious concerns remain', *ACTNow*, 14 March, <https://actnowpng.org/blog/blog-entry-seabed-mining-hyped-serious-concerns-remain>.
- 50 Deep Sea Mining Campaign, 2019, *Why the Rush? Seabed Mining in the Pacific Ocean*; for an extended discussion on corporate capture of the ISA by business interests; see also Cassoná, L, 2020, *Deep Trouble – The murky world of the deep sea mining industry*, Greenpeace International, [c86ff110-pto-deep-trouble-report-final-1.pdf](https://www.greenpeace.org/international/press/reports/c86ff110-pto-deep-trouble-report-final-1.pdf).
- 51 Tagicakibau, E, 2021 'The South Pacific Nuclear Free Zone Treaty: 35 years on', *Devpolicy blog*, January 22, <https://devpolicy.org/the-south-pacific-nuclear-free-zone-treaty-35-years-on-20210122-2/>

- 52 Mangioni, TL, 2021, 'The transnational struggle against nuclear colonialism in the "sea of islands"', 14 December, <https://thefunambulist.net/magazine/the-ocean/the-transnational-struggle-against-nuclear-colonialism-in-the-sea-of-islands>
- 53 Keown, M, 2018, 'Waves of destruction: Nuclear imperialism and antinuclear protest in the indigenous literatures of the Pacific', *Journal of Postcolonial Writing*, no.54, vol.5, pp.585–600, doi: 10.1080/17449855.2018.1538660
- 54 John Luick (2022) in simulations of the benthic plumes from the Nauru-sponsored NORI Licence area attempts to draw attention to the role of currents and sedimentation spread from areas earmarked for DSM in the CCFZ. The initial results from Luick's study demonstrate how unrestrained the movement of ocean currents are and the implications for sedimentation movement (see Luick, J, 2022, *Blue Peril: A Visual Investigation of Deep Sea Mining in the Pacific Islands*, Deep Sea Mining Campaign, https://www.stopdeepseamining.ca/wp-content/uploads/2022/01/nodule_mining_in_the_pacific_ocean.pdf).
- 55 A principle that CSOs evoke is "free, prior informed consent". This principle, especially in resource development projects, presupposes that affected communities ought to have prior and balanced information about the project's costs and benefits to be able to give consent to its operations in their environs.
- 56 Pickering, V, 2021, 'Seabed mining a disturbing new threat to the Pacific', *Island Times*, 4 May, <https://islandtimes.org/seabed-mining-a-disturbing-new-threat-to-the-pacific/>.
- 57 Tilot, V, Willaert, K, Guilloux, B, Chen, W, Mulalap, CY, Gaulme, F, Bambridge, T, Peters, K, and Dahl, A, 2021, 'Traditional Dimensions of Seabed Resource Management in the Context of Deep Sea Mining in the Pacific: Learning From the Socio-Ecological Interconnectivity Between Island Communities and the Ocean Realm'.
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- 59 Bainton, N, and Skrzypek, E, 2022, 'Pacific nations are extraordinarily rich in critical minerals. But mining them may take a terrible toll', *The Conversation*, 3 August, <https://theconversation.com/pacific-nations-are-extraordinarily-rich-in-critical-minerals-but-mining-them-may-take-a-terrible-toll-187172>.
- 60 Pasifika Environews, 2021, 'Cook Islands PM welcomes Opposition's stance on seabed mining', *Pacific Geojournalism*, 22 March, <https://pasifika.news/2021/03/cook-islands-pm-welcomes-oppositions-stance-on-seabed-mining/>.
- 61 Littlewood, M, 2022, 'Cook Islands Prime Minister Mark Brown says his government's stance on deep sea mining might end up in a 'different vaka' to New Zealand', *Cook Islands Seabed Minerals Authority*, 14 October, <https://www.sbma.gov.ck/news-3/article-98>.
- 62 RNZ, 2022, 'Call for strong action against deep sea mining in Pacific', *RNZ*, 14 April, <https://www.rnz.co.nz/international/pacific-news/465297/call-for-strong-action-against-deep-sea-mining-in-pacific>.

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