

Banning Seabed Mining in Vanuatu:

Advice on What Legislative Measures Would Be Required to Ban Any Possible Seabed Mining in Vanuatu, Now and Into The Future.

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A brief policy paper on the legal approaches that are needed to be considered by the Vanuatu Government to implement a ban on seabed mining. This paper identifies:

- The extent to which seabed mining could be beneficial yet potentially harmful to Vanuatu ;
- The necessary legal instruments needed to be enacted by Vanuatu to ensure there is a proper ban in place; and
- The recommended approach to effectively implement such a ban.

Legal Advice On The Legislative Measures Required To Ban Any Possible Seabed Mining In Vanuatu, Now And Into The Future

I. INTRODUCTION

A. Background

The advancement of technology has ushered in a new generation of conscious policy makers who aim to ensure that any new proposed developments are carried out sustainably. In the pursuit of diversifying humanity's need for raw resources and decreasing the global reliance on fossil fuels, world leaders are now looking to the sea for solutions. Deep Sea Mining (hereafter known as 'DSM') or Sea Bed Mining, is the controversial solution that experts suggest would be the main approach to meet the global demand for raw materials. DSM involves extracting rich mineral resources from the seabed using cutting edge machinery and vessels.

Up until 2014, the Vanuatu Government has issued about 145 licenses for offshore mining exploration and prospecting, and another 3 for offshore oil exploration.¹ However, as it currently stands, no DSM related license has been issued since 2014.² These past licenses were issued without any proper national regulatory framework for seabed mining or for scientific research, let alone any proper understanding of what the prospecting process entails and what lies on our seabed. As the custodians of the world's biggest ocean, we Pacific Islanders and especially the Vanuatu people have a moral obligation to protect it against exploitation and destruction.

B. Current Issue

Due to the rich resource extraction, DSM operations could potentially increase Government revenue. Unfortunately, there still exists great uncertainty over the environmental consequences and the immediate impacts it could have on Pacific Island states given that there is still need for further research and dialogue on the various impacts of DSM. Civil society organizations and most national associations in Vanuatu have extensively reiterated that there needs to be a precautionary approach to DSM and a major policy change needs to be

¹ Papua New Guinea Mine Watch, 'Vanuatu Minister Calls on Pacific Governments to Respect People's Wishes on Experimental Seabed Mining' (2013) <http://www.deepseaminingoutofourdepth.org/vanuatu-minister-calls-on-pacific-govts-to-respect-peoples-wishes-on-experimental-seabed-mining/> (Accessed 28 June 2021).

² Interview with Brooks Rakau, Tenement Licensing Officer at the Vanuatu Department of Geology and Mines (By Jordan Aru, at the Vanuatu Ministry of Lands and Natural Resources, 16 July 2021).

advocated for.³ However, with the impending ‘new gold rush’ steadily making progress in other Pacific Island states⁴ and internationally,⁵ there has been a need to find a quick suitable solution.

The Vanuatu Government has made efforts to approach DSM activities in a transparent and sustainable manner. This is reflected in the Government’s policy on DSM in the *National Ocean Policy*.⁶ The objectives proposed in the policy indicate that DSM may have the potential of being considered by the Government given that, (i) transparent regulatory frameworks are in place, (ii) DSM benefits are equitably shared, and (ii) that there are efforts made to protect marine ecosystems. However, this is in contrast to the opinions of the wider public. In Vanuatu, there is a general consensus that a ban must be put into place to stop DSM because of its potential harmful impacts on both the environment and to a majority of Ni-Vanuatu that depend on marine resources.⁷ This proposed ban would reaffirm the Government’s commitment to the *National Sustainable Development Plan* and would ensure that various potential issues relating to this *Plan* are resolved in a timely manner. This includes but is not limited to, the recognition of rights of custom owners over waters and the sea bed, the lack of a specific DSM legal framework, and the importance of protecting Vanuatu’s endemic marine species.⁸

This policy paper will firstly highlight some main discussions about the advantages and disadvantages of DSM. Secondly the paper will outline what legislative measure(s) would be required to ban any possible DSM in Vanuatu, now and into the future.

II. DISCUSSION

A. Benefits of DSM

Some may argue that there are a number of benefits associated with DSM.

Potential Economic Benefits

Firstly, DSM consultations have always involved discussions promising to bring in much needed revenue into a nation’s economy. The existence of precious metals and in-demand mineral resources have greatly boosted the economic viability of DSM operations. To clearly understand how valuable the Pacific seafloors were worth, the Secretariat of the Pacific Community (SPC), in conjunction with the European Union (EU), issued a report detailing an initial cost-benefit analysis of DSM in the Pacific Region. The report states that, for example, if Polymetallic

³ Pacific Institute of Public Policy, *DSM: Starting a Dialogue, A report on the Vanuatu Government’s consultation workshop 7-9 October, 2014* (2014).

⁴ The World Bank, *Precautionary Management of Deep Sea Minerals: Pacific Possible Background Paper No.2.* (2017).

⁵ International Seabed Authority, ‘Exploration Contracts’ (2021) <https://www.isa.org.jm/deep-seabed-minerals-contractors> (Accessed 18 June 2021).

⁶ A policy aimed to establish a framework that supports the best marine resource management practices.

⁷ The main civil society organisations in Vanuatu signed the *Vanuatu National CSO Resolution on Sea Bed Mining* in 2017. This petition called on the government to place a moratorium on DSM.

⁸ Government of the Republic of Vanuatu, *Vanuatu 2030 The People’s Plan: National Sustainable Development Plan 2016 to 2030* (2016).

Nodules were to be mined in Cook Islands the net benefits would reach approximately USD\$ 467 million.⁹ This would significantly increase the GDP of any Pacific Island state If DSM was given approval. However, as a precaution, it is important to note that, the mentioned analysis was only hypothetical and did not involve possible environmental or social risks.

Potential Environmental Benefits

DSM operations involve the extraction of three main resources. These resources are called, Seafloor Massive Sulphides (SMS), Cobalt Rich Crusts and Polymetallic Manganese Nodules (PMN).¹⁰ These mineral resources contain not only one but a variety of metals and minerals. SMS are found near hydro-thermal vents on the seafloor. They are estimated to contain huge amounts of copper, iron, zinc and gold.¹¹ In addition, Cobalt Rich Crusts may contain iron and manganese and also small traces of precious metals (platinum) and Rare Earth Elements (REE).¹² Similarly, PMNs, although small in diameter, may contain a variety of minerals ranging principally of manganese and iron with significant traces of nickel, copper and cobalt, along with traces of lithium, molybdenum and various REEs.¹³ With these mentioned metals and minerals, it is likely that one DSM operation could in fact replace almost multiple land-based mining operations due to the large variety of metal and mineral extraction. It would be inevitable that carbon emissions from land mines would be reduced because the world would now be looking to tap into the large accumulation of metals under the sea.¹⁴ Furthermore, in today's environmentally-friendly conscious world, the need for green technology has never been greater. The metals and minerals contained in SMS, Cobalt Crusts and PMNs are currently being used to manufacture reusable batteries, electric cars and solar powered devices.¹⁵ Therefore, the need to extract resources from the seafloor is now more essential than ever before.

B. Potential Problems related to DSM

Public Disagreement

Although DSM would reap significant economic and social benefits for Vanuatu, the great unknown and uncertainties of DSM is yet to be determined because there is limited understanding about the full impacts of DSM on marine ecosystems, species and food chains, including those relied upon by our own species. The scraping of the ocean floor by machines can alter or destroy deep-sea habitats leading to loss of species and fragmentation or loss of ecosystem. In Vanuatu, *the Vanuatu Association of Non- Government Organization (VANGO), Vanuatu*

⁹ Deep Sea Minerals Project, Secretariat of the Pacific Community and European Union, *An Assessment of the Costs and Benefits of Mining Deep-sea Minerals in the Pacific Island Region: Deep-sea Mining Cost-Benefit Analysis / Pacific Community* (2016).

¹⁰ International Union for Conservation of Nature, 'Deep-sea Mining' (2021) <https://www.iucn.org/resources/issues-briefs/deep-sea-mining> (Accessed 18 June 2021).

¹¹ SPC (2013). Deep Sea Minerals: Sea-Floor Massive Sulphides, a physical, biological, environmental, and technical review. Baker, E., and Beaudoin, Y. (Eds.) Vol. 1A, Secretariat of the Pacific Community.

¹² SPC (2013). Deep Sea Minerals: Cobalt-rich Ferromanganese Crusts, a physical, biological, environmental, and technical review. Baker, E. and Beaudoin, Y. (Eds.) Vol. 1C, Secretariat of the Pacific Community.

¹³ Cuyvers, L., Berry, W., Gjerde, K., Thiele, T. and Wilhem, C. (2018). Deep seabed mining: a rising environmental challenge. Gland, Switzerland: IUCN and Gallifrey Foundation. x + 74pp.

¹⁴ Damian Carrington, 'Is DSM vital for a greener future – even if it destroys ecosystems?' The Guardian (London, UK) 4 June 2017, <https://www.theguardian.com/environment/2017/jun/04/is-deep-sea-mining-vital-for-greener-future-even-if-it-means-destroying-precious-ecosystems> (Accessed 18 June 2021).

¹⁵ Ibid.

Council of Church (VCC), Malvatumauri National Council of Chiefs, Vanuatu National Council of Women, Vanuatu Cultural Centre, Media Association of Vanuatu, Vanuatu Environment Advocacy Network, Vanuatu Indigenous Land Defense Desk, Presbyterian Church of Vanuatu, Vanuatu Environmental Science Society, Vanuatu Provincial Tourism Council and Youth Challenge Vanuatu have agreed to place a ban on DSM operations in Vanuatu.¹⁶ This is important because it represents the view of Vanuatu youths, chiefs, church leaders, service providers and community leaders that Vanuatu should ban DSM.

Dependence on Marine Resources

As a Pacific Island Country, Vanuatu is socially and economically dependent on marine resources and if there is no ban on DSM then the damages that it will bring to the sea ecosystems and habitats will be devastating and irreversible. The risk of giant sediment plumes travelling beyond the mining sites, smothering and potentially destroying all life forms on the sea floor is too great and the recovery of biodiversity destruction is one that we will most likely never recover from. Polymetallic Nodules which are considered potential targets for DSM take millions of years to form and they provide critical habitat for an array of unique and largely understudied species including deep-sea corals, sponges, sea urchins, starfish, jellyfish, squid, octopus, shrimp and sea cucumbers.¹⁷ Sediment plumes and waste discharge from mining could upset phytoplankton blooms at the sea's surface and introduce toxic metals into marine food chains.¹⁸ These marine waste could also damage nearby seamounts and coral reef systems which many fish and marine mammal species depend upon for shelter and food and put entire fisheries at risk. It would affect local fisheries that provide local wealth, employment and food security for many islanders.

Climate Change

Vanuatu is an island nation that is vulnerable to climate change and DSM could worsen the impacts of climate change. The deep sea is one of our best defense against climate change because the sediment down in the sea bottom helps sequester carbon from the atmosphere and lock away carbon. Mining the seabed could disrupt this natural ocean process and lead to the release of these stored carbon into the mid-ocean columns and potentially into the atmosphere leading to an increase in greenhouse gas emissions at a time when the global community is seeking to limit the earth's temperature to 1.5 degrees celsius.¹⁹

In light of the above analysis, it is submitted that given the potential risks and the limited number of studies assessing the impacts of DSM operations, it would be appropriate to approach this development with a proper legal framework in place. However, the outcome of Vanuatu's National DSM Consultations have clearly indicated that a majority of people do not support the idea of having any DSM related activities in Vanuatu. The Government has since then received multiple requests from various stakeholders and civil society groups to cease all DSM related activities and to implement a ban on such activities. Therefore, in taking all of these factors into consideration, we are of the view that proper legislative measures need to be adopted to permanently ban existing and future DSM related activities in Vanuatu.

¹⁶ Above n 7.

¹⁷ Alberts. C. E (2020) Deep-sea Mining: An Environmental Solution or Impending Catastrophe, Conservation News, <https://www.google.com/amp/s/news.mogabay.com/2020/06/deep-sea-mining-an-environmental-solution-or-impending-catastrophe/amp>, (Accessed 18 June 2021).

¹⁸ Ibid.

¹⁹ Casson. L, (2019) DSM is not the Future, Greenpeace, <https://www.greenpeace.org/international/story/23285/deep-sea-mining-no-future/>, (Accessed 18 June 2021).

The following are the proposed legislative measures to be considered by the Vanuatu Government in order to permanently ban any deep sea mining or seabed mining activity in Vanuatu:

III. LEGISLATIVE MEASURES

A. Amending the Mines and Minerals Act

Mines and Minerals (Amendment) Act No of 2021

Commencement:

REPUBLIC OF VANUATU

THE MINES AND MINERALS (AMENDMENT) ACT

No. of 2021

Arrangement of Sections

- 1 Amendment
- 2 Commencement

REPUBLIC OF VANUATU

MINES AND MINERALS (AMENDMENT) ACT

No. OF 2021

An Act to amend the Mines and Minerals Act [CAP. 190]

BE IT ENACTED by the President and Parliament as follows: -

1. Amendment

The Mines and Minerals Act No. 11 of 1986 is amended as set out in the Schedule,

2. Commencement

This Act Commences on the day on which it is published in the Gazette.

SCHEDULE

AMENDMENTS OF MINES AND MINERALS ACT NO. 11 OF 1986

1. Section 1 of the Mines and Minerals Act No. 11 of 1989 (hereinafter referred to as the “Act” is further amended

(a) by repealing the definition of the word “land” and substituting the following definitions:

“land” includes-

(a) surface area that is solid ground and not water;

(b) land above the mean high water mark;

(c) does not include the land beneath water and the seabed and subsoil beneath the territorial sea.

2. Section 1 (3)

Repeal the paragraph.

3. Section 3 (2)

After “this Act (other than Parts XIII and XIV) shall” insert “not”.

4. Section 67 (8)

Repeal this paragraph.

5. Section 74 of the Act is amended in subsection (4) (a) and (b) by the deletion of the following words: -

“Without limiting the generality of subsection (3) a person carrying on operations under a Mining Right shall not, except where that person gives to the Minister prior notice in writing of the expected nature and duration of the interference, take action which in any way will interfere with -

(a) fishing; or

(b) navigation,

lawfully carried on.”

B. Creating a specific prohibition Act

DRAFT

REPUBLIC OF VANUATU

BILL FOR THE SEABED MINING PROHIBITION ACT

Explanatory Note

The Vanuatu Government has conducted a national consultation on a draft Deep Sea Minerals Policy. The draft Policy sets out Vanuatu's strategic planning policies in relation to its deep sea minerals. The Government has also carried out a workshop on Deep Sea Mining hosted by the Vanuatu Ministry of Lands and Natural Resources on 7-9th October 2014. As a result of these public consultation processes, representatives from the Malvatumauro National Council of Chiefs, Civil Society Organizations, and other national organizations have called on the Government to permanently ban all seabed mining related activities now and into the future.

This public consensus is reflected in the Vanuatu National CSO Resolution on Sea Bed Mining. This Resolution, signed in 2017, notes the fundamental duties of every person to safeguard the national wealth, resources and environment in the interest of the present and future generation as stipulated in the Constitution of Vanuatu. The Resolution also recalls the goals stated under the Environment Pillar of Vanuatu's National Sustainable Development Plan 2015 – 2030.

In acknowledging the strong public protest, the great uncertainties, the cultural heritage of the Ni-Vanuatu people and the global cautionary stance linked with seabed mining, the Vanuatu Government hereby submits that the policy intention of this Bill is to:

- Put in place a permanent nationwide prohibition on all seabed mining related activities within the Exclusive Economic Zone (EEZ) and Vanuatu's coastal and territorial waters (governed under the Maritime Zones Act No. 6 of 2010);
- Prohibit the issuing and creation of all exploration licenses, prospecting licenses and mining licenses for any seabed mining related activities;
- Retrospectively withdraw existing exploration, prospecting and mining rights related to seabed mining; and
- Prohibit the Government of Vanuatu from being a sponsoring State to any seabed mining related activities in international waters.

Arrangement of Sections

1. Title.
2. Commencement.
3. Purpose.

PART 1 - GENERAL

4. Interpretation.

PART 2 - PROHIBITION

5. Seabed Mining Prohibition.

PART 3 – TRANSITIONAL MATTERS

6. Existing licenses revoked.
7. Matters pending on commencement date.
8. No compensation payable.

PART 4 – MISCELLANEOUS

9. Exceptions.
10. Offences and Penalties.
11. Orders.

The Parliament of Vanuatu enacts as follows:

1. Title.

This Act is the Seabed Mining Prohibition Act 2021.

2. Commencement.

This Act comes into force on the day after the date on which it receives the Presidential assent.

3. Purpose.

The purpose of this Act is to permanently prohibit any activities relating to the prospecting for, exploration for, and mining of State owned minerals on and under the seabed in the Republic of Vanuatu.

The Act also prohibits any State sanctioned activities relating to the prospecting for, exploration for, and mining of minerals under the jurisdiction of the International Seabed Authority.

PART 1 – GENERAL

4. Interpretation.

In this Act, unless the context otherwise requires –

“Act” means the Seabed Mining Prohibition Act 2021;

“Appropriate Minister” means the Minister for the time being responsible for matters relating to mineral resources;

“Commencement Date” means the date on which this Act comes into force;

“Company” means any incorporated company registered in Vanuatu or registered overseas;

“Existing application” means an application for a license or similar document for a prohibited activity and/or prohibited overseas activity that—

- (a) was lodged by a person and/or company under the Mines and Minerals Act [Cap 190] or any other piece of legislation before the commencement date; and
- (b) as at the commencement date had not been finally determined;

“Existing license” means any license or similar document for a prohibited activity and/or prohibited overseas activity that is current immediately before the commencement of the Act;

“License” means an exploration license, a prospecting license and a mining license, or any of them, relating to the prohibited activity and/or relating to the prohibited overseas activity as the context requires;

“Maritime Zones” means any or a combination of the following as stated under the Maritime Zones Act No. 6 of 2010 of Vanuatu:

- (a) Internal Waters;
- (b) Archipelagic Water;
- (c) Exclusive Economic Zone;
- (d) Roadsteads;
- (e) Territorial sea;
- (f) Contiguous Zone;
- (g) Continental Shelf;

“Prohibited activity” means any activity relating to the prospecting or exploration for, or the mining of, State owned minerals on or under the seabed in Vanuatu’s Maritime Zones;

“Prohibited overseas activity” means any State sanctioned activity relating to the prospecting or exploration for, or the mining of, minerals under the jurisdiction of the International Seabed Authority;

“Vanuatu” means the Republic of Vanuatu.

PART 2 – PROHIBITION

5. Seabed Mining Prohibition.

(1) Any activity relating to the prospecting or exploration for, or the mining of, State owned minerals on and/or under the seabed in Vanuatu is prohibited.

(2) Any State sanctioned activity relating to the prospecting or exploration for, or the mining of, minerals under the jurisdiction of the International Seabed Authority is prohibited.

(3) The issuing of any license or similar document, relating to a prohibited activity and/or a prohibited overseas activity shall be prohibited.

(4) The appropriate Minister is prohibited from creating, amending or authorizing any other legislation or order which would contravene the purposes of this Act.

PART 3 – TRANSITIONAL MATTERS

6. Existing licenses revoked.

(1) Existing licenses are revoked.

(2) Any activity that was authorized by a license that is revoked in accordance with this section must immediately stop.

7. Matters pending on commencement date.

All existing applications and existing licenses are revoked.

8. No compensation payable.

(1) No compensation is payable by the Government for any loss or damage, or any adverse effect on or under any right or interest, arising from the enactment or operation of the Act.

(2) If there is any inconsistency between this clause and any other enactment or rule of law, this clause prevails over that enactment or rule of law.

PART 4 – MISCELLANEOUS

9. Exceptions.

Nothing in this Act shall make it an offence or prohibit the granting of any application or grant in respect to the following –

- (1) any scientific and educational research related activity involving Vanuatu's Maritime Zones;
- (2) any potential dredging for port development and maintenance activities, geothermal activities and fishing; and
- (3) any other State sanctioned infrastructural development that would involve altering the natural features in Vanuatu's Maritime Zones.

10. Offences and Penalties.

- (1) Any contravention of this Act, or of any order made hereunder, shall be deemed to have occurred in Vanuatu.
- (2) Any contravention of this Act, or of any order made hereunder, shall be dealt with according to Vanuatu law.
- (3) Any person and/or company that contravenes this Act or any order made hereunder shall be liable on conviction to a fine not exceeding 5,000,000 VT or to imprisonment for 5 years or both such fine and imprisonment.

11. Orders.

- (1) The appropriate Minister may by order -
 - a. regulate the conduct of any scientific and educational research related activity involving Vanuatu's Maritime Zones; and
 - b. provide otherwise for the better carrying out of the provisions of this Act and for its due administration.

For the purpose of completeness, the following measure is an option, which has been adopted by a number of countries including the Republic of Fiji.

IV. MORATORIUM

A ‘moratorium’ is an official postponement or temporary suspension²⁰ of any planned, or proposed governmental activity or law. With the recent international developments²¹ made to hastily finalize global deep sea mining operations and procedures, there has been an equally growing call for governments to implement a moratorium on the activity.

A. Arguments Supporting A Moratorium

Lack of Transparency

The *International Seabed Authority (ISA)*²² is tasked, under the *United Nations Convention on the Law of the Sea (UNCLOS)*, to be the main regulatory body in managing mineral resources in the “Area”-seabed and ocean floor and subsoil beyond a state’s national jurisdiction.²³ The ISA’s role, however, is compromised by various corporate agendas.²⁴ Nearly most of the data collected by the ISA is confidential²⁵ and as such this contradicts the notion that the “Area” is a common heritage of humankind.²⁶ Furthermore, the ISA does not seem to allow any civil society representatives in their consultation workshops.²⁷ This is very worrying as it could result in corporate interests overpowering any environmental or socio-economic interests associated with the ocean.

²⁰ Oxford English Dictionary Online, Oxford University Press, June 2021, www.oed.com/view/Entry/122116 (Accessed 1 July 2021).

²¹ Kate Lyons, ‘Deep-Sea Mining Could Start In Two Years After Pacific Nation of Nauru Gives UN Ultimatum’ (2021) <https://www.theguardian.com/world/2021/jun/30/deep-sea-mining-could-start-in-two-years-after-pacific-nation-of-nauru-gives-un-ultimatum> (Accessed 2 July 2021).

²² See <https://www.isa.org.im/>

²³ See Article 1 of the *United Nations Convention on the Law of the Sea 1982* (UNCLOS).

²⁴ [Michael Lodge, Secretary General of the ISA, plays an active public relations role for major deep sea mining companies such as DeepGreen in its marketing videos.](#)

²⁵ Komaki Kanae and Fluharty David, ‘Options to Improve Transparency of Environmental Monitoring Governance for Polymetallic Nodule Mining in the Area’ (2020) 7 *Frontiers in Marine Science* <https://www.frontiersin.org/articles/10.3389/fmars.2020.00247/full> (Accessed 22 June 2021).

²⁶ Jeff A. Ardron, Henry A. Ruhl and Daniel O.B. Jones, ‘Incorporating transparency into the governance of deep-seabed mining in the Area beyond national jurisdiction’ (2018) 89 *Marine Policy* <https://www.sciencedirect.com/science/article/pii/S0308597X17304207> (Accessed 29 June 2021).

²⁷ Deep Sea Mining Campaign, London Mining Network, Mining Watch Canada, “Why the Rush? Seabed Mining in the Pacific Ocean”, pp 26. <http://www.deepseaminingoutofourdepth.org/wp-content/uploads/Why-the-Rush.pdf> (2019).

International and Domestic Obligations

A moratorium on seabed mining may need to be established if the Vanuatu Government intends to re-evaluate its state obligations.²⁸ Firstly, under the UNCLOS²⁹ and the *Convention on Biological Diversity*,³⁰ Vanuatu has an obligation to protect the marine environment by adopting appropriate policies. Secondly, a similar obligation is found in Vanuatu's Constitution. It expressly states that every person has a duty to “safeguard the national wealth, resources and environment in the interests of the present generation and of future generations”.³¹ Also, in establishing a moratorium, Vanuatu will have ample time in ensuring that the existing goals presented in the *National Sustainable Development Plan 2016 to 2030*,³² the *Vanuatu National Environment Policy and Implementation Plan 2016–2030*³³ and *Vanuatu's National Ocean Policy*,³⁴ are realistically met and maintained.

Weak Regulatory Framework Concerns

To date, the ISA has not yet completed and adopted the ‘*Mining Code*’³⁵ which would govern how the ISA regulates mining in the “*Area*”. However, other states in the region have created seabed mining regulations to regulate mining within their respective jurisdictions.³⁶ In Vanuatu, there exists no specific legislation to regulate seabed mining. Therefore, if the Vanuatu Government is of the view that further research is needed in order to determine whether deep sea mining should be allowed, it may be appropriate to put in place a moratorium to enable the Parliament to create appropriate laws to regulate seabed mining.³⁷

Unknown Environmental Impacts

Currently, the seafloor is an area on which more scientific research is needed. However, experts agree that the physical removal of large areas of the seabed is likely to cause loss of habitation for some faunal groups.³⁸ Along with sediment plume pollution and potential ore depository runoffs, the potential impact of chemicals released from the mixing of sediments, could be devastating for naturally occurring environmental conditions.³⁹ A moratorium would need to be implemented to ensure that experts have enough time to be able to create precise scientific models enabling them to learn how to minimize the serious environmental impacts.

²⁸ The following are Vanuatu's ratified conventions and domestic laws and policies.

²⁹ Above n 23, Part XII.

³⁰ Article 14 of *Convention on Biological Diversity 1992*.

³¹ Constitution of Vanuatu, Art 7 (d), available at http://www.paclii.org/vu/legis/consol_act/cotrov406/.

³² The People's Plan is a policy framework to achieve sustainable development within the next decade; Above n 8.

³³ The main policy for the sustainable development and management of the environment of Vanuatu.

³⁴ Above n 6.

³⁵ International Seabed Authority, ‘The Mining Code’ (2021) <https://www.isa.org.jm/mining-code> (Accessed 20 June 2021).

³⁶ To see a list of Pacific Island Countries with existing legislations, visit <https://www.isa.org.jm/national-legislation-database>

³⁷ Vanuatu needs to clearly set up a legal framework to show how the Mines and Minerals Act [Cap 190] 1986, the Maritime Zones Act No.6 of 2010, the Environmental Management and Conservation Act 2003, the Customary Land Management Act No. 33 of 2013, the Fisheries Act, the Land Reform (Amendment) Act 2013, the Pollution (Control) Act 2013, the Preservation of Sites and Artifacts Act and the Water Resources Management Act will need to be amended to cater specifically to deep sea mining related issues.

³⁸ Above n 13.

³⁹ Ibid.

Delay in Circular Economy Efforts

A circular economy emphasizes the importance of developing a nation's economy both sustainably and equitably.⁴⁰ The Vanuatu Government, through its various policy objectives mentioned in the previous page, has made efforts to bring about future development using a similar planned circular economy approach. Pro-DSM organizations, however, in an effort to exaggerate the environmentally friendly aspects of DSM operations, have claimed that the only way to extract minerals to meet the future demand of clean energy technologies⁴¹ would be to carry out DSM operations.⁴² This is misleading because there are peer-reviewed scientific evidence which show that DSM would result in permanent damage to deep sea ecosystems and, this destruction of natural ecosystems directly contradicts the intention of building a sustainable clean energy future.⁴³ If a moratorium is adopted, the Government would have ample time in ensuring that the language in all its policy objectives relating to sustainable development is uniform throughout.

B. Arguments Against Implementing A Moratorium

Potential Economic Benefits

In a bid to discourage a moratorium, multinational mining companies have repeatedly stressed the economic benefits of seabed mining. Firstly, DSM projects promise to facilitate citizens' professional development and therefore build the human resource capacity in understanding more about the deep sea environment.⁴⁴ Whenever, a potential DSM project is established, an initial scientific research and an environmental impact assessment is carried out. This helps to build the human resource capacity of Vanuatu in learning more about Vanuatu's deep sea environment, which in turn, helps the Government to take a researched policy direction in the future relating to the deep sea environment. Secondly, although there are always fluctuations on metal prices, current estimates show that a single seabed Polymetallic Nodule mine could achieve pre-tax profits of USD\$18.1 billion over the 30-year lifetime of a proposed mine.⁴⁵ This would greatly increase the revenue capture for the Government and various stakeholders. Not only does the Government benefit from the licensing fees and the taxable profits of DSM companies, but it would also benefit from any potential investments that could be brought into the country. The Government will also need to establish a mining fiscal framework that would help to ensure

⁴⁰ United Nations Industrial Development Organization, 'Circular Economy' (2021) <https://www.unido.org/our-focus-cross-cutting-services/circular-economy> (Accessed 18 July 2021).

⁴¹ International Energy Agency, The Role of Critical Minerals in Clean Energy Transitions, IEA, Paris <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions> (2021).

⁴² Above n 13; Above n 14.

⁴³ An Lambrecht, 'Minesplaining: Busting The Deep Sea Mining Industry Greenwash' (2021) <https://www.greenpeace.org/international/story/47972/minesplaining-busting-deep-sea-mining-industry-greenwash/> (Accessed 18 July 2021).

⁴⁴ Above n 9.

⁴⁵ Randolph Kirchain et al, 'Report To The International Seabed Authority On The Development Of An Economic Model And System Of Payments For The Exploitation Of Polymetallic Nodules In The Area' (MIT Materials Systems Laboratory, Massachusetts Institute of Technology, Cambridge, MA USA, 55-58, June 2019) <https://isa.org.jm/files/files/documents/Nodule%20Financial%20Payment%20System%20Report%20October%202020%20V3.pdf> (Accessed 17 July 2021).

that royalties are paid equitably to Provincial Governments and indigenous land owners. Last but not least, the Government may also receive revenue by creating strict guidelines for DSM operators to follow. In that way, the Government may also capitalize on any harsh penalty fees it has the discretion to create.

However, this argument may prove to be unrealistic. The economic benefits from DSM operations are likely to be negligible due to the operational size and the severity of consequences of the mine. Firstly, there could potentially be low levels of direct local employment due to the lack of locally skilled and technical individuals which are needed to operate under sophisticated environments using new modern technologies.⁴⁶ Secondly, the actual revenue capture for Pacific Island states could be lower because the bulk of the processing and consumption of the raw materials would occur overseas⁴⁷ since there may be no existing local infrastructures to cater for this. Finally, depending on the contractual obligations between the Government and a DSM company, there are many potential risks which could prove to be costly rather than beneficial for the country. The Government may potentially incur liabilities relating to damages brought about by the physical disruption of the sea floor which could have an impact on local fisheries or tourism activities in the community.⁴⁸ Therefore, it is suggested that it would be beneficial if the Government considered a permanent ban rather than a moratorium.

Public Outcry

In Vanuatu, it is clear that the public disagrees with the idea of deep sea mining. The Vanuatu Government, through the Ministry of Lands, has conducted nationwide consultations to inform people of the aspects of deep sea mining.⁴⁹ As a result of these consultations, various associations, including the Council of Churches and the National Council of Women,⁵⁰ have expressed their disapproval to the idea of deep sea mining.⁵¹ This public consensus is also crystallized in the *Vanuatu National CSO Resolution on Sea Bed Mining*.⁵² This petition calls on the government to ban all seabed mining related activities now and into the future. A moratorium would not be appropriate to effect this because it would just be a temporary ban. What would be appropriate is for the government to simultaneously amend the existing *Mines and Minerals Act* and create a stand-alone legislation to permanently prohibit seabed mining in Vanuatu.

⁴⁶ Binney, J. and Fleming, D., 'Counting the Potential Cost of Deep Sea-Bed Mining to Fiji. A Report for WWF International'. [online] MainStream Economics and Policy, pp.10-11. (2016) Available at: https://wwfasia.awsassets.panda.org/downloads/deep_seabed_mining_economic_risks_final_1.pdf [Accessed 7 August 2021].

⁴⁷ Ibid.

⁴⁸ Ibid.

⁴⁹ Bob Makin, 'Deep Sea Mining Consultation Goes Provincial' (2014) https://dailypost.vu/news/deep-sea-mining-consultation-goes-provincial/article_600632f8-62e4-5c7e-96f1-997adb9d2676.html (Accessed 24 June 2021).

⁵⁰ 'Woman I Boikotem Dip Si Miting' Vanuatu Independent (Port Vila, Vanuatu) 11 October 2014, 26.

⁵¹ Radio New Zealand, 'Vanuatu women and churches against deep sea mining' (2013) <https://www.rnz.co.nz/international/pacific-news/212810/vanuatu-women-and-churches-against-deep-sea-mining> (Accessed 24 June 2021).

⁵² Above n 7.

C. [A Proposed Moratorium Instrument for Vanuatu](#)

Mines and Minerals Act 1986

(Chapter 190)

**MINES AND MINERALS (MORATORIUM ON EXPLORING, PROSPECTING AND
MINING OF MINERALS ON AND UNDER THE SEABED IN VANUATU)
REGULATIONS, 2021**

(Section 88)

IN exercise of the power conferred on me under paragraph (b) of section 88(2) of the Mines and Minerals Act, I have made the following Regulation-

Short Title

1. These Regulation may be cited as the Mines and Minerals (Moratorium on Exploring, Prospecting and Mining of Minerals on and under the seabed in Vanuatu) Regulations, 2021.

Commencement

2. These Regulations Commences on the day on which it is published in the Gazette.
3. The Mines and Minerals Regulation (Exploring, Prospecting and Mining License) is amended by inserting the following provisions.

SCHEDULE

**MORATORIUM ON EXPLORING, PROSPECTING AND MINING OF MINERALS ON AND
UNDER THE SEABED IN VANUATU**

4. No person or company, be it a holder of a mining right, exploration license, a prospecting license and a mining license, during the 1st of September 2021 to the 1st of September 2031 shall, in any way prospect or explore for, or mine, State owned minerals on and under the seabed in Vanuatu.
5. Any State sanctioned activity relating to the prospecting or exploration for, or the mining of minerals, under the jurisdiction of the International Seabed Authority is prohibited during the 1st of September 2021 to the 1st of September 2031.

6. The Minister responsible is prohibited from creating, amending or authorizing any other legislation or order which would contravene the purposes of this Regulation.
7. Any person or company, who contravenes the provisions of regulation (4), (5) and (6) is liable on conviction to a fine not exceeding VT200,000 or to imprisonment for a term not exceeding 12 months or to both such fine and imprisonment.
8. The Minister responsible may, if considers necessary or desirable, extend the prohibition on activities specified in regulation (4) and (5), to a period beyond 1st September 2031 and may such extension be notified in the Vanuatu Gazette.

Made this 12th July 2021

[NAME]

Minister of Lands, Geology and Natural Resources

V. RECOMMENDATION AND CONCLUSION

The various public consultation efforts made by the Vanuatu Government clearly signifies the cautionary stance taken by the people of Vanuatu. In addition, it is noted that seabed mining offers many unanswered questions and unknown potential impacts to the people and their environment. There is also an existing concern of the lack of an adequate seabed minerals regulatory framework in Vanuatu.

Therefore, it is recommended that the following legislative measures be adopted:

1. Amending the existing Mines and Minerals Act

The Vanuatu Government should create an amendment to the existing *Mines and Minerals Act* [Cap 190]. This Act authorizes the Minister to grant an exploration, prospecting and mining license to any successful applicant whether it be an operation on land or under the sea. The Act does not specifically mention anything relating to seabed mining. It is, however, relied upon by default because it defines 'land' as including both 'land beneath [the] water' and the 'the seabed'. This is very problematic because it has the potential of creating a legal loophole. To ensure that there are no gaps in the legislation, and having regard to the immense public disapproval of DSM, it would be appropriate that the amendments should prohibit the issuing and creation of all exploration licenses, prospecting licenses and mining licenses for any seabed mining related activities in Vanuatu, now and into the future.

2. Creating a Seabed Mining Prohibition Act

The Vanuatu Government should create a specific Act that prohibits and bans any activities related to seabed mining or deep sea mining. This approach is likely to gain the support of the people since there is already an existing resistance towards seabed mining in Vanuatu. The purpose of this proposed legislation would be to ensure that the Government's stance on this controversial development is clear and that is to permanently prohibit and ban any activities relating to seabed mining. This new (*Seabed Mining Prohibition*) Act for Vanuatu, would specifically prohibit not only the seabed mining within the national jurisdiction of Vanuatu, but also any State sanctioned activity relating to seabed mining under the jurisdiction of the International Seabed Authority.

Conclusion

These recommendations should be implemented to ensure that seabed mining operations are prohibited and the potential negative impacts resulting from its operations are prevented. These two sets of legislation will undoubtedly remove the need to unnecessarily amend several Acts and regulations to cater for the various loopholes presented by seabed mining operations. Although the potential for a government sanctioned moratorium is discussed in this paper, it is suggested that, a more permanent solution to this issue requires the implementation of the above mentioned sets of legislation.

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