

**Press review:  
Mining in the South Pacific**

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**Abbreviations in common use:**

BCL: Bougainville Copper Limited

LNG: Liquid Natural Gas

PIR: Pacific Islands Report

PNG: Papua New Guinea

**Websites:**

Radio New Zealand: <http://www.radionz.co.nz/international>

PNG Post-Courier: <http://postcourier.com.pg/>

PNG National: <http://www.thenational.com.pg/>

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**U.N. deep-sea mining rules unlikely to be completed by 2023 deadline, Latam countries say**

By Helen Reid, REUTERS, 28 October 2021

\* Jamaica-based U.N. body must finalise regulations by mid-2023

\* COVID-19 has stalled negotiations, restricted access

\* Member states, observers ask for Dec meetings to be postponed

JOHANNESBURG, Oct 28 (Reuters) - Regulations governing deep-sea mining will take longer to finalise due to the global pandemic, a group of Latin American countries said, creating uncertainty for companies looking to mine the sea bed for metals, including cobalt and nickel. The delayed negotiations also pose a potential difficulty for companies seeking financing from investors to mine the sea floor. The U.N.'s International Seabed Authority (ISA) is working on global rules covering sea bed mining, which is not allowed until the regulations are finalised. The tiny Pacific state of Nauru has tried to speed up the process by triggering in June a two-year deadline for the rules to be completed. Nauru is a sponsoring state of mining company The Metals Co subsidiary Nauru Ocean Resources Inc (NORI). The Latin American and Caribbean Group said "no tangible progress has

been achieved” towards the adoption of regulations and guidelines for mining, in a submission dated Oct 13 and published on the ISA website on Thursday.

The ISA did not immediately respond to a request for comment. The Latin American and Caribbean Group, one of several regional groupings at the ISA, said the ISA Council might not be able to finalise and adopt the required regulations within the two-year period, adding that delegations are far from reaching agreement on key issues. The Latin American and Caribbean Group includes Argentina, the Bahamas, Chile, Costa Rica, Cuba, the Dominican Republic, Guyana, Jamaica, Panama and Trinidad and Tobago. The African Group in July also criticised the fast-tracking of negotiations, saying the task of agreeing on regulations by mid-2023 is “seemingly insurmountable”. Deep-sea mining involves sucking up potato-sized rocks rich in cobalt, nickel and other battery metals from the Pacific Ocean floor at depths of 4-6 kilometres.

Many scientists and environmentalists have called for a ban on deep-sea mining, saying it could cause lasting damage to little-understood habitats. Key metal consumers like carmaker BMW and Alphabet Inc’s Google have called for a moratorium on the practice. The ISA in September said meetings of the ISA Council and ISA Assembly would be held at its Kingston, Jamaica headquarters from Dec 6 to Dec 10 and Dec 13 to Dec 15, but with restrictions on delegation size due to COVID-19. Chile and two environmental groups have requested the meetings be postponed due to the restrictions on delegations, in letters seen by Reuters. Jamaica’s COVID-19 measures include a quarantine period even for vaccinated arrivals, and a 50-person limit on meetings, making it difficult for representatives from around the world to attend. (Reporting by Helen Reid, Editing by Amran Abocar and Jane Merriman)

### **No permit issued for Frieda project: Mori**

By SHIRLEY MAULUDU, October 21, 2021, The National Business

ENVIRONMENT, Conservation and Climate Change Minister Wera Mori says no environment permit has been issued for the Frieda River copper/gold project in West Sepik. He was commenting on reports that a permit had been issued to the operator PanAust Ltd. “The (permit has) not (been) granted yet,” he said. Earlier this year, Mori said PanAust had the licence and was conducting exploration activities. “Frieda River is an ongoing project, meaning that the company (PanAust) that has got the licence, and is still conducting exploration,” he said. He said the company would upgrade the degree of confidence they had on the ore body and the type and style of mineralisation before submitting their plans and mining development proposal to the Conservation and Environment Protection Authority and Mineral Resources Authority.

“In the mining development plan that they will submit, they will note the nature and style, the volume, and the mining rate (how much tone they are going to mine a year), with both the commercial minerals. From there, discussions will follow.” PanAust announced the completion of the project’s feasibility study in May, 2016. The following month, a special mining lease application for the project was registered with the MRA. In December of the same year, PanAust announced the completion of the project’s environmental impact statement and that an electronic copy of the document was lodged with CEPA.

### **K15mil needed to remove toxic waste left by miner, Mori says**

By SHIRLEY MAULUDU, October 20, 2021, The National Business

ABOUT K15 million is needed to clean up the Sinivit mine in East New Britain, says Environment, Conservation and Climate Change Minister Wera Mori. Mori told *The National* yesterday that the

toxic waste left behind after the operator, Niugini Gold Ltd, left the country would be disposed at sea. “(We are) waiting for funding as it will cost around K15 million,” he said. “(It’s) not only cleaning, but getting the waste (for disposal) offshore.” Mori previously said the company packed up and left in 2014 without notifying the Government, claiming that its mining lease had not been renewed. “They (company) abruptly left the camp,” he said. “All the infrastructure, leaching facilities, cyanide, are all left behind, with dynamites (and) explosives.

“These are very dangerous and they must now be disposed of. We need to clean the place up.” Mori said the company did not provide the Mineral Resources Authority any plan to put the camp under care and maintenance. “As a result, we now have serious environmental issues,” he said. “We need a reputable company to detoxify the cyanide, including those that are kept in the vat ponds, and remove them.” Around 50,000 people live close to the mine area. The company began gold and silver production in August 2007 and stopped production at the end of June 2012. Its revenue from gold was K77,297,238.06 and silver was K352,833.49.

### **State repaying US\$120mil loan**

By DALE LUMA, October 20, 2021, *The National Business*

THE State is now repaying the US\$120 million (about K408 million) Solwara 1 loan and liability transferred from Kumul Mineral Holdings Ltd, according to Bank South Pacific Financial Group Ltd (BSP). BSP chief executive officer Robin Fleming told *The National* that the loan and liability was transferred to the State directly earlier this year. “This facility and all loan facilities with the State are being serviced in terms of arrangements on time,” he said. “Unfortunately due to customer confidentiality I cannot disclose what the repayment terms are, but those repayments are being met.” According to the Papua New Guinea Extractive Industries Transparency Initiative (PNGE-ITI), a mining lease for the Solwara project (ML 154) was granted in 2011. This deep-sea mining venture of Nautilus Minerals planned to mine copper and gold from massive seafloor deposits 1,600-metres below the surface of the Bismarck Sea at the Solwara 1 project site.

The State holds a 15 per cent equity in the project. The venture faced a range of challenges, and Nautilus Minerals went into liquidation. In 2019, Nautilus Mineral’s holding was acquired by Deep Sea mining Finance Ltd, a privately owned joint venture between USM Holdings Ltd and MB Holding Company LLC, owned by the Sultanate of Oman, with the intention to restart the project. Last January the Mineral Resource Authority (MRA) stated that the K408.8 million invested in the project by the State would be written off. Managing director Jerry Garry said it was a failed investment. Garry said the State had invested a lot of money in the project and was still paying off the debt. “That was a risky investment, technology has never been tried and tested,” he said. “Very difficult project.”

### **Illegal mining on Kiribati coast increasing**

Radio New Zealand on 20 October 2021

In Kiribati, the Ministry of Environment, Lands and Agricultural Development says illegal mining of sand and aggregate on South Tarawa and Betio is increasing.

Environment Inspector Morrison Tabokai told Radio Kiribati News that the illegal mining is happening at Bonriki, Temaiku, Bangantebure, Ambo, Bairiki and Betio. Mr Tabokai says sand and aggregate mining could be acceptable for decorating burial grounds and floors but the practice has not been encouraged to minimize coastal erosion. He says any environmentally-significant activity or any construction work designed to enable an environmentally-significant activity needs a licence.



Sand bagging the beach to stop erosion in Tarawa, Kiribati. Photo: Supplied

## **New Caledonia strikes nickel supply deal with Tesla**

Radio New Zealand on 19 October 2021

The nickel producer Prony Resources New Caledonia has struck a deal with the car manufacturer Tesla to supply 42,000 tons of the metal for use in batteries. Negotiations had been under way since before the pandemic and were concluded at Tesla's headquarters last week. The contract is for several years and makes Tesla a key customer.



Prony Resources plant at Goro in Southern New Caledonia. Photo: AFP

Prony Resources, which operates its plant at Goro, said it plans to double this year's nickel output by 2024 to produce 44,000 tons annually. Nickel prices have rebounded to \$US20,000 a ton which has set New Caledonia's nickel sector onto a path of recovery. Prony Resources is majority owned by New Caledonia's provinces but also has a Swiss-based commodity trader Trafigura as a shareholder. The new owners bought the nickel plant from Vale of Brazil this year after a protracted sale

process, during which operations at Goro were suspended because of violent attacks. Last year, an earlier bid for the plant by an Australian company, New Century Resources, failed and Vale threatened it would close the site unless another buyer was found, which triggered fears of huge job losses.

### **Project sites report rise in gold**

October 19, 2021, The National Business

THE Adyton Resources Corporation has reported an 88 per cent increase in gold ounces at its Fergusson Island gold project and Feni gold and copper project. Fergusson Island maiden indicated resource of 175,000 gold ounces at 1.33 grams/tonne (g/t) and inferred resource increased by 33 per cent to 540,000 gold ounces at 1.08 g/t. Feni Island inferred resource increased by 123 per cent to 1,460,000 gold ounces at 0.75 g/t. Adyton chairman, president and chief executive officer Frank Terranova said the updated resource estimates would provide a strong basis for technical studies to be undertaken before submitting a mining lease application for the Fergusson Island project by the end of 2022. “When we acquired the Fergusson Island and Feni Island projects, we saw a unique opportunity to create a portfolio of complementary projects, each of which demonstrated clear pathways for accelerated development,” Terranova said.

“The Fergusson Island project provides a relatively simple pathway to near term production while the Feni project has the potential to be a project of international significance. “With a relatively modest drill programme at Gameta, and a re-assessment of the economic cut-off grade based on a conceptual mining study, we have significantly increased the size of our overall mineral resource estimate, which leaves the company confident for the future.” Terranova is confident that future exploration programmes would continue to grow the mineral resources on Fergusson Island with the resource being close to the surface, and open in multiple directions including at depth. He said the Feni Island’s resource estimate upgrade was also very encouraging. Mayur Resources own about 43 per cent of Adyton.

### **PM: Project development forum in Dec**

October 18, 2021, The National Business

THE Porgera mine project development forum will be held in December in Enga, Prime Minister James Marape says. “We will try to tally what we are doing and in December, we will meet the provincial government and the landowners at the development forum proper,” he said. Marape said they had secured the additional 1 per cent for royalty, the additional 2 per cent as a premium they are paying for fiscal stability, and the 51 per cent equity for PNG parties. He said it included what was understood to be 10 per cent for the Porgera Valley landowners and 5 per cent for Enga. The development forum will unbundle the landowner demands, landowner expectations and within the Government’s take that is from our 53 per cent in total project economic benefit, and from our 51 per cent equity. “As far as discussions with landowners will take place in December, we will allocate sufficient time and a place in Enga for us to meet all our landowners for us to go into finer details, benefit structures, and all the demands,” Marape said. “We are on a path to ensuring that Porgera is reopened.” Enga Governor Sir Peter Ipata said the country had suffered economic hardships and Porgera would help the economy recover.

## Porgera to start in April

By PETER ESILA, October 18, 2021, The National Business



Porgera mine operation in Enga is expected to start in April following the signing of the starting agreement by the Government and Barrick Niugini Ltd (BNL) on Friday. Prime Minister James Marape said it would be followed by the operatorship agreement, fiscal stability agreement and the shareholder agreement. “This is a milestone in our journey towards reopening the Porgera gold mine and for it to be in operation for the next 20 years,” he said. The commencement agreement formalises the terms of the commercial and financial arrangements contained in the framework agreement signed in April. The terms include that:

- PNG stakeholders and BNL will share the economic benefits generated over the mine life on a 53/47 per cent basis;
- BNL will finance the capital required to restart the mine;
- AN increase in equity will be allocated to landowners who are the customary owners of the land where Porgera is located; and
- THE State will retain the right to acquire the remaining 49 per cent of the mine from BNL at fair market value after 10 years.

The Government and BNL will continue negotiations to ensure remaining conditions required for the restart of operations at Porgera can be reached quickly. Barrick Gold senior vice-president Woo Lee said the 1,000 employees kept on during the care and maintenance period were doing all the preparations. “We are investing funds within the description of the care and maintenance so that when all the agreements are done, we can fire up and get started as soon as possible.”

## O’Neill: Govt can only take 22.5pc

October 15, 2021, The National Business

IALIBU-Pangia MP Peter O’Neill says the Government can only take up 22.5 per cent in P’nyang project in Western and not 32.5 per cent. He said this following Prime Minister James Marape’s recent announcement on the signing of the P’nyang heads of agreement between the State and ExxonMobil. Marape had said the overall deal reflected a win-win for both sides with the State’s take of 63 per cent, compared to 49 per cent in PNG LNG and 51 per cent in Papua LNG. This is made possible by an increased production levy of 3 per cent (same as Papua LNG) and the State equity

(including the commercial purchase) being 32.5 per cent compared to just 19.6 per cent in the PNG LNG and 22.5 per cent in Papua. O'Neill yesterday said the State, as announced by Marape, would get 32.5 per cent equity, but under the law, the Government was only entitled to have up to 22.5 per cent. "That is a right under the Oil and Gas Act," he said. "Nobody can negotiate that. "We only need to exercise that right. "But the State wants to take up additional 10 per cent. "For the 10 per cent, we have to pay it through at commercial price meaning that they have to pay what is the market rate today.

"And that means borrowing more billions of kina to go and buy 10 per cent of the equity to develop the P'nyang fields. "I want to just remind the country, and our people, that the last time we went and borrowed money internationally to invest in equity, the first PNG LNG project, we got into all sorts of drama with the UBS loan, the Arab loan, Goldman Sachs and Oil Search and so forth. "So we have some experience out of all that, where we were almost blindfolded by people, both officials and advisers who were advising us, we trusted them to do the right thing for our country. Issues like extra equity need to be negotiated on the basis that it comes at the price same as the backing rights costs, those are things that they need to negotiate and agree on before making public announcements, because making public announcements just for the sake of pleasing the public and having political point scoring exercise is not going to help anybody."

O'Neill said based on previous experience in the sector, the Government needed to negotiate for early revenue starting from the first export and not wait 10 years. "Better royalties and levies are needed now for the increasing population in our country," he said. "We must not push ourselves into a corner like Porgera and Wafi, where we will have no choice but to make a deal with these investors. "We are dealing with very experienced international businessmen who travel across the world from country to country at ease and at fast pace, and they negotiate this kind of deals on a daily basis and they do that for a living, we don't. "Therefore, we must be careful and learn from the mistakes made in the past and come out with a better deal for our people."

### **LOs cry foul over 2.44 pc equity**

Post-Courier, October 14, 2021

Local landowners from the upcoming have cried foul over the national Government's announcement of a 2.44 per cent free carried equity for landowners. In a joint media statement last week, Ningerum Landowners Resource Association president Samuel Wain and former Western Governor Norbert Makmop said the government cannot give the 2.44 per cent equity and expect the people to be satisfied. Mr Wain and Mr Makmop were responding to the recently signed Head of Agreement (HOA) for the P'nyang LNG project by Prime Minister James Marape and ExxonMobil in Texas, USA, where the Government successfully secured 63 percent State Equity. Mr Marape, at that time, announced that P'nyang LNG landowners will receive 2.44 per cent Free Carried Equity and the project will come on in eight years as soon as the Papua LNG project gets off the ground. The Prime Minister, accompanied by Petroleum Minister Kerenga Kua, Justice Minister Bryan Kramer, Gulf Governor Chris Haiveta and Hela Governor Philip Undialu, met with the President of ExxonMobil for Upstream Oil and Gas, Liam Mallon and the senior executive team and executed the HOA on the P'nyang Gas Agreement along with an Equity Purchase HOA with ExxonMobil.

"The government has to provide options for landowners to participate fully by purchasing an equity stake in the P'nyang LNG project. Landowners are prepared to take up half of the 63 per cent State equity secured by the government and the Team in Texas," Mr Wain and Mr Makmop said. Both leaders said the government should make provisions in the HOA agreement from the beginning for the landowners to be on par with the progress. "The national Government must come clear on the percentage equity participation for landowners and the provincial government. "We will then

prepare in advance to take up the equities,” the leaders said. “The people of Western Province want the P’nyang LNG project to be a standalone project and must get off the ground as soon as possible. “We cannot wait for another eight years and cannot be subjected to the Papua LNG project,” Mr Wain and Mr Makmop added. The leaders reiterated that the Papua LNG project did not include nor cover Western Province, adding that P’nyang LNG should be addressed separately as a standalone project.

### **Mineral sector decline due to Porgera closure**

BY MAXINE KAMUS, Post-Courier, October 13, 2021

The country’s mineral sector has shown the largest decline in the economy’s growth for the period 2020-2021, according to an economist. Asian Development Bank PNG country economist Edward Faber said the mineral sector helps drive economic growth in the country and in 2020, there was a huge contraction on the growth due to the closure of Porgera mine, the six weeks closure of Ok-Tedi mine and also the weak production at Lihir gold mine. “Other main sectors to show contraction is the accommodation and food service, transport, storage, trade and construction which was significantly impacted by the initial lockdown and restrictions to movement of people,” he said. Papua New Guinea-European Union Business Council president Michael Sullivan also said that the lower than expected recovery for 2021 is mainly due to an anticipated decline in the mineral sector where the growth has remained on the low due to the closure of Porgera gold mine.

Mr Sullivan said PNG’s economy heavily depends on the mineral sector, but the sector contributed less than 30 per cent to the economy in 2020 primarily because of the closure of Porgera gold mine, and the absence of any new projects following the end of the construction phase of the PNG LNG project that has adversely affected the economy just as much as fluctuations in the world commodity prices. “The closure of Porgera gold mine in 2020 and delays with the Papua LNG Project, the Wafi Golpu Gold project, the Pasca offshore gas project and the P’nyang LNG Project have all contributed to a relatively depressed PNG economy over the last five years,” he said. Mr Sullivan added that greater effort is required on the part of the government and resource developers to better space resource projects, reduce dependence on the export of unprocessed primary products and increase on-shore processing of raw material. He concluded that through increased support in these large-scale efforts would PNG’s economy see improvement.

### **‘Mismatch in export revenue, import expenditure affecting economy’**

By DALE LUMA, October 12, 2021, The National Business

A MISMATCH in the country’s export revenue and import expenditure is making the economy vulnerable, says PNG-EU business council president Michael Sullivan. Sullivan said successive governments had promised to restructure the economy but nothing eventuated. “PNG is an export-driven economy relying on mineral and agricultural products,” Sullivan said. “These products are subject to the volatile world market prices. “At the same time, PNG imports most of the manufactured products consumed in the local economy, products which usually have a fixed price. These mismatch between export revenue and import expenditure makes the PNG economy particularly vulnerable. “Successive PNG governments have promised to restructure the economy so that PNG is less dependent on primary exports and manufactured imports, a greater emphasis on value added exports in particular onshore processing of mineral products. “Although frequently talked about, it has not really eventuated.”

He said historically, PNG’s boom and bust phenomena had been associated with mineral discoveries and the construction phase of large resource projects. “Gold discoveries in Bulolo in 1932, and

the construction and development of the Panguna gold and copper mine in 1972, the Ok Tedi gold mine in 1984, the Porgera Gold mine in 1989, the Kutubu project in 1992 and the PNG LNG project in 2008 all produced substantial spikes in the PNG economy and generated prosperity,” he said. “The in between periods however have been much less attractive.” He said the absence of any new projects following the construction phase of the PNG LNG project had adversely affected the PNG economy for much of the past five years, just as much as fluctuations in the world commodity prices. “The closure of the Porgera mine in 2020 and delays with the Papua LNG project, the Wafi Golpu project, Pasca offshore project and the P’nyang project have all contributed to a relatively depressed economy in the last five years,” he said. Sullivan told the second EU-PNG business, trade and investment conference yesterday that gross domestic product growth rates in the past five years reflected this scenario.

### **‘PNG needs projects to bring in forex’**

October 12, 2021, The National Business

THE country desperately needs new gas and mining projects to bring in foreign exchange, create jobs and business opportunities for small-to-medium enterprises (SMEs) that desperately need them, an official says. Chamber of Mines and Petroleum chairman Anthony Smare made the statement when applauding the signing of Heads of Agreements for the P’nyang gas project, by PNG and ExxonMobil executives in Houston, Texas, US, recently. “Our country desperately needs new gas and mining projects to bring in foreign exchange, create thousands of jobs, create significant business opportunities for Papua New Guinea SMEs that desperately need them, and generate additional revenue for the State to fund government services,” Smare said. “It is pleasing to see the positive and constructive manner in which the prime minister and his team approached the negotiation with the developers, and the win-win outcome that was secured for the country. “It is also important to note that the State was able to secure these advantageous economic benefits via a commercial negotiation with ExxonMobil under the current resource sector laws.”

### **Economy needs projects: Bank**

By DALE LUMA, October 12, 2021, The National Business

PAPUA New Guinea’s economy will remain challenged in the short term until some resource projects commence, according to the Asian Development Bank (ADB). ADB PNG country economist Edward Faber said the country currently faced a number of issues such as the impact of the Coronavirus (Covid-19) pandemic, foreign exchange imbalance, and the upcoming national elections next year. He addressed the EU-PNG business, trade and investment conference in Port Moresby yesterday. Faber said PNG’s economy in 2020 was about US\$23.7 billion (about K81 billion), the mineral sector making up a quarter which helped to drive significant growth in the whole economy. “In 2020, the growth forecasts had been to be about two per cent pre Covid-19, so that was still seen to be relatively subdued and weak,” Faber said. “There’s no major investment, no major mega projects generating growth and also a number of impediments including foreign exchange shortages and infrastructure.

“With the Covid-19 pandemic effects, growth was then revised between negative three to four per cent. “So as we take a closure look at 2020 then, the major sectors to show contraction were accommodation and food services, transport and stage, trade, construction and elsewhere. “These sectors being specifically impacted by the lockdowns, restriction to movement of people and goods and weaker international demand for Papua New Guinea’s exports and difficulties with having imports.” Faber added that the largest sector to show a decline was the mining sector due to the Porgera mine closure while the Ok Tedi mine suspended operations for about six weeks and the Lihir mine

reported weaker production. Faber said there were, however, bright spots such as the anticipated re-opening of the Porgera gold mine and other major projects in the pipeline including fiscal reforms.

### **‘Papua LNG to start in 2027’**

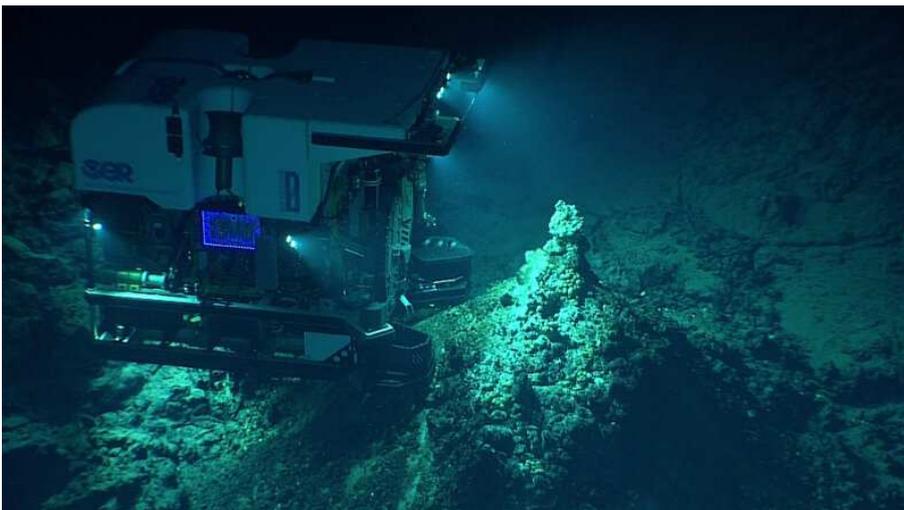
By SHIRLEY MAULUDU, October 12, 2021, The National Business

THE Papua LNG project is scheduled to start in 2027, Total E and P managing director Jean-Marc Noiray says. He said the company was mobilising its project team after three years of delays. “Our project of Papua LNG, after three years of delay, we are again, mobilising our project team, targeting front end engineering and design (Feed) entry through to 2022, final investment decision (FID) in the fourth quarter 2023 and start four years after in the fourth quarter of 2027,” Noiray said. He said this during the second European Union – Papua New Guinea Business, Trade and Investment Conference yesterday. “Total will continue with its partners, investing US\$10 billion (about K34.29 billion) from FID, knowing that we have already invested US\$2 billion (about K6.85 billion) in exploration, pre-Feed and others,” Noiray said.

“So this investment will allow to produce 5.6 million tonnes per year in LNG (liquefied natural gas) over 15 years, adding to the 8 million tonnes per year produced from the PNG LNG. “Investment of the project will amount to about one-third of the gross domestic product (GDP) and will add a major source of income to the country and direct and indirect jobs. “The project will impact two provinces – Gulf, for the upstream processing facilities, and Central,” Noiray said. “The two new trains of production will be constructed within the fence of the existing PNG LNG, to maximise the synergies. “The constraint of building simultaneously a train has been lifted as P’nyang will be developed into the existing PNG LNG facility. “Our constraints are foreign exchange limitation, unreliable utilities, lack of infrastructure, security or law and order, and shortage of expertise and skilled workers.”

### **Deep seabed mining is risky. If something goes wrong, who will pay for it?**

Mongabay Series: [Deep Sea Mining 2021](#), by Ian Morse on 8 October 2021



- *Citizens of countries that sponsor deep-sea mining firms have written to several governments and the International Seabed Authority expressing concern that their nations will struggle to control the companies and may be liable for damages to the ocean as a result.*
- *Liability is a central issue in the embryonic and risky deep-sea mining industry, because the company that will likely be the first to mine the ocean floor — DeepGreen/The Metals*

*Company — depends on sponsorships from small Pacific island states whose collective GDP is a third its valuation.*

- *Mining will likely cause widespread damage, scientists say, but the legal definition of environmental damage when it comes to deep-sea mining has yet to be determined.*

Pelenatita Kara travels regularly to the outer islands of Tonga, her low-lying Pacific Island home, to educate fishers and farmers about seabed mining. For many of the people she meets, seabed mining is an unfamiliar term. Before Kara began appearing on radio programs, few people knew their government had sponsored a company to mine minerals from the seabed. “It’s like talking to a Tongan about how cold snow is,” she says. “Inconceivable.” The Civil Society Forum of Tonga, where Kara works, and several other Pacific-based organizations have written to several governments and the International Seabed Authority (ISA) to express concerns that their countries may end up being responsible for environmental damage that occurs in the mineral-rich Clarion-Clipperton Zone, an expanse of ocean between Hawai‘i and Mexico.

“The Pacific is currently the world’s laboratory for the experiment of Deep Seabed Mining,” the groups wrote to the ISA, the U.N.-affiliated body tasked with regulating the nascent industry. As a state that sponsors a seabed mining company, Tonga has agreed to shoulder a significant amount of responsibility in this fledgling industry that may threaten ecosystems that are barely understood. And if anything goes wrong in the laboratory, Kara is worried that Tonga’s liabilities could exceed its ability to pay. If no one can pay for remediation, Greenpeace [notes](#), that may be even worse. “My concern is that the liability from any problem with deep-sea mining will just be too much for us,” Kara says.

Another Pacific Island state, Nauru, notified the ISA in June that a contractor it sponsors is applying for the world’s first deep-sea mining exploitation permits. The announcement triggered the “two-year rule,” which compels the ISA to consider the application within that period, regardless of whether the exploitation rules and regulations are completed by then. Among the rules that may not be decided upon by the deadline is liability: Who is responsible if something goes wrong? Sponsoring states like Nauru, Tonga and Kiribati — which all [sponsor contractors owned](#) by Canada-based DeepGreen, now The Metals Company — are required to “ensure compliance” with ISA rules and regulations. If a contractor breaches ISA rules, such as causing greater damage to ocean ecosystems than expected, the contractor may be held liable if the sponsoring state did all they could to enforce strict national laws.

However, it’s not yet clear how these countries can persuade the ISA that they enforced the rules, nor how they can prove that they are able to control the contractors, when the company is foreign-owned. The responsibility of sponsoring states to fund potentially billions of dollars in environmental cleanup depends on the legal definitions of terms like “environmental damage” and “effective control,” which may be as murky two years from now as they are at present. Myriad problems may occur in the mining area: sediment plumes may travel thousands of kilometers and obstruct fisheries, or damage could spread into other companies’ areas. Scientists don’t know all the possible consequences, in part because these ecosystems are poorly understood. The ISA has proposed the creation of a fund to help cover the costs, but it’s not clear who will pay into it. “The scales of the areas impacted are so great that restoration is just not feasible,” says Craig Smith, an oceanography professor emeritus at the University of Hawai‘i, who has worked with the ISA since its creation in 1994. “To restore tens or hundreds of thousands of square kilometers would be probably more expensive than the mining operation itself.”



A meeting of the International Seabed Authority. Image courtesy of Kirsty McQuaid, DeepCCZ expedition.

### **Nauru voices concerns**

Just over a decade ago, before Nauru agreed to sponsor a deep-sea mining permit, the government worried that it was going to find itself responsible for paying those damages. The government [wrote](#) to the International Tribunal for the Law of the Sea, voicing concerns about the liability it could incur. As a sponsoring state with no experience in deep-sea mining and a small budget to support it, the delegation wanted to make sure that the U.N. did not prioritize rich countries in charting this new frontier in mineral extraction. Nauru and other “developing” countries should have just as great an opportunity to benefit from mining as other countries with more experience in capital-intensive projects, they argued. Sponsoring states like Nauru are required to ensure their contractors comply with the law but, the delegation wrote, “in reality no amount of measures taken by a sponsoring State could ever fully ‘secure compliance’ of a contractor when the contractor is a separate entity from the State.”

Seabed mining comes with [risks](#) — environmental, financial, business, political — which sponsoring states are required to monitor. According to Nauru’s 2010 request, “it is unfortunately not possible for developing States to perform their responsibilities to the same standard or on the same scale as developed States.” If the standards of those responsibilities varied according to the capabilities of states, the Nauru delegation wrote, both poor and rich countries could have their chance to exploit the valuable metals locked in the deep sea. “Poorer, less developed states, it was argued, would have to do less by way of supervision because they lacked greater resources and capacity,” says Don Anton, who was legal counsel to the tribunal during the decision on behalf of the IUCN, the global conservation authority.

The tribunal, issuing a final court opinion the next year, disagreed. Each state that sponsored a deep-sea miner would be required to uphold the same standards of due diligence and measures that “ensure compliance.” Legal experts generally regarded the decision well, because it prevented contractors from [seeking](#) sponsorships with states that placed lower requirements on their activities. However, according to Anton, the decision meant that countries with limited budgets like Nauru have only two choices when they consider deep-sea mining: either sponsor a contractor entirely, or avoid the business altogether. According to the tribunal’s decision, “you cannot excuse yourself as a sponsoring state by referring to your limited financial or administrative capacity,” says Isabel Feichtner, a law professor at the University of Würzburg in Germany. “And that of course raises the

question: To what extent can a small developing state really control a contractor who might just have an office in that state?"

Nauru had just begun sponsoring a private company to explore the mineral riches at the bottom of the sea Clarion-Clipperton Zone. Nauru Ocean Resources Inc. (NORI), initially a subsidiary of Canada-based Nautilus Minerals, transferred its ownership to two Nauru foundations while the founder of Nautilus [remained](#) on NORI's board. As a developing state, Nauru said, this kind of public-private partnership was the only way that it could join mineral exploration. Nauru discussed the tribunal's decision behind closed doors, according to a top official there at the time, and the government sought no independent consultation, hearing only guidance from Nautilus. Two months after the tribunal gave its opinion, Nauru officially [agreed](#) to sponsor NORI.



Deepsea nautilus. Courtesy of the

Schmidt Ocean Institute.

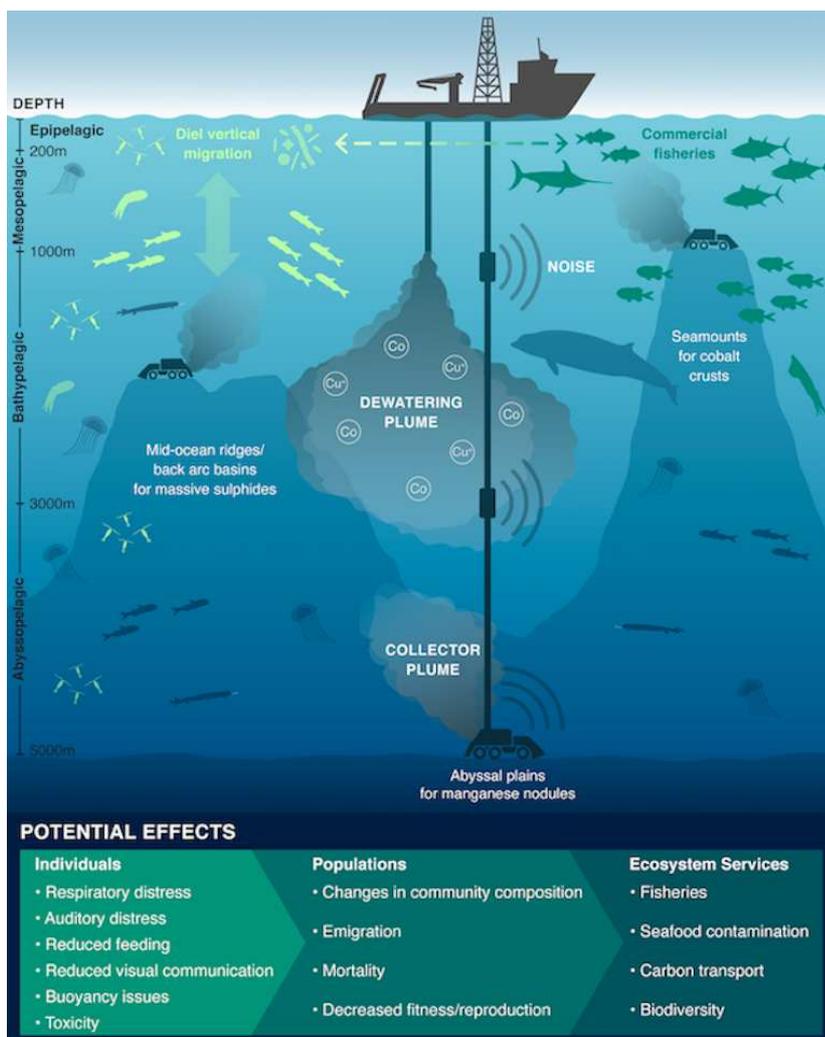
## Control

After the tribunal's decision, the European Union recognized that writing the world's first deep-sea mining rules to govern companies thousands of miles away would be a [tall order](#) for countries with little capacity to conduct research. The EU, whose member states also sponsor mining exploration, [began](#) in 2011 a 4.4 million euro (\$5.1 million) project to help Pacific island states develop mining codes. However, by 2018, when most states had finished drafting national regulations, the Pacific Network on Globalization (PANG) [found](#) that the mining codes did "not sufficiently safeguard the rights of indigenous peoples or protect the environment in line with international law." In addition, in some cases countries enacted legislation before civil society actors were aware that there was legislation, says PANG executive director Maureen Penjueli.

"In our region, most of our legislation assumes impact is very small, so there's no reason to consult widely," she says. "We found in most legislations is that it is assumed it's only where mining takes place, not where impacts are felt." For Kara, mining laws are one thing, but enforcement is another. Sponsoring states must have "[effective control](#)" over the companies they sponsor, according to mineral exploration rules, but the ISA has not explicitly defined what that means. For example, the exploration [contract](#) for Tonga Offshore Mining Limited (TOML) says that if "control" changes, it must find a new sponsoring state. When DeepGreen acquired TOML in early 2020 after Nautilus filed for bankruptcy, the ISA said the Tongan government allowed the transfer and reevaluating the company's background was not required.

Kara questions whether Tonga can adequately control TOML, its management, and its activities. TOML is registered in Tonga, but its [management](#) consists of Australian and Canadian employees of DeepGreen. It is owned by the Canadian company. Since DeepGreen acquired TOML, the only Tongan national in the company is no longer [listed in a management role](#). “It’s not enough to be incorporated in the sponsoring state. The sponsoring state must also be able to control the contractor and that raises the question as to the capacity to control,” Feichtner says. When Kara’s Civil Society Forum of Tonga and others wrote to the ISA, they argued Canada should be the state sponsor of TOML, considering TOML is owned by a Canadian firm. In response, the ISA wrote that the Tongan government “has no objection” to the management changes, so no change was needed.

“Of all the work they’re doing in the area, I don’t know whether there’s any Tongan sitting there, doing the so-called validation and ascertaining what they do. We’re taking all of this at face value,” Kara says. With few resources to track down people who live in Canada or Australia, Kara is worried that Tonga will not be able to hold foreign individuals accountable for problems that may arise. In merging with a U.S.-based company, DeepGreen became The Metals Company and will be responsible to shareholders in the U.S. The U.S., however, has not signed on to the U.N. convention that guides the ISA, and as such is not bound by ISA regulations, the only authority governing mining in the high seas. “What I think is pretty clear is that ‘effective control’ means economic, not regulatory, control,” says Duncan Currie, a lawyer who [advises](#) conservation groups on ocean law. “So wherever it is, it’s not in Tonga.”



The potential effects of mining-generated sediment plumes and noise on pelagic taxa. Organisms and plume impacts are not to scale. See text for explanation of effects. Connections between seafloor vehicles and surface ships are only shown for nodule mining. Image by Drazen, et al. (2020).

## The risks

On Sept. 7, Tonga's delegation to the IUCN's global conservation summit in France joined 80% of government agencies that voted for a motion [calling](#) for a moratorium on deep-sea mining until more was known about the impacts and implications of policies. "As a scientist, I am heartened by their decision," says Douglas McCauley a professor of ocean science at the University of California, Santa Barbara. "The passage of this motion acknowledges research from scientists around the world showing that ocean mining is simply too risky a proposition for the planet and people." Tonga's government continues to sponsor an exploration permit for TOML. According to the [latest](#) information, Tonga and TOML have agreed that the company will pay \$1.25 in royalties for every ton of nodules mined. That may amount to just 0.16% of the value of the activities the country sponsors, according to [scenarios](#) presented to the ISA by a group from the Massachusetts Institute of Technology. Royalties paid to the ISA and then distributed to countries [may be around](#) \$100,000.

Nauru's contract with NORI stipulates that the company is not required to pay income tax. DeepGreen has [reported](#) in [filings](#) to the U.S. Securities and Exchange Commission that royalties will not be finalized until the ISA completes the exploitation code. With the two-year rule, NORI plans to apply for a mining permit, regardless of when the code is written. "The only substantial economic benefit [Nauru] might derive is from royalty payments, and these are not even specified yet. and on the other hand, it potentially incurs this huge liability if something goes wrong," Feichtner says. Like NORI, TOML began its life as a subsidiary of Nautilus minerals, one of the world's first deep-sea miners. Just before Nautilus's project in Papua New Guinea's waters [failed](#) and left the country \$157 million in debt, its shareholders created DeepGreen. "I am afraid that Tonga will be another Papua New Guinea," Kara says. "If they start mining and something happens out there, we don't have the resources, the expertise, because we need to validate what they're doing." DeepGreen has [said](#) it is giving "developing" states like Tonga the opportunity to benefit from seabed mining without shouldering the commercial and technical risk. DeepGreen did not respond to Mongabay's requests for comment.

"I'm still trying to figure out their angle. Personally, I think DeepGreen is using Pacific islanders to hype their image. I'm still thinking that we were never really the target. The shareholders have always been their target," Kara says. She says she doubts the minerals at the bottom of the ocean are needed for the world to transition away from fossil fuels. In a [letter](#) to a Tongan newspaper, Kara wrote, "Deep-sea mining is a relic, left over from the extractive economic approaches of the '60s and '70s. It has no place in this modern age of a sustainable blue economy. As Pacific Islanders already know — and science is just starting to learn — the deep ocean is connected to shallower waters and the coral reefs and lagoons. What happens in the deep doesn't stay in the deep."

*Banner Image: A submersible inspects a newly discovered hydrothermal vent. Image courtesy of the NOAA Office of Ocean Exploration and Research, 2016 Deepwater Exploration of the Marianas.*

Source: [https://news.mongabay.com/2021/10/deep-seabed-mining-is-risky-if-something-goes-wrong-who-will-pay-for-it/?utm\\_medium=Social&utm\\_source=Twitter#Echobox=1633798057](https://news.mongabay.com/2021/10/deep-seabed-mining-is-risky-if-something-goes-wrong-who-will-pay-for-it/?utm_medium=Social&utm_source=Twitter#Echobox=1633798057)

## Experts see no way back for NZ firm blocked from trying to mine the seabed

by Elizabeth Claire Alberts, MONGABAY on 7 October 2021

- *The New Zealand Supreme Court recently blocked consent for a seabed mining operation that would annually extract 50 million tons of iron ore from the seabed off the coast of South Taranaki.*
- *Environmentalists see this decision as a clear victory, but the mining company has stated its intention to reapply for mining permission.*

- *But experts say it's unlikely the company, Trans-Tasman Resources Limited (TTR), will be able to regain consent due to fundamental issues with its application, such as the distinct lack of baseline studies on resident marine life and the potential impacts of mining.*
- *Conservationists say seabed mining in this part of New Zealand would cause irreversible damage to the ecosystem and threaten many rare and endangered species.*

Conservationists have expressed hope that a New Zealand company whose bid to mine the seabed was blocked by the country's highest court last month has little chance of winning approval.

The Supreme Court of New Zealand ruled unanimously on Sept. 30 to block consent for the mining operation that would extract millions of tons of iron ore from the seabed off the coast of South Taranaki on the nation's North Island. Experts say that the decision was primarily based on the finding that mining company Trans-Tasman Resources Limited (TTR) could not illustrate that its activities would not cause "material harm" to the environment.

While TTR seems confident that it will be able to reapply for mining consent, conservationists who have spent years campaigning against seabed mining in New Zealand say the company will not find an easy path due to fundamental issues in its application. For instance, they point out that TTR's most recent application lacked studies about resident marine life and the impacts of mining on species and the overall ecosystem.

"The company hadn't done its homework," Cindy Baxter, chair of [Kiwis Against Seabed Mining](#) (KASM), one group that opposed the mining application, told Mongabay in an interview. "It didn't even have baseline data for where it wanted to mine, so no one can even measure what the [impacts] would be if it went ahead."

Duncan Currie, an international environmental lawyer who acted as counsel to KASM and Greenpeace Aotearoa, said it would be "extremely difficult" for TTR to get its application reapproved due to this lack of baseline data. He added that researching to obtain this data would be like "throwing the money away" since it would still be unlikely for TTR to prove that mining would not cause material harm to marine life.



South Taranaki coast near Patea, New Zealand. Image by [Phillip Capper / Flickr](#).

TTR's application proposed to extract 50 million tons of iron-rich sand from a 66 -square -kilometer (23-square-mile) area of the seabed each year over a period of 35 years. But it would take just take 5 million tons of iron-ore each year and dump the remaining 45 million tons of sand back into the ocean. Conservationists say the mining would have caused irreversible damage to the environment by smothering sensitive rocky coral reef systems with sediment plumes. Mining residue and noise pollution could also threaten the survival of many species, including New Zealand's little blue penguins (*Eudyptula minor*) and critically endangered Māui dolphin (*Cephalorhynchus hectori maui*), experts say. The region has also recently been recognized as a foraging ground for a [newly](#)

[identified population](#) of pygmy blue whales (*Balaenoptera musculus brevicauda*). In the lead-up to the Supreme Court decision, there were weeks of hearings and submissions by conservation groups such as KASM and Greenpeace Aotearoa, iwi (Maori tribes), independent scientists and even the fishing industry.

“I’ve campaigned on bottom trawling, and there we were hand in hand with the fishing industry,” Baxter said. “But the fishing industry can see the potential impact to their business . . . and I think we won really in the process because our environmental arguments were so strong.” In 2017, New Zealand’s Environmental Protection Agency granted TTR consent on its application to mine the seabed off the coast of South Taranaki. But in 2018, New Zealand’s high court reversed the EPA’s decision. TTR then made an appeal to New Zealand’s court of appeals, but the company was not successful.

“What was interesting there is that the [decision-making] committee specifically said in the recommendation [for the first application] that the applicant should go back and do some of these studies because basically, they hadn’t done [them],” Duncan said. TTR’s latest application still lacked these baseline studies, but did include “new plume modeling,” according to Duncan. The new plume modeling suggested that the sediment would not cause as much harm to the marine environment as previously thought. Yet Phil McCabe, the Pacific liaison for the [Deep Sea Conservation Coalition](#), told Mongabay that the modeling was “questionable.” TTR did not respond to Mongabay’s request for comment. But in a [statement](#) published shortly after the Supreme Court’s decision, Alan J. Eggers, executive chairman of TTR, said the company was “satisfied” with the court’s decision since it would have the opportunity to reapply. If TTR does resubmit an application for mining, Baxter said, it will face the same opposition from environmental groups, scientists, iwi and the fishing industry.



Little Blue Penguin (*Eudyptula minor*) on Maud Island in New Zealand. Image by Kimberley Collins / Flickr.

“We’re not going to go away,” she said. “We’re not going to suddenly give up and not bother to oppose any application. We’re going to be there every single step of the way.” McCabe said a way to ensure that deep-sea mining will not occur in the future is for New Zealand to enact a total ban on the activity. “The world views us as a country that has a pretty strong moral compass for the environment,” McCabe said. “So I think it’s appropriate for us to stand in place of caution on this issue. Only a few other nations have pursued plans to allow seabed mining within their territorial waters, although none of these ventures have been allowed to proceed due to environmental concerns. For instance, in 2018, the Mexican government rejected a permit for Exploraciones Oceanicas, a

subsidiary of U.S.-based Odyssey Marine Exploration, to start mining for phosphate in the seabed of Mexico's exclusive economic zone, [due to the damage it could cause](#) to habitat for loggerhead turtles, gray whales and humpback whales, as well as local fishing grounds. And in Namibia, the high court recently found the company Namibian Marine Phosphate in breach of [its license](#) when it conducted trial mining, which put a halt to its activities.

In 2019, the now-defunct company Nautilus received the first ever license to begin seabed mining in Papua New Guinea (PNG) and [started exploratory drilling](#) near a network of hydrothermal vents. But before Nautilus could start extracting any minerals, the company went bankrupt, leaving the PNG government with millions of dollars of debt and the local marine environment severely damaged. David Heydon, the former CEO of Nautilus, went on to found Canada-based company DeepGreen, which recently became [The Metals Company](#) when it merged with NASDAQ-listed Sustainable Opportunities Acquisition Corporation. While seabed mining in nations' territorial waters faces delays, there is a move to start mining in international waters within the next two years. The Pacific island nation of Nauru, which sponsors the Nauru Ocean Resources Inc. (NORI), a subsidiary of The Metals Company, recently [triggered a "two-year rule"](#) that would require the International Seabed Authority (ISA), the U.N.-mandated body overseeing seabed mining in international waters, to allow mining to commence with whatever rules and regulations are in place by then.

There is considerable opposition to deep-sea mining in international waters from scientists, conservationists, governments and civil society. At last month's congress of global conservation authority the IUCN in Marseille, France, delegates [voted overwhelmingly in support of a motion](#) that called for a moratorium on deep-sea mining and the reform of the ISA. Government agencies from 37 states voted in favor of the motion, including Germany, a sponsoring state for a deep-sea mining company. "There's a number of things that are stacking up in favor of a moratorium," McCabe said. "And this New Zealand case is another solid, concrete example of this activity being shown to be too destructive."

***Banner image caption:*** Critically endangered Maui's dolphins (*Cephalorhynchus hectori maui*). Image courtesy of the New Zealand Department of Conservation.

## **Wafi Golpu Project LOs present benefits position papers**

Post-Courier, October 7, 2021

The Morobe Provincial Government, landowners and host Local Level Governments (LLGs) of the Wafi Golpu mining project this week, presented their position-papers to Mineral Resources Authority (MRA). Position-papers are proposed developmental aspirations or plans of landowners and stakeholders of mining projects which are submitted to government as part of a consultation process leading to Memorandum of Agreements (MoA) negotiations. The Morobe Provincial Government position-paper was presented by the Governor Ginson Saonu on Monday. The Governor indicated support for mine development but maintained doubt over the deep sea tailings placement. Except for Yanta Landowners Association, position-papers for the Special Mining Lease (SML) landowner associations of Babuaf and Hengambu, and the pipeline landowner associations, of Wampar Pipeline, Butibam Pipeline, Wagang outfall, and their respective Local Level Governments' (LLGs) of Mumeng, Wampar and Ahi, were presented by the respective leaders on Tuesday October 5.

Yanta landowner association was not prepared to present their paper and would do so at a later date. Governor Saonu when presenting his government's paper, announced his new concept and policy of Ownership, Partnership, Participation and investment (OPPI). He said all stakeholders must feel a sense OPPI in order to fully enjoy the benefits of the project. In their position-papers, the associations and their respective LLGs outlined what their development plans are with the view that

government and the developer of Wafi Golpu project, Newcrest would agree and commit to fund the plans come MoA negotiation time. President of Babuaf landowner association Jack Raban said one of the most important plans in the association's position-paper was to have road access to his communities and villages. He said his people depend on selling garden produce and cocoa to earn cash.

President of Hengambu landowners association John Nema said Wafi Golpu must be sustainable and mutually beneficial to all parties particularly in terms of benefits sharing arrangements. The MRA's Executive Manager for Development Coordination Division (DCD) Andrew Gunua, explained that the presentation of position-papers was in fulfillment of section 3 of the Mining Act 1992, which calls for consultation process to be held before the exploitation of resources. He said the papers would be assessed by MRA and subsequently submitted to the State Negotiating Team (SNT) for further deliberations in preparation for the Development Forum and MoA negotiations. First Secretary to the Mining Minister Motsy David on behalf of the Mining Minister Hon Johnson Tuke, said the government intends to conclude all consultations on Wafi Golpu by the end of this year under the Marape led government.

### **Twinza told to meet conditions**

By SHIRLEY MAULUDU, October 7, 2021 The National Business

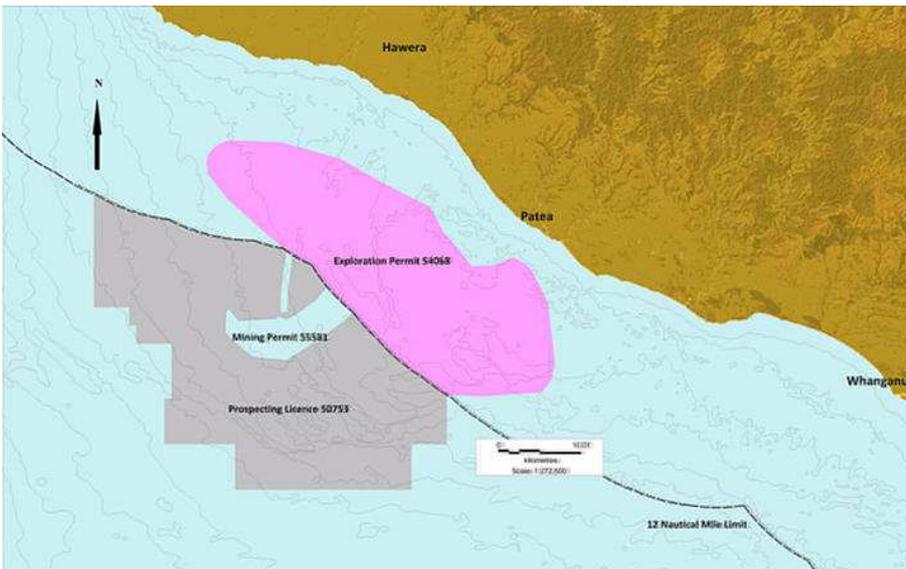
PETROLEUM Minister Kerenga Kua says Twinza Oil Ltd has been given two things to comply with, otherwise negotiations for the Pasca A offshore gas project will be put off after Oct 15. He said Twinza must sign the non-disclosure agreement, and have key people involved in the negotiations to be in the country by Oct 15. "The State has demanded Twinza two things," Kua said. "One is that they must submit to signing non-disclosure and confidentiality agreement, similar to what ExxonMobil has signed to have validity over the period of negotiations only. "We demanded that because they have a habit of going to the press at every corner. "We believe that when you are in negotiation phase, you should not destroy the confidentiality of the negotiations and diluting your good faith element by running to the media and negotiating your case in the media and public forum all the time. "Therefore we required them to sign a confidentiality agreement before the negotiations resume.

"Secondly, we are asking that people with the highest authority to close a deal, who are now presently based in Australia, to come to Papua New Guinea and negotiate face to face with the state negotiating team members. "For them to operate by remote control is confusing the whole process. "It doesn't provide for a smooth flow of negotiations. "We've given them a deadline of Oct 15. If on, or before Oct 15, they've got these things assembled, then we've got the potential of re-engaging. "But if either of these condition precedents are not achieved, that will be end of the negotiations. "We will withdraw from the negotiations and it will be up to the petroleum advisory board to make a determination on the application which is still pending before them."

### **NZ govt urged to ban seabed mining for Pacific's sake**

Radio New Zealand on 5 October 2021

A New Zealand Supreme Court ruling against seabed mining has been described as important for the Pacific region. After a long legal process the Supreme Court has ruled against a bid by [Trans Tasman Resources to mine the South Taranaki](#) seabed. The ruling was welcomed by Te Paati Māori co-leader Debbie Ngarewa-Packer of Ngāti Ruanui iwi in South Taranaki, who led legal challenges against the bid.



A map showing the area covered by the South Taranaki Bight Project. Photo: Trans-Tasman Resources

Ngarewa-Packer is wary about seabed mining companies courting Pacific islands governments with promises of money and claims that seabed minerals will help the fight against climate change. "This isn't about the planet and this isn't about people, and I think if there's anything that a pandemic environment has warned us it's that money is not the 'be all and end all' I think," she said.



Photo: RNZ / Samuel Rillstone

"Seabed mining wasn't able to guarantee any assurance off environmental protection at all, it's purely desecration." Given the growing interest in the Pacific Ocean seabed by mining advocates, Ngarewa-Packer said it's incumbent on New Zealand to lead the way. "The pressure now has to be calling on the prime minister to follow through and ban seabed mining. And if we follow through then the other Pasifika nations will get the confidence to follow through. There's better ways to grow an economy." Ngarewa-Packer said New Zealand must now ban seabed mining in its waters. She said economic growth should not come at the cost of the environment and future generations.

## ‘Antithetical to science’: When deep-sea research meets mining interests

by Elham Shabahat, MONGABAY on 4 October 2021



- *The high cost of studying deep-sea ecosystems means that many scientists have to rely on funding and access provided by companies seeking to exploit resources on the ocean floor.*
- *More than half of the scientists in the small, highly specialized deep-sea biology community have worked with governments and mining companies to do baseline research, according to one biologist.*
- *But as with the case of industries like tobacco and pharmaceuticals underwriting scientific research into their own products, the funding of deep-sea research by mining companies poses an ethical hazard.*
- *Critics say the nascent industry is already far from transparent, with much of the data from baseline research available only to the scientists involved, the companies, and U.N.-affiliated body that approves deep-sea mining applications.*

When Cindy Van Dover started working with Nautilus Minerals, a deep-sea mining company, she received hate mail from other marine scientists. Van Dover is a prolific deep-sea biologist, an oceanographer who has logged hundreds of dives to the seafloor. In 2004, Nautilus invited Van Dover and her students to [characterize ecosystems in the Manus Basin off Papua New Guinea](#), a potential mining site with ephemeral hydrothermal vents teeming with life in the deep ocean. Van Dover was the first academic deep-sea biologist to conduct baseline studies funded by a mining company, an act considered a “[Faustian pact](#)” by some at the time. Since then, more deep-sea biologists and early-career scientists aboard research vessels funded by these firms have conducted such studies. But partnering with mining companies raises some thorny ethical issues for the scientists involved. Is working with the mining industry advancing knowledge of the deep sea, or is it enabling this nascent industry? While there are efforts to disclose this scientific data, are they enough to ensure the protection of deep-sea ecosystems?

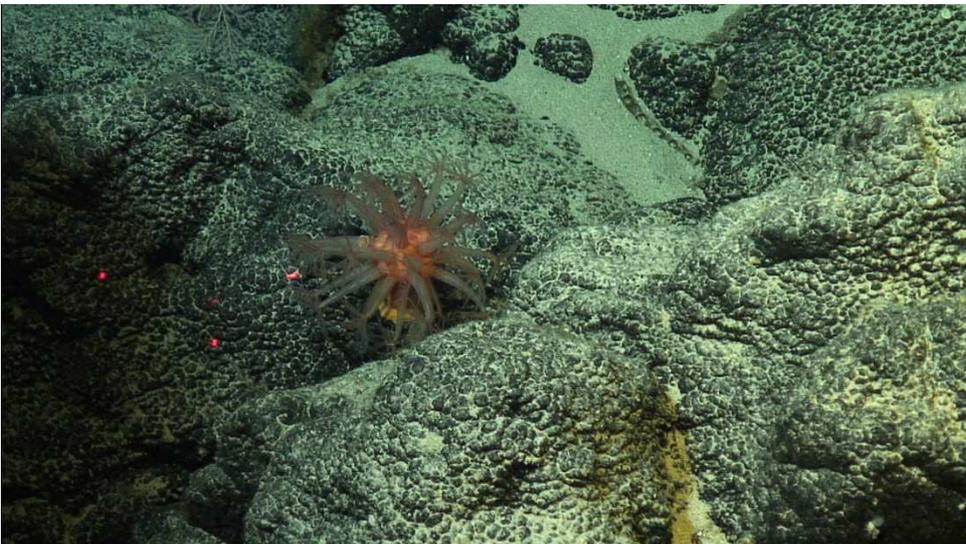
“I don’t think it’s sensible or right to not try to contribute scientific knowledge that might inform policy,” Van Dover said. With deep-sea mining, she added, “we can’t just stick our heads in the sand and complain when it goes wrong.” More than half of the scientists in the small, highly specialized deep-sea biology community have worked with governments and mining companies to do baseline research, according to Lisa Levin, professor of biological oceanography at the Scripps Institution of Oceanography. [Collecting biological samples](#) in the deep sea is expensive: a 30-day cruise can cost more than [\\$1 million](#). The U.S. National Science Foundation, the European Union

and the National Science Foundation of China have emerged as [top public funders of deep-sea research](#), but [billionaires](#), [foundations](#) and [biotech companies](#) are getting in on the act, too.

Governments and mining companies already hold exploration licenses from the U.N.-affiliated International Seabed Authority (ISA) for vast swaths of the seafloor. Although still in an early stage, the deep-sea mining industry is on the verge of large-scale extraction. Mining companies are scouring the seabed for polymetallic nodules: potato-shaped rocks that take a millennium to form and contain cobalt, nickel and copper as well as manganese. Nauru, a small island in the South Pacific, earlier this year gave the ISA a [two-year deadline to finalize regulations](#) — a major step toward the onset of commercial deep-sea mining. The ISA is charged with both encouraging the development of the deep-sea mining industry and ensuring the protection of the marine environment, a conflict of interest in the eyes of its critics.

The Metals Company, a mining company based in Vancouver, Canada, formerly known as DeepGreen, recently said that it spent [\\$75 million on ocean science research](#) in the Clarion Clipperton Zone (CCZ) in the Pacific. The company has established partnerships with “[independent scientific institutions](#)” for its environmental and social impact assessments. Kris Van Nijen, managing director of Global Sea Mineral Resources [said](#), “It is time, unambiguously and unanimously, to back research missions ... Support the science. Let the research continue.” [UK Seabed Resources](#), another deep-sea mining firm, lists significant scientific research that uses data from its research cruises in the CCZ.

The ISA requires mining companies to conduct baseline research as part of their exploration contracts. Such research looks to answer basic questions about deep-sea ecosystems, such as: what is the diversity of life in the deep sea? How will mining affect animals and their habitats? This scientific data, often the first time these deep-sea ecosystems have been characterized, is essential to assessing the impacts of mining and developing strategies to manage these impacts. Companies partner with scientific institutions across the United States, Europe and Canada to conduct these studies. But independence when it comes to alliances with industry is fraught with ethical challenges. “If deep-sea science has been funded by interest groups such as mining companies, are we then really in a position to make the decision that is genuinely in the best interest of deep ocean ecosystems?” asks Aline Jaeckel, senior lecturer of law at the University of New South Wales in Australia. “Or are we heading towards mining, just by the very fact that mining companies have invested so heavily?”



Cobalt-rich ferromanganese crust with batraoidal (bubby) appearance characteristic of older, thicker deposits. Image courtesy of NOAA/Christopher Kelley.

### **The ethics of independent science**

There's a risk of potential conflicts of interest when scientists are funded by industry. While [mining companies](#) often tout working with [independent scientists](#), in company-sponsored research vessels, "having somebody independent on board would be somebody who has presumably no financial affiliation in any way shape or form," says Levin of the Scripps Institution of Oceanography. When working with mining companies to collect baseline data, scientists are compensated through [funding](#), which can be as high as \$2.9 million, for their research labs. Many go on to publish journal articles based on data gathered on company-sponsored ships, advancing science in a relatively unknown realm where [access is expensive and sparse](#).

While knowledge of the deep sea has advanced in recent decades, scientists are still trying to learn how these ecosystems are connected and the impact of mining over longer periods of time. The deep pelagic ocean — mid-water habitats away from the coasts and the seabed — is the [least studied and chronically undersampled](#). There is also a [dearth of deep-sea data](#) for the Pacific, South Atlantic and Indian Oceans, where researchers (and mining companies) are increasingly focusing their attention. For mining companies, science adds legitimacy, argues Diva Amon, a deep-sea biologist and director of SpeSeas, Trinidad and Tobago. "I think they recognize the value of science in appealing to consumers ... and stakeholders as well."

While it is common for scientific research to be funded by public agencies, when such funding dries up, scientists [may be compelled to seek funding from or collaborate with interest groups](#). In other scientific endeavors like [tobacco research](#), [public health](#), climate science and [clinical drug trials](#), there are policies to [manage conflicts of interest](#), because [history is rife](#) with examples of industry influencing the [design](#), [outcome](#) and communication of research in their favor. Some [argue](#) that even if industry-funded scientists publish research that is methodologically sound, industry influence on a broad scale can bias research results in [imperceptible ways](#) that erode [trust in science](#). Being funded by industry is not an issue if scientists are able to publish their research without restrictions, even if results are negative for the contractor, says Matthias Haeckel, a deep-sea biologist who is coordinating a [mining impact project in the CCZ](#), funded by several European Union member states. "The question is if it's up to this degree of independency, and that's difficult to know from the outside ... for me it's sometimes a transparency issue. It's not clear what the contracts with the scientists are."

Deep-sea biologists have published research that does not work in the industry's favor. A [survey of megafauna diversity on the seafloor of the CCZ](#) found that of the 170 identified animals, nearly half were found only on polymetallic nodules that are of interest to mining contractors. The study suggests that the nodules are an important habitat for species diversity. Biodiversity loss [associated with mining is likely to last forever on human time scales](#), due to the slow rate of recovery in deep-sea ecosystems.

For some scientists, the key difference between being funded by an entity like the National Science Foundation versus the industry is control. Mining companies can ask scientists to sign nondisclosure agreements because companies in competition are concerned about the details of their sampling programs being made public, says Jeff Drazen, a deep-sea scientist at the University of Hawai'i who is conducting research funded by The Metals Company. While there is a general understanding that scientists are free to publish their research, there can be embargos on when the research is released and requirements for consultation with the contractors.

"Many of them want you to sign an NDA before you can even talk to them. With the current contract we have with The Metals Company, none of our people have signed NDAs, and that was one of the reasons we decided to work with them," Drazen says. "This is a common part of the business world to sign these NDAs — and that is antithetical to science, so that's a cultural shift for most of

us academics.” The ISA has [issued guidelines for baseline studies](#), but the decision of what and how much to sample rests on the company and scientists involved. “Scientists have to be careful not to necessarily be driven entirely by what the person funding the research wants,” says Malcolm Clark, a deep-sea biologist at New Zealand’s National Institute of Water and Atmospheric Research. “We’ve got to be very objective and make it very clear what’s required for a robust scientific project, and not just respond to the perceived needs of the client. Easy to say — very, very difficult to actually put into practice.” Clark also sits on the Legal and Technical Commission, a body within the ISA tasked with assessing mining applications.



Relicanthus sp.—a new species from a new order of Cnidaria collected at 4,100 meters in the Clarion-Clipperton Fracture Zone (CCZ) that lives on sponge stalks attached to nodules. Image courtesy of Craig Smith and Diva Amon, ABYSSLINE Project.

### **‘Damned if you do, damned if you don’t’**

Scientists are still trying to fathom the depths of our oceans, both to understand the sensitive ecosystems that thrive there, and the minerals that can be extracted from polymetallic nodules that have formed over millennia. [Less than 1%](#) of the deep sea has been explored. The interest in exploiting ocean minerals is coupled with advancements in scientific research. A study published earlier this year [found](#) that deep-sea research languished when this interest in exploitation waned in the 1980s and ’90s. For baseline research, “if this fundamental first-time characterization of these ecosystems is going to be done, it should be done by experts, so there’s quality assurance,” Levin said in a lecture in 2018 on the ethical challenges of seabed mining. “You’re damned if you do and damned if you don’t at some level.”

There’s also the perceived conflict of interest: the intangible effects of working closely with industry representatives, where collecting data means going out together on a research vessel for several weeks at a time. “We’re humans, we’re building relationships, and going to sea is a particularly bonding experience because you’re out there isolated and working together. I cannot imagine how that kind of relationship will not at some point interfere with scientific judgment,” says Anna Metaxas, a deep-sea biologist at the Dalhousie University in Canada, whose research has not been funded by mining companies. It’s not the collection of data that Metaxas is concerned about, “it’s what you do with the data and how you end up communicating to whom and when.”

“What I’m noticing with many PIs [primary investigators] working with mining contractors is that they don’t want to bite the hand that feeds them,” says Amon. “As a result, they are less willing to speak to the public and the press, which is really unfortunate.” The Wall Street Journal [reported](#) that according to two people familiar with the matter, Jeff Drazen was facing the possibility of having his funding revoked after publicly criticizing seabed mining. In an interview with Mongabay,

Drazen declined to comment on the matter. Other prominent scientists who work with mining contractors did not respond to interview requests for this article.



A cusk eel swims along the seafloor in the area of the Deep Sea Ventures site during Dive 07 of the 2019 Southeastern U.S. Deep-sea Exploration. Image courtesy of the NOAA Office of Ocean Exploration and Research, 2019 Southeastern U.S. Deep-sea Exploration.

### The trouble with DeepData

Since the ISA started giving out exploration contracts, the data that contractors collected was [kept in a “black box”](#) for more than 18 years, hidden from the world with the key in the hands of the contractors, the scientists who conducted this research, and a few people within the ISA. Because academics are involved, some of this data and analysis would eventually become available as peer-reviewed scientific literature. In 2019, the ISA developed [DeepData](#), a public database where contractors are required to submit the baseline data they collect. But the only data available to the public is environmental data. Resource data, particularly related to polymetallic nodules that are of interest to mining contractors, is [off-limits and remains proprietary](#). The distinction between environmental and resource data is a “gray area,” according to Clark. What is deemed confidential [is up to the mining contractors and the secretary-general](#) of the ISA.

The nodules, rich in metals such as cobalt and nickel, are a [breeding ground for deep-sea octopuses](#), and home to new species of [deep-sea sponges](#), [diverse animals](#) and [microbes](#) not found in surrounding waters or sediments. The communities of organisms that rely on these nodules and sediment [vary with the abundance](#) of the nodules. “Miners are going after the components of the habitat,” says Craig Smith, a deep-sea scientist at the University of Hawai‘i. “But we can’t really assess the abundance of that habitat without knowing the abundance of the nodules.” In fisheries, for example, industry-sensitive data is aggregated to help with management decisions, but such data is considered proprietary for the nodules. The metallic content of these nodules is also a trade secret, though the information could be relevant for environmental assessments. Toxicity from broken-down ores could be created in the sediment plumes or wastewater that’s reinjected in the water column as a by-product of the mining process, potentially affecting fish and other biodiversity. Where exactly in the water column mining companies will discharge the wastewater is [also confidential](#).

Drazen, whose research (funded by The Metals Company) is looking at mining impacts on the mid-water column, says the mining process will discharge mud and chemicals. “There’s a whole suite of potential effects on a completely different ecosystem above the seafloor. We depend upon the water column ecosystem ... a lot of animals we like to eat ... forage on deep-sea animals,” he says. The discharge of metals and toxins over [potentially large areas could contaminate seafood](#). A recent study suggests that elements in discharge waters could spread further than mining areas, affecting

tuna's food, distribution, and migration corridors. There is increasing evidence that tuna, swordfish, marine mammals and seabirds rely on deep-sea fish, and [foraging beaked whales could also be diving down](#) to the seafloor in search of food. DeepData is experiencing teething problems. A workshop to assess biodiversity for the CCZ in 2019 found [inconsistencies in the data](#), making it difficult to synthesize across the CCZ. Different sampling methods can make it difficult to provide a cohesive picture. "There's still a bit of work in progress with DeepData. But certainly, the willingness is there to have it serving people with appropriate needs," Clark says. "We do still need to be careful of the commercial confidentiality as it relates to the geochemical information in particular." The ISA did not respond to requests for comment.

### **An opaque decision-making body**

The structure of the ISA, particularly its *de facto* decision-making body, the Legal and Technical Commission, is also [fraught with transparency challenges](#). The Legal and Technical Commission assesses mining applications, which currently involve exploration contracts for the deep sea, but all of its meetings are held behind closed doors. The commission is composed of 30 experts nominated by their countries — [some by governments that also hold exploration contracts](#) — with only three deep-sea biologists on board.



A meeting of the International Seabed Authority. Image courtesy of Kirsty McQuaid, DeepCCZ expedition.

"Even if some mining companies might genuinely fund what might be considered independent science, we still end up with a problem that the decision about whether or not to mine and the decision around environmental management of seabed mining rests entirely on data that is provided by the mining companies," says Jaeckel of the University of New South Wales. "There is a lot of trust placed on mining companies." There is no way to independently verify this data either, because deep-sea science is expensive, she adds. The degree to which [companies are accurately reporting the baseline data to the ISA](#) is not clear. The commission is the only body within the ISA that sees the content of contractor's applications, so the baseline data that contractors submit to be able to monitor impacts are only visible to the commission. There is an audit of the scientific data by the commission which [reviews](#) a contractor's [confidential](#) annual reports. And then there's [public scrutiny of environmental impact assessments](#) by NGOs.

Nauru Ocean Resources Inc., a wholly-owned subsidiary of The Metals Company, is "going to have to produce something really good," says Clark of the company's upcoming environmental impact assessment. Clark is a deep-sea biologist who was nominated to sit on the commission by New

Zealand, which does not hold an exploration contract with the ISA. “Otherwise, the whole industry’s potential will be affected because it will taint the view of public and NGOs as to what contractors are doing — are they doing a serious and good job at the underlying research or are they trying to cut corners and push the ISA into making hasty decisions?”

In 2017, the commission [approved an exploration contract](#) for the Lost City, a metropolis of hydrothermal vents in the Atlantic Ocean that the Convention of Biological Diversity has recognized as [an ecologically or biologically significant marine area](#) that should be conserved. Marine scientists issued an [open letter to the ISA](#) to turn to independent scientists when evaluating requests for mineral exploration, and some have long called for [open meetings and an independent scientific committee](#) to advise the commission. Scientists are [now petitioning](#) for a pause on deep-sea exploitation out of concern about impacts on the marine environment. That baseline research with industry might enable mining is “a very naïve perspective,” adds Smith of the University of Hawai‘i. “My gut feeling is that mining will go forward. It would be really wise to just permit one operation to go forward initially and monitor the heck out of it for 10 years. That would make a lot more sense than permitting multiple operations without even knowing what the real footprint will be in terms of disturbance.”

**Banner image:** *A hydromedusa documented at 800 meters deep over a newly discovered petite-spot volcano. Image courtesy of the NOAA Office of Ocean Exploration and Research, 2016 Deepwater Exploration of the Marianas.*

## **Araigned for misusing K268mil**

October 1, 2021, The National

AN employee of Young and Williams law firm alleged to be involved in the misuse of K268 million from Western people’s dividend trust account was yesterday read her charges in the Waigani Committal Court. Magistrate Danny Wakikura read the charges to Tabitha Malken and adjourned her case to Nov 8, with conditions not two interfere with State witnesses, not to leave National Capital District without leave of the court, attend court at all times and not to commit any other offences. Malken 40, from Wosera-Gawi, East Sepik, is charged with 17 counts of misappropriation, 16 counts of false pretence, 18 counts of dealing with criminal property and two counts of conspiracy.

The police hand up brief alleged that Malken, while employed as the legal assistant for Gloria Salika, of Young and Williams lawyers, used her company email address to communicate with ANZ Bank Ltd employees to facilitate the transfer of the K15 million from the Western people’s dividend trust account at the bank to Young and Williams’ trust account held in Bank South Pacific Financial Group Ltd. It was alleged that when the K15 million was transferred out from the Western people’s dividend trust account, a formal complaint was made to police through the office of the police commissioner last Aug 19 by North Fly MP James Donald. Donald alleged that the transfer totalling K268 million had being done under false pretences and all the funds had being misappropriated by the directors and management of Ok Tedi Fly River Development Foundation Ltd and Young and Williams particularly. Malken’s police bail of K2,000 was converted to court bail.

## Chamber of mines, petroleum applauds gas project deal

October 1, 2021, The National



From left: Justice Minister Bryan Kramer, Petroleum Minister Kerenga Kua, Prime Minister James Marape, ExxonMobil president Liam Mallon, ExxonMobil PNG managing director Peter Larden and Gulf Governor Chris Haiveta in Houston, Texas, USA, on Monday. – Picture supplied

THE Papua New Guinea Chamber of Mines and Petroleum has applauded the signing of the Heads of Agreements (HOA) for the P’nyang Gas project. Chamber president Anthony Smare said: “Our country desperately needs new gas and mining projects to bring in foreign exchange, create thousands of jobs, create business opportunities for PNG SMEs (small to medium enterprises) that desperately need them, and generate additional revenue for the State to fund important government services. “The signing of the heads of agreement after a successful negotiation between the PNG Government and ExxonMobil earlier this week in Houston, USA, was an important first step in the finalisation of the necessary agreements to pave the way for the construction of the P’nyang Project.

Smare said it was encouraging to see the positive and constructive manner in which the Prime Minister and his team approached the negotiation with the developers, and the win-win outcome that was secured for the country. “As the Prime Minister stated, it is also important to note that the State was able to secure these advantageous economic benefits via a commercial negotiation with ExxonMobil under the current resource sector laws – this win-win outcome was achieved without changing any laws. “The signing of these agreements signal a continued push in the right direction of returning stability to the resource investor climate and led by ExxonMobil and its partners committing to the project, and agreeing with the government on its expectations.” Smare said the signing of the agreement would help retain and build investor confidence in the country’s existing resource laws, amongst other potential developers across the globe.

## Pressure Builds to Mine International Waters Amid Questions About Ecosystems and Profit-Sharing. *By Anna Bianca Roach, PaaBlue on Sep 29, 2021*

A wealth of resources lies beneath international waters, including cobalt, copper, manganese and other minerals used to power smart phones and other technology. Safeguarding “the common heritage of mankind,” as the United Nations Convention on the Law of the Sea terms this vast store, is a regulatory body called the International Seabed Authority, or ISA. A quarter-century after its launch, the Kingston, Jamaica-based organization is being pressured to finalize rules that will allow companies to start unearthing the minerals. Scientists, lawmakers, environmentalists and other experts warn that rushing this complicated process could lead to irreparable damage to some of the world’s largest ecosystems.

At the end of June, Nauru, a small island nation in the Pacific, [triggered](#) what’s known as the “two-year clause” — a crucial provision in the authority’s founding legislation — giving countries the

power to demand that the processing of mining permits begin within two years. “We’re already seeing warnings from scientists that deep-sea mining risks inevitable and irreversible harm,” said Louisa Casson, a senior political strategist at GreenPeace International. “We know that our oceans are already in a state of crisis.”



Greenpeace International activists painted the word “RISK!” on the starboard side of the Normand Energy, a vessel chartered by the Belgian company Global Sea Mineral Resources, April 21, 2021. Greenpeace’s Rainbow Warrior was in the Pacific Ocean to “bear witness,” the organization said, to equipment tests carried out by the company to “commercially extract minerals from the seabed in the future.” MARTEN VAN DIJL/GREENPEACE

During a September World Conservation Congress held by the International Union for the Conservation of Nature, a public-private membership organization, 81 of 127 governments and almost 600 nonprofit groups voted in favor of halting deep-sea mining activity until more is known about its potential consequences and until policies are devised to mitigate harm. The motion also calls for a reform of the ISA to “to ensure transparent, accountable, inclusive, effective and environmentally responsible decision-making and regulation.” Some large companies like Google and BMW have also signed on to the moratorium.

The ocean floor has never been mined, and scientists worry that this new type of extraction could devastate fragile, unexplored ecosystems. To gather manganese, copper, cobalt and nickel, “collectors” — large bulldozer-like machines — would rake up the top few inches of the ocean floor and shoot the sediment some 3,000 to 4,000 meters to the surface, where it could be sifted for “nodules,” potato-sized rocks that contain the minerals. The remaining material, a sludge packed with heavy metals, would be piped back into the ocean, where it would be released and eventually sink to the floor.

“There’s no doubt that all of the life on the [affected] sea floor will be destroyed,” said Duncan Currie, a lawyer with the Deep Sea Conservation Coalition, an international network of more than 80 nongovernmental organizations, fishery groups and policy institutes. The sediment kicked up by the collectors alone would be enough to smother much of the life on the deep seabed, but the biggest risk, Currie explained in a phone interview, would come from discharging the sludge roughly 1,200 meters below the surface, “so nowhere near the sea floor,” he said, adding, “It’ll be effectively a toxic plume” that could travel over 1,400 kilometers and remain in the ocean for more than a year, threatening the lives of fish, squid and marine mammals. The ISA has not responded to a request for comment or an interview about the proposed legislation or other questions about the organization and deep-sea mining.



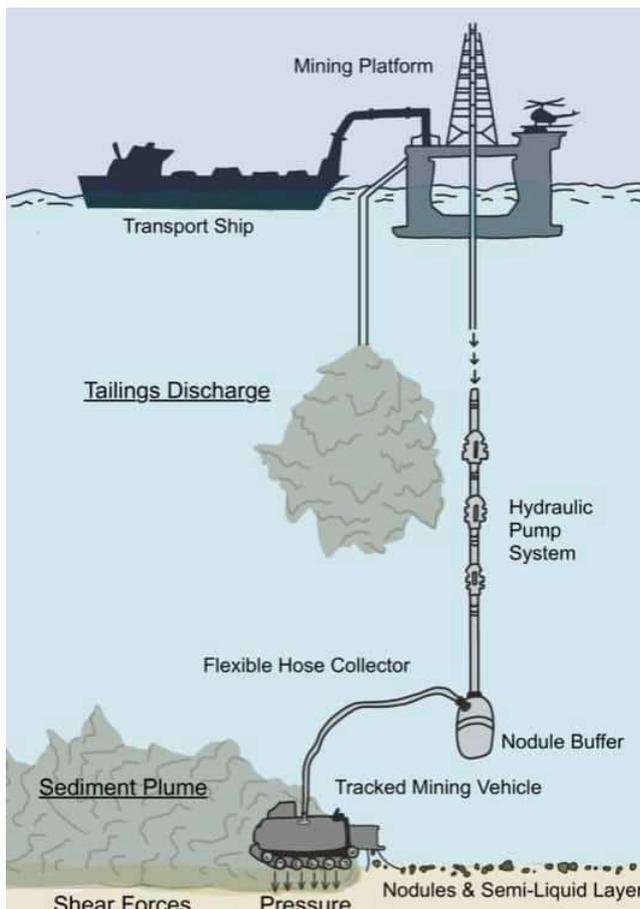
David Lodge, a Briton who is secretary-general of the Kingston, Jamaica-based International Seabed Authority. ISA

### **Health, wealth and redistribution: a delicate balance**

Balancing the health of the world’s oceans with the potential economic benefits of mining is one of the ISA’s biggest challenges. Moreover, the authority has a mandate to ensure deep-sea mining helps reduce inequalities among developed and developing states. “This was supposed to be an economic enterprise that was to lift states from poverty,” said Kristina Gjerde, who represents the International Union for the Conservation of Nature at the UN and the ISA, referring to the latter. Indeed, the 1982 Convention on the Law of the Sea, which created the authority, states that it would “tak[e] into particular consideration the interests and needs of developing states and peoples who have not attained full independence” when deciding how to mandate profit-sharing from deep-sea mining. Almost 40 years later, the logistics for this distribution remain a big unknown and an enduring source of tension among ISA members. Some 167 countries, among them China and Russia, but not the United States, and the European Union signed on to the Law of the Sea treaty. The authority is led by Secretary-General [Michael Lodge](#), a British lawyer who has worked as a consultant in the international fishing industry. The US maintains [observer status](#) to the authority.

What’s clear is that the profits will be split among member states, sponsoring states, the authority itself and the company undertaking the mining. What’s unclear — a source of disagreement that will be challenging to resolve within the 2023 likely deadline triggered by Nauru — is what the split will look like and how it will be enforced. A [report](#) by the Massachusetts Institute of Technology describes the delicate balance that the authority must strike as it comes up with a payment formula. If undersea mining is going to work, it must be profitable enough for the mining companies to justify the sizable costs of underwater work. At the same time, it must also pay for the authority’s expenses and provide enough income to member states and sponsoring states, like Nauru, to justify the potential damage. Finally, some relevant parties are calling for the creation of an environmental fund that would pay for any needed restoration of the ocean floor.

The African regional group in the ISA — 47 countries, comprising almost a quarter of its members — has been one of the most vocal opponents of the primary financial model under consideration. One letter from a representative of the African Group implores the ISA to ensure “deep-sea mining only ever occurs if there is substantial compensation to mankind” and not to design the payment regime “as if the overarching goal . . . is to ensure deep-sea mining is not inhibited.”



*A schematic of manganese nodules mining on the deep sea floor. Environmental impacts are underlined. MIMIDEEPSEA/CREATIVE COMMONS*

### **Calls for transparency and accountability**

To ensure that deep-sea mining would benefit developing states, the ISA [reserved](#) certain parts of the ocean for mining only by those countries and the companies they sponsor. But the relationship between commercial enterprises that would do the mining and the countries that back up their license applications raises questions about where the benefits will actually go. “I think the original intention was that [the companies] would in fact be driven by developing states,” and that those sponsoring underwater mining companies would receive a cut of the profits, Gjerde told PassBlue. In reality, “it’s really unclear who has effective control over what.”

Greenpeace’s Casson, who wrote a recent [report](#) on the companies that hold licenses for deep-sea exploration, said: “We know that there’s only really a handful of governments who are really pushing deep-sea mining. It’s become increasingly clear that those kinds of governments are working, most of them, very closely with private sector contractors. And when you track the ownership of various subsidiaries or partnership agreements, it comes back most of the time to these three parent companies”: the Vancouver-based Metals Company, the Belgian company DEME and the American corporation Lockheed Martin.

If small nations like Nauru can’t keep a strong grip on the contractors they sponsor, they run large risks: They may be held liable for ecological damage caused by the mining venture and the cost of restoration. The Metals Company published a [response](#) to the report authored by Casson and her team, in which it argued that small island developing states like Nauru would not be able to “participate in the benefits of this new resource opportunity.” Watchers of the ISA also ask who exactly the authority is accountable to. Its relationship to the UN is important but indirect: Though it was created under the Law of the Sea treaty, the ISA remains an autonomous body and collaborates with

UN divisions on a case-by-case basis. This makes it unclear who the authority must report to in its work.



Areas outside exclusive economic zones, or international waters, are in bright blue, where the ISA has jurisdiction over the seabed, ocean floor and subsoil. CREATIVE COMMONS

The authority holds an observer status at the UN and has “a lot of support coming from the Division for Ocean Affairs,” said Pradeep Arjan Singh, a researcher at the University of Bremen in Germany who specializes in the Law of the Sea. (The [Division for Ocean Affairs and the Law of the Sea](#) are part of the UN Office of Legal Affairs.) “While the ISA has made effort in some respects to align with the UN, one aspect that has been left out is accountability,” Singh wrote in an email. The ISA is answerable not to the UN but to the State Parties to the Law of the Sea, which meet annually but have “no clear means for complaints or grievances.”

The authority hasn’t met in person since before the pandemic hit, and it’s unclear when its next session will occur. Gerard Barron, chief executive of the Metals Company, has [said](#) that the company aims to begin “shipping product to customers in 2024,” referring to deep-sea mining extraction. ISA’s Lodge [has told](#) the BBC that he expects mining to begin in 2026. Meanwhile, the moratorium that was voted on earlier this month at the International Union for the Conservation of Nature, which was backed by countries, public interest groups and major companies, is a sign of just how much work the ISA has ahead of it to reach diplomatic consensus — and its goals for the common heritage of mankind, as the Convention on the Law of the Sea puts it.

*This article is the first in a series by PassBlue investigating the International Seabed Authority.* The post [Pressure Builds to Mine International Waters Amid Questions About Ecosystems and Profit-Sharing](#) appeared first on [PassBlue](#).

## **Nauru's seabed mining pitch out of step with Pacific**

Johnny Blades, RNZ Pacific Journalist , Radio New Zealand on 29 September 2021

A Pacific government which has sought to expedite deep sea mining used its UN platform to make a pitch for an industry that is unpopular with ocean peoples. There's great interest among advocates of the fledgling sector in the polymetallic nodules found on the deepest seabed of the Pacific, but few regional countries are on board.

Polymetallic nodules are lumps found on the seafloor which are known to contain metals such as manganese, ganesenickel, copper, cobalt and other minerals. These eagerly sought after materials are integral for lithium-ion batteries and storage, among other uses. Nauru recently invoked a rule at the International Seabed Authority (ISA) to allow seabed mining to commence within two years in its waters. Ocean scientists, environmentalists and Pacific civil society have criticised the move and repeatedly urged a pause on any start to mining. However Nauru's president Lionel Aingimea told the UN General Assembly that the fledgling sector was a vital component in the fight against

climate change. "Accessing these polymetallic nodule resources is critical to building the clean energy transitions we need, and towards a circular economy.



Nauru's President Lionel Aingimea addresses the UN General Assembly by video link, 23 September, 2021 Photo: UN

"These polymetallic nodules are needed to transform big and small countries' energy systems, and support our fight against the climate crisis." Nauru is one of four Pacific Island countries which have approved licenses for exploration in their waters. The others are Kiribati, Tonga and the Cook Islands. They are going against the grain of the Pacific push for ocean health, a chief advocate of which is Fiji's Prime Minister Frank Bainimarama, who told a conservation event on the sidelines of the General Assembly that his country had banned deep sea mining. "Humanity is not above nature. We are part of it. And the arrogance of thinking otherwise is costing us dearly," Bainimarama said.



Fiji's Prime Minister, Frank Bainimarama addresses the 76th UN General Assembly by video link. Photo: Fiji Government

"Fiji is committed to the 100 percent sustainable management of the ocean, with 30 percent declared as marine protected areas. We have banned deep sea mining in Fijian waters."

### **Nauru seeks benefits**

According to Aingimea, his country has a right to explore the possibilities of deep sea mining. "This process will allow Nauru and other developing countries to participate in a new industry, accessing valuable resources in light of a historical context that far too often deprived developing

countries from reaping the benefits," he said. "We look forward to working with ISA members and observers to develop environmental regulations that help ensure any exploitation in sea floor collection operations are conducted safely and responsibly." But ocean scientists such as Douglas McCauley, the head of the of the Benioff Ocean Initiative at the University of California, Santa Barbara, say there should be a pause on any mining activity until more research is conducted on the farthest depths of the ocean, perhaps the least studied part of the planet. While there is still much to be learnt, [McCauley said](#) the damage risks were high for such a slow-evolving ecosystem as the ocean floor. While advocates of mining say the seafloor nodules are critically needed for batteries for electric vehicles, McCauley said there was [more potential in recycling](#) of old batteries already in the waste cycle, in order to meet renewable energy's demand for metals.



Electric vehicle Photo: Unsplash / Andrew Roberts

### **NZ government grilled**

Development of environmental regulations for seabed mining is also where New Zealand's government is pinning its focus in the ongoing debate around seabed mining. But its abstention on a recent vote for a moratorium on seabed mining at the IUCN World Conservation Conference drew plenty of criticism in parliament. Foreign Affairs Minister Nanaia Mahuta was unapologetic for New Zealand not voting with the majority. "Our position on that particular motion, alongside the UK, USA, Australia, Canada, France, was set to ensure that we continue to work in a very strong way to build the regulatory framework through the ISA to guide countries in their sovereign determination of deep sea mining," she said.

New Zealand Māori Party co-leader Debbie Ngarewa-Packer was one of several MPs who grilled the minister on seabed mining. "What will she say to tagata whenua in Aotearoa and tagata moana across the Pacific who have been consistently opposing this destructive mining of the seabed?" Ngarewa-Packer asked. In reply, Mahuta doubled down on New Zealand's position that it participates in the ISA to ensure there is a strong regulatory framework to guide the industry. The position of most Pacific Island governments is reflected by the Secretariat of the Pacific Regional Environment Programme's recent recommendation for a 10-year moratorium on deep sea mining. Meanwhile, with global efforts to increase protection for the deep ocean gaining pace, investors appear to have taken flight from one of the main entities seeking to mine the Pacific seabed, The Metals Company. Formed out of a merger involving DeepGreen Metals, a company with multiple exploration licenses in the Pacific and close ties to Nauru, the miner has seen its share price plunge this month.

## **Miner says women take huge risks with little returns**

By GLORIA BAUAI, September 24, 2021, The National Business

GEORGINA Kori, an alluvial miner from Wau, Morobe, says mining as a woman is more laborious and dangerous with very little benefit. Kori, in her late 40s, has been involved in alluvial mining for a long time. She said living in a mining town such as Wau where the cost of living was high, alluvial mining was the main source of income for all. According to Kori, majority of women who mine were in a polygamous marriage, widowed or the husband does not provide. “We need to care for our families and do that through alluvial mine despite the risks involved,” she said. Kori said unlike men who use bigger tools and machines, women were limited. “We can spend the whole day in the mine and get no gramme at all compared to men who dig directly into hard rock and have better advantage. “We collect and after five days, we wash our dirt and get at least point three or point five grammes, that’s enough for us. “Our other bigger challenge is having to deal with our children while handling chemicals (mercury) because while we mine, we are still mothers,” she said.

## **Mine switches to recovery mode**

September 24, 2021, The National Business

ST Barbara chief executive officer and managing director Creg Jetson says a recovery plan for its Simberi operations in New Ireland is underway following mine shut down in May. The mine suspended operations as a result of a fatality onsite due to an accident and damage of its deep sea tailings placement (DSTP) identified through a routine inspection. This affected its gold production. “Turning to Simberi Operations where, despite a steady start to (Financial Year 2021), production was impacted by the shutdown of mining operations in May following the fatality,” Jetson said. “The following month, placement of tailings through Simberi’s deep-sea tailings placement pipeline ceased following a routine inspection identified pipe damage.

“Annual gold production was thus impacted with 73,723 ounces produced this year, with milled grade of 1.35 g/t (grams per tonne) and an AISC (All in sustaining cost) of AU\$2,162 (K1,336.83) per ounce. “A recovery plan for Simberi is well underway, incorporating corrective actions from the investigation into the fatality, with mining since restarted and replacement of the DSTP pipeline underway. “In April this year, the board signed off US\$13 million (about K45 million) for pre-investment work on the Sulphide project. “This project will increase the life of the mine significantly, allowing us to continue making a real difference to social outcomes in New Ireland.” In its plans to progress the Simberi sulphide project to financial investment decision, the company plans to further optimise some aspects of the feasibility study. The Social and Environmental Impact Statement is under review by Conservation and Environmental Protection Authority and engaged independent reviewer, Coffey.

## **LOs can form association**

By KARO JESSE, September 24, 2021, The National Main Stories

ELECTION for Porgera Landowners Association (PLOA) can now proceed after the court endorsed the remaining six clan agents. This now confirms full endorsement of the agents of the 25 clans in the new Porgera special mining lease (SML) area. The election of the six clan agents was previously disputed by aggrieved landowners in court which then saw only 19 clan agents endorsed by the National Court on Sept 15. However, with the turn of events yesterday at the National Court in Waigani, Deputy Chief Justice Ambeng Kandakasi endorsed the six clan agents through a consented order agreed to by lawyer Jason Cappo – representing the agents of the six clans (plaintiffs)

– lawyer Nelson Saroa representing Mineral Resource Authority and Solicitor-General Tauvasa Tanuvasa representing the State.



The consented order agreed to by all parties was filed in a proceedings initiated by all the duly elected clan agents from the six clans – Henry Lara for Tieni Kaimalo clan, John Kulina for Tieni Lakima clan; Nixon Mangape for Tieni Wuape clan; Joe Kale for Tieni Akira; Sole Taro for Tuanda Yapala and Nika Puli for Tuanda Ulupa. The 25 clan agents validated and endorsed by the court are given seven days to convene executive meetings for endorsing executives of PLOA. Outside court, Tanuvasa explained to the media that the validation process for the 25 clans within the mining lease area was concluded with endorsement of all 25 clan agents who were at liberty to form their landowner association. The validation process was ordered by Justice Kandakasi on July 2, which he reverted the landowner identification process to the people to ensure validation and appointment of legitimate leaders from the 25 clans.

### **NZ criticised for abstention in vote on deepsea mining**

*New Zealand has been criticised for abstaining from voting in support of a deep sea mining moratorium in a global forum. Greenpeace Aotearoa made the criticism after the vote at the International Union for Conservation of Nature's World Congress last week.*

Radio New Zealand on 20 September 2021

The motion received support from most countries, but Greenpeace Aotearoa seabed mining campaigner James Hita said New Zealand's government continued to fall behind the rest of the world in preserving oceans. Delegates at this year's congress also voted overwhelmingly for reform of the International Seabed Authority, the UN-mandated body tasked with regulating this activity Hita said deepsea mining was one of the greatest threats facing the oceans, especially in the Pacific. "The relevance of the moratorium's support is even more important following the South Pacific nation of Nauru's decision to trigger the "two-year rule" only months ago," he said. The two year rule requires the ISA to allow the nation to permit mining within two years under whatever regulations have been established by then. Other countries who abstained from voting included the United Kingdom, Canada, the United States of America, Australia and France. "New Zealanders and our Pacific cousins need New Zealand's government to be on the right side of history on deep sea mining. Abstaining from voting is not," Hita said. "Greenpeace Aotearoa wants the Government to take a leadership position on deep sea mining by supporting the moratorium especially when we are a Pacific country."

## **Bougainville govt looking to cash in on alluvial gold mining industry**

*The Bougainville Government believes it can earn millions of dollars from the gold currently being mined and shipped out illegally.*

Don Wiseman, RNZ Pacific Deputy News Editor, Radio New Zealand on 20 September 2021



Gold panning on the fringe of Bougainville's Panguna mine, decades after it was closed for large scale mining. Photo: Johnny Blades / RNZ Pacific

There are dozens of illegal alluvial gold operations in the autonomous Papua New Guinea region and the Minerals and Energy Resource Minister, Rodney Osioco, said they estimate about 80 kilogrammes is leaving Bougainville every month. He said as Bougainville prepares for its independence from PNG it wants to ensure that it is earning from the region's resources. The minister said the government intends making gold a 'restricted item' at all seaport and airport facilities. "We have to talk with the National Airlines Corporation because the airport services is still in the Papua New Guinea Government, and PNG Port Services," he said.

"We have to reach a common understanding of putting our men there and involving our officials, especially the tax office or the department of finance, to monitor the movement of gold." Rodney Osioco said the government would apply a tax to the gold and he thinks it could earn more than \$US16 million annually, based on current prices. He said there is a handful of mining operators with licences and those that remain unlicensed risk forfeiting all their gold at the ports. The previous Bougainville Government, under John Momis, had raised the prospect of building a gold smelter in the region. But Osioco said Bougainville is not yet ready for such a move.

## **Porgera LOs laud validation exercise**

BY ROBERT APALA, Post-Courier, September 17, 2021

Porgera mine landowners have applauded the National Government for completing a successful clan agent vetting process without any hiccups. One of the chief clan agents, Philip Mungalo of Lime Plant, said the team from Mineral Resource Authority (MRA) has done a good job to complete the vetting process on time without objections or difficulty. Mr Mungalo said the State negotiation team was also at hand to witness the clan agent vetting process to ensure that the landowner appoint their leaders to represent them in forums and benefit sharing agreements. Mr Mungalo thanked Prime Minister James Marape and the National Government for the plan to unite all the 25 agents by way of appointing them by the people.

He said the man behind the successful exercise was Joe Kak with his experience in coordinating smooth flow of the validation process for the SML landowners. “The appointment of sub clan agents were done according to the time scheduled and for Anga clan it took time but at least it went well with an appointment of an agent,” Mr Mungalo said. “Now, the agents are ready and people on the ground are ready to reopen the mine.” Mr Mungalo said landowners were waiting for the National Government and the developer including the MRA for the next phase to reopen the mine on September 16, in line with Mr Marape’s earlier announcement.

### **Director charged**

September 15, 2021, The National

OK Tedi Fly River Development Foundation director Boston Kassiman was charged in the Waigani Committal Court with 15 counts of misappropriation involving K248 million belonging to Western people. Magistrate Danny Wakikura read the charges to Kassiman comprising five counts of false pretence, five counts of misappropriation and five counts of conspiracy. He is charged with other directors, Anne Smerewai, Edna Oai and lawyer Greg Sheppard of Young and Williams lawyers. Kassiman is alleged to have on various dates beginning on Aug 30, 2018, conspired with others through board meetings for the foundation with the intension to defraud the people of Western totalling K248 million held in a CMCA trust account. Police also alleged that on various dates between Aug 30, 2018, and last Feb 21, Kassiman dishonestly applied different sums of money totalling K248 million held in the account.

Police prosecutor Sgt Joseph Sangam informed the court that the police hand-up briefs for all matters had been completed, filed and served, except for Sheppard’s recent arrest. He also asked the court to deal with Sheppard’s recent charges separately. Wakikura then adjourned hearing for a month to allow parties time to prepare submissions. Parties were ordered to deliver submissions by Oct 4 to allow time for preparation for response before the matter returns for oral submissions on Oct 11. Their bails were extended.

### **Critics question the climate crisis benefits of deep seabed mining**

*Marta Montojo and Ian Urbina from the non-profit Outlaw Ocean Project on the risks of dredging minerals from the ocean floor. Splash, September 13, 2021*



NOAA

Few people have ever heard of the tiny country of Nauru. Even fewer ever think about what happens at the bottom of the world's oceans. But that may soon change. The seafloor is thought to hold trillions of dollars' worth of metals and this Pacific-island nation is making bold moves to get a jump on the global competition to plumb these depths. The targets of these companies are potato-sized rocks that scientists call polymetallic nodules. Sitting on the ocean floor, these prized clusters can take more than three million years to form. They are valuable because they are rich in manganese, copper, nickel, cobalt that are claimed to be essential for electrifying transport and decarbonizing the economy amid the green technological revolution that has emerged to counter the climate crisis.

To vacuum up these treasured chunks requires industrial extraction by massive excavators. Typically 30 times the weight of regular bulldozers, these machines are lifted by cranes over the sides of ships, then dropped miles underwater where they drive along the seafloor, suctioning up the rocks, crushing them and sending a slurry of crushed nodules and seabed sediments from 4,000-6,000 meters depth through a series of pipes to the vessel above. After separating out the minerals, the processed waters, sediment and mining 'fines' (small particles of the ground up nodule ore) are piped overboard, to depths as yet unclear.

But a growing number of marine biologists, ocean conservationists, government regulators and environmentally-conscious companies are sounding the alarm about a variety of environmental, food security, financial, and biodiversity concerns associated with seabed mining. These critics worry whether the ships doing this mining will dump back into the sea the huge amounts of toxic-waste and sediments produced by grinding up and pumping the rocks to the surface, impacting larger fish further up the food chain such as tunas and contaminating the global seafood supply chain. They also worry that the mining may be counterproductive in relation to climate change because it may in fact diminish the ocean floor's distinct carbon sequestration capacity. Their concern is that in stirring up the ocean floor, the mining companies will release carbon into the environment undercutting some of the very benefits intended by switching to electric cars, wind turbines and long-life batteries.

Douglas McCauley, who is also the director of the Benioff Ocean Institute at the University of California Santa Barbara, warned against trying to counter the climate crisis with solutions that rely on a "paradigm of just ripping up a new part of the planet." If the goal is to slow climate change, he said, it makes little sense to obliterate the deep-sea ecosystems and marine life that presently play a role in capturing and storing more carbon than all the world's forests. If the high seas represent the last frontier on earth, then the deep seabed outside of national waters is a frontier beyond that, a realm subject to a unique regime under international law, deeming the international seabed area and its resources to be managed by an international organization called the International Seabed Authority (ISA) on behalf of humankind as whole. "But who benefits and how from this new rush to seabed mining remains unclear," said Kristina Gjerde, high seas policy advisor for the IUCN Global Marine Program. "And what constitutes benefits to humankind is also unclear as the deep seafloor is filled with untold biodiversity, much of it vitally important to the survival of our planet."

Still, Nauru hopes to forge ahead with seabed mining. Located in Micronesia, northeast of Australia, the tiny island is among the smallest countries on the planet, with a landmass of 8 square miles and a population of around 12 thousand. By moving faster than its competition, this cash-strapped developing nation hopes to get an early edge on a potentially multi-billion dollar market even though Nauru itself is only likely to receive a small fraction of the financial benefits of seabed mining from the Canadian company it is sponsoring. In June, Nauru took the first step in launching the industry. It announced plans to submit an application for commercial extraction on behalf of its sponsored entity "NORI" as early as 2023 to the International Seabed Authority. Such an

application will be judged against whatever the deep sea mining rules are at that time — finalized or otherwise.

Over a dozen other countries, including Russia, the UK, India and China, have 15-year exploration contracts. The government of India has recently set aside \$544 million to stoke private sector investments and technological research in this industry. But Nauru is taking the lead partially because its sponsored company NORI is a wholly owned subsidiary of a Canadian company that thinks it may benefit from being the first, based on its arguments that the minerals are necessary to enable the transition to a new green economy. International interest in seabed mining has been stoked partly by new advances in robotics, computer mapping and underwater drilling — combined with historically high but fluctuating commodities prices. Mining companies globally are said to be scouring for fresh reserves, having depleted much of the world’s easy-to-access veins. The metals they seek are used in magnets, batteries, and electronic components for smartphones, wind turbines, fuel cells, hybrid cars, catalytic converters and other high-tech gadgetry. These metals are commonly found on land but some raise concerns that these may not be enough.

“With dwindling resources on land, with exponential growth of demand, and a shortage in circulation (recycling), there is a need to find alternative sources of critical metals needed to allow the energy transition to zero-net carbon economies,” said Bramley Murton, a marine researcher at the UK’s National Oceanography Centre. It has been estimated that, collectively, the nodules on the bottom of the ocean contain six times as much cobalt, three times as much nickel, and four times as much of the rare-earth metal yttrium as there is on land. Mining companies and states have set their eyes on a specific part of the sea, an area bigger than the size of continental United States that stretches from Hawaii to Mexico, neighboring Nauru’s exclusive economic zone. The ocean floor under that area, known as the Clarion-Clipperton Zone, is estimated to contain metals valued at between \$8 trillion and \$16 trillion.

Nauru has teamed up with NORI, which is owned by a Canada-based firm called The Metals Company to explore this area. “We are proud that Pacific nations have been leaders in the deep-sea minerals industry,” a statement co-authored by Nauru’s representative to the International Seabed Authority recently declared. Scientists have conservatively estimated that each mining license will permit direct strip mining of some 8,000 square kilometers of seabed over the course of a 20 year mining license from the ISA and ‘easily’ impact a further 8,000-24,000 square kilometers of surrounding seabed life by sediment plumes generated by the mining the ocean floor. They estimate that the ‘nodule obligate species’ – the animals living on the nodules or, like deep-sea octopuses, that otherwise need the nodules to survive – will take millions of years to recover and even the animals living in the surrounding sediment may take hundreds to thousands of years to recover from the impact of mining.

Some corporate stakeholders are voicing skepticism. In March, BMW and Volvo Group, along with Samsung and Google, pledged to abstain from sourcing deep sea minerals. In its most recent global report, the International Energy Agency, a global body that advises countries on policy, concluded that seabed mining machines, “...often cause seafloor disturbance, which could alter deep sea habitats and release pollutants...stirring up fine sediments, could also affect ecosystems, which take a long time to recover.” In June, the European Parliament also asked the executive branch of the European Union to stop financing deepsea mining technology and called for a delay in more exploration operations. UK House of Commons Environment Audit Committee in 2019 concluded that deep-sea mining would have “catastrophic impacts on the seafloor”, the International Seabed Authority benefiting from revenues from issuing mining licenses is “a clear conflict of interest” and that “the case for deep sea mining has not yet been made”

One worry among seabed mining critics is that the industry's giant suction, grinding and harvesting machines will kick up huge and suffocating clouds of sediment both along the seabed and high in the water column that block light, crowd out oxygen, produce harmful amounts of noise pollution and disperse toxins which decimate life and contaminate seafood. Such contamination could also pose a threat to the food security for developing and coastal nations whose fishing stocks and other seafloor marine life would be decimated. "We need much more time for research to be carried out, not by mining companies, but by independent seabed ecologists," said Kelvin Passfield, who runs the Te Ipukarea Society in the Cook Islands and is part of a group of non-profit organizations in Fiji, Vanuatu and elsewhere in the Pacific islands that are concerned about the impacts of such plumes on local fishermen and food security.

Other critics see the mining as a ponzi scheme of sorts that is meant to draw venture capital investment but in fact has little real chance to make money in the long term. Matthew Gianni, co-founder of the Deep Sea Conservation Coalition, said that seabed mining companies are trying to peddle a false choice between having to mine cobalt and nickel on land or in the deep sea when they claim we need 100s of million of tons of these metals to build batteries for electric vehicles and other renewable energy storage technologies. "We don't need to build batteries with either nickel or cobalt. Tesla and BYD, the world's second largest EV manufacturer, are making cars with Lithium Iron Phosphate (LFP) batteries, with little to no nickel or cobalt, which are selling unexpectedly well," he said. "There is massive investment now being put into developing batteries that don't use these metals at all." Better product design, recycling and reuse of metals already in circulation, urban mining, and other 'circular' economy initiatives can vastly reduce the need for new sources of metals, he said.

Once thought to be relatively lifeless, the deep sea is now seen by most scientists as a species-rich environment populated by creatures that thrive under conditions that seem impossibly extreme. And yet, much of its biodiversity on the seafloor is distinctly vulnerable to change because their habitat is so far removed and thus rarely disturbed. The oceans already face a daunting list of threats, ranging from overfishing, sonar testing, oil dumping, and plastic pollution, to sea level and temperature rise, acidification, oxygen depletion, algal blooms, and ghost nets. Add to those the additional strains faced by deep-sea marine life on the seafloor: internet cables, bottom trawling, treasure hunting, oil and gas drilling, coral bleaching, the sinking of retired drilling rigs. In 2019 the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) issued its Global Assessment report which estimated that a million species are at risk of extinction, many within the next several decades unless we reverse the drivers of biodiversity loss.

One of the biggest challenges in stoking concern about this type of mining is that the seabed is so far removed — geographically, emotionally and intellectually — from the public that benefits from it. Most of the world's seafloor is not even mapped but less properly or fully understood or robustly governed. Deep below the waterline it is always dark, its many of its inhabitants defy categorizations into the traditional animal-plant-mineral taxonomy. No solution to a problem as complex as the climate crisis will come without difficult decisions and heavy costs especially as the global public tries to wean itself from fossil fuels. The hard part, though, is figuring out how to take one step forward without also moving three steps back.

## **Judge stays State's permit for Wafi-Golpu**

September 13, 2021, The National

DEPUTY Chief Justice Ambeng Kandakasi has stayed the environmental permit issued by the Government for the Wafi Golpu mining project pending the judicial review case filed against the decision to issue it. Morobe Governor Ginson Saonu and the Morobe government have asked the court

to review the decision to issue the permit by the Minister for Environment, Conservation and Climate Change Wera Mori and the managing director of Conservation and Environment Protection Authority (Cepa) Gunther Joku. They are arguing that the decision to issue the environment permit was ultra-vires, a denial of natural justice, biased and unreasonable. They claim that there was a lack of proper consultation between the State and landowners regarding reports on the risk and impact of the Deep Sea Tailing Placement (DSTP) on the environment.

Justice Kandakasi ruled that a balance of convenience favoured the granting of the stay order to avoid possible losses. He told the parties to have a careful look at the proposed waste management DSTP system which was the crust of the court case. “I am persuaded, considering all arguments from both sides, that there is an arguable case present,” he said. “It appears to be possible breaches of the relevant provisions of the Environment Act 2002. “And those serious questions will be determined in the substantive review. “Counsel for the defendants did not assist me to put my hands on baseline studies carried out by whoever was preparing the Environment Impact Survey (EIS), the preliminary steps.”

### **Govt focuses on mining projects: Marape**

September 10, 2021 The National



Prime Minister James Marape (right) said the difference between his Government and Peter O'Neill's was that his Government was for a better deal for Papua New Guinea on the Papua LNG Project, new Porgera Mine, Wafi-Golpu Mine, P'nyang LNG, Pasca LNG and Pandora LNG projects.

THE Papua LNG Project, New Porgera Mine, Wafi-Golpu Mine, P'nyang LNG, Pasca LNG and Pandora LNG are the six major resource projects the Government is focused on, Prime Minister James Marape says. Marape said this in response to Treasurer Ian Ling-Stuckey's ministerial statement on the 2020 Final Budget Outcomes, 2021 Mid-Year Fiscal and Economic Outlook and the Way Forward. “This is more than the previous Peter O'Neill regime which had only the Papua LNG Project to its name,” he said. “O'Neill, in eight years, delivered only the Papua LNG (liquefied natural gas) project. “We are working very hard, and in just two years, we are discussing Papua to ensure that it takes off, Wafi-Golpu, New Porgera, Pandora, Pasca and P'nyang.

“These five big projects, apart from the Papua LNG project, remain our focus, to ensure our economy is strong.” Marape said the difference between his Government and O'Neill's was that his Government was for a better deal for Papua New Guinea on all these projects. He said the Papua LNG Project was not one that was supposed to have begun right away as the Opposition was claiming. “The Papua LNG Project was not supposed to have been constructed in 2019 or 2020,” he said. “It would have to go into pre-Feed (front end engineering and design), then Feed, and then Fid (final investment decision). “They (Opposition) are making it (Papua LNG Project) as if it was going

to be a miracle that would have brought money into the country in 2019 or 2020.” Marape said the Papua LNG Project was going into Feed in 2022, Fid by 2023, and construction to start in 2024 or 2025.

### **Landowners ask court to invalidate election of members**

September 10, 2021, The National

A GROUP of landowners in the Porgera gold mine is asking the court to invalidate the election of members of six sub-clans because they allegedly failed to comply with a landowner validation exercise. The case was filed by Arnold Kulina, on behalf of the landowners, challenging the election of members of the Tieni Kaimalo, Tieni Lakima, Tieni Wuape, Tieni Akira Tuanda Ulupa and Tuanda Yapala sub-clans, claiming that they failed to comply with a court-ordered validation process. The six sub-clans are part of 25 in the mining lease area ordered by the court on July 2 to go through a validation process to appoint representatives as land negotiating committee agents.

The group also requested that their application to restrain the State from endorsing any appointed representatives from the 25 sub-clans be heard together with a case by the Mineral Resource Authority (MRA) on Oct 8. The MRA is seeking orders to endorse those appointed as representatives of 25 sub clans, as the validation process ordered by Deputy Chief Justice Ambeng Kandakasi on July 2 had been completed. Justice Kandakasi ordered that parties joining the proceedings filed by the MRA must refrain from filing fresh proceedings unless ordered to by the court.

### **Chamber hails announcement**

September 10, 2021, The National Business

THE Papua New Guinea Chamber of Mines and Petroleum is encouraged by Prime Minister James Marape’s recent announcement of a clear policy on the payment of dividends from resource projects through to a Sovereign Wealth Fun. Marape made the announcement upon receiving a K100 million dividend payment from Kumul Petroleum Holdings Ltd on Aug 18. PNG Chamber of Mines and Petroleum president Anthony Smare said this was a good sign of the Government’s commitment to ensuring economic returns from resource sector projects were rightfully accounted for, and properly invested and managed for the long term.

“The resource sector contributes approximately 28 per cent annually to the PNG economy,” he said. “While this has a massive indirect multiplier effect in the form of employment, crucial infrastructure and education and health support. “There is still a misinformed opinion as to how the real economic returns of the sector are being recorded, and correctly valued. “The establishment of a sovereign wealth fund with transparent management processes will ensure that these direct economic returns from our resources are adequately captured and managed for the long term, and be used for development, right down to people in our districts and communities.”

### **Next part to deal with law’s review: Sonk**

By PETER ESILA, September 10, 2021, The National Business

THE review of the Organic law on oil and gas will go to Parliament after next year’s election due to changes and lessons learnt in some of the current project negotiations, Kumul Petroleum Holdings Ltd (KPHL) managing director Wapu Sonk says. Sonk said this during the PNG Investment conference yesterday. He said the organic law would allow state-owned enterprises (SOEs) such as KPHL and Kumul Minerals Holdings Ltd to get licenses to partake in the development of the mining and

petroleum sector. Sonk, who is part of the current Government's state negotiating team (SNT), said it was set up by the Government as a way of getting government officials to do more commercially driven negotiations. "Some of these changes in the Act removes all of that (SNT learning) so we realise all the commercialisation as soon as the investors are interested and they see that it will work economically for everyone involved then we go straight into development, the Organic law is about production sharing."

He said the organic law on the oil and gas and minerals was on the agenda this year but was withdrawn and being revised based on lessons taken from the Porgera mine negotiations and oil project sites. He said it would go to Parliament next year after the formation of the new government. "As far as the act or intent of the organic law was concerned is to put Kumul Petroleum and Kumul Mineral in the box seat to get those licenses, so that we can do commercial deals as far as inviting investors into the country is concerned, as far as framing down or framing out or proposing for development and negotiating for development of the assets is concerned," Sonk said. He said major projects such as Wafi-Golpu and P'nyang had been delayed and SNT aimed to get officials into commercially driven negotiations.

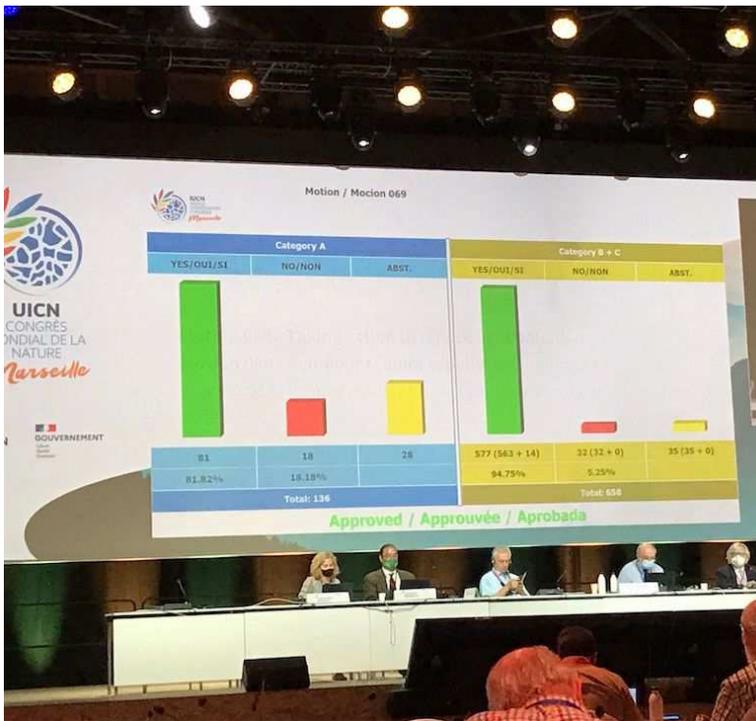
## **Deep-sea mining gets a resounding rejection from conservation authorities**

by Elizabeth Claire Alberts, Mongabay on 9 September 2021

- *Members of the IUCN World Conservation Congress have voted overwhelmingly in support of a moratorium on deep-sea mining, an activity that conservationists say could cause irreversible damage to the ocean.*
- *The South Pacific nation of Nauru recently triggered a two-year rule, which would require the International Seabed Authority (ISA) to grant it a license to begin mining under whatever regulations are in place by then.*
- *Conservationists say there is currently little to no understanding of how deep-sea mining could negatively affect the deep-sea environment.*

MARSEILLE, France — Delegates at this year's global conservation summit have voted overwhelmingly in support of a motion that calls for a moratorium on deep-sea mining and the reform of the International Seabed Authority (ISA), the U.N.-mandated body tasked with regulating this activity. Eighty-one governments and government agencies attending the IUCN World Conservation Congress voted in favor of the moratorium, laid out in [Motion 69](#), while 18 voted against and 28 abstained. Five hundred and seventy-seven NGOs and civil society organizations also voted in favor, while only 32 voted against and 35 abstained. Farah Obaidullah of the Deep Sea Conservation Coalition (DSCC) called the motion's approval "excellent news." "We're very happy to see ... such overwhelming support for Motion 69," she told Mongabay in an interview. "It sends a clear and resounding message to the International Seabed Authority that there is no social license and no global appetite to mine the deep sea."

Deep-sea mining activities would target three types of deep-sea habitat to extract minerals: abyssal plains, seamounts, and hydrothermal vents. Proponents say deep-sea mining would be less destructive to biodiversity than terrestrial mining, and that the extraction of minerals from the seafloor is necessary to fuel the rise of renewable energy technologies, such as [electric cars](#). But a large consortium of conservationists and scientists say that deep-sea mining would irreversibly damage deep-sea habitats as well as other parts of the ocean, and that renewable energy technologies could rely on terrestrial mining and metal recycling programs to acquire the minerals they need. While deep-sea mining has yet to begin, the ISA has already granted 16 licenses to explore for minerals in the Clarion Clipperton Zone, a region in the Eastern Pacific Ocean believed to be one of the most biologically diverse parts of the ocean.



The results of the vote on motion 69 at the IUCN World Conservation Congress. Image courtesy of Deep Sea Conservation Coalition.

In June, the South Pacific nation of Nauru triggered what's known as the “[two-year rule](#),” which would require the ISA to allow the nation to begin mining in two years' time under whatever regulations have been established by then. Nauru sponsors a subsidiary of a Canadian company previously known as DeepGreen. Recently, DeepGreen formally merged with Sustainable Opportunities Acquisition Corporation to form The Metals Company, which is valued at \$2.9 billion. Matthew Gianni of the DSCC said that if deep-sea mining is allowed to begin in two years, there could be a “gold rush” as other countries and companies seek to obtain licenses. “The big problem we have is that once the International Seabed Authority opens the door to mining, it will be almost impossible to close it,” he told Mongabay in an interview at the IUCN congress in Marseille. “And if DeepGreen or other companies begin mining, make a profit and begin paying royalties to the ISA, and money ... to the government that sponsors it ... other governments and other companies are going to want to jump in on this.”



Relicanthus sp.—a new species from a new order of Cnidaria collected at 4,100 meters in the Clarion-Clipperton Fracture Zone (CCZ) that lives on sponge stalks attached to nodules. Image courtesy of Craig Smith and Diva Amon, ABYSSLINE Project.

Previously, more than 450 marine science and policy experts from 44 countries signed a [statement](#) calling for a moratorium on deep-sea mining, saying that deep-sea mining could substantially and irreparably damage the deep-sea ecosystem and that there isn't enough scientific research to fully understand the [negative effects of mining](#) in the deep sea. The South Pacific island nation of Fiji is one country that voted in favor of Motion 69 for the moratorium on deep-sea mining. Joshua Wycliffe of Fiji's Ministry of Waterways and Environment said that the motion will be a "strong signal" coming from the IUCN, but that action must follow.

"If there is no action, then it just becomes yet another [piece of] paperwork," Wycliffe told Mongabay in an interview at the IUCN Congress. "We need to show action behind it. We need to do something concrete." Obaidullah said this motion is one of many messages being sent to the ISA that the world does not agree with the launch of deep-sea mining. "[It's] loud and clear," she said, "do not rush into embarking on another reckless activity such as deep-sea mining."

**Banner image caption:** *A rare deep-sea cirrate octopod (*Grimptoteuthis* sp.) uses its fins on either side of its head to gracefully propel itself through the water column around Deep Discoverer. Image courtesy of the NOAA Office of Ocean Exploration and Research, *Discovering the Deep: Exploring Remote Pacific MPAs*.*

### **KPHL awarded licence**

By SHIRLEY MAULUDU, September 6, 2021, The National Business

KUMUL Petroleum Holdings Ltd (KPHL) has been awarded the petroleum retention licence (PRL) 47 – the Pandora gas field. It is the fourth licence to be awarded to the country's national oil and gas company. Petroleum Minister Kerenga Kua said the license was a field of around one trillion cubic feet of dry gas. "These (four) are financial licences," Kua said. "The financial impact may not be considerable, but the ideology behind it, using the existing laws, is revolutionary. "We have carved out a new way for the State to make more money and make it quicker. "In the past we could not do something like this because an entity like Kumul (Petroleum) was not around." "KPHL managing director Wapu Sonk said PRL 47 was a discovered gas field. "This is a licence that has been discovered but was not commercialised by people that have had the licence," Sonk said.

"The license has expired. "So the licence was then given back to the Department of Petroleum and Energy and new interested parties (then) apply." The petroleum advisory board, the independent body that assesses the financial, technical, commercial and capabilities of the applicants, decide who to give it to. "KPHL was fortunate to have been selected to be the licensee in this discovered gas field. "All (four) fields add up to about 3 tcf of gas, 100 per cent controlled by Kumul Petroleum. "The onus is now on Kumul Petroleum to find suitable partners, come up with suitable, feasible, economically viable and commercial development options to develop those licenses and basically make it commercial." He said the gas fields had been left stranded for a reason. "Some of them are a little bit too small for LNG projects but it is enough reserve for petrochemical industry. "We are looking at all those different options."

### **Wafi-Golpu: PM wants project started**

September 6, 2021 The National Business

PRIME Minister James Marape has tasked the mining ministry, the Mineral Resources Authority (MRA) and the State negotiating team (SNT) to address the delay in starting the Wafi-Golpu project by December. In a forum organised by the mining ministry at Mumeng in Bulolo, Marape was asked by the landowner associations to fast-track the processes and fix issues which are delaying

the project. Marape said the processes of engaging with the landowners, provincial governments and districts must be done right in September, October and November. “If we can complete the agreements before the end of this year, it is not hard for us,” he said. “When you all agree, the Government can go ahead and give the developer the special mining lease (SML). “We will get the position papers of the landowners, the province, and all stakeholders.



Wafi-Golpu mine landowners and stakeholders at Mumeng in Bulolo for the pre-development forum last Thursday.

“We will look at them and what we can get through negotiations with our investors and we will do our utmost best to take what we can get in our discussion with the company. “Royalty demand, equity demand, business spin-off demands, environmental damage demands, land rate demands, all these are entitled to you and our job as the government is to talk with the investors for all your benefits and bring them to you.” Marape expects that by December, “we should have a conclusion and then we can give the okay to the company to start the mine (project)”. “We will work with the investor to get the headline agreements as soon as possible and we will go through the issues through the forums,” he said.

### **Landowner groups agree to draft deed**

September 6, 2021, The National Business

TWO major landowner groups in Kurumbukari and the inland pipeline of the Ramu nickel/cobalt project in Madang have agreed to a draft deed for their future generation trust fund. Kurumbukari landowners chairman Eddie Utu and his deputy John Tigavu, and Inland Pipeline (Maigari) landowners association chairman Jacob Winis and his deputy Sam Aimai agreed to a draft deed prepared by the State’s legal team. The trust is to receive payments from the Ramu nickel/cobalt project or any other company, individual, organisation or sources on behalf of the beneficiaries who are legitimate landowners of the project. The trust would also invest the funds to grow it. It followed two days of awareness by a State team comprising officers from the Mineral Resources Authority (MRA), Mineral Resources Development Company (MRDC), and Treasury. The draft on the Ramu future generation trust fund was presented to the landowners with copies given to their executive to discuss and change clauses to suit all parties.

## Govt warns Twinza: Meet conditions or lose Pasca negotiations

September 6, 2021, The National Business

THE Government may pull out of negotiations with Twinza Oil Ltd on the Pasca gas project agreement if it disagrees with the conditions set out by the State Negotiation Team. Petroleum Minister Kerenga Kua said the Government was disappointed with Twinza for disclosing information to the media which were supposed to remain confidential between the two parties as negotiations were still ongoing. “We feel that once the negotiations are ongoing, certain protocols must be observed. Certain level of confidentiality must be maintained by the negotiating parties,” Kua said. “The State is extremely disappointment with Twinza’s continuous incisions into the media talking the negotiations up, talking the negotiations down.” He said “individuals” were making comments about the integrity of the Government to tarnish its name and credibility. “Those sorts of things are not acceptable to any nation and we can’t accept it,” he said.

“Because it has been going on for quite a while, the State negotiating team, have upon the advice and assistance of the state solicitor, sent a draft confidentiality and non-disclosure agreement to them to sign. Twinza has refused to sign. “What the State has done is to withdraw itself from the negotiations.” He said the negotiations had gone through “two layers on the Twinza side”. “One is through their local representatives here (who then) with their bosses in Australia. And when ideas change, they come back and the direction of the negotiations changes next day,” Kua said. “What we have said is bring all decision makers into Papua New Guinea, sit across the table facing the SNT then they negotiate.” He said the non-disclosure agreement must be signed within seven days as of last Friday. “Secondly, all decision-makers from Twinza must be in Papua New Guinea physically and then they negotiate. That has to be achieved by Oct 15,” he said.

## Wafi-Golpu: PM assures landowners

September 3, 2021, The National Business



From left: Deputy Prime Minister Sam Basil, Prime Minister James Marape, Lae MP John Rosso and Tawai-Siassi MP Kobby Bomareo at Mumeng in Bulolo, Morobe, for the pre-development forum.

PRIME Minister James Marape has assured the landowners and others involved in the Wafi-Golpu Mine project in Morobe that they will get the best deal. He said the mine had been delayed for years because the parties failed to agree on issues to get the mining started. He attended a Wafi-Golpu Mine pre-development forum in Mumeng, Bulolo yesterday. Marape said the government would discuss the terms with the developer, landowners and other stakeholders. “Let’s all discuss the best

outcome for us,” Marape said. “The Mining department has been compiling reports from all stakeholders.

“And when instruments are signed for the project, it will happen the way everyone wanted. “Decisions for the mine will come out from an open, transparent discussion.” Marape advised the developers Newcrest and Harmony that the Government is ready to hand them the special mining lease (SML) and waiting for them to respond to papers they were given. Mining Minister Johnson Tuke said the Government was determined to deliver the project. “I’m ready to sign to start this project which will bring in a huge economic value to the country,” Tuke said. Deputy Prime Minister Sam Basil said he was 100 per cent committed to see the mine come on-stream.

### **Ok Tedi: Sir Moi retires as chairman**

September 1, 2021, The National Business

SIR Moi Avei has retired as chairman of the Ok Tedi Mining Ltd (OTML) after six and a half years. OTML managing director and chief executive officer Musje Werror yesterday thanked Sir Moi for his service and contribution. “Under Sir Moi’s leadership, the value of the OTML business has nearly tripled while mine life has been extended by six years to 2032,” he said. “The outlook for the company is very positive with over K20 billion expected to be generated over this period. “This has been achieved at the same time as the company has made a step change improvement in safety performance. “2020 was the first year with no lost-time injuries recorded in over 30 years. During that year, recordable injury frequency rates fell by 42 per cent. This followed a 27 per cent improvement the previous year.” On behalf of the management and the workers, he thanked Sir Moi for his “guidance, wisdom and the positive legacy he leaves” behind. He said Sir Moi had supporting the elevation of the first local to become the managing director and chief executive officer of Ok Tedi. “He is warmly regarded by all at Ok Tedi, and we wish him well in his retirement,” he said. Sir Moi thanked all the stakeholders for the support and faith shown to him and the board.