Nauru Government enacts International Seabed Minerals Bill

The Government of Nauru passed its International Seabed Minerals Bill on 23 October 2015, becoming one of the few countries in the world to have an Act governing its engagement in seabed mineral activities within international waters known as ‘the Area’.

The Act ensures that measures are taken for Nauru to exercise its effective control on contractors conducting seabed mineral activities in the Area, and at the same time adhere to the rules and regulations set forth by the International Seabed Authority (ISA).

To effectively control contractors, the Act promotes good governance by establishing a Nauru Seabed Minerals Authority that is responsible for monitoring and managing Nauru’s involvement with seabed mineral activities. Revenues generated will be vested into a ‘Seabed Minerals Fund’ established by the Act, which will be managed for the benefit of the Nauruans.

Nauru has been working closely with the Deep Sea Minerals (DSM) Project, seeking legal and technical advice and assistance in the lead up to the enactment of this Act.

The DSM Project congratulates Nauru on this fantastic achievement.
Report on the cost benefit analysis of deep sea mining in the Pacific Region

A report on “An Assessment of the Costs and Benefits of Mining Deep-Sea Minerals in the Pacific Island Region” is now publicly available on the DSM Project website (gsd.spc.int/dsm/images/pdf_files/PIR_CBA_Report). The report, commissioned by the Pacific Community (SPC) through the DSM Project, aims to assist Pacific Island countries in making sound deep sea mining related decisions. It provides additional clarity around the potential magnitude of the impacts of deep sea mining, while offering decision-makers some insight into the potential constraints and challenges to achieving positive net benefits if deep sea minerals mining were to occur under current circumstances.

Cardno, an integrated professional service provider with a global network in more than 290 offices across projects in 85 countries, was contracted to conduct the cost-benefit analysis (CBA) between 23 February and 16 October 2015. For the purpose of the CBA, Cardno assembled a strong team of resource economists and environmental scientists with decades of experience in natural resource economics, impact and risk assessments, sustainable economic development, and ecological restoration in deep sea and reasonable involvement in DSM related activities.

Based on the resource potential of three of the project countries, the CBA considers the monetary value of all aspects of mining seafloor massive sulphides in Papua New Guinea; manganese nodules in Cook Islands; and cobalt-rich crusts in the Republic of the Marshall Islands.

The report interestingly found that seafloor massive sulphide mining in Papua New Guinea has benefits that significantly outweigh the costs. Also, it revealed the mining scenario in the Cook Islands (where four metals are recovered and the miner owns the operation and the processing facility overseas) has the highest net benefits. However, the report states that crust-mining in the Marshall Islands, under the two scenarios considered, is currently not economically viable due to present metal prices, expected ore recovery and costs of technology.

The report concluded that as long as proper steps are taken to manage the wealth in the long-term and to transfer the environmental risk from the people of the host country to the mining company, there is a higher possibility of the social benefits outweighing the social costs. Despite the studies limited focus on three countries, the report provides important findings and considerations that are applicable to other Pacific nations with similar deep sea mineral resources.

Cook Islands recruits legal counsel for legal support

The Cook Island’s Seabed Minerals Authority (SBMA), with the financial assistance of the DSM Project, recruited a Legal Counsel, Ms Amelia Ponton, to provide legal support while Ms Alexandrya Herman pursued her Masters study abroad.

Both Ms Ponton and Ms Herman were former legal interns of the DSM Project.

Ms Ponton is of English and Tuvaluan descent, joined the DSM Project as its first legal intern in 2012. She graduated from Griffith University in Brisbane with Bachelor of Laws and a Bachelor of Arts Degree majoring in Cultural Sociology. It was through her initiative in approaching the Project that the legal internship scheme was developed.

A Memorandum of Understanding was signed between the Pacific Community (SPC) and the SBMA to formalise work and financial arrangements for Ms Ponton to assist the SBMA’s Commissioner with advice and drafting assistance on relevant legislation, licensing regulations, seabed prosecutions, negotiations and contracts.
Pacific countries discuss environmental management options for deep sea minerals development

Representatives from 11 Pacific Island governments, civil society groups, the private sector and international environment experts gathered in Nadi, Fiji between 5 and 8 October 2015 to participate at the DSM Project’s 8th regional training workshop. This workshop focused on the “Environmental Management of DSM Activities”.

Comprising panel discussions, working group activities, presentations by mining companies and international environment experts; the workshop was an opportune time for participants to ask experts questions about environmental issues and impacts associated with deep sea mining.

Major components of the workshop involved the review of two important regional documents, the Regional Environment Management Framework, which contains an Environment Impact Assessment template developed for deep sea mineral activities, and the Regional Deep Sea Minerals Scientific Research Guideline, which has been written for Pacific Island countries to use to develop their respective national marine science guidelines or regulations.

These documents are aimed to assist Pacific States to ensure that marine scientific research, prospecting, exploration and mining activities relating to deep sea minerals are well managed and performed in accordance with international standards and best environmental practices.

In addition to the workshop’s environmental management component, the DSM Project supported the civil society representatives to meet and discuss ways in which they could better engage in deep sea mining discussions; as well as their perspectives on deep sea mining and issues they wish to raise with the experts.

The workshop generated effective discussions on the environmental management of DSM and acquired comprehensive feedback and comments from participants on the two documents reviewed.

The workshop was highly participatory with many activities including the workshop favourite BINGO! This exciting and competitive activity involved solving matching DSM questions in teams of two people. Prizes, consisting of candies, chocolates and Pure Fiji products were awarded to winners.

The documents from the workshop are available on our website (http://gsd.spc.int/dsm/index.php/11-workshops-and-meetings/90-environmental-management-of-dsm-activities), including the BINGO! sheets which are great to use in awareness raising events.
Feedback from participants:

“The workshop was very informative, useful and very clear on what it aimed to achieve throughout Pacific Island countries that have the potential for DSM mining or are located within areas of interest for DSM activities. I can truthfully say that this has been a very comprehensive workshop and I have learnt a lot of important facts and issues that I would need to take back home to my country and address them to the relevant government ministries.” - Brendon Pinau, Principal Environment Officer, MECDM, Solomon Islands

“The workshop overall was very informative especially given the chances at discussions on our opinions on both documents discussed during the workshop. The content and program of the workshop was great and I enjoyed it.” - Victoria Hnanguie, Acting Environment Inspector, MELAD, Kiribati

“I have learned a lot from this workshop. Environmental management is the major concern for all stakeholders involved in DSM, thus proper management techniques/technology should be used. After this workshop I came to realise that good collaboration/data sharing within each government’s national departments is vital for informed decisions on environment management. The two documents reviewed at the workshop captured every important detail needed for proper environmental management and gave member countries useful insights on how they should go about drafting policy and legislation for good environment management.” - Samuel Himata, Acting Senior Research Officer, Department of Mineral Policy & Geohazards Management, PNG

“I have attended several of these workshops in the past but I find this more interactive and inclusive especially the BINGO! sessions and the opportunity for a separate dialogue for the CSOs. The workshop addressed very important measures and issues regarding environment. I suppose the major challenge is that for the Pacific Island countries, the ocean is the major source of revenue (tourism, fisheries), cultural and traditional importance. DSM has the opportunity of either being a ‘blessing or curse’ to the Pacific Island states, thus the environmental issues are of significant importance to be clearly understood, with the possible misconception and the precautionary environmental measures to be taken in this new frontier. Having DSM experts was really helpful in sense that we were able to get industries, CSOs, and government reps on the same table (venue) to discuss DSM. This is a process of coming to understand and respect each other and their opinion.” - Willie Atu, Country Director, The Nature Conservancy (TNC), Solomon Islands

“Thank you to the SPC-EU DSM project for supporting my attendance at the workshop and providing me with the opportunity to deliver a presentation, on behalf of SPREP. The workshop was very well-organised, expertly facilitated and well-attended. The activities were engaging and participation levels were high. It seemed that participants were keen to contribute and learn, as much as they could. It was also good to see participants engaging in robust discussion and asking difficult questions that got to the heart of some of the most challenging issues. The BINGO! games were a real hit! I think workshop participants left with a rich learning experience and greater confidence in addressing the many complex issues surrounding deep sea mining.” - Melanie Bradley, Environmental Planning Officer, SPREP, Samoa

“The workshop gives good opportunity for participants to review the REMF and MSR papers. The level of interaction was very good and inputs from participants were excellent. The secretariat team will need to screen comments well so that there is a clear boundary to the content of the document. The works presented for review set a good basis for our work. Activities model were good, group work style was good and yes, more BINGO!” - Jope Davetanivalu, Planning and Capacity Development Adviser, SPREP, Samoa

“It is fitting that the last DSM Project workshop be on the very important issue of environment management. It was fantastic to see the participants fully engaged in the workshop activities. The feedback we received on the two regional frameworks was of high quality. I would like to thank all the experts who presented and helped make the workshop a great success” - Alison Swaddling, Environment Advisor, SPC, Fiji (and workshop facilitator)
Vanuatu conducts final consultations on draft national DSM Policy

The Vanuatu National Offshore Minerals Committee (NOMC), responsible for the drafting of a DSM Policy and advising the government as well as the community on issues pertaining to deep sea mining, conducted final consultations for its draft national DSM Policy from 22 June to 12 September, 2015.

Consultations and awareness programmes were conducted in 24 different locations in the province of Torba, Penama, Sanma, Malampa, and Tafea. The purpose of the consultations were to raise awareness on deep sea mining, capture the opinions of the people of the Provinces on the components of the Deep Sea Minerals Policy draft, and integrate consultation feedback into the policy draft document.

Targeted audience for the consultations included provincial authorities, community leaders (chiefs, priests, and councillors), villages with high population density, and the community at large. Awareness materials distributed in the consultations included posters, booklets, and two Bislama translated DSM DVDs (Under Pressure and Out of Darkness). These materials were also distributed to secondary schools.

The DSM Project recommends the establishment of a NOMC in each of its 15 participating Pacific countries, and is able to provide funding of activities based on approved work plans.

Solomon Islands holds public information session at SINU campus

Solomon Islands took the opportunity to invite the DSM Project Manager, Mr Akuila Tawake to give a public lecture/presentation on deep sea minerals on 26 October 2015 at the Solomon Islands National University (SINU) Lecture Theatre.

The public lecture, titled, “What does the Future Hold for the Minerals that is Beneath Solomon Islands Ocean Floors?” was held in support of the National Mining Forum and was attended by about 50 SINU students and a number of lecturers. The aim of this public lecture was to provide the opportunity for the students (and the public) to learn about what is going on in Solomon Islands and the Pacific in relation to Deep Sea Minerals and its potential economic and environmental impacts.

Mr Tawake was in the Solomon Islands attending the National Mining Forum. This forum is a conference supported by the Solomon Islands Government and The Nature Conservancy which aimed to pave way for a better mining industry by identifying pathways for better economic, social and environmental outcomes for the Solomon Islands Mining Industry.

The DSM Project encourages its participating States to hold DSM public consultation events, including lectures, and welcomes invitations for DSM Project Staff to present and share information. The Project’s website (gsd.spc.int/dsm) has many materials (videos, Information and Country specific brochures, newsletters, presentations etc.) to assist with engagement events.
Into their second month of their study program at the University of Hawai‘i at Manoa, Cook Islands national, Ms Alanna Smith and Tongan national, Ms Ese Fulivai have progressed well with their Deep-Sea Biology course, learning more about the deep sea environment.

“An interesting topic included the likes of sea mounts and how they act as fish aggregators as a result of their prominent topographic feature causing water masses to increase turbulence and mixing to enhance local biomass production by moving nutrients. This was an interesting paper as it made me realise the locations of sea mounts would need to be taken into consideration when assessing suitable sites for possible mining locations within the Cook Islands,” Ms Smith said.

“I am enjoying the study program as I learned a lot of new information from lectures. I am submitting a weekly report to my boss in Tonga, providing useful information that he could use for his Radio Talkback show,” Ms Fulivai said.

For the month of October, the two interns assisted in evaluating the community structure and biodiversity of megafauna in the UK-1 claim area in the Clarion Clipperton Fracture Zone. The DSM Project provided support to the two interns on their three-month training placement.

The internship opportunity enabled them to gain practical and technical experience in sorting and analyzing macrofaunal samples and megafauna photo surveys taken from the Clarion Clipperton Zone in the East Pacific; gain a better understanding of the various techniques used to achieve environmental baseline surveys, as well as gaining a broad understanding of the deep-sea ecosystem from the deep-sea biology class they were involved in.

“This was an exceptionally valuable opportunity for myself as I was able to gain a vast amount of knowledge in a completely new field to me. Not only did I learn so much, the internship also inspired myself to want to further my career within the environmental management side of deep-sea nodule mining, and I would definitely recommend this opportunity to others, particular young new graduates such as myself, as this is a relatively new field that I believe will interest many young graduates who may still be looking for their niche in life,” Ms Smith said.
CSO Perspectives

As part of its role to engage all stakeholders in the DSM discussion in the Pacific region, the DSM Project acknowledges the importance of engaging civil society organisations (CSOs) in these discussions. Since its inaugural consultation workshop held in Nadi, Fiji in June 2011, the DSM Project has been inviting and supporting CSO representatives to attend consultation workshops and meetings including awareness and stakeholder consultation programmes, and regional training workshops.

To further support CSO participation in the DSM dialog, the DSM Project provides this space for CSOs to share their perspectives. The first of CSO perspectives was provided by Ms Teina Mackenzie, from the Te Ipukarea Society in the Cook Islands in the 8th Issue. This second contribution is from Dr. Helen Rosenbaum, from the Deep Sea Mining Campaign.

CSO contributions should be sent to the DSM Project Manager, Mr Akuila Tawake at akuilat@spc.int

Contributions will not be edited.

Dr Helen Rosenbaum
Deep Sea Mining Campaign
Project of the Ocean Foundation

The Canadian mining company, Nautilus Minerals Inc. is set to embark on the unprecedented extraction of metals from the sea floor. The mining project, known as the Solwara 1 project, proposes to extract gold and copper from the floor of the Bismarck Sea in the New Guinea Islands Region of Papua New Guinea (PNG). It is the first of a potentially large number of deep sea mining (DSM) projects within the Pacific Islands Region, including a number of other nearby tenements granted to Nautilus.

Globally, interest in DSM is burgeoning. The Indian Ocean, the Red Sea and the Clarion Clipperton Zone (58,000 km2 of international waters between Hawaii and Mexico) are just some of the world’s exploration hot spots.

Over the past decade, the Pacific Islands Region has also witnessed a flurry of seabed exploration. Over 1.5 million km2 of ocean floor in the southwest Pacific alone is under exploration leasehold to private companies and Government–company joint-ventures within both territorial and international waters.

Nautilus commissioned United States based consultancy firm, Earth Economics (EE), to produce the Environmental and Social Benchmarking Analysis (ESBA) of the Solwara 1 project. Published in May 2015, Nautilus and the consultants consider the report a groundbreaking analysis of DSM using natural capital accounting and an ecosystem goods and services framework.

According to the ESBA report, the primary goal of the analysis is to measure the social and environmental impacts of the Solwara 1 project in comparison to three terrestrial copper mines, as a tool for good decision making. In the words of EE:

“This study provides a social and environmental review of the Solwara 1 project. It provides a preliminary framework that examines the ecosystem goods and services that may be enhanced, degraded, or consumed by the Solwara 1 project in Papua New Guinea. This study also sets out the first ever natural capital accounting and ecosystem goods and services framework for seabed mining. The Solwara 1 project is compared to modern existing and proposed terrestrial copper mines. Increased recycling and replacement of copper as alternatives to mining and the smelting process are also examined.”

However, as the Deep Sea Mining Campaign critique, Accountability Zero explains, the ESBA falls well short of its own stated goals and does not provide the critical analysis needed for strengthened decision making. While it employs a structure adapted from an internationally recognized natural capital accounting process, it fails to meet the well accepted requirements of a cost-benefit analysis (CBA). A CBA would identify major social and environmental concerns associated with Solwara 1 and attempt to quantify impacts as meaningfully as possible. It would seek to estimate the net benefits of the proposed deep sea mine against its net impacts. Without a CBA, the ESBA is of little value to public policy and DSM decision-making.

Furthermore, the ESBA contains serious methodological and logical inconsistencies including:

• The use of natural assets, ecosystem services and values that describe terrestrial environments but bear no relevance to deep sea and marine environments. As a result, the ESBA undervalues, or values at zero the ecosystem goods and services provided by deep sea and marine ecosystems;
• A failure to account for the social, cultural and economic values of oceans;
• The failure to account for the cumulative impacts of the several deep sea mines Nautilus intends to operate in the Bismarck Sea;
• A questionable comparison with selected terrestrial mines that fails to build a picture of the natural assets and ecosystem services associated with the Solwara 1 site;
• A partial and incomplete analysis that rests its case entirely on copper production and omits the analysis of gold production.
Internship Programme

As part of its capacity-building initiative, the DSM Project has established successful Internship Programmes for recent graduates in law, communications, environment, geology and geographic information systems (GIS). The aim of these schemes is to build a sustainable source of in-country expertise, as the interns are encouraged to return to their countries to work with national authorities involved in deep sea minerals activities. The Project also offers an intensive two-week placement to Pacific-ACP Government officers. Government officials receive tailored training, for example, DSM specific country legislation being drafted that may need assistance, and they also receive guidance in relevant general practice work for their country.

The internship vacancies are available on a rolling basis and preference is given to applicants from our 15 member countries. For more information on the internships or to apply, please visit the website: http://gsd.spc.int/dsm/index.php/get-involved

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Government officials

**Name:** Divine Waiti  
**Country:** Marshall Islands  
**Trainee Duration:** 16 November 2015 – 28 November 2015

**Background:** Divine is the Legislative Counsel for the Parliament of the Republic of the Marshall Islands. He graduated with a Bachelor of Laws Degree from the University of the South Pacific in 2001 and holds a Master of Laws Degree in International Human Rights from the University of London, UK in 2005. He has been involved in various DSM regional workshops and consultations on DSM in the region and in the Marshall Islands. During his placement with the Project, he worked on finalising the draft DSM policy and legislation for the Marshall Islands.

Legal Intern

**Name:** Abraham Bualo  
**Nationality:** Solomon Islands  
**Trainee Duration:** 14 September 2015 – 9 October 2015

**Background:** Abraham is a final year law student at the University of the South Pacific, Emalus Campus in Vanuatu. During his internship with the DSM Project, he conducted legislative reviews on laws relating to deep sea mining.

“I’ve learnt so much from the DSM Project. I gained a lot of knowledge from the tasks I was assigned with. The Legislative reviews, for instance helped me to see the crucial areas the Pacific Islands needs to consider when drafting or passing law.”

Geology Intern

**Name:** Warileka Sam  
**Nationality:** Papua New Guinea  
**Trainee Duration:** 16 September 2015 – 10 December 2015

**Background:** Warileka is a third year Geology student at the University of Papua New Guinea. Her tasks during her internship involved conducting a literature review of Nautilus Minerals’ activities in PNG and Tonga.

“The most important thing I’ll be able take away from my internship is a deeper appreciation for our mineral resources – both terrestrial and marine. I’ve come to learn that not all countries are fortunate enough to have an abundance of (commercial) mineral resources and while there is some controversy over mining deep sea minerals, I understand that for these countries, deep sea mining may be the best opportunity for them to boost their economies.”
Name: Kevin Chand
Country: Fiji

Background: Kevin works and specializes in the area of environmental law at a private law firm in Fiji. He received support from the DSM Project to attend a three week course at the Rhodes Academy Centre for Oceans and Law Policy in Greece. Dedicated to fostering a better understanding of the main principles of oceans law, the course covers a range of topics related to oceans law and policy, which includes the fundamentals of the law of the sea (UNCLOS), fisheries and the marine environment, deep seabed mining, maritime boundaries, delimitation and disputes.

“Our lecturers who are renowned experts in their respective fields had amazing insight into the topics they covered. In addition to our lecturers we were fortunate that many of our fellow students, many of whom are very experienced lawyers, scientists and experts in their own right, shared their own experiences and perspectives in respect to the topics that we discussed and provided a richer understanding of the issues covered.”

GIS Interns
Name: Allan Boe
Nationality: Vanuatu
Trainee Duration: 25 October 2015 – 7 November 2015

Background: Allan is a Data Entry Officer at the department of Geology, Mines and Water Resources in Vanuatu. He undertook a two weeks training with the DSM Project to increase his knowledge on Programming and Geographical Information Systems (GIS). The Vanuatu government also benefited from a programming and GIS training conducted by the DSM Project in Vanuatu on February 2014, resulting in the establishment of the Vanuatu data management database which led to the recruitment of Allan as a Data Entry Officer. Allan’s placement with the Project was aimed to ensure that he was equipped with the necessary knowledge and skills to effectively carry out his tasks as a Data Entry Officer for Vanuatu.

“My experience was extremely rewarding. In addition to sharpening my editing skills and knowledge in programming and GIS, maturing professional, I thoroughly enjoyed working with such a great team of people. It was a pleasure to watch and learn from my fellow colleagues.”

GIS Interns
Name: Marino Wichman
Nationality: Cook Islands
Trainee Duration: 10 November 2015 – 26 November 2015

Background: Marino works with the Cook Islands Seabed Minerals Authority as a GIS Officer. During his placement with the DSM Project, he received technical support and training on geographic information system (GIS) capacity and technical information management systems to provide better technical footing for the Authority, as the Cook Islands progresses with its Exploration Tender which commenced on 10 August 2015.

“I would like to thank SPC-GSD for their continued support to the development of the Cook Islands Minerals sector. In particular, the development of the technical capacity to the Seabed Minerals Authority Exploration Tender, expected to close January 2016. Through this placement, the Authority now has better footing for the appropriate management for its Tender tenements, which have set parameters outlined in the Cook Islands Seabed Minerals Amendment Act 2015.”
New resources

Breaking the Surface: The Future of Deep Sea Mining in the Pacific

New video on website:

http://gsd.spc.int/dsm/index.php/12-videos/93-breaking-the-surface

This short film explores how the two Pacific Island nations of Papua New Guinea and Vanuatu are working together with their communities to manage the future opportunities and impacts associated with the deep sea mining industry.

The film demonstrates the critical importance of the work of the DSM Project to all stakeholders and takes a more regional focus to highlight the two countries’ consultation process and efforts.

Papua New Guinea, being the only Pacific nation to issue a deep sea mining license to date, looks likely to be the first country in the world to begin the pioneering of deep sea mining.

This film showcases how its government has been consulting local communities and national stakeholders about its plans to manage the development of this new industry and that it has designated a coastal area of benefit in an effort to recognise coastal communities living nearest to offshore mining activities.

Similarly, Vanuatu has been undertaking detailed consultations with their communities on deep sea minerals management and development and it has completed a full national consultation process to inform the development of the country’s deep sea minerals policy.

Breaking the Surface is the third in a series of films produced by the DSM Project.

Get Involved

DSM Project Internships
The DSM Project offers internships in Law, Environment, Communication and Geology. For more information on the internships visit the website: http://gsd.spc.int/dsm/

DSM Project LinkedIn Group
The DSM Project has set up a LinkedIn Group Page:

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