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SPC-EU EDF10 Deep Sea Minerals Project Proceedings of the Cook Islands National Deep Sea Minerals Stakeholder Consultation Workshop AOG Hall, Takuvaine, Rarotonga, Cook Islands 11 April 2012



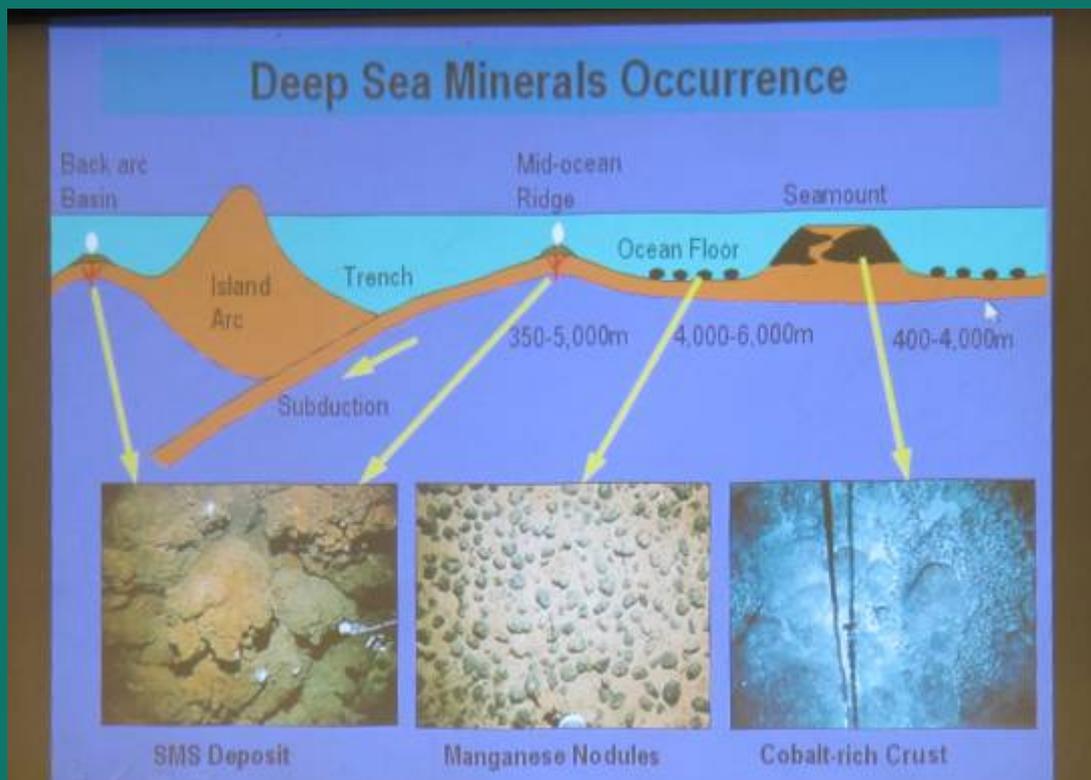
July 2012

SOPAC WORKSHOP REPORT (PR103)

Hannah Lily¹, Akuila Tawake¹, Darryl Thorburn², Paul Lynch², Ben Ponia²

¹Deep Sea Minerals Project, Ocean and Islands Programme, SOPAC Division

²Cook Islands, Ministry of Marine Resources



A slide from Mr Tawake's presentation about the Pacific's deep sea minerals potential

This report may also be referred to as SPC SOPAC Division Published Report 103

Applied Geoscience and Technology Division (SOPAC)
 Private Mail Bag
 GPO Suva
 Fiji Islands
 Telephone: (679) 338 1377
 Fax: (679) 337 0040
 E-mail: director@sopac.org
 Web site: <http://www.sopac.org>



**SPC-EU EDF10 Deep Sea Minerals Project
Proceedings of the Cook Islands National Deep Sea
Minerals Stakeholder Consultation Workshop
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EXECUTIVE SUMMARY

The Cook Islands National Deep Sea Minerals (DSM) Stakeholder Consultation Workshop was held by the SPC-EU EDF10 Deep Sea Minerals Project (DSM Project) in collaboration with the Office of the Minister for Minerals and Natural Resources, Hon. Tom Marsters and the Cook Islands' Ministry of Marine Resources in Rarotonga on Wednesday the 11th of April 2012. Opportunity was also given to those who could not participate in this daytime workshop, to attend an evening presentation on Thursday the 12th of April 2012 at 6.30 pm. In attendance were representatives from various government departments, the private sector, traditional leaders, international agencies, NGOs, the media, and civil society.

The workshop was organised to present the DSM Project to in-country stakeholders and collectively discuss national priorities in relation to DSM issues. In addition, it provided an opportunity to discuss next steps for the Cook Islands to be fully prepared for any future engagement with DSM exploration within its waters. Key issues discussed included: implementing the national seabed minerals legislation, capacity building requirements, and how to create and operate effective environmental regulation and monitoring.

The workshop aligned with the DSM Project's aim to encourage a stakeholder participatory approach: to keep in-country stakeholders informed, to disseminate sound technical and policy advice, and to provide a forum at which all voices can be heard. The Project provided copies to workshop attendees of its six information brochures developed to inform Pacific Island countries about minerals and mining issues and DSM specifically. Attendees were advised that a Cook Islands-specific brochure, providing the data held by SOPAC about Cook Islands' DSM deposits, was being prepared. Information known about those deposits was also presented at the workshop.



The six information brochures produced by the SPC-EU DSM Project.

The workshop was opened by the Deputy Prime Minister and Minister for Minerals and Natural Resources, Hon. Tom Marsters, and presentations were delivered by the DSM Project Team Leader, the DSM Project Legal Advisor, the Secretary of the Marine Resources Department, and representatives from the Office of the Minister for Minerals and Natural Resources, Hon. Tom Marsters, National Environment Service, and the Ministry of Finance and Economic Management. A short video, provided by KORDI (Korea Ocean Research and Development Institute) was presented, to show some of the equipment and technology that may be used in seabed mineral exploration and extraction.

In the afternoon, participants divided into a technical working group, and a policy working group for the second half of the workshop. The two groups presented in plenary the outcomes of their discussions for consideration and further deliberation.

The following recommendations arose from the discussions of the workshop:–

1. The Cook Islands should continue its active engagement with the DSM Project; and:
 - i. the DSM web-pages within the SOPAC website, once launched, should be made widely available, and should include learning from across the region; and
 - ii. should seek from the Project further support with national DSM information-sharing, and capacity-building initiatives.
2. Participatory and multi-stakeholder engagement in the Cook Islands' work on DSM is important, and can be enhanced by:
 - i. the addition of community representatives to the relevant advisory or decision-making body (currently the Seabed Minerals Taskforce); and
 - ii. a programme of information-sharing with traditional leaders, like the Aronga Mana and local communities.
3. A legislative review (particularly of the Environment Act 2003) should take place, to:
 - i. identify any gaps, and suggest options to fill those;
 - ii. harmonise the different laws;
 - iii. ensure the Cook Islands' legal framework meets UNCLOS standards and is in line with International Seabed Authority regulations;
 - iv. ensure sanctions imposed for non-compliance by licence-holders are sufficiently meaningful to act as a deterrent; and
 - v. ensure that appropriate due diligence processes would be applied before mining licences are issued, which include a minimum capital requirement for the company.
4. The creation of a national integrated resource framework, encompassing and harmonising marine resources (both DSM and fisheries) and marine park plans should be considered.
5. A comprehensive cost/benefit analysis or 'strategic environmental and social assessment baseline study' should be performed by the Government before a decision to grant mining licences is taken; and other methods of generating income from the ocean (e.g. tourism or fisheries) should first be investigated.
6. Marine scientific research and exploration activities in the Cook Islands' Exclusive Economic Zone should be encouraged, as an opportunity to obtain more information on the resources in the Cook Islands EEZ.
7. Once exploitation or exploration activities commence:–
 - i. The precautionary approach should be applied.
 - ii. Employment opportunities for Cook Islanders arising out of DSM should be encouraged.
 - iii. Assistance should be sought for independent review of EIAs, and State monitoring and compliance of licence-holders' work.
 - iv. A sovereign wealth fund should be established to preserve any State income derived from DSM.

The seven recommendations above will be submitted to the Cook Islands Seabed Minerals Taskforce, for their consideration and recommendation for the DSM Project's future intervention in the Cook Islands.

A note of a follow-up evening event, held after the main Workshop, is also included at Attachment 3.

ACKNOWLEDGEMENTS

The workshop was funded by the European Union (EU) through the SPC-EU EDF10 DSM Project. Much gratitude is extended to Mr Ben Ponia, Mr Patrick Arioka, Mr Paul Lynch, Mr Darryl Thorburn and their colleagues for their assistance prior to and during the workshop; and to the Minister of Minerals and Natural Resources, Hon. Tom Marsters, for his insightful opening to, and support for, the workshop.

The Project also wishes to acknowledge all the attendees for their active involvement throughout the workshop. The participation of Joseph Brider and Richard Neves is especially acknowledged.

1 – INTRODUCTION

Previous marine scientific research and offshore mineral exploration conducted within the Exclusive Economic Zone (EEZ) of Pacific Island states have confirmed variable potential of mineral occurrence. The high global demand for metals coupled with recent discovery of high grade Seafloor Massive Sulphide deposits in Papua New Guinea have led to the recent upsurge in offshore minerals exploration within the EEZ of Pacific Island countries, and several other Pacific Islands have granted licences for exploration within their EEZ. In 2011 Tonga and Nauru also became the first 'developing states' to sponsor commercial entities to explore in the International Seabed Area.

Abundant manganese nodule occurrence, with high cobalt-content, has been identified within the Cook Islands' EEZ. Conscious of potential interest in its deposits as technology progresses and commercial extraction becomes viable, the Cook Islands has started to prepare itself for engagement with the DSM industry, and has been one of the first countries in the world to enact legislation to regulate DSM activities in its EEZ.

Due to the lack of specific technical knowledge and capacity, and policy, legislation and regulations for the governance of DSM resources in the Pacific region, the DSM Project was launched in 2011, at the request of Pacific Island States. The Cook Islands is one of the fifteen countries participating in the DSM Project, and the DSM Project Team conducted this April 2012 visit to the Cook Islands to hold a national stakeholder consultation workshop about DSM and to discuss with relevant Government officials how the Project can most usefully be implemented in the Cook Islands.

1.1 Participants of the Workshop

The DSM Project gives particular emphasis to in-country stakeholder participation in preparing Pacific-ACP States to fully participate in this new industry. The Cook Islands National DSM Consultation workshop was held to bring together key stakeholders in Cook Islands to provide information and to discuss the challenges and the benefits of Cook Islands' potential engagement with the exploration or mining of DSM. This one-day workshop was held at the Assemblies of God (AOG) Hall in Rarotonga on Wednesday, 11th April 2012. A further evening session was also provided the following day, in case interested parties were unable to make the daytime session (see Attachment 3 for notes of that evening session). A range of stakeholders were invited to the workshops, including representatives from government, NGOs and local communities, and traditional leaders. A group photo of participants is shown on the title page. A full list of participants is attached to this Report in Attachment 2.

1.2 Objectives of the Workshop

The objectives of the Cook Islands DSM national stakeholder consultation workshop were to:

- identify key in-country stakeholders and present the SPC-EU DSM Project and information about Cook Islands' engagement with DSM to them;
- provide a forum for the discussion of issues and concerns relating to DSM;
- determine the needs and priorities of Cook Islands in terms of policy and legislation development, capacity building and other DSM related issues;
- provide the necessary guidance for the implementation of the DSM Project in Cook Islands;
- discuss methods of future collaborative working with key stakeholders (e.g. government agencies and NGOs) to involve all interested parties in Project activities in Cook Islands;
- assist DSM Project staff to understand the situation in Cook Islands;
- obtain from stakeholders answers to the DSM Project's questionnaire to assist the Project staff better understand the situation in the Cook Islands; and
- disseminate DSM Project information brochures to stakeholders.

2 – RECORD OF THE WORKSHOP PROCEEDINGS

2.1 Workshop Opening

After a brief welcome and introduction to the day from Mr Paul Lynch (Advisor to the Deputy Prime Minister), the Workshop was officially opened by the Minister for Minerals and Natural Resources, Hon. Tom Marsters.



The Hon. Tom J. Marsters opens the Cook Islands National DSM Stakeholder Workshop.

Mr Marsters emphasised the importance of the workshop, and formally welcomed those who had made the time to come to listen, and to participate. He welcomed Akuila Tawake and Hannah Lily from the SOPAC Division of SPC – highlighting that SPC is the regional organisation based in Fiji, to which all Governments in the Pacific refer for advice and technical support on scientific matters.

He noted that before today the Project has held similar workshops in several other Pacific neighbour countries. He hoped that coming later to the Cook Islands was a case of the Project Team 'leaving the best to the last'. He stated that he certainly considered the Cook Islands to be 'the best' in terms of the careful preparation that is being undertaken before any activities at the seabed occur.

The Hon. Minister welcomed also Mr Darryl Thorburn, the newly appointed resident natural resources advisor to the Cook Islands: a geologist, who brings vast experience to the role – most recently having been working in Afghanistan to advise the Ministry of Mines there. He also acknowledged the Chairman of the Seabed Mining Taskforce, Mr Ben Ponia.

This Taskforce was put in place by the former Minister of Marine Resources (Hon. Mr Robert Wigmore), and the current Government considered it important to maintain it. The Taskforce comprises a cross-section of experience from Cook Islands Government and the private sector. Finally the Minister acknowledged the presence at the workshop of local businessman and promoter of DSM issues, Mr Richard Barton. He stated that Mr Barton has for many years been encouraging the seabed minerals dialogue in the Cook Islands, and it is largely because of this that the Cook Islands has progressed their work on DSM.

The Minister informed the workshop of his own long-standing interest in DSM – dating from 1974, when he had spent time on the research vessel that conducted the first survey in Cook Islands' waters: an exciting voyage. He highlighted the further research that has been undertaken since then in search of manganese nodules on the Cook Islands' seabed.

He explained that it has been estimated that there may be as much as 20 billion tons of nodules in the Cook Islands' EEZ, situated at great depths – 3000 m – 6000 m, far from our shores. The Cook Islands have been advised by Japanese scientists that these nodules have significant resources of cobalt, nickel and copper. There is great global demand for these core metals. In addition, Japanese scientists last year revealed that there may be extraordinary deposits of rare earth metal in the Pacific Basin, which may include the Cook Islands' deep water mudflats.

Mr Marsters expressed his hope that, if the Cook Islands manage these resources carefully, there may be thousands of years' worth of mineral resources in the EEZ. The Cook Islands' economy has struggled through times of boom and bust. The Cook Islands has worked to develop its agriculture and tourism industries – and has been blessed to have foreign aid from generous development partners. But a new opportunity for State revenue and employment and development would be welcome. The Minister expressed the belief that the dream is moving closer to reality. The technology to harvest the nodules is not quite there yet but may be just round the corner – perhaps even within the next 10 years. So the Cook Islands in this time and age have a real opportunity, and have time too, to make good decisions, and to be properly prepared in order to make a productive and sustainable legacy for the generations that will follow.

In 2009 the Cook Islands became the first nation in the world to pass legislation specifically focussed on the administration of DSM within its EEZ. The Minister paid homage to all of the team of that era. In 2011 the Cook Islands committed to be part of the DSM Project, which was launched last year in Fiji. The Minister was grateful for the opportunity this provides to local stakeholders, including those gathered at the workshop, to take the best advice on a future with DSM. The Minister expressed the Government's view of the importance to have in place before mining occurs: the best legislation, the best financial rules, and the best environmental

standards. He expressed the Government's commitment to work hard in that direction (with the support of the Commonwealth Secretariat, SOPAC and others). He encouraged everyone attending to engage with the workshop, and to contribute to the discussion for the benefit of the Cook Islands today, and for generations to come.

2.2 Response by Akuila Tawake on behalf of the SPC-EU DSM Project

In his responding remarks, Mr Tawake acknowledged the presence of the Hon. Deputy Prime Minister, Members of Parliament, government officials, representatives from the private sector, civil society, and members of the media.

He sincerely thanked the Deputy Prime Minister for his words of welcome and sound advice in opening the Cook Islands National DSM Stakeholder Consultation Workshop. He thanked the Government of Cook Islands, working through the office of the Deputy Prime Minister, for collaborating with the Project in organising this workshop. He thanked the EU for the financial assistance that enables SPC to implement the Project.

Research of DSM and associated ecosystems have been ongoing in the Pacific Islands region in the last 40 years. The then Pacific Islands Applied Geoscience Commission (SOPAC) was instrumental in collaboration with developed countries (US, Australia, Japan and Germany) in identifying DSM deposits in some Pacific Islands' EEZs, including the Cook Islands. In the 1970s and 1980s, it was not considered feasible by industry to extract these seabed minerals.

There has however been a recent rejuvenation of interest – triggered by rises in metal prices and global increase in demand for metals. New discoveries of high grade precious and base metals in Papua New Guinea and Tonga, coupled with the grant of a mining licence to Nautilus Minerals by PNG in January 2011 – and Nautilus' statement that they will commercially mine DSM by the end of 2013: a world first – has put Pacific in the forefront of this emerging industry, and demonstrated global interest in DSM in the region.

The Cook Islands commenced surveying of their EEZ in 1970s, and continued throughout the 1980s. Early exploration efforts were then supplemented by four surveys carried out between 1985 and 2000 under the Japan/SOPAC DSM cooperative study. This has made the EEZ of the Cook Islands one of the more surveyed areas in the region. But due to the vast size of the Cook Islands' EEZ, much more work still needs to be undertaken to assess the country's mineral potential.



Participants listen to the opening addresses.

Recognising likely interest in that potential, the Government of Cook Islands with support and assistance of the Commonwealth Secretariat, has put into place legislation to administer DSM within its EEZ – making the Cook Islands the first in the region, and a leader worldwide. Mr Tawake congratulated the Government for taking this initiative, from which other Pacific States can learn.

Mr Tawake highlighted that, with the limited knowledge available in relation to DSM, prudent decisions are essential to ensure environmental impacts of DSM exploration and exploitation are monitored, mitigated and managed. The application of the Precautionary Approach is essential in ensuring this new industry addresses the relevant issues carefully and correctly. Mr Tawake quoted the Rio Declaration’s formulation of the precautionary approach (Principle 15): *“Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”*

Mr Tawake highlighted the circumstances surrounding the conception of the DSM Project. The SPC through the SOPAC Division (where the Project is situated) is mandated to assist Pacific Island countries in dealing with issues relating to mineral exploration and mining. The Project was initiated by Pacific Island countries, recognizing that a regional and multi-stakeholder, participatory and consultative approach is an effective one for developing technical expertise, law and policy for DSM. This is consistent with the Sustainable Development and Governance pillars of the Pacific Plan.

Mr Tawake however cautioned that, while deep sea mining may bring much-needed alternative economic development to countries in the region, we must be careful not to create unnecessary fear about its impacts, nor false hope and expectation about the wealth it may bring. Efforts to

date were to *explore* only, rather than to *mine*. Mineral exploration projects have long gestation periods, and any decision to mine or not to mine hinges on results of extensive mineral exploration and scientific research, and financial forecasts and capabilities – much of which still remains to be done.

The DSM Project has been sharing information with Pacific Islands through media releases, workshops and brochures to ensure better understanding of issues relating to DSM and the potential opportunity they may afford to various stakeholders. The SPC, through the DSM Project, sincerely hopes to work with in-country stakeholders with the implementation of Project activities in the Cook Islands. Mr Tawake looked forward to the outcome of deliberations during the workshop – and hoped that through interactive discussions we will be able collectively to identify the concerns and priorities for the Cook Islands going forward with DSM, and to plan for an inclusive and precautionary approach in addressing deep sea minerals issues.

2.3 Presentations and Discussions

Copies of the presentations delivered during the workshop are available from the Ministry of Natural Resources and Minerals (contact: Mr Darryl Thorburn).

2.3.1 Presentation 1: Cook Islands and Deep Sea Minerals

Presenters: Mr Ben Ponia, Secretary of Marine Resources, and Chairman of the Cook Islands' Seabed Mining Taskforce; and Mr Darryl Thorburn, Natural Resources Advisor

Mr Ponia introduced the workshop to manganese nodules. He summarised the history of surveys in the Cook Islands, and showed a map of the bathymetry of the Cooks Islands' EEZ, where more than half of the seafloor is at 4000-5000 m depth. He explained how manganese nodules are formed in a spherical shape, in a two-stage, and very slow process. They are composed of about 20% manganese, and smaller parts of cobalt, nickel and copper. The Cook Islands has particularly high nodule abundance, with surveys suggesting a volume greater than the 5-10 kg per square metre that is generally cited to be the cut-off point for what is a 'minable' resource. He explained that there is further work required to assess more fully nodule abundance. There is newer, more accurate technology available now, compared to that used some 15 years ago in the last surveys. But some surveys have shown as much to 42-47 kg per square metre, with 80-90% coverage. These nodules are situated over large zones (100-300 km²), at depths of 4900-5400 m.

Mr Ponia introduced by way of comparison the nodules found in the Clarion-Clipperton Fracture Zone (CCZ) – international seabed, outside of EEZ jurisdiction – which have proven to be of recent exploratory interest to investors. These contain higher quantities of copper than the Cook Islands' nodules, and are less uniform in composition and abundance – possibly only half the abundance of Cooks Islands' EEZ. Tuvalu's seabed crusts had been assessed to contain

higher concentration of cobalt, compared to Cook Islands' nodules, but the technology to mine these is further away.

Taking an assessment of the overall mineral reservoir on the seafloor, at current metal prices, it could be estimated to be US\$1,134 billion worth. That said, much of this ore may not be recoverable – perhaps only US\$146 billion, and from this ore, the amount of metal that is extractable may only be a much smaller percentage of this. The costs of extraction – and the ability to get this to market will also affect the likely revenue, and it has been seen that metal prices can fluctuate dramatically on the global markets. So a more realistic estimate of the potential value of the nodules to the Cook Islands may be much less.

There is little information available about rare earth metal content in the Cook Islands' nodules, but it is possible (comparing with French Polynesia) that there may also be potential for these valuable commodities within the Cook Islands' EEZ. Mr Ponia explained that China has had a monopoly on rare earth elements (from onshore mining), and has dramatically reduced its exportation of rare earth elements in recent times, increasing demand and prices. So if there are rare earth elements in the Cook Islands' nodules this would be a new and significant dimension.

Mr Ponia explained that various prototypes have been designed for extracting the ore, and highlighted that exploitation methods are likely to be challenging, and also very costly. He explained that smelting was likely to be used to process the ore, to remove the manganese and the iron, which would be followed by further processes (e.g. acid leaching) to extract the metals of interest (nickel, cobalt, copper).

The impact on the environment is also an important consideration – not just at the benthic level, but also in the mid-column (where the current is very slow), and the upper column, at the photic level where fish are found. Responsible disposal of tailings will be essential.

As the Seabed Mining Taskforce has examined the Cook Islands' deep sea minerals potential, it has become apparent also that the fiscal regime will be key, in order to ensure that the Cook Islands obtains an equitable share of the revenue. Responsible management of that revenue will also be essential.

The centrepiece of the regulatory framework in the Cook Islands is the Seabed Mineral Act, which was enacted by Parliament in 2009 to govern seabed minerals activity in the Cook Islands, and which reflects both international best practice and some of the unique features of the Cook Islands.

The Act establishes institutional arrangements: the Minister is responsible for the implementation of the Act. A national Seabed Minerals Authority will be created within the Ministry, and will have day-to-day responsibility for administering the Act, including licensing, monitoring, compliance and enforcement. A Seabed Minerals Commissioner will be appointed to head the Authority and an Advisory Board will be established to provide cross-sector advice

and consultation on the issues. Mr Ponia summarised the licensing arrangements under the Act, which address different stages of DSM activity: prospecting, exploration, mining, and retention licences. The Act also provides for the drafting of a Seabed Mineral Agreement, according to a draft Model Contract Agreement, prepared in accordance with accepted international practice (based on the International Seabed Authority's model documents, and experience from onland mining). This will be a legally binding agreement between the Government and the mining company, and will be the avenue by which the Government and the mining company agree to the terms to facilitate the conduct and financing of DSM activities.

Next steps for the Cook Islands' Government include to set fiscal terms, and to implement the institutional arrangements envisaged by the Act, as outlined above. In the interim, the office of the Deputy Prime Minister acts as the implementing authority, with technical support from the newly appointed resident Natural Resources Advisor, and with advisory support from the Seabed Mining Taskforce Committee, which comprises: Marine Resources, Foreign Affairs, Public Service Commissioner, Financial Secretary, Solicitor General, Environment Services, the Director of Policy (Prime Minister Department), and the private sector (a trust manager, and a lawyer). Mr Ponia provided a notional timeline for next steps – the realisation of which is dependent on funding.

The presentation concluded with a summary of the Cook Islands' extended Continental Shelf claim, which was due to be defended at the UN Commission in New York imminently.

Discussion on Presentation 1:

The question was raised: why isn't there civil society and community representation on the Seabed Mining Taskforce Committee? The view was expressed that the owners of the resource are the people of the Cook Islands, and they should have primary input at all stages of the process. It was clarified that the Committee was set up by the previous Government as an interim measure to undertake a specific and narrow role of progressing the implementation of the legislation. It is not the intention for this to be the only forum for consultation and advice as DSM work progresses in the Cook Islands. The composition of the Committee is considered fit for purpose for that limited role. An Advisory Board will be set up under the Act, which will have a different composition,



Ben Ponia, Secretary of Marine Resources, and Darryl Thorburn, Natural Resources Advisor, take questions.

including traditional leaders. In the meantime there have been quite extensive consultations with the people of the Cook Islands already, and this will continue. A wide range of civil society representatives had been invited to the workshop.

It was discussed that face-to-face consultation in the community would be the most effective approach to raise awareness about DSM issues. It was clarified that the DSM Project could assist the Cook Islands conduct further stakeholder consultation meetings, if this is considered a priority area for the country.

It was asked whether the Advisory Board would be set-up before an exploration licence is issued. It was responded that the Seabed Minerals Authority has to be established under the Act, before any licences are issued, and it would be prudent to set up the Board at the same time. The Act has been passed, but is not 'in force' yet. A Commencement Act will be required for the Act to be in force. But before the Act is formally commenced in this way, work needs to take place to prepare the institutional bodies that the Act will establish (the Seabed Minerals Authority, the Board, the Seabed Minerals Commissioner, etc.)

The opinion was expressed and seconded by workshop participants that the Board should be set up as a matter of priority, so that advice and input can come from a wider group than just one or two central decision-makers within Government.

A question about the timeline presented by Mr Ponia – which showed tenders for licences being sought in 2013 – was raised. It was clarified that the licence tendering process would only occur once the Seabed Minerals Authority was established and operational, and that the timeline was an optimistic one, and dependent on availability of funding.

2.3.2 Presentation 2: Overview of the Deep Sea Minerals (DSM) Project

Presenter: Akuila Tawake (DSM Project Team Leader)

Mr Tawake explained that a regional approach to DSM had been called for by Pacific Island countries, following the recent upsurge in offshore minerals exploration in the EEZs in the region, and in view of a lack of tailored policy and legislation in place to regulate DSM activities. He explained that, following submission of a concept note by the SOPAC Division of SPC to the EU,



Akuila Tawake, DSM Project Team Leader.

4.7 m Euros funding had been granted to support the implementation of the Project in 15 Pacific countries over 4 years (2011-2014).

The Project's overall objective is: to expand the economic resource base of Pacific States by facilitating the development of a viable and sustainable marine minerals industry. The Project aims to do this by strengthening the system of governance and capacity of Pacific States in the management of DSM through supporting the development and implementation of sound and regionally integrated legal frameworks, improved human and technical capacity, and effective monitoring systems.

The project has four Key Result Areas:

- (1) Regional Legislative and Regulatory Framework (RLRF) for offshore minerals exploration and mining;
- (2) National policy, legislation and regulations;
- (3) Building national capacities – supporting active participation of Pacific Island nationals in the offshore mining industry; and
- (4) Effective management and monitoring of offshore exploration and mining operations.

Project activities to date for each of the Key Result Areas have included the following:–

- (1) An inaugural workshop held in June 2011 in Nadi; and the dissemination of the draft RLRF in January 2012 to a wide range of stakeholders for comments.
- (2) Six national stakeholder workshops have been convened, and national offshore minerals committees are being established in those countries to take the Project forward.
- (3) Work on a publication to provide an assessment of DSM knowledge is underway, with contributions from a group of leading experts world-wide. This will be published later this year by the Norway based UNEP/GRID-Arendal, with whom the Project is working in partnership. The Project is also currently gathering data to establish a regional marine minerals database, building on the data derived from previous marine scientific research and exploration in the region.

The Project is identifying national candidates for capacity-building opportunities. A candidate from Kiribati is currently on a safety and awareness training course in Australia, before he embarks on a survey with an exploration company later in 2012; and a candidate each from Cook Islands, Papua New Guinea and Tonga were sponsored to attend a mining conference in Noumea in November 2011. In collaboration with partners, the production of a DSM documentary is in progress.

- (4) The Project is developing a regional environmental management and monitoring framework and guideline, in partnership with UNEP/GRID-Arendal. When the opportunities arise, the Project will collaborate with marine scientific research groups on monitoring the environmental impacts of deep sea mining over the next 2 years – identifying suitable candidates for on-the-job training in this area.

The Project has supported dissemination of information to key in-country stakeholders, including 6-monthly updates, information brochures, and media work. Web-pages dedicated to DSM are now being launched within the SOPAC Division's website. The Project will support national DSM committees to conduct DSM public awareness programmes.

Discussion on Presentation 2:

Questions were raised about what the capacity-building component of the Project would entail. Mr Tawake clarified that the Project has established a pool of 'experts' upon whom Pacific Islands can draw. He explained that these were individuals from international agencies, private sector, and academia (largely from developed countries). He also explained that the Project has a partnership with UNEP Grid-Arendal, based in Norway, and is able to refer to their contacts and other expert colleagues also. Secondments and research vessel placements may also be available to Cook Islanders. Mr Tawake confirmed that the focus was on up-scaling individuals' technical skills. Mr Lynch reiterated that the Project offered a valuable opportunity for the country, to assist the Cook Islands to develop the scientists, lawyers, and accountants properly to manage the national industry in the future. It was suggested that the opportunities should be presented to Cook Island students, in sixth form, and universities overseas, so they can choose to specialise in this new industry. Mr Lynch clarified that it is embedded in the Government Policy (currently a work in progress) that the development of a DSM industry in the Cook Islands should be an opportunity for Cook Islanders to be able to learn new skills and to grow professionally.

It was asked whether there was a website where NGOs and members of the public could access the relevant information. Mr Tawake confirmed that a 'mini-website' is just about to be launched within the SOPAC website (<http://www.sopac.org/dsm>), which will contain a wide range of information about DSM.

It was confirmed by Mr Tawake, in response to a question raised, that NGOs were a key stakeholder to the Project. References by Mr Tawake earlier in the presentation to the private sector as a key stakeholder, had specifically related to technical capacity-building, where the expertise, technology and resources for actual deep seabed exploration are currently only found within the private sector. NGOs were a primary beneficiary and stakeholder of the Project in terms of consultation and information sharing.

It was asked how the Cook Islands can maximise the return from the regional Project, given that it already has legislation in place and clear plans for institutional implementation, and so may not need the same support as other Pacific Island Countries. Mr Tawake confirmed that the purpose of the workshop (and meetings during the visit between Project staff and Cook Island Government officials) was to take away action points for the Project that are specific to the Cook Islands.

It was observed that managing the wealth that DSM could bring to the Cook Islands should be a key priority, taking into account other experiences in the region in this regard. It was confirmed that the Cook Islands Government was cognisant of this, and that the DSM Project was able to support this also.

One participant commented that discussions about mining of DSM in the Cook Islands should be tempered with doubt about when, and even whether, such mining may happen. There are a limited number of companies with capacity and interest to mine nodules in the Pacific Ocean, and the CCZ provides a competitive area for exploration and exploitation of nodules. A nodules mining venture may cost more than one billion dollars. To convince investors to take this on, given all the unknowns, will be extremely challenging. There are lots of countries' waters to choose from, and few companies, so it shouldn't be taken for granted that mining will occur in the Cook Islands. Even if it does, the abundance of the nodules may not be as promising as it seems – it will depend upon world markets. The debate about DSM should take into account the possibility that an exploration company may spend three years and several million dollars exploring in the Cook Islands' EEZ, and then decide that exploitation is not viable, and so will not pursue it further – yielding no great income for the Cook Islands.

Mr Ponia thanked the contributor – noting that the perspective of investors is very important. He agreed that the Cook Islands must understand fully what its offer is. Mining companies are very conscious of their public image, and are keen to engage with jurisdictions that have proper regulation – and it is hoped that the Cook Islands may appeal to investors for that reason, combined with its mineral deposit potential. But the people and Government of the Cook Islands should indeed temper expectations with realism.

Mr Lynch clarified that this is the time to prepare. So while it may seem premature to be discussing responsible investment of resources, it is possible and best practice to do this now – before mining occurs. Despite 'the unknowns' there has been commercial interest expressed in DSM development within the Cook Islands' EEZ, and so the Government of Cook Islands considers it worthwhile to cover all regulatory areas now.

The importance to establish the correct balance between the confidentiality of commercially sensitive data, and public accountability was noted. It was explained that the exploration licence that would be put in place with a DSM company would contain a requirement to provide the technical data gathered from the exploration programme to the Cook Islands Government who

would hold the data on a confidential basis for a fixed time. This information could be shared with the SOPAC Division – as a back-up repository – on a confidential basis, at the Government’s request and with the knowledge of the owner of the data.

A speaker raised a concern that the environment and impact on biodiversity should be significantly addressed. He also expressed concern that the rights of indigenous people, the owners of these minerals, had not been properly emphasised. The distinction between the people (*the owners*) and the government (*the managers*) should be made. Capacity-building should take place with elders, so they have the requisite knowledge to be able to make informed decisions.

A further concern was raised about the challenge for Cook Islanders to be able to see what is happening at the deep seabed and to monitor mining companies and their impacts (including on fisheries) effectively. Another attendee spoke in Māori seeking assurances that the Cook Islands only take steps that are in the best interests of the country, and the next generation.

2.3.3 Presentation 3: Deep Sea Minerals in the Pacific Island Countries

Presenter: Akuila Tawake (SOPAC Division, SPC)

Mr Tawake introduced the different types of mining in the Pacific, highlighting the fact that DSM mining is a new frontier in mineral development. He explained how marine mineral exploration had occurred from the 1960s to the 1990s, and that these surveys had shown the potential of three different DSM deposits in the region: manganese nodules, sea-floor massive sulphides (SMS) and cobalt-rich crusts. From 1985 to 2005 joint Japan-SOPAC surveys were conducted within the waters of PNG, Solomon Islands, Vanuatu, Fiji, Tonga, Samoa, Niue, Cook Islands, Kiribati, Tuvalu, Federated States of Micronesia and Marshall Islands.

Commercial entities currently involved in offshore exploration in the region include Nautilus Minerals, Korea Ocean Research and Development Institute (KORDI), and Bluewater Metals. Nautilus Minerals is currently developing the necessary technology to mine SMS deposits in Papua New Guinea’s EEZ.

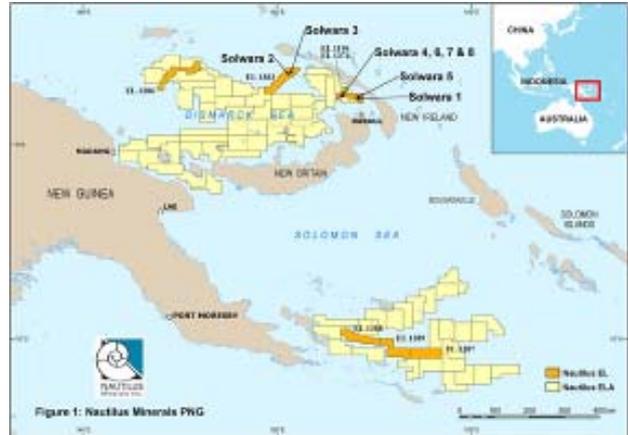
Mr Tawake described how, where and at what depth DSM occur and the mineral contents of the different types of deposits. The potential benefits of offshore mining were also explained, together with the differences between terrestrial and marine mining.

Discussion on Presentation 3:

It was asked who was granting licences in the CCZ. Mr Tawake clarified that it is the International Seabed Authority, a body established by the UN Convention on the Law of the Sea, for this purpose. He explained that developed countries (Germany, Japan, Russia, China and Korea) are already exploring for manganese nodules in the CCZ. Nauru and Tonga’s sponsored companies

have only recently received their exploration licences, and have yet to commence activities. It is open to any State that is signatory to the Convention on the Law of the Sea to apply for a licence for exploration or mining in the CCZ, or to sponsor a company to do so.

A query was raised about the Papua New Guinea Solwara 1 Project. Mr Tawake showed on a map the licensing tenements, for exploration and for mining, so that the size of these areas in comparison to the total EEZ of Papua New Guinea could be seen.



A map of licensing tenements in Papua New Guinea

Responding to questions about how potential environmental impacts created by mining company activities could be managed, and how the people of the Cook Islands could know what was happening in the deep sea, Hannah Lily, Legal Advisor to the DSM Project, briefly outlined some of the international legal standards that would be applied to any DSM licence-holders by the Cook Islands Government. These include: prior environmental impact assessment and measurement of baseline data, regular monitoring by the Government, and reporting by the company of DSM activities and their impacts (against the baseline data), publication of data and public notice and review mechanisms for decision-making where possible.

2.3.4 Presentation 4: Past, Present and Future of DSM in the Cook Islands

Presenter: Paul Lynch, Advisor to the Minister Minerals and Natural Resources, Hon. Tom Marsters

Mr Lynch introduced a research paper charting the Cook Islands' history with DSM, which can be found here: http://www.cook-islands.gov.ck/docs/research_paper.pdf.

Mr Lynch emphasised the nodule abundance in the Cook Islands' EEZ, and reviewed chronologically relevant events and activities undertaken in the past few years by Government, such as to put the SBM legislation in place, and to consult with in-country stakeholders. He explained that a draft Cook Islands' DSM policy existed, and the Seabed Minerals Act has been passed, establishing the required institutional arrangements, and applying to any future DSM activities, the environmental controls set out in the Cook Islands' Environment Act 2003. He explained the Cook Islands' plan to use the Norwegian National Trust Fund model for managing income from SBM resources –



Mr Paul Lynch, Advisor to the Deputy Prime Minister

which requires ringfencing of a large percentage of funds for longer-term use by the nation. Mr Lynch also described the Government's plans to develop a DSM specific tax regime.

He finished by expressing the view that the Cook Islands has the time and the intention to engage in DSM work responsibly, and securing maximum benefits for the people of the Cook Islands. But budgetary support and capacity-building measures will be required. He hoped that this workshop would confirm the Cook Islands' engagement with the DSM Project, where valuable support can be sourced.

2.3.5 Presentation 5: DSM Technology

Presenter: Patrick Arioka, CEO, Office of the Deputy Prime Minister, and Ben Ponia, Secretary of Marine Resources

Mr Arioka explained that a Cook Islands' delegation had recently met with representatives of relevant government agencies in Korea to learn about developments with DSM work there. He and Mr Ponia would present to the Workshop a video produced by KORDI, with commentary (as follows). The video, a copy of which can be obtained by application to Mr Darryl Thorburn (Natural Resources Advisor), shows a combination of some technology that is already in use, and other 'best guesses' for the technology that remains under development.



Patrick Arioka provides commentary to a video showing planned DSM exploration and exploitation techniques

Commentary: the ocean is vast and largely unknown. Very little is known about what is on the seafloor. The video shows a research vessel and a survey taking place to assess the nature of occurrence of nodules on the seafloor. The research vessel maps the contour of the ocean floor, to find out which areas are most suitable for potential mining. The information is transferred back to the ship and analysed, giving a view of the composition of the seafloor. Next a probe is launched into the water, to give a more detailed estimate as to the abundance of mineral deposits. It is a Remotely Operated Vehicle (ROV), which can get closer to the seafloor, and obtain much more detailed information (including photographs) of the nodules themselves. A second more sophisticated probe can also be used. A piece of sampling equipment is then lowered to the seafloor, and scoops up a few manganese nodules for analysis.

A coring tool can next be employed to take a sample of the sediment and part of the actual seafloor. Another sampling technique is a tool that drags along a distance to gather nodule samples. This allows an assessment of abundance over an area.

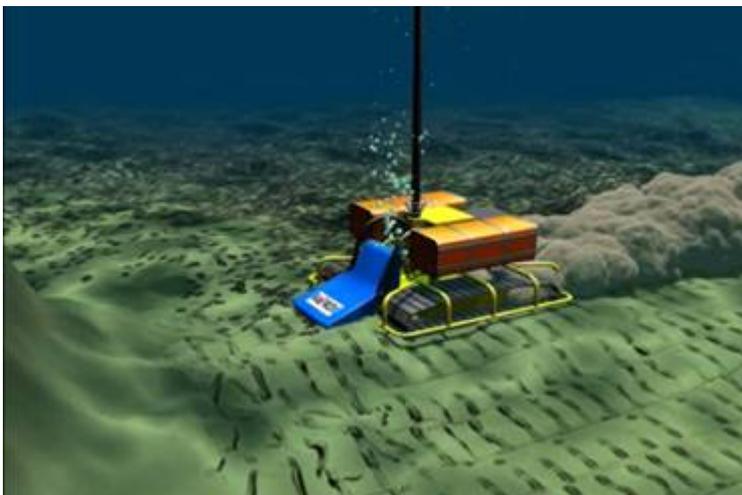
This data is processed and analysed and put into a digital map and database. This data will be very useful for any future exploration interest.

Some of the environmental monitoring techniques are also shown – there are a variety of different techniques, all of which are used simultaneously to provide as comprehensive an assessment as possible. One method is a canister chamber that takes water samples at various depths, to be analysed on the vessel for water quality. Some larger tanks are also placed in the water to assess what life-forms exist at various depths. A conical net-style collecting tool is also used for this purpose. Water monitoring stations are deployed and kept in place over a period, to profile the water column – for biological and chemical analysis. A grab-sampling tool takes samples of the seafloor, enabling analysis of the sediment, to establish how the sediment plume may behave if mining occurs.

A proposal for an ROV, operated from the vessel to mine the seabed systematically in strips, and the expected plume discharge, is shown. The nodules are shown being crushed at the seafloor, and then transported along a riser pipe to the vessel. Methods to return waste water and dust to the seafloor are being investigated. A graphical representation of the smelting process to extract the core metals from the ore – which will occur onshore – is shown.

Discussion on Presentation 5

Concerns were expressed about one of the scooping tools shown, and the size of the sediment plumes. A comment was also made that the video was a notional animated representation, rather than actual film footage of known practices. The level of pollution that will be created in the sea is yet unknown, as no one has disturbed the seafloor to this degree before. Mr Ponia confirmed that KORDI have extensive monitoring programmes in place, to assess any impact on the marine environments. He added that research has shown that at 5000 m depths on the Cook Islands' mudflats, there is very little life.



A screenshot from the KORDI video presented by Patrick Arioka and Ben Ponia

It was clarified that the KORDI proposal is for the nodules to be ground up into a watery mud at the seafloor, and lifted up the surface, and de-watered on the vessel. The 'waste' produced from this processing will be water only. The proposal from Nautilus, when SMS mining occurs, is to filter the water on the vessel, and to return it to where it originated at the seafloor.

2.3.6 Presentation 6: DSM Law and Policy

Presenter: Hannah Lily (DSM Project Legal Advisor)

International law requires States to take all appropriate steps to ensure that DSM exploration and exploitation activities under their jurisdiction or control are appropriately managed, in accordance with international standards – including the general obligation under the UN Convention on the Law of the Sea (UNCLOS) to protect the marine environment. This requires the adoption of laws, regulations and administrative measures. The Cook Islands is advanced this area, being the only country in the region to have specific DSM legislation enacted.



Hannah Lily, DSM Project Legal Advisor.

Direct obligations under international law in respect of DSM, to which the Cook Islands will need to adhere in their implementation of the Seabed Minerals Act, include (i) the precautionary approach, (ii) best environmental practices and (iii) environmental impact assessment (EIA). It is necessary by law for States engaging in DSM to identify or create an administering body to receive, assess and decide upon applications, to set the terms of licences for DSM activity, to monitor DSM operators working under such licences or agreements, and to enforce compliance where necessary. This function will be undertaken in the Cook Islands by the Seabed Minerals Authority, once established, working in partnership with the National Environment Service.

Options may be available to delegate some functions to a regional body, private contractor or other expert body.

Ms Lily also introduced the EU-SPC DSM Project's draft Regional Legislative and Regulatory Framework (RLRF), which provides detailed guidance for Pacific Island Governments on DSM law and policy requirements, and which is currently under consultation (due to be published July 2012); and invited comments on it from Cook Islands representatives.

Discussion on Presentation 6

On the question whether the Cook Islands' seabed minerals legislation has conformed to international laws, Ms Lily responded that the standards required by relevant international conventions are reflected in the legislation.

The Cook Islands seabed minerals policy and legislation were formulated with the assistance of the Commonwealth Secretariat experts who are familiar with international laws, and Ms Lily believes that the legislation is very comprehensive, and an excellent starting point for the Cook Islands.

While responding to a question on effective implementation of the legislation in the Cook Islands, Ms Lily said that the national legislation provides for the establishment of institutional arrangements to process exploration and mining applications, and to monitor DSM projects, and the country will need over time to build its capacity in order to effectively regulate seabed exploration and mining activities. One of the areas in which the DSM Project can assist participating countries such as the Cook Islands is to build national capacities to effectively regulate this new industry.

On the issue of reviewing national policy and legislation to ensure all relevant issues and stakeholder concerns are covered, Ms Lily said that it's probably not the right time to discuss reviewing the seabed minerals policy and legislation, but this may be required after five or more years if and when new data and information are available.

2.3.7 Presentation 7: Environmental Aspects of DSM in the Cook Islands

Presenter: Joseph Brider, National Environment Service

Mr Brider explained that the Cook Islands National Environment Service (NES) is set up to protect, conserve and manage the environment. The NES focuses on certain areas, aiming to target limited resources. This includes a compliance division, responsible for EIAs. The Environment Act 2003 supports the work of the NES, by establishing the National Environment Council for proposed projects within the Cook Islands EEZ (beyond 12 nautical miles from the coastline) – where DSM will occur. The Act also establishes Island Environment Authorities, who have jurisdiction on the islands and up to 12 nautical miles offshore.

Mr Brider explained that an EIA's role is to assess the possible positive or negative impact that a proposed project may have on the environment, looking at environmental, social and economic aspects. An EIA should have three key components:–

- (1) Identify impacts, and justify the use of non-renewable resources with reconciliation of the short and long term productivity.
- (2) Propose actions to mitigate, monitor and manage impacts.
- (3) Consider alternatives to the proposed project.

An EIA should be accompanied by a long-term 'living' (i.e. adaptable as information increases) environmental management plan. It should be a multi-disciplinary and multi-stakeholder approach.

The impacts of DSM activities are largely as yet unknown, but we can learn some lessons from existing mining practices, and can take into account what we do know now about the nodules locations, and the nature of the surrounding waters, currents and associated biodiversity. DSM mining will cause some impact, and some changes of the environment. What is important to investigate is the interaction between the atmosphere, ocean water and the seafloor. This

establishes a baseline, which should be measured before activities take place, to provide a comparison point.

In the absence of precedent, technology assessment is often more meaningful. There are multiple forms of technology proposed for DSM extraction: continuous line-bucket system, air-lift or suction dredge tools, and remotely operated vehicles – the latter may be the least intrusive. It is clear however that all forms will result in some sediment disturbance, thus impacting biodiversity to some extent. It is important therefore to acknowledge that a decision to develop this resource for the benefit of the people of the Cook Islands will be a decision not to maintain the current quality of the benthic environment intact entirely as it is currently. These are the important decisions then that need to be taken collectively.

Mr Brider suggested the following, as key points moving forward:

- The precautionary principle must be prioritised.
- Communication, coordination and cooperation across Government departments – and beyond – is paramount.
- The environmental legislation needs reviewing and regulations are required to support the primary legislation – which is very broad, and which didn't envisage DSM when drafted.
- Baseline data must be gathered.
- Pilot studies are preferred prior to full scale operation.
- Monitoring has to be practical, and properly documented.
- The licensing regime should be able to reflect technological changes.
- We can learn from the International Seabed Authority, and the DSM Project.

Discussion on Presentation 7

The comment was made that the DSM Project can support the Cook Islands by ensuring that our legislation meets appropriate requirements, but does not go too far: so as to shake the interest of the exploration and mining companies, and prevent them from pursuing activities in our EEZ. Secondly we should bear in mind that these exploration and mining companies themselves can assist us develop our knowledge. The findings of the exploration can help us fill in our knowledge gaps. The data they supply will be useful for us, and it is through partnership with these entities that we can actually build our capacity, knowledge and improve our systems.



Joseph Brider presenting on behalf of the National Environment Service

It was suggested that the Cook Islands themselves purchase a ROV for monitoring activity on the seafloor. Mr Brider expressed that it may be more feasible to obtain that data from the mining companies, who will have this (very expensive) technology.

A concern was expressed about the amount of unknowns, but the honesty about that in Mr Brider's presentation was welcomed. Mr Brider emphasised that this lack of knowledge is world-wide, not just in the Cook Islands. But knowledge is improving all the time.

Mr Ponia emphasised that, unlike other industries where there are numerous ships roaming throughout thousands of square kilometres, a DSM operation will comprise one stationary mining vessel (and smaller barges to transport the ore to shore), covering an area of about 650 square metres only, lifting relatively small quantities of non-toxic material. Monitoring this - perhaps with a permanent on-site monitor stationed on the vessel - seems do-able, and within the Cook Islands' capabilities.

2.3.8 Presentation 8: Financial Aspects of DSM in the Cook Islands

Presenter: Richard Neves, Financial Secretary, Ministry for Finance and Economic Management



Richard Neves provides a financial perspective

Mr Neves explained that prior to taking up his role in the Cook Islands, he had spent 5 years in East Timor developing a fiscal regime and sovereign wealth fund for the oil resources in their EEZ.

The financial issue for DSM can be summarised into three basic questions: how does the Government get income, how does the Government manage the income, and what are the social and economic gains that can be secured as a result of that income.

It is important to avoid the 'resource curse'. Many countries have vast resources which are not managed well. Proper management and avoiding corruption is crucial to ensure that income benefits all in the community.

The World Bank has already provided advice to the Cook Islands on a framework for the taxation regime – striking a balance to incentivise investment, while securing a fair benefit for the Cook Islands. Tax rules should be simple and clear, set out in the law, with stability and certainty.

Learning from other mining experiences, there would usually be three parts to the taxation scheme (in addition to withholding taxes, VAT, import levies etc):–

- (1) The 'ad valorem' royalty on the export value of the minerals, which is obtained upon extraction; at 2-4% would be consistent with international practice. 4% could yield \$22 m per year for the Cook Islands, taking a very speculative estimation.
- (2) Corporate income tax. This is likely to be the most significant source of income raised for the Cook Islands for DSM. The rate is currently set at 20% for local firms and 28% for non-locals. This variance may need to change, to avoid foreign companies setting up shell subsidiary local companies, just to evade higher tax rates.
- (3) Resource Rent Tax – also known as a tax on 'super-profits'. This enables ratcheting up of taxes if and when profits increase significantly, in the case of commodity boom.

Funds raised by the State from DSM taxation and royalties would need to be responsibly managed, preferably by way of a sovereign wealth fund. Consultation on this will be essential, so local people understand and support the transfer of a physical asset from the ocean into a financial asset, for future generations.

There are some precedent Funds that can be followed by the Cook Islands, including the Norwegian Oil Fund, and the East Timorese Petroleum Fund. It is recommended that the fund is managed at arms' length from the Government, with clear restrictions on expenditure and investments, and that all revenue from DSM, including taxation and licence fees, go into the fund.

Mr Neves finished by introducing the Extractive Industries' Transparency Initiative (EITI), which requires publication of all monies paid by the mining company, and all monies received by the Government arising from mining activities – and reconciles these. He informed the workshop that the Cook Islands has made contact with the EITI body to express their interest. An expert has also very recently been appointed specifically to advise the Cook Islands on establishing a fiscal regime specifically for DSM.

Discussion on Presentation 8

Mr Neves clarified that the sovereign wealth fund is a good tool to ensure that the economy is not flooded with new income, to the detriment of the nation's development ultimately.

The idea of an environmental bond was discussed – whereby a mining company pays money into a holding account, which will be returned to it upon successful completion of a mining project, without unanticipated environmental damage occurring. Mr Neves expressed his view that it is a good idea, but must take into account what is viable for the mining company.

3 – WORKING GROUPS

Workshop participants were divided into two working groups, to discuss (i) **technical** DSM issues in relation to the needs and priorities of Cook Islands, and (ii) national DSM **law and policy**. Each group then presented back in plenary on the outcomes of their discussions for consideration and further deliberations.



Working Group 1 in discussions

3.1 Outcomes of Working Group 1: Law and Policy

- It was welcomed that DSM legislation is already in place, if not in force. It was suggested that there may be a need to strengthen that Act (perhaps by way of regulations), and also other related legislation (e.g. the Environment Act, and maritime transport legislation) and to ensure that the different statutes are harmonised. It was recommended that the finished products should be translated into Māori. The link to UNCLOS, and other relevant international law and best practice (e.g. the ISA rules) should be clearly made. The Project should be requested to assist with the legislative review.
- Monitoring was recognised as a challenge. Creative solutions should be identified.
- The sovereign wealth fund model is supported, and comprehensive cost benefit analysis should be undertaken to identify environmental, social, economic and cultural impacts.

- The Seabed Mining Taskforce should be more inclusive e.g. NGOs.
- It was acknowledged that DSM may bring benefits to the Cook Islands, particularly a new income source, but also job creation, and training for Cook Islanders.
- The potential adverse effects may be: environmental degradation, the resource curse. These should be managed. The Cook Islands needs to preserve its 'clean and green' reputation.
- Concern was expressed that proper due diligence should be conducted before agreements are entered into with mining companies. It was recommended to set a minimum capital or investment funds, to ensure sufficiency solvency or reserves to cover potential liability.
- Communications and consultation and dissemination of information are important – and it was noted that this has already begun.



Working Group 2

3.2 Outcomes of Working Group 2: Technical Issues

- The many significant uncertainties were highlighted, and it was agreed that the precautionary principle was essential.
- It was recommended that a policy discussion should take place before mining licences are given, to determine whether DSM extraction should be pursued now, taking into account all other potential development opportunities.
- The Government's good work in establishing the DSM framework should be continued. The Cook Islands should be ready, even if DSM mining is still some time away.

- More marine scientific research would be welcomed.
- Exploration in the Cook Islands' EEZ should be pursued, recognising that exploration activities are themselves an important way to start to fill in uncertainties.
- Independent reviews of DSM company reports are important.
- Local engagement and capacity-building will be important e.g. seconding Cook Islanders to exploration companies.
- As the Marine Park plan progresses there may be a need for clarification as to how this will fit with the DSM framework.
- There may be a capacity gap in-country to assess environmental impacts, and to conduct monitoring – once DSM activities commence.
- The legislation should have significant penalties for breaches, and capacity should be resourced within Government to enforce those.
- Legislative review by an external expert (e.g. the SOPAC Division DSM Project) may be beneficial.
- Partnership working and information-sharing, including to the public, should be prioritised. Because the resources belong to everyone, everyone should be involved. A multi-stakeholder approach should be taken, including meaningful opportunities for potentially-affected people to contribute to policy and decision-making.
- In the future, a regional body for deep sea monitoring, and information-retention and dissemination should be established.
- The use of a sovereign fund for DSM income is supported.

3.3 Conclusion of Working Group Session: Workshop Outcomes

Taking into account the working groups' presentations back to plenary, the following recommendations were agreed by the workshop attendees, as recommendations for the Project, and to the Seabed Mining Taskforce Committee, for consideration by the Cook Islands Government:–

1. The Cook Islands should continue its active engagement with the DSM Project; and:
 - i. the DSM web-pages within the SOPAC website, once launched, should be made widely available, and should include learning from across the region; and
 - ii. should seek from the Project further support with national DSM information-sharing, and capacity-building initiatives.
2. Participatory and multi-stakeholder engagement in the Cook Islands' work on DSM is important, and can be enhanced by:
 - i. the addition of community representatives to the relevant advisory or decision-making body (currently the Seabed Minerals Taskforce); and
 - ii. a programme of information-sharing with traditional leaders, like the Aronga Mana and local communities.

3. A legislative review (particularly of the Environment Act 2003) should take place, to:
 - i. identify any gaps, and suggest options to fill those,
 - ii. harmonize the different laws,
 - iii. ensure the Cook Islands' legal framework meets UNCLOS standards and is in line with International Seabed Authority regulations,
 - iv. ensure sanctions imposed for non-compliance by licence-holders are sufficiently meaningful to act as a deterrent,
 - v. ensure that appropriate due diligence processes would be applied before mining licences are issued, which include a minimum capital requirement for the company.

4. The creation of a national integrated resource framework, encompassing and harmonising marine resources (both DSM and fisheries) and marine park plans should be considered.

5. A comprehensive cost/benefit analysis or 'strategic environmental and social assessment baseline study' should be performed by the Government before a decision to grant mining licences is taken; and other methods of generating income from the ocean (e.g. tourism or fisheries) should first be investigated.

6. Marine scientific research and exploration activities in the Cook Islands' Exclusive Economic Zone should be encouraged, as an opportunity to obtain more information on the resources in the Cook Islands EEZ.

7. Once exploitation or exploration activities commence:
 - i. The precautionary approach should be applied.
 - ii. Employment opportunities for Cook Islanders arising out of DSM should be encouraged.
 - iii. Assistance should be sought for independent review of EIAs, and State monitoring and compliance of licence-holders' work.
 - iv. A sovereign wealth fund should be established to preserve any State income derived from DSM.

4 – CLOSING OF WORKSHOP

Mr Ponia expressed that he was happy for the listed recommendations to be recorded, and to be considered by the Seabed Mining Taskforce Committee.

Mr Tawake thanked the participants, the Secretary of the Marine Resources Department, Government officials, and NGO representatives for their active and thoughtful participation in the day's proceedings. Mr Lynch thanked the SOPAC Division Project team for holding the workshop.

Mr Ponia thanked Mr Lynch for chairing the event; and expressed gratitude on behalf of the Cook Islands' Government for the efforts of all workshop attendees. He committed to following up the recommendations, and to the Cook Islands' continued formal engagement with the SOPAC Project going forward.

ATTACHMENT 1

The Cook Islands Deep Sea Minerals Stakeholder Consultation Workshop, Wednesday, 11th April 2012, AOG Tukavaine, Rarotonga

Time	Agenda	Objectives/Topic	Methods	Facilitator/presenters
8:30 am –	Opening Prayer National Anthem	Opening prayer	Prayer Singing	Orometua/Pastor
9 – 9.10 am	Welcome and Introductions Purpose of Workshop	Meet participants and understand purpose of workshop	Presentation – Q&A	Facilitator – Paul Lynch , Advisor, Office of the Minister
9:10 – 9.30 am	Opening Address	Set scene for the Workshop	Presentation of Opening Address	The Hon. Tom Marsters , Minister of Minerals and Natural Resources
9.30 – 9.40 am	Response to Opening Address	Set scene for the Workshop	Presentation	Akuila Tawake , SPC-EU DSM Project Team Leader
GROUP PHOTO AND MORNING TEA 20 MINS				
10:00 – 11.00 am	Cook Islands DSM presentation	Inform participants about past and planned involvement with DSM	Presentation	Ben Ponia , Secretary of Marine Resources, and Chairman of the SBM Taskforce; and Darryl Thorburn , Seabed Minerals Advisor
11.00 – 11.50 am	DSM project presentation	Overview of (i) the SPC-EU DSM Project; and (ii) DSM in the Pacific Islands Region.	Presentations and Q&A	Akuila Tawake , DSM Project Leader
ICE BREAKER 10 MINS				
12.00 – 12.15 pm	History and future of DSM Cook Islands	Summary of research paper (see link ¹)	Presentation Q&A	Paul Lynch
12.15 – 12.30 pm	DSM technology	Overview of proposed DSM extraction methods	Presentation Q&A	Patrick Arioka CEO, Office of the Minister
12.30 – 1.00 pm	Questions from the morning session	Clarify matters and express views on DSM	Q&A	Various facilitated by Paul Lynch
LUNCH 1 HOUR				
1:30 – 1.50 pm	Legal Aspects of DSM and the DSM project	International law requirements, and national implementation	Presentation Q&A	Hannah Lily Legal Advisor DSM project
1:50 – 2.05 pm	Environmental Aspects of DSM in the Cook Islands	Potential environmental aspects and controls for DSM	Presentations Q&A	National Environment Service
2:05 – 2.20 pm	Financial Aspects of DSM in the Cook Islands	Discussion of key financial aspects of DSM	Presentations Q&A	Ministry for Finance and Economic Management

¹ http://www.cook-islands.gov.ck/docs/research_paper.pdf

<p>2.20 – 3.40 pm</p>	<p>Group discussions</p> <p>Group 1: Policy Issues</p> <ul style="list-style-type: none"> • Development of deep sea minerals policy, legislation and regulation: next steps / gaps. • Appropriate fiscal regime policies for deep sea mining • Environmental management and monitoring <p>Group 2: Technical Issues</p> <ul style="list-style-type: none"> • Technical challenges of seabed mining and recommendations • Current institutional capacity and priority areas for capacity building • Ideas for capacity building initiatives (e.g. attachment in offshore exploration and mining, training workshops) • How to implement environmental monitoring and management for seabed exploration and mining • Stakeholder partnership (e.g. Government-Private sector-SPC-NGO partnership) <p>Both Groups: General Issues</p> <ul style="list-style-type: none"> • Perceived benefits and adverse impacts of deep sea mining • Formation of a National Offshore Committee (NOMC) for delivery of the DSM Project in Cook Islands • Confirmation of DSM Project focal points • Any additional deep sea mineral issues 			
<p>AFTERNOON TEA 10 MINS</p>				
<p>3.50 – 4.20 pm</p>	<p>Group reporting back</p>	<p>Decisions on proposed DSM activities under the DSM project</p>	<p>Working Group presentations to plenary, and discussion</p>	<p>Facilitator: Paul Lynch</p>
<p>4:20 pm to close</p>	<p>Closing Address and Closing prayer</p>			<p>Facilitator: Paul Lynch Orometua/Pastor</p>

ATTACHMENT 2**Cook Islands Deep Sea Minerals National Stakeholder Workshop Participants**

	Name	Job title	Organisation
1.	Hon. Tom Marsters	Minister for Minerals and Natural Resources, Hon. Tom Marsters, and Deputy Prime Minister	Ministry of Foreign Affairs, Immigration, Transport, Minerals and Natural Resources
2.	Paul Lynch	Advisor to the Minister	Minerals and Natural Resources
3.	Darryl Thorburn	Resident Natural Resources Advisor	Minerals and Natural Resources/ Marine Resources
4.	Ben Ponia	Secretary	Ministry of Marine Resources
5.	Patrick Arioka	Chief Executive Officer	Minerals and Natural Resources
6.	Tupe Short	Koutu Nui	Matavera
7.	Nga Puna		Office of the Prime Minister
8.	Tai Tura		Parliament
9.	Tai Manuela	Acting Director – Policy	Office of the Prime Minister
10.	Temu Okotai		Private
11.	Teavo Iro		T.G.A
12.	Mii Daniela	Welfare Officer	Private –Vaipae/Aitutaki Island
13.	Mataio Rea Kautai	Retired	
14.	Vaipo Mataora	GIS Manager	Ministry of Infrastructure and Planning
15.	Joseph Brider	Environment Officer	National Environment Services
16.	Vaitoti Tupa	Environment Service	National Environment Services
17.	Paul Allsworth	PAC – Secretariat	Parliament
18.	Vai Peua	Retired	MP
19.	John Engu		
20.	Makiuti Tongia	Advisor to Koutu Nui	Ruatongia
21.	Sel Napa		Opposition Office
22.	Taunga Toka		MP
23.	Nandi Glassie	Crown Minister	Cook Islands Government
24.	Trevor Durbin	Graduate student	Rice University
25.	Richard Barton		The Bond/Endeavour

26.	Richard Neves	Financial Secretary	Ministry of Finance and Economic Management
27.	Imogen Ingram	National NGO	Island Sustainability Alliance
28.	Dale Thorby	Te Koroku Whenua	T.K.W NZ
29.	George Turia	E.U. MFEM	Ministry of Finance and Economic Management
30.	Teariki Vakalalabure		Cook Islands Business Trade Investment Board
31.	Eruera Nia Rio Rangatira	Aronga Mana	Te Ao O Tonga
32.	Kelvin Passfield		Marine Resources/TIS
33.	Anthony Brown	Secretary	Ministry of Agriculture
34.	Maree V Pene-Quinn	Te Koroku Whenua T.K.W NR	NZ
35.	Russell Thomas		Office of the Public Service Commissioner
36.	Teina Mackenzie		Rarotonga
37.	Noeline Browne	Koutu Nui	
38.	Akuila Tawake	Project Team Leader, Deep Sea Minerals Project	SPC-SOPAC
39.	Hannah Lily	Legal Advisor, Deep Sea Minerals Project	SPC-SOPAC

ATTACHMENT 3

Note of Follow-Up Evening Event to the Cook Islands Deep Sea Minerals National Stakeholder Workshop

A further event was held at the Office of the Deputy Prime Minister, at 6.30 pm on Thursday, 12th April, to provide an opportunity for interested persons who had been unable to attend the Wednesday, 11th April Cook Islands National DSM Stakeholder Consultation Workshop ('the Workshop'), to:

- meet and speak with the DSM Project Team and the Cook Islands' Government focal points;
- receive the information that had been provided at the Workshop; and
- have an opportunity to raise questions, concerns or comments.

A list of the attendees at this evening event is included below. Only one of the attendees had not also participated in the previous Workshop. He (Mr Bill Carruthers) took the opportunity to express his concerns that any debate about DSM in the Cook Islands should be tempered with an understanding that it was a highly speculative matter, and that actual extraction activities may be many years away, and may even never happen.

Two individuals who had participated the Workshop, chose to attend the evening event also in order to express points that they had not made at the Workshop. Mr Tupe Short, attending on behalf of traditional leaders, and Mr Makiuti Tongia, attending on behalf of his extended family and local community, made statements of their support of the Project and the Cook Island's proposed approach to take up the opportunity in a safe and profitable manner, for the benefit of the Cooks Islands' people. They both expressed that they had appreciated the opportunity to be informed about this new area, and had found the debate and expressions of different opinions at the workshop to be healthy and helpful.

Mr Short stated that he had been elected the Koutu Nui's representative for DSM matters, and that he stood ready to involve himself as and when the Government wanted to engage; and wished to advise that traditional leaders are supportive of the country progressing with DSM.

Mr Tongia acknowledged the duty that we have to the next generation, and supported the preparatory work undertaken by the Cook Islands' Government to ready the country for DSM. He requested that information-sharing about the subject should continue.

The meeting was closed by Mr Paul Lynch at 8pm.

Attendees of 6.30-8 pm, 11 April, Cook Islands DSM Stakeholder Consultation Event

	Name	Job title	Organisation
1.	Tupe Short	Koutu Nui	Matavera
2.	Makiuti Tongia	Advisor to Koutu Nui	Ruatongia
3.	Trevor Durbin	Graduate student	Rice University
4.	Bill Carruthers	Business sector	Rarotonga
5.	Paul Lynch	Advisor to the Minister	Minerals and Natural Resources

6.	Darryl Thorburn	Resident Seabed Minerals Advisor	Minerals and Natural Resources / Marine Resources
7.	Ben Ponia	Secretary	Ministry of Marine Resources
8.	Akuila Tawake	Project Team Leader, Deep Sea Minerals Project	SPC-SOPAC
9.	Hannah Lily	Legal Advisor, Deep Sea Minerals Project	SPC-SOPAC