

Proceedings Note from the DSM Project 'Law and Negotiations' Workshop, Tonga, 11 - 15 March, 2013



May 2014

SOPAC SUMMARY NOTE (PR174a)

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Geoscience for Development Programme

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INTRODUCTION

The SPC-EU Deep Sea Minerals (DSM) Project is funded under the 10th European Development Fund to provide technical advice and assistance to 15 Pacific States in their engagement with DSM activities, with particular attention to the protection of the marine environment, and securing equitable and sustainable financial arrangements for Pacific States and their people.

SPC-EU DSM Project Objective

To strengthen the capacity and systems of governance for management of the region's DSM, particularly through the development and implementation of:

- sound and regionally integrated legal frameworks and fiscal regimes,
- improved human and technical capacity, and
- effective data management, and environmental management and monitoring systems, within Pacific Island countries.

Consultation has shown that capacity-building within Pacific Governments is required to empower the meaningful participation in and effective regulation of the DSM industry by Pacific States. This is one of a series of regional events and technical training workshops organised by the DSM Project (details of all these events can be found on our web-pages: www.sopac.org/dsm). The theme of this workshop, at the urgent request of the DSM Project Steering Committee (comprising Pacific Government focal points), focusses on legal aspects for States engaging with DSM, and negotiating commercial agreements with DSM operators.

DSM is a new field, within which Pacific Islands are leading the way globally. The legal framework for managing DSM encompasses a variety of different legal areas and instruments, and few Pacific States have in-country expertise of DSM law. Some have minimal experience of engagement with the extractive industries. Scientific data and cost benefit analysis for DSM projects are limited, complicating decision-making by States as they engage with the DSM industry. There is likely to be an imbalance of power between 'Small Island Developing States' specialist, and the legal negotiating and marketing arms of mining companies. There is concern that Pacific States may be approached by purported DSM operators or investors pressuring Governments to sign up to a deal for DSM activities that is described persuasively, but which in practice may pose great risk or present little benefit to the State. Equally Pacific Governments would like to be equipped to negotiate – and indeed to recognise – a 'good deal' with a credible company when one is on the table. As the DSM industry grows and Governments develop their law and policy in this area, understanding what DSM operators view as an attractive operating environment will also be important.

Workshop Opening: Honourable Samiu Vaipulu, Deputy Prime Minister of the Kingdom of Tonga

The Workshop was formally opened by the Honourable Deputy Prime Minister, who highlighted the importance of the subject, and in particular of empowering the region's Governments to protect the interests of present and future generations of Pacific Islanders.

Responding Remarks: Professor Michael Petterson, Director SOPAC Division, SPC

Professor Petterson responded by emphasising that the Secretariat of the Pacific Community (SPC) is an intergovernmental agency mandated to provide development assistance to Pacific Islands – and the work of the DSM Project is a direct response to Governments' requests for assistance in this sector. The Project recognises that a multi-stakeholder approach is essential for informed decision-making, and adopts an inclusive approach: seeking to promote dialogue and interaction between all interested parties, whether communities, non-governmental organisations (NGOs), government, or industry – and with the involvement of academic and other experts.

It was highlighted that Tonga is an appropriate venue for this workshop, given that three companies have been licensed to conduct exploration activities within Tonga's Exclusive Economic Zone (EEZ), and in 2011 the International Seabed Authority granted Tonga Offshore Mining Limited, a subsidiary of Nautilus Minerals, a contract to explore in the Area under Tonga's sponsorship. This means that Tonga is not only among developed nations in participating in this exciting venture but the government is also going to benefit from the revenue generated if mining does occur. Finally, the DSM Project has supported Tonga Government to draft national policy, legislation and regulations for the governance and management of Tonga's deep sea mineral resources (currently under review in-country).

This exciting new frontier brings opportunities as well as challenges to the Pacific Island region. The potential economic benefits must be balanced with sound environmental management. Countries must embrace the precautionary approach.

SUMMARY OF WORKSHOP SESSIONS

(1) DSM Geology and Biology: An Overview, Akuila Tawake, DSM Project Team Leader, SOPAC Division, SPC

- There is significant deep sea mineral ('DSM') potential in the Pacific region.
- There is interest in mining these deposits because samples show high grades of globally in-demand metals, including rare earth elements required for 'green' and much modern technology. Whether mining is viable depends on metal prices remaining high.
- Commercial explorers are currently working in the waters of Tonga, Solomon Islands, Vanuatu, Fiji and PNG.
- There has not yet been any DSM mining, but the technology is close to realisation, and the first permit to mine has been granted by PNG Government ('Solwara 1')
- There are also promising DSM deposits in parts of the seabed that do not fall within any country's maritime jurisdiction – this is known as 'the Area', and is governed by the International Seabed Authority ('ISA').
- Nauru, Tonga and Kiribati have sponsored companies to explore in the Area.
- Two types of DSM (nodules and crusts) are found in deep-sea stable environments: abyssal plains and on the sides of seamounts. The conditions are characterised by low temperature, slow bottom currents and minimal food supply. These are still active and diverse communities. Many of the biota found in these habitats are tiny microfauna. It is considered that seabed areas with crust or nodule deposits will host communities similar to deep seabed areas with low seabed mineral potential.
- A third type of DSM (seafloor massive sulphides, or SMS) arise from hydrothermal venting, the energy from which also hosts active biological life. These communities are highly-varied and site-specific (possibly unique) and as yet poorly understood.
- DSM mining will differ from onland mining in having little or no waste products (e.g. only seawater, at the mining site at sea) and a small physical footprint compared to terrestrial mine sites and their associated infrastructure.
- Resource ownership disputes are likely to be avoided with DSM.

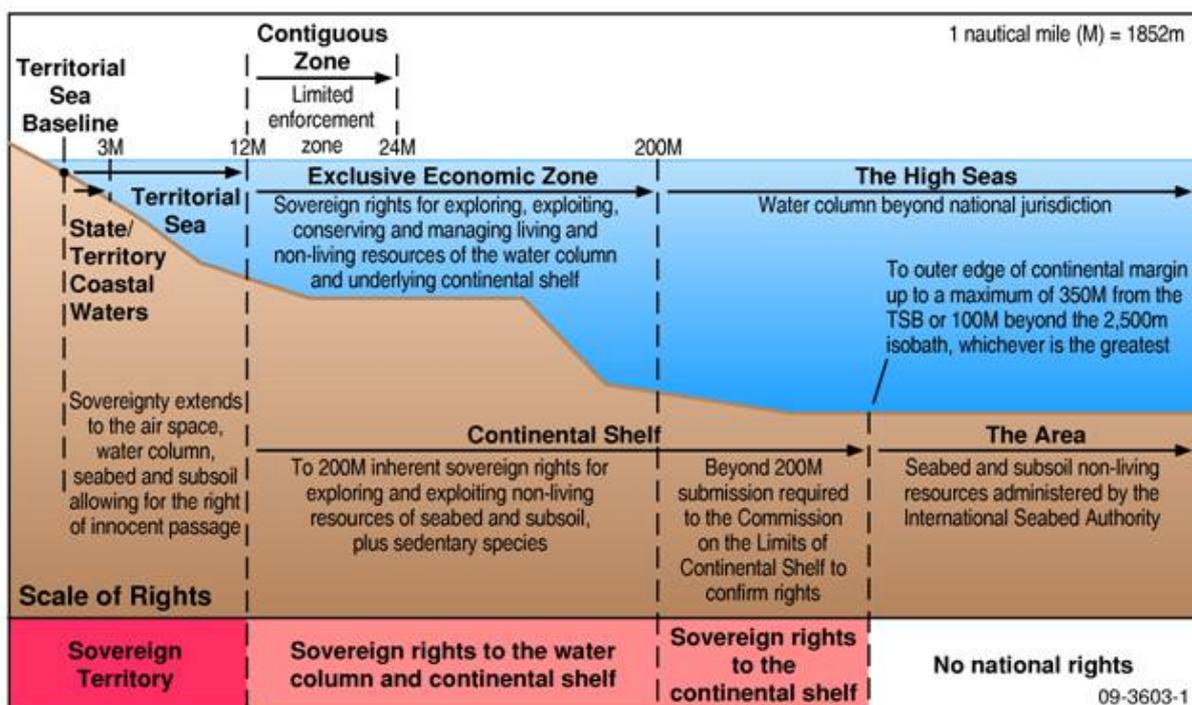
(2) DSM Project, Akuila Tawake, DSM Project Team Leader, SOPAC Division, SPC

- The Deep Sea Minerals Project, funded by the EU and hosted by SPC (SOPAC Division) has been running since 2011, with the aim: to strengthen the capacity and systems of governance for management of the region's DSM.
- The DSM Project particularly focusses on the development and implementation of:
 - sound and regionally integrated legal frameworks and fiscal regimes,
 - improved human and technical capacity, and
 - effective data management, and environmental management and monitoring systems, within Pacific island countries.
- Last year the DSM Project published the Pacific Islands Regional Legislative and Regulatory Framework for DSM Exploration and Exploitation ('RLRF') with the endorsement of the 15 Project member countries. This and other DSM Project deliverables (e.g. information brochures) are available on the website www.sopac.org/dsm.
- DSM Project has conducted in-country DSM stakeholder workshops in each Project country. Concerns raised by attendees have included: competing interests, the unknowns, lack of Government capacity, equitable sharing of DSM benefits, lack of in-country awareness, how to monitor DSM activities, data-handling, and conflicting messages from different parties (e.g. NGOs, industry and Government).

(3) International Law for DSM

(3a) Within National Jurisdiction, Hannah Lily, DSM Project Legal Advisor, SOPAC Division, SPC

- The UN Convention on the Law of the Sea (UNCLOS) establishes maritime zones and sets rules for States to use, and protect, marine resources within these zones.
- National jurisdiction is the Territorial Sea, Exclusive Economic Zone (EEZ) and Continental Shelf (CS). A country has exclusive sovereign rights over the DSM within these areas. This means that Governments can mine or not mine – on their own terms – provided they obey the restrictions set by UNCLOS: to have regard to other states (e.g. shipping paths) and to protect the marine environment.
- Pacific Island countries should prioritise the negotiation and declaration of their boundaries in order to know fully the extent of their national jurisdiction.
- This includes preventing pollution and dumping of waste at-sea, preserving fragile or rare ecosystems, and careful monitoring of the impacts of DSM activities as they proceed. Other requirements include the Precautionary Principle, maritime treaties, the Noumea Convention, and the Convention on Biological Diversity (e.g. marine protected areas, and taking special care of areas of ecological or biological significance).



- Other non-binding documents are useful resources:
 - the *Madang Guidelines* and *DSM Project's RLR* can assist DSM Policy development;
 - the *Extractive Industry Transparency Initiative* ('EITI') is a great mechanism for ensuring responsibly public financial management of incoming funds from DSM;
 - the industry-led *International Marine Mineral Society Code on Environmental Management*, and the *Equator Principles* (used by banks to manage environmental and social risks in project financing) provide some useful generic standards for operators.
- Countries must adopt laws and regulations to control DSM activities, in line with these international law requirements – and implement those laws. This can be challenging for small States, as it involves monitoring offshore activities, reviewing complex data, and using enforcement powers in cases where the rules are not being adhered to.
- This includes overall protection of the marine environment. This is ultimately Government's responsibility, not the mining companies'. Governments need to set out the rules for the companies to obey, and monitor their compliance. There are different marine spatial planning tools that can be used for environment management and protection. A holistic approach, considering all marine users, and cumulative impacts is recommended. Measures like marine protected areas, buffer zones, control sites will assist.
- Every part of the seabed that is not within national jurisdiction, is 'the Area'. This is governed internationally, by a separate legal regime.

(3b) The Area and the International Seabed Authority ('ISA'), Gwenaelle Gurun Legal Officer, ISA

- DSM in the Area are 'the Common Heritage of Mankind' (UNCLOS). No one State can claim them for their own, and any DSM activities in the Area must be carried out peacefully and for the good of all humankind.
- This is governed by the ISA – an intergovernmental agency, of which all Pacific Island countries are members – and their Mining Code (a regulatory framework that is still a work-in-progress). The Mining Code so far covers prospecting and exploration for three different DSM types, as well as some environmental management recommendations and financial reporting

requirements. The ISA can impose financial penalties for breaches, and there is an international court for disputes.

- Next steps are to work on regulations, and financial rules, for mining.
- Areas of particular environmental interest will not be available for DSM activities, as an environmental protection mechanism. The ISA regulations (which so far cover prospecting and exploration only) there is no requirement for an environmental bond from contractors. But this has been recommended, and we are considering this.
- Any State parties to UNCLOS, or entities sponsored by a State party, can apply to the ISA for a contract. States must adhere to duties of due diligence, precautionary approach and best environmental practice. Contractors must demonstrate financial and technical capability, pay a \$500k application fee, and propose a plan of work containing environmental baseline studies, preliminary environmental impact assessment ('EIA'), and pollution prevention measures. ISA checks these areas, but does not examine the 'deal' between a contractor and a sponsoring State, this is a matter between those two parties.
- Contractors will be liable for damages arising from their wrongful acts or omissions, and sponsoring States will be liable unless they can show every effort was made to discharge their obligations (e.g. implementing effective national laws to control the contractor).
- Applicants must offer two sites, and if successful will be awarded one by the ISA. The other is 'reserved' for 15 years, accessible only to a developing country applicant.
- We have training programmes available at the ISA, and I encourage all countries to be aware of these and submit your applications. We have an endowment fund also to facilitate attendance by representatives of developing nations.
- **Hannah Lily** [responding to a question]: For a country sponsoring a contractor in the Area it is essential to have proper laws in place. The ISA will not insist on this, but it is for the country's own protection. The contractor is a private company and so is not a signatory to UNCLOS. The country is an UNCLOS signatory, and will be liable for the contractor's wrongful action, unless the country has taken every step to hold the contractor to UNCLOS requirements. Ways to do this include: requiring the contractor to be a national registered company, law and regulations, and an agreement with the company. Several Pacific Islands are in the process of drafting these legal frameworks now. This is more advanced than most other countries world-wide.
- **Gwenaelle Gurun** [responding to a question]: Dr. Russell Howorth is the current Chair of the ISA's Legal and Technical Commission (LTC). The LTC is an important organ of the ISA: a body of 25 experts who review all applications to the ISA (and other documents) and make recommendations to the wider ISA. Dr. Howorth's appointment was not attached to his Directorship of SOPAC, he was nominated by Fiji, and appointed in a personal capacity following a selection process.

(4) The Pacific Regional Legislative and Regulatory Framework for DSM Exploration and Exploitation (the 'RLRF'), Hannah Lily, DSM Project Legal Advisor, SOPAC Division, SPC

- The RLRF (available on www.sopac.org/dsm) provides an overview of relevant issues for Pacific Island states considering whether and how to engage with DSM activities; and offers a road-map to the development of DSM law and policy.
- It was developed by DSM Project in consultation with expert lawyers and other stakeholders (Earlier drafts were circulated to at least 300 different persons, and 40+ substantive inputs were incorporated). The RLRF was finalised in July 2012 with the endorsement of all 15 Pacific-ACP Project countries, and launched by Pacific Island Leaders at the 2012 Forum meeting. It has been heralded as a useful and comprehensive document – without precedent in this field.
- Participants were allocated into working groups to identify suggested improvements to the RLRF, to be incorporated in any future revision of the text. A transcript of these working group suggestions can be obtained by contacting hannahl@spc.int.

(5) Understanding Mineral Resource Classification, John Feenan, IHC Mining

- DSM is new and not the same as onshore mining. Investors want to know the expected monetary value of a project, and the probability of success pre-mining. The higher the multiplier of the two, the more attractive the investment.
- Operators will need to deliver DSM at competitive market prices compared to existing sources of minerals. Nautilus' Solwara 1 in PNG is the DSM project with the greatest resource knowledge currently. The success or failure of that project will greatly affect investor confidence in DSM, and the progress of other operators.
- There will be several steps of assessing a DSM operation's viability before it progresses to a mining stage. This will include (i) technical matters (the geological resource, engineering), (ii) commercial matters (project funding, DSM economics), (iii) regulatory (laws, government, stakeholder confidence or 'social licence'), (iv) environmental sustainability. It may be 10-15% of projects that meet these criteria satisfactorily in order to move to mining phase.
- Mineral resource classification provides a tool to manage risks and rewards, and enables investors to reach a relative measure of confidence in a DSM project.
- The Australian Institute of Mining and Metallurgy uses the Joint Ore Reserves Committee Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code'). This sets minimum standards, recommendations and guidelines for public reporting in Australasia of data and information about 'mineral resources' or 'ore reserves' generated by exploration programmes.
- 'Mineral resources' are defined as a concentration or occurrence of material of intrinsic economic interest in or on the Earth's crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are reported from the geological evidence and knowledge as: 'measured', 'indicated' or 'inferred' (in decreasing order of geological confidence). Inferred mineral resource would not usually be sufficient alone to proceed.
- An 'Ore Reserve' is defined as the economically mineable part of a measured and/or indicated mineral resource. This value is calculated after further assessment (including assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors); and takes into account dilution and losses that may occur when the material is mined. These assessments seek to demonstrate that at the time of reporting extraction could reasonably be justified. Ore reserves are sub-divided in order of decreasing confidence into 'proven' and 'probable' ore reserves.
- Such assessments should be carried out by 'competent persons' with registered certification (e.g. Australian Institute of Metallurgy, SRK Consulting, Golder Associates and Quantitative Group), who are able to modify tools like the JORC Code to fit specific projects (e.g. DSM).

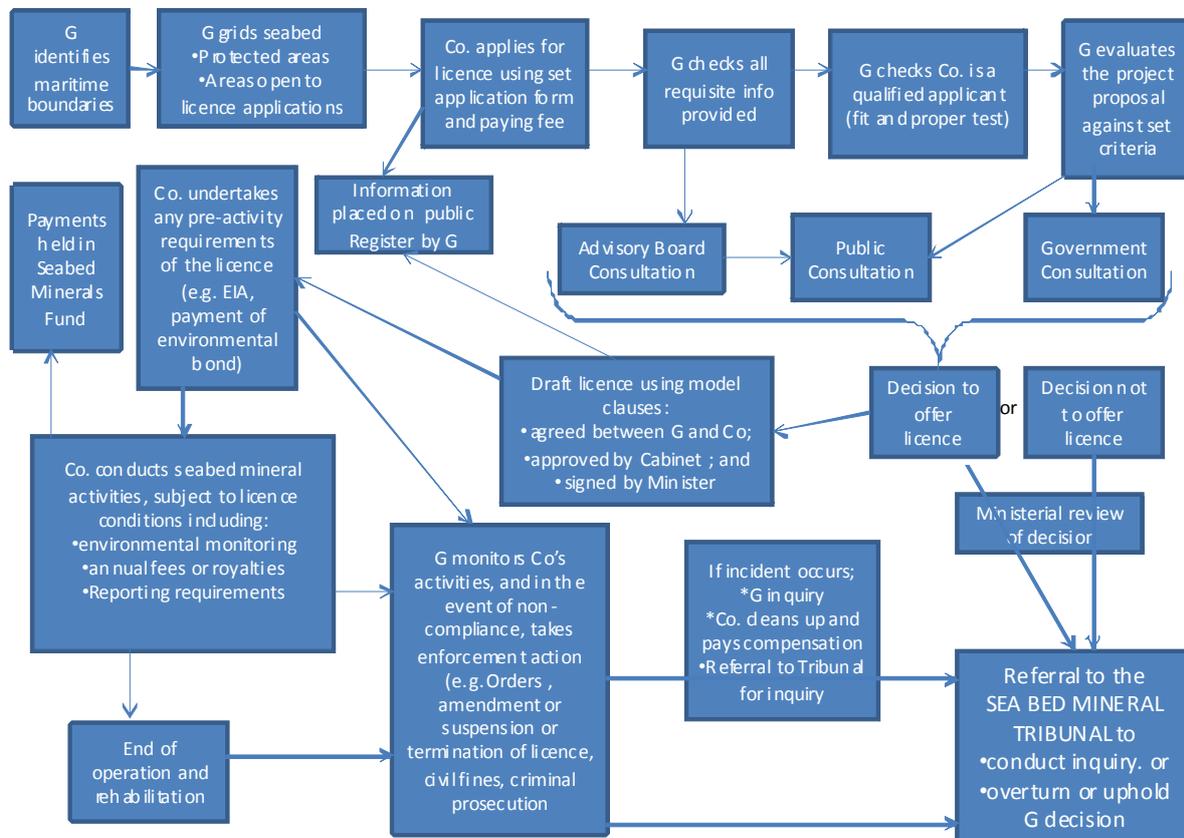
(6) DSM National Law Requirements and Administrative Arrangements

(6a) Overview, Hannah Lily, DSM Project Legal Advisor, SOPAC Division, SPC

- A national regulatory regime for DSM should cover (i) licensing: (how to apply for a licence, fee schedule, how licensing decisions are made, where public participation may occur, what licences will permit and what restrictions they will place on licensees, 'security of tenure' – i.e. how long a licence will last and in what circumstances can it be terminated early); and (ii) monitoring and enforcement (environmental management, reporting requirements, sanction and penalties for non-compliance).
- Fundamentals should be included in primary legislation (an Act) and the detail can be included in secondary legislation (regulations), which are flexible to be amended over time.
- The law should set out which agency has responsibility for which role, and their respective constitutions, objectives, powers, duties and functions. Government may decide to use existing

staff and structures as the DSM regulator at this stage, until the human resources required, and income to be generated, are clearer.

- A cross-departmental advisory committee is recommended, as good DSM decisions will require science, law, finance, and environmental management inputs.



- The DSM Project has a legal internship programme, to train up Pacific Island nationals in this new area of law. Where possible interns work on their own countries' draft laws and policies. We can also fund training placements for Government lawyers.

(6b) The Precautionary Principle in a DSM Context – ‘Aisiena Taumoepeau (Tongan Lawyer, and former Legal Intern of the DSM Project, SOPAC Division, SPC)

- The Precautionary Principle (‘PP’) in the context of DSM aims to ensure a higher level of environmental protection through cautious decision-making and risk management.
- The PP is cited in various international and regional legal instruments, in slightly differing terms. A 2011 advisory opinion on seabed mining, by the International Tribunal on the Law of the Sea, indicated that the PP has most likely achieved customary law status as a binding obligation across all environmental decision-making.
- The Rio Declaration on the Environment and Development is one of the main sources cited for a specific definition of the PP in a DSM context, as the ISA use this formulation in their Mining Code.
- UNCLOS requires States managing DSM activities to adhere to standards no less stringent than those employed by international organisations. The fact that the PP is a requirement in the ISA’s regulations, means that the PP is also now an international law requirement that must be reflected in national DSM laws.

- The PP will include public consultations and a participatory approach, as these enable an informed assessment of possible impacts on the environment and whether DSM is justifiable at any given time.
- Unlike a preventative approach where action is taken when environmental threats are tangible, or a compensatory approach, where the need for financial compensation arises after harm has occurred, the precautionary approach demands pre-emptive action to address risks (or in extreme cases, that the proposed activity should not be taken).
- Precautionary approaches are goal- and alternative-oriented, requiring technology innovation, pollution prevention, and impact assessment.
- Rather than presume that a specific activity or product is safe until proven dangerous, the PP places a presumption in favor of protecting the environment and public health. This switch of presumption places the burden of proof or the responsibility for demonstrating safety and preventing harm on those who are the ones undertaking the potentially harmful activities.
- PP in a DSM context has several dimensions, requiring an approach that is: continual, robust, regulatory, participatory, proportionate, incremental, and uses best environmental practice and other relevant management measures – such as the establishment of marine protected areas, implementing buffer and control zones, and conducting comprehensive baseline research against which impacts can be continually monitored.
- **Hannah Lily** [in response to the question ‘will the responsibility of PP be a burden to Pacific Island countries?’]: The PP is a binding rule for DSM, there is no way around it. It is important to bear in mind that it is not the companies that are bound by international treaties, but the States themselves permitting or sponsoring the companies to carry out the DSM activities. So States they have to ensure that they put in place regulatory frameworks to control the activities of the companies, and this should impose the PP as a requirement onto the companies, and place specific standards, requirements and obligations on the countries that will together constitute the PP being implemented. DSM Project Information Brochure 13 (available on www.sopac.org/dsm) is an attempt to capture and explore what the PP in a DSM context means, in a short easy-to-understand brochure.

CASE STUDIES

(6c) **Fiji: Drafting Process for National DSM Law, Tima Vakadewabuka, Attorney-General’s Office**

- Fiji has recently drafted the International Seabed Mineral Management Decree (applicable to the Area only, separate laws are being prepared for national jurisdiction).
- The lead Ministry was Foreign Affairs (‘MFA’), and the process started with a draft law prepared by Hannah Lily (DSM Project Legal Advisor) at MFA’s instruction.
- This was then reviewed by our national Maritime Affairs Coordinating Committee (‘MACC’) – a cross-ministerial group chaired by MF, already established in Fiji (e.g. for our maritime boundaries work). MACC met several times, and discussed the draft Decree in detail, making several amendments to tailor it to Fiji’s requirements and to ensure the Decree fits within the existing policies and laws of Fiji. For example we cross-checked the draft Decree’s ‘qualification criteria’ for contractors with our onland minerals law. We also aligned the Decree with our Pillar 5 People’s Charter, which requires the drive for economic development to be tempered by the protection of the environment.
- Our mind-set was both to see the importance of how investment in international DSM developments can assist Fiji’s economic growth, but also to take a precautionary approach
- As this Decree relates to Fiji’s engagement with the Area, administered by the ISA, it is about foreign investment by Government, rather than a matter that is likely to affect Fiji citizens directly, but we did share a draft with local civil society groups (a first for Fiji in its minerals work – where usually landowners are consulted but no other groups), and other relevant stakeholders (including industry and the ISA), and MACC received their comments.

- The refined draft was vetted by the Attorney-General's Office, and then submitted to Cabinet for approval – with some further amendments taking place at this stage.
- SOPAC was engaged in an advisory role throughout, providing technical and legal assistance with regards Fiji's international law obligations to MFA, as well as assisting Fiji Government in some initial discussions with potential partner DSM companies.

(6d) Tonga: Content of National DSM Law, Neil Adsett, Attorney-General

- Tonga has a draft Seabed Minerals Bill (and draft Licensing Regulations), based on a draft provided by the DSM Project at SOPAC (SPC) and is committed to place this before the Legislative Assembly later this year. An overview of the Bill is as follows:
 - Part 1 provides the objectives of the Bill, defines relevant terms, and vests the ownership of seabed mineral deposits in the Crown.
 - Part 2 designates a Tonga Seabed Minerals Authority, which function will be carried out by the Minister and the CEO of the leading Ministry.
 - Part 3 provides for the creation of a multi-stakeholder advisory body, but we are considering whether this may be overkill in Tonga – at least unless and until the DSM industry proves to be viable and commercial. I also query whether the matter is too technical for civil society involvement.
 - Part 4 describes how areas within Tonga's national jurisdiction will be made available for DSM activities.
 - Part 5 sets prohibitions and requirements upon persons carrying out DSM activities – such as obligations designed maintain Government's close control over the activities, to protect the environment, and to secure appropriate benefits to the Kingdom.
 - Part 6 sets a regime for 'prospecting', which is non-intrusive marine research whereby operators have non-exclusive rights to a seek DSM deposits with potential in Tonga's waters.
 - Part 7 covers exploration and exploitation (or mining) phases, where a licensing process is detailed, to give applicants exclusive rights to explore and mine. Only companies registered in Tonga can be licensed to operate.
 - Part 8 covers Tonga's engagement as a sponsoring State in the Area – where the DSM are the common heritage of mankind, rather than a resource over which Tonga has sovereign rights.
 - Part 9 refers to the fiscal regime. The full regime will be in separate laws, which we are working on, with partners. All monies coming in, from licensing fees to royalties, will be paid into a separate fund. Tonga is not looking to have equity stake or partnerships in the projects – we want to focus on a straightforward royalties arrangement.
 - Part 10 suggests the designation within our judicial system of an appeals tribunal for DSM decisions and/or inquiries into any incidents occurring. However our plan is to remove this, as we have a Supreme Court that can deal with such matters on judicial review.
- Overall the Bill (and Regulations) permit regulated DSM activities. We want to provide a stable environment for prospecting, exploration and exploitation. We want to proceed with actively, but sensibly and with caution. We don't want to be a centre for environmental activism.
- There are fines and imprisonments for wilful breach of the law. Since we are dealing with mining companies who could write off small fines as business expenses, and because the potential result of breaches could be irreversible environmental damage, fines are large and prevalent to act as a disincentive.
- The draft Bill will be consulted upon within Government first and then put out for public consultation – by placing it on our website and advertising in the press. The public can also participate when it is before Parliament. As it is a specialist area there may not be much public awareness.
- There are no land ownership issues in Tonga, as all the minerals are vested in the Crown.

(6e) Cook Islands: Implementing National DSM Law, Alex Herman, Seabed Minerals Authority

- The Cook Islands have a maritime jurisdiction of about 2.4 million km², containing abundant nodule deposits. Recent resource assessments show high-grades of cobalt, manganese – with indications of titanium and rare earth elements that may also be viable target minerals.
- Cook Islands has not yet issued any DSM licence, but has enacted law (Seabed Minerals Act 2009) establishing the legal framework and institutional arrangements for DSM regulation.
- The Act establishes a Seabed Minerals Authority (Government regulator) led by a Seabed Minerals Commissioner, and a Seabed Minerals Advisory Board (a group of nine community representatives, who will be trained up on DSM issues, to provide recommendations to the Authority in relation to their management of DSM, including the tenement licensing process.
- Cook Islands is now commencing the licence process – for exploration first Cook Islands will start an international tendering process towards the end of the year for sites with high nodule potential. Under the Act ad hoc applications can be received and assessed by the Authority, but we prefer a tender, as it is a transparent competitive procedure. The tender rules will be public so that our citizens and potential miners will see how it works. Commonwealth Secretariat area assisting with the bidding process.
- International standards for environmental management are incorporated into national laws, including best environmental practice, prior EIA and the precautionary principle.
- To combat the misinformation and misconceptions about DSM, we are prioritising public awareness-raising. We are conducting a programme of public events and stakeholder consultation; and now have a website: www.seabedmineralsauthority.gov.ck.
- Other aspects of the regime we are working on include: managing social and cultural impacts, fiscal regime, revenue management, capacity building, and monitoring compliance.

(6f) Non-State Actor Participation in Developing National DSM Laws, Cook Islands: implementing national DSM Law, Teina Mackenzie, Te Ipukarea Society, Cook Islands

- DSM Project invites and funds civil society organisations to training workshops like these, and this holistic approach is appreciated. Indeed all of us are ‘non-state actors’ in one sphere or another – Government officials are parents, members of sport clubs, social groups etc.
- There are many ways in which NGOs can strengthen government-led initiatives. We need to understand that we stand on the same principles and that is to assist our countries, and have a better future for our families and children. We need to work together.

(7) Securing State Benefits from DSM Activities

(7a) DSM Financial Management Overview: Hannah Lily, DSM Project Legal Advisor, SOPAC Division, SPC

- The financial return to a State from DSM activities will be different depending on whether the DSM are located within the EEZ, the extended continental shelf, or the Area – as the Government’s rights over the DSM are different from zone to zone.
- In the Area, the DSM are the common heritage of mankind. When mining takes place in the Area, contractors will have to pay fees and royalties to the ISA. These are yet to be set. Any additional payment the contractor makes to their sponsoring State will be a matter of negotiation between the parties (the ISA will not look at this). A State sponsoring a company undertakes liability, and incurs costs in the role of ‘effective control’ of the sponsored company, and will want to recoup those costs, and make profit.
- The extended continental shelf has a special regime (halfway between EEZ and the Area): if mining takes place in the extended continental shelf, after first 5 years, a royalty (or in-kind)

payment (of 1%, increasing by an additional 1% each year, capped at 7%) must be made to the ISA (to be distributed by the ISA for the benefit of all).

- Government can set its own fiscal regime for DSM activities within national jurisdiction (fees, taxes, royalties). A balance must be found between being competitive (particularly with the ISA regime, when this has been developed), but ensuring State obtains an adequate 'take' from mining of these finite resources. A regime that is stable, predictable, equitable, and legislation-based should be aimed for.
- A variety of tax mechanisms are available, including those that are profit-based, and those that focus on production levels. Both have benefits and disadvantages. Government will have to wait longer for profits-based payments. A production-based system may be less appealing to the minerals companies, as payment is required even if they are not making any profit.
- There are non-monetary benefits too, such as enhanced scientific data, and training opportunities and employment for local personnel.
- For States to secure development advantage from the DSM industry, it is paramount not only to secure that income, but also to manage it responsibly. Careful financial management is needed to support the macro-economic stability and avoid 'Dutch disease', whereby national economies are negatively affected in the long-term, by influx of a short-term new income. Responsible DSM revenue management also helps prevent corrupt practices, and leads to equitable and inter-generational sharing of resource wealth. The Extractive Industry Transparency Initiative is also recommended.

(7b) DSM Financial Management Tonga case study: Lepaola Vaea, Ministry of Finance, Tonga

- Tonga is currently consulting upon a draft DSM fiscal regime.
- Our aim is that Tonga receives an appropriate share of economic rent generated from natural resources. In determining the appropriate share, Tonga must balance the desire to maximise revenue against any deterrent this may have on investment.
- Where there are super profits, the share needs to be adjustable (resource rent tax).
- [Hannah Lily, responding to a question] The mining company will only commence the project if they know they will reach a certain level of profits. Anything above that level is 'super-profit.'
- There is a need to consider exemptions for mining companies from indirect taxes.
- It is advisable to keep negotiations to a minimum so we don't set the royalty rate too low or too high, so the regime should be embodied in law and there also needs to be institutional clarity on the fiscal policy.
- Production sharing agreements, and state equity options are other ways in which Government can receive a share of a natural resources project's economic rent.

(7c) Discussion

Mary Louise Vitelli: Different minerals have different royalty rates and these are usually based on international standards and the market. That said, it is up to each country to fix their royalty rates. Some countries have royalty charts where each mineral type is listed along with the expected range of royalty rate (e.g. 'copper: 1-3%'). Some countries may take the more 'severe' approach and have a definite royalty (e.g. 'copper: 3%') and others do not have any royalty guidance but leave it entirely to negotiation (which may be very frustrating for an investor trying to forecast their financial model). It also matters *when* you charge the royalty: when it comes out of a mine, when the company is taxed for it e.g. at customs border, or when the company has a finished product e.g. post-processing. Because DSM is new you may need to negotiate royalties in the beginning, rather than fix them in legislation - because if you start out with too high rates, it will be a disincentive for investors; and if it is too low, it is not in the States' interest. It is important to find a balance.

Akuila Tawake: In addition to the international markets, the geological potential of a mine is a very important issue that should be taken into account in designing a fiscal regime. Geological potential of minerals are not the same, some have high grades some have lower grades. There are some mines that are called marginal mines because they do not have high grades in copper, silver or gold or their cost of operation is high – and so profits will be small; or if the price of a commodity drops, these mines will run at a loss (and eventually close down). Those mines that have a higher profit margin will continue, and takeover those markets. A good example is the PNG Lihir Goldmine – an open pit goldmine with very rich deposit, they are mining 5g/tonne – and garnering high profit. They also generate geothermal energy to run the mining operation, lowering the mining company’s costs by some US\$40m a year. This is why a “super-profit tax” may be prudent: this captures highly profitable mining operations, by adding additional tax on any profits that are additional to the profits expected out the outset.

Hannah Lily: There are sections in the RLR on DSM fiscal regime and revenue management. These discuss the ‘super-profit’ (or ‘resource rent’) tax. During the consultation on the RLR, mining companies were not in favour of us recommending resource rent tax – and so you may anticipate that reaction also in future DSM negotiations. DSM Project will hold a fiscal regime workshop in 2014: a whole week of discussions with experts on the topic. This will be done in conjunction the International Monetary Fund’s Pacific Financial Technical Centre, and we will jointly produce an options paper next year to provide further guidance and model clauses on this issue. This should be useful as a guide – but each country will still need to tailor it to their individual circumstances. There are external experts who can help you to understand your mineral potential, metal content, and market prices so you can make good choices on how to apply royalties. It is difficult to do for DSM now, because there is no mining taking place therefore there are no benchmarks for metal grades, mining quantity, costs and efficacy of extraction and processing, how many elements will be marketable from one ore etc.

(8) Minerals Contracting Overview: Mary-Louise Vitelli, Attorney, SPC Consultant

- It is best to have a mining policy and legal framework in place, before any contract is envisaged. In a robust and modern legal regime a negotiated contract may not be required; the licence will suffice.
- ‘Mineral contracts’ may include licences, development agreements, production sharing agreements, offtake agreements, field service contracts.
 - The **licence** is the legal authorisation that conveys mineral tenure and permits specific activities (e.g. prospecting, exploration, artisanal/small scale mining, exploitation and/or retention). Licences may define limits by the size of an area, amount of production, type of activities permitted and machinery/equipment used and/or number of employees. There is no world standard of what a licence should entail.
 - A **mineral development agreement** is a comprehensive approach. It is a written document, enacted by the State and a legal person for the purpose of exploration and exploitation of minerals, in which the rights and obligations of each party are stipulated in accordance with the provisions of applicable law.
 - An **offtake agreement** is between a producer of a resource and a buyer of a resource to purchase/sell portions of the producer’s future production. This guaranteed customer enables the producer to obtain financing. Offtake agreements should have an exit clause.
 - **PSAs** are an ‘alternative contract structure’ that gives foreign companies the right to extract (usually oil) for a long period of time (e.g. 25 – 40 years). Rather than paying the State for the natural resource, the State ‘compensates’ the company for their investment and operating costs, giving them a share of their profits.
 - A **concession** is a traditional form of contract that grants the company the resources it extracts, and the company compensates the State through taxes and royalties.
 - A **field services contract** is entered into when specialty firms with ‘niche’ expertise are hired by mining companies to conduct specific activities (such as seismic studies, well

testing, deep water explorations) usually on a time and materials basis (actual cost plus overheads and profits).

- **Goods and services contracts** may be entered into to cover a broad range of support to minerals development that the mining company may not wish to do, does not have the capacity to do or finds it more economically or socially prudent to outsource.
- There are a variety of elements which trigger the use of mineral development contracts. Governments should consult heavily before anything is done. It is a complicated process.
- It is important to impose licensing conditions *in legislation* to avoid negotiations on fundamental standards, and avoid any misunderstandings, or difficulties caused by personnel changes.
- The decision criteria for mining investment from the company perspective includes geological potential for target minerals, security of tenure, ability to repatriate profits, consistency and constancy of mineral policies, management control of companies, and stability of fiscal regime amongst others.
- Minerals contracts can be awarded via different processes: following receipt of ad hoc application (rare), directly to a state-owned mining company, or directly to a preferred company via tender process. A tender exercise is an intricate process which includes reservation of a site for tender, preparation of 'transaction documents', clear tender stages, contract negotiation and award, and monitoring and evaluation of contract.
- Parties to any minerals contract should include Government and mining company (and State mining company if one exists).
- Different Ministries play different roles. Minerals contracting is a cross-government responsibility. Involving all relevant departments encourages clarity, transparency and accountability, and minimises risk of future dispute.
- The 'pros' of mineral development agreements (as opposed to a licensing scheme provided by law) are: reaching a long-term clear and certain agreement on key terms, with a clear statement of requirements, and input from stakeholders. The 'cons' are that: poor negotiations can result in mediocre terms (in retrospect, the deal always could have been better); monitoring and enforcement of individual agreement commitments can be onerous; political, social or economic priorities can change over time, and any change in the deal after agreement can result in negative public relations.

(9) Terms of a Minerals Contract: Mary-Louise Vitelli, Attorney, SPC Consultant

- A minerals contract will include parties, definitions, principles, duration of the contract (and renewal), objectives, obligations and responsibilities on parties (transparency measures, financial and technical requirements; and mining and non-mining performance standards), application of law, disputes, official language, enforcement provisions, and licensing terms (or a copy of the licence as an annex).
- Government will need to secure an appropriate level of control. Minerals are national property and Government decides what and how to govern and monitor the operations.
- A contract *can* be amended afterwards (things change), however too much modification will lead to a loss of credibility.
- Mining contract terms form the core of the agreement. Terms that should be addressed include: technology, feasibility studies, timelines, mine plans, construction and staffing.
- In terms of transparency, adopting the EITI and involving media at the early stages to publicise the contract will be beneficial.
- For disputes mechanisms like mediation or arbitration should be preferred to court.
- Regarding the application of governing law, usually the host country's laws are applicable.
- The transfer of rights should be addressed. Where a company wants to transfer its licence rights to another company, caution must be taken to ensure that there is a pre-transfer approval process with due diligence processes for the transferor, and States should consider imposing a transfer tax for the transfer of rights.
- For onland mineral contracts financial remediation costs are included in the contract. It may be prudent to include a mechanism to secure the costs for clean-up of any unanticipated

environmental impacts, as well as fundamental environmental management provisions (e.g. EIA) – which take into account social impacts also. The licence may be conditional on these.

- ‘Ancillary terms’ may concern infrastructure, processing, exports, community development.
- A Community Development Agreements (CDA) formalises the relationship between the mining company and the community. For DSM, there is likely to be no community directly impacted, but a CDA may still be considered as part of the social impact assessment.
- There may be provision to pay surface rent to the land owner. Compensation may be payable if persons are resettled or their lives dramatically changed.
- While all these aspects are important, there is no one way to draft a mineral development agreement. It must be tailored for each country, reflecting national policies, priorities and regulatory frameworks.
- Full publication of minerals contracts is recommended. That’s a policy matter for the government.
- **Jonathan Lowe, Nautilus Minerals** (in response to a question): In PNG, Government elected to take a 30% equity share in the Solwara 1 Project, so it is a joint venture. Unfortunately we have had to go to independent arbitration proceedings to solve a divergence in opinions about that arrangement.

(10) Deep Sea Mineral Operations

(10a) Korea Institute of Ocean Science and Technology (KIOST): Jang Wan Bang (Fiji and Tonga Director)

- KIOST (which used to be called KORDI) was established by the Korean Government in 1973 and became an independent institution in 1990, focussed on ocean science and technology research: marine biology, transportation, ocean energy etc. as well as seabed mining. KIOST currently employs 472 people with an annual budget in 2013 of US\$222 million.
- KIOST has exploration tenements in the Area in the North Eastern Pacific (manganese nodules), Western Pacific (manganese nodules), and Indian Ocean Ridge (SMS). KIOST also holds licences for SMS exploration within the EEZ of Tonga and Fiji (where a research cruise is planned for 2013).
- The Tonga licences were issued in 2008, for a total area of 24,500km². KIOST have run nine cruises to date with a total project cost of US\$31 million. The planned programme is:
 - 2013: Estimation of recoverable ore reserves, environmental baseline studies;
 - 2013: EIA, and application for mining licence;
 - 2014 – 2016: preparation of commercial mining including the constructing of mining support vessels and riser system;
 - 2017: commercial mining (in accordance with environmental monitoring and management plan).
- KIOST has Korean Government support (50% share) and also partners with five major companies (50% share between them) such as Samsung Heavy Industries, Daewoo Shipbuilding and Marine Engineering, LS–Nikko Copper, SK Networks, and POSCO – to assist with transportation, mining, smelting and refining.
- The mining operation will involve vessels, pipelines and remote operating vessels (ROV). Extracted materials will be brought to the vessel, where unnecessary materials will be separated out and returned to the deep ocean. [Jonathan Lowe, Nautilus: the waste materials, or ‘tailings’ for an SMS mining operation will be just seawater]. Simulation work will be done prior to mining to minimise discharge of pollution or hazardous materials into the marine environment, and maximise environmental protection.

(10b) Neptune Minerals Inc. (Bluewater Metals / Bismarck Mining): Tim McConachy, Vice President

- Neptune Minerals is a company established in the USA and funded by private investors.
- Neptune has marine mineral exploration licences (and outstanding applications) in Papua New Guinea, Solomon Islands, Vanuatu, Fiji, Tonga, New Zealand and Japan, principally focussing on SMS sites.
- Neptune establishes local wholly-owned subsidiary operating companies in the countries where it is active (e.g. Bluewater Metals in Tonga, and Bismarck Mining in Solomon Islands).
- Security of tenure is a key aspect for investors, therefore Neptune will primarily target mining jurisdictions that offer a clear and stable commercial and regulatory environment.
- The company's emphasis is on 'baby steps' – proceeding carefully, and applying a precautionary approach. There are numerous steps, and unknowns to understand, before any mining commences. Currently Neptune uses methods such as satellites and multi-beam echo sounders, to map the features of the seafloor; and ROVs with GPS trackers to obtain water and rock samples etc. and to undertake environmental baseline studies. Even when sampling during exploration phase we take great care to safeguard the environment.
- Neptune welcomes the active participation of local nationals in their operations.
- Seabed exploration is an expensive business. It takes a lot of time, efforts and capital; there are high risks involved, and to be commercially viable, the timing has to be right.

(10c) Nautilus Minerals: Jonathan Lowe (Vice President Exploration) and Paula Taumoepeau (Country Manager, Tonga)

- Nautilus Minerals focus is purely the discovery and development of mineral resources on the ocean floor. It is a public company, listed in the stock exchange with major industry shareholders, e.g. Anglo American, Metalloinvest, Teck, and MB.
- Compared to land-based mining, deep sea mineral production involves highly innovative technology, is of low volume, low waste, and will leave a small footprint on the environment. Some of the social and environmental advantages of deep sea mineral production include: high grade deposits, minimal overburden, small physical footprint and no interference with landownership.
- Nautilus' Solwara 1 Project in PNG is the best-studied project to date. Nautilus also have 19 prospects identified in Tonga (NB not all prospects will proceed to the mining phase).
- Solwara 1 is in the Bismarck Sea occurs at depths of 1600m, 30 km from the nearest coast, and has an extraction area of 0.11 km². Samples suggest richness of mineral deposits far exceeding what is currently mined onland.
- Nautilus heeds concerns raised by local people, which have related to the impacts of activities on the water surface, the volume of the noise, and spillage risk.
- In its efforts to put into practice the precautionary approach, Nautilus will ensure that there are limited impacts to surface waters by: implementing a fully enclosed system at the site; avoiding use of hazardous chemicals; responsible discharging of tailings; using biodegradable fluids/oils in all equipment. Furthermore Nautilus will be seeking independent bodies to monitor and review its reports and ensure transparency in all its activities.
- The organisms at vent sites include bacteria (feeding off the sulphide), snails (eating off the bacteria), shrimp and some octopus feeding on the snails. Our studies show that, when the geothermal steam shuts off (naturally), the community dies anyway.
- Environment protection measures at the mining site include setting aside a reference site, refuge areas, localised fauna, re-location and artificial substrates. Our studies to date show that the environment can recover from harsh conditions very quickly: hydrothermal venting will continue, chimneys will re-form and animals will return.
- There are similarities between the type of technology to be used for DSM and oil and gas extraction. This technology is proven in the oil and gas industry to cause minimal impacts and leaves behind a small footprint. However, unlike oil and gas, which involves volatile

substances that are explosive and hard to contain when released, DSM material is containable. If an unforeseen disaster occurs the worst case scenario, which we think would be from a shipping accident is that the minerals will fall back into the ocean.

- We will apply the best environmental practices and will continue to monitor our activities as we go along.
- From an industry perspective a good minerals policy framework is where you have simple and clear guidelines, transparency, consistency, efficiency and independent reviewing.
- In PNG there are laws involved that require the company to cover the costs of any damages caused as a result of its activities, as well as criminal sanctions in cases of malpractice or negligence.
- An incredible amount of time and efforts have been dedicated to community participation in both PNG and Tonga.
- The benefits to the people of PNG will include: (1) royalties - which go to the government for distribution; (2) a voluntary fund setup by the company for local communities, and (3) increase in employment opportunities – the company hopes to have 70% of the staff working at the operation sites to be PNG nationals; and there will be lots of opportunities for capacity building for nationals.
- The Solwara 1 Project is an example of a slow and carefully planned process: the first exploration license was granted in 1997. Much research and work have been undertaken since then (there have been 18 peer review reports on our work by scientists) but mining is yet to commence.
- There may be areas for future development, such as using the mineral rich waste-water e.g. as fertiliser, or using the differential in seawater temperatures as a source of energy to reduce our diesel consumption. It is something Nautilus will look to with interest (but we do not have the technology to engage in this yet).

(11) Deep Sea Mineral Financial Models: A Panel Discussion

Q: With regards to the Solwara 1 Project, do you think it was a good idea for the PNG government to take equity interest in the project?

A: Winterford Eko (PNG): This aspect of the Solwara 1 Project is currently subject to arbitration proceedings, which limits how much we can discuss this point. The PNG Mining Act 1992 provides that the State can claim an equity interest of up to 30% on any mining project. This decision is taken on a case by case basis, and whether it is anticipated by Government that such an opportunity would be beneficial for the country. We are reviewing our policy, laws and fiscal regime to ensure all aspects of DSM in PNG are appropriately covered and to maximise economic returns.

Q: What plans does Cook Islands Government have to secure benefit from future DSM projects?

A: Darryl Thorburn (Cook Islands): Government must understand the life cycle of the project, in terms of costs and revenues, the drivers, inputs, and what the long-term price of the mineral is likely to be. Commonwealth Secretariat has confirmed its assistance to the Cook Islands Government to build an economic model to allow us to comprehend these relevant issues in designing our fiscal regime, and to give a clear indication of potential economic benefits in the long run.

Q: What are positive benefits from onland mining projects for local communities?

A: Malakai Finau (Fiji): Employment - even though it may be unskilled labour – in Fiji preference is given to the landowners. Other revenue streams may include food supply, community-based projects (such as schools) and other assistance under the Company's corporate social responsibility policy. In some cases, a compensation fund is setup to rehabilitate the land after the project. Local communities will also benefit from national revenue generated by taxes and royalties to be paid to the State.

Q: Tonga currently has three mining entities exploring in its EEZ - what benefits as government enjoyed so far?

A: Taaniela Kula (Tonga): During current exploration phase, we are increasing our knowledge of the mineral potential within our waters. We look forward to revenue in the future.

A: Pelenatita Kara (Civil Society Forum Trust, Tonga): Nautilus is currently funding Tongan students at maritime school; and are building capacity in the communities and local schools.

Q: Is getting too close with the mining companies a bad thing?

A: Malakai Finau (Fiji): For government, there are risks both ways - getting too close to the landowners may put off investors, and getting too close to mining companies, means you may fail to fulfil properly your role as regulator. Observing a balance is the best option.

A: Pelenatita Kara (Civil Society Forum Trust, Tonga): In Tonga, Nautilus has been open to discussions with members of the public who wish to raise questions and queries. I can understand that getting too close with the mining entities may not be a good thing, but continuous dialogue should be encouraged.

Q: What are the social and cultural 'costs' to engaging with minerals projects?

A: Malakai Finau (Fiji): In Fiji terrestrial mining projects have caused changes to the livelihoods of communities, for example, men cultivating the land and fishing for the daily subsistence of their families have moved to work at mining sites. There has also been social dislocation - third generation residents living and working at the Vatukoula gold mine have never been to their villages and no longer speak their native dialects.

A: Darryl Thorburn (Cook Islands): There are studies by UNDP on social impacts of mining. We will conduct social impact assessment studies in the CI, but envisage that for DSM the social impacts should be minimal – and more beneficial (new revenue) than negative.

Q: How will DSM ventures impact upon fisheries?

A: Darryl Thorburn (Cook Islands): The manganese nodules in the Cook Islands occur at much greater depths than the fish populations and therefore we do not envisage that seabed mining will have much impact upon deep sea fishing. The national seabed minerals authority will work with the fisheries sector to manage the two sectors compatibly.

Q: Will whales and dolphins be adversely affected by the noise from DSM mining sites?

A: John Feenan (IHC Mining): Sound impact is being taken into account by the engineers designing the technology with a focus on: low sound impact, in addition to leaving a small footprint on the seafloor. Continuous monitoring and re-evaluation of impacts will be important.

A: Winterford Eko (PNG): The EIA process is a good starting point to identify and highlight such issues, and identify how these need to be dealt with.

A: Malakai Finau (Fiji): To manage DSM activities effectively, it is important that Government works closely with their Environment Department colleagues, the very outset. For monitoring purposes, it is recommended to place a government official onboard the vessel.

Q: In relation to DSM, where do you see Tonga in 20 years' time?

A: Taaniela Kula (Tonga): If we can rely on financial modelling presented, we anticipate that in 20 years' time DSM could be the primary source of revenue for Tonga. This should positively influence a shift in our current position (reliant on external aid assistance) and should lead to an increase in development, employment and infrastructure. While we aspire for this better future for Tonga, we are also aware of the challenges. Tonga needs to devise a strategic risk management plan to attempt to minimise negative impacts associated with the DSM industry. We will involve civil society organisations in our national advisory forum. We will put aside funds from DSM for our future generations, and will ensure that benefits arising are channelled all the way to communities.

(12) Negotiation: Processes and Strategies, Mary Louise Vitelli, Attorney and Consultant

- The negotiation process is crucial to bring about mutual understanding between parties, in order to make a good contract.
- Mining companies are not primarily here to improve Pacific Islands' wellbeing, but to make a profit – and it is Government's job to secure a good deal for the country.
- As well as decision-makers, you must include technical specialists in the negotiation (mining lawyer, financial person, geologist, environmental officer).
- Be careful of what political influence you bring to the table. Local seldom take a broad (nationwide interests) perspective. You may see trade union representatives at the table, or even CSOs representatives, but this is not common and may deter the commercial party.
- Choose your negotiation venue thoughtfully. Multiple venues are advised: one meeting in the host country office and one in the company's office.
- Once a mining company has approached you for a deal, it's likely they are very keen on your geological potential, and this can put Government in a strong negotiating position.
- It is important to prepare for the negotiation. Investigate market prices for the target minerals. Review draft minerals contracts, existing codes of practice, policies, and international standards. Know what your relevant laws are.
- Due diligence on the 'other side' is essential. The aim of due diligence is to provide you with that necessary information for your purpose, in the same way that you would do some research before buying a car or travelling overseas. Methods of due diligence include: Google search, visit the company's office, reference check (former/present clients, banks, embassies etc.), hire expert services (company / legal search). You should know the full names, qualifications, track record and other background profiles of the company and its representatives, and have copies of any public documents produced.
- **Illustrative Minerals Contract Negotiation Process:**
 - Step 1** Government prepares model contract and ancillary contracts
 - Step 2** Company reviews/comments on contracts
 - Step 3** Parties agree to negotiation schedule
 - Step 4** Formal negotiation minutes/recorded
 - Step 5** If necessary, may suspend; safeguard docs
 - Step 6** Government/Company approvals must be received *prior* to final signing
 - Step 7** Once formally closed may not reopen
- Keep to timelines and focus and prioritise the discussions during the meetings.
- If you need to walk away, better do that, in order to avoid conflicts or dispute and come back when you are ready to pursue the negotiation.
- Ensure to keep all written materials in a safe place and confidential until the negotiation is completed. Once you close the negotiation, if possible try not to re-open it (unless amendment is mutually agreed to be necessary) – as to do so could negatively affect your country's credibility as a secure investment environment.
- It is recommended to discuss during negotiations: principles of Corporate Social Responsibility, transparency and accountability (as reflected in the EITI), and how to approach the concept of 'Social Licence to Operate' are also crucial notions and aspects to discuss during the negotiation process. Companies may wish to hear from Government how it is proposed to distribute revenues between the different levels of Government (national, sub national), communities and citizens.

(13) Case studies: Countries' negotiation experiences

(13a) Fisheries: Maurice Brownjohn, Parties to the Nauru Agreement (Marshall Islands)

- The Parties to the Nauru Agreement (PNA) are a group of 8 small island nations in the Western and Central Pacific with a vast maritime area (14.3 million km² of combined EEZ).
- For over 3 decades PNA led tuna conservation and management in the region and initiated the Western and Central Pacific Fisheries Commission (WCPFC) measures (without formal staff, functioning through a range of ad hoc meetings). In 2010, PNA established an office in Majuro, in the Marshall Islands.
- PNA undertakes satellite tracking of fishing vessels and observing devices used to extract tuna, in order to monitor the amount of fishing stock harvested. PNA works closely with SPC and FFA on issues pertaining to regional fisheries policy making.
- Three years ago, fees for fishing licenses were sited at US\$80/tonne. Today they have more than doubled, and in some cases countries make US\$5000/day minimum from fishing licenses, which funds a large part of their national budget.
- Some of the challenges faced by PNA are: limited investment, lack of infrastructure, remote locations, high cost structures, scarce capital and export freights.
- The PNA countries produce 50% of skipjack tuna globally – which gives certain leverage negotiations. We do not want to be victims to the “Tragedy of the Commons” (depletion of a shared resource by individuals acting out of self-interest).
- As with DSM in the Area, countries cannot exercise sovereign rights over fisheries in the High Seas. But an interesting situation arises with High Seas ‘pockets’ which are surrounded by PNA countries EEZs, effectively closing them off.

(13b) Nauru's Experience: Mike Aroi, Secretary for Foreign Affairs, Nauru

- Nauru Ocean Resources Inc (NORI) is sponsored by the Government of Nauru to conduct exploration in the Area, in the Clarion-Clipperton Fracture Zone (CCFZ). By engaging in the NORI joint venture with NORI, we hope to build national capacity, and derive economic returns for Nauru. NORI's project is regulated by the ISA. Nauru took on this sponsorship because it anticipating royalties. NORI is a Nauruan entity and is funded by 2 trust funds (1) Nauru training and education fund and (2) Nauru rehabilitation fund. We see this as an opportunity to capitalise benefits for the country.
- Although DSM is new, Nauru has vast and unpleasant experience with phosphate mining.
- Nauru is an isolated single island, with about a population of 10,000 people. The country has limited human capacity and expertise. This has limited our ability in decision making and negotiations.
- Other challenges include: decisions being taken by leaders, without consultation with the staff; and foreign companies trying to bribe or influence officials with sweeteners.
- Officials' attendance at international meetings, such as this one, provide a very valuable opportunity for us to learn, and bring expertise back to our countries.

(13c) Tonga's Experience: Taaniela Kula, Ministry of Lands, Climate Change, Environment and Natural Resources, Tonga

- Government must manage both sides of DSM development: the benefits and the disadvantages. The benefits include improved scientific knowledge, economic growth, and possibly development of national industry, employment, and ultimately improvement of communities' livelihoods. The disadvantages include potential environmental impacts. It is essential that we do not overlook the negatives, because we are so keen on the positives.
- It is important to recognise when a negotiation is taking place. There are currently 3 DSM companies holding exploration licences in Tonga but no minutes of any negotiations having

taken place. Perhaps meetings took place, in the form of enquiries about existing laws and processes, or more informal chats over dinner. The ‘negotiations’ may have occurred without the ministry realising how significant such ‘casual’ interactions with the company were.

- Another form of negotiation meeting takes place when an application is formally submitted to the office – usually completed with information about beneficial the proposal will be for Tonga in the long run, and perhaps referring to previous meetings (the ones that are not minuted). Government must be empowered not to treat the application as a final format or a done deal , but to scrutinise the application, and proposed agreement terms, to ensure all Tonga’s requirements are met, before any licence is granted.
- There is another tension between the State’s interest at this stage to attract as many exploration companies as possible. This will put us in the most competitive position to find a credible company if and when Tonga proceeds to DSM mining. However we should not look for quantity alone. We want high-performers: companies who are productive and active. We must also not miss income opportunities – for example we offer exploration and prospecting application and annual fees, which are low compared with other States – are we missing valuable revenue here?
- To assist Governments get the best deal, I agree (in accordance with DSM Project’s recommendations) that Government should:
 - establish a national DSM committees should to act as an advisory board to Government decision-makers,
 - familiarise itself with existing relevant law, policy and practices,
 - develop a national strategy for DSM development, which includes maximization of national benefits from DSM, and
 - enact new DSM-specific legislation (like Tonga’s Seabed Minerals Bill 2013) to increase certainty and security and remove unnecessary discretion and negotiables.

(13d) Lessons Learned in Afghanistan, and New Zealand: Darryl Thorburn, Natural Resources Advisor, Seabed Minerals Authority, Cook Islands

- **New Zealand** has a long history of mining, starting in the 1840s with the first discovery of gold. The country has built-up a good system of storing minerals data, and has developed a licensing regime for the allocation and management of onland mineral resources, based on the Australia / UK / Canada model. This evolved over time, responding to political priorities, e.g. 1990s legislative reform resulted in Government retaining ownership of the minerals.
- The process for application, allocation, transfers, royalties, data lodgement etc. are prescribed by law, and permit limited individual discretion, and there are fixed standard conditions for prospecting, exploration and mining licences. Government does however retain the ability to vary the standard conditions in exceptional circumstances, and work programmes within licences can be tailored to case-specific operations, especially for major mining proposals or to cater for new exploration technologies.
- Licences, when granted, are made publically available online. Transparency and accountability are promoted, through dissemination of information, and a system of check and balances, and judicial review. The licensing process in therefore is ‘best-practice’ but on the downside: can be burdensome and time consuming.
- **Afghanistan** has a vast territory endowed with minerals (copper, gold, silver) and Government aspires to attract mining investment, to generate new revenue and jobs In 2007-2010 World Bank assisted the Mines in relation to Aynak, a large copper deposit discovered by an Afghan-Soviet team in 1974, but not developed due to armed resistance during the 1979-89 occupation of Afghanistan. After a competitive bidding process in 2007, the Government of Afghanistan awarded a 30-year lease to the Metallurgical Corporation of China (which then created an Afghan entity named MJAM) to explore the Aynak resource and submit a feasibility study and environmental and social impact assessment as next steps toward establishing a copper mine. The World Bank provided expertise, employing an objective, transparent standards-based tendering process, without prejudice to any particular bidder – which is now embodied in Afghanistan’s Mining Act 2009. References:

http://www.bgs.ac.uk/afghanminerals/docs/aynak_a4.pdf; and Simon Handelsman, 'Afghanistan's Aynak copper deposit tender process: case study', *Business Ethics: A European Review*, Volume 21 Number 4 October 2012.

(13e) Solwara 1 Project: Winterford Eko, Legal Advisory Branch, Department of Minerals Policy and Geohazards Management, Papua New Guinea

- All mining activities in Papua New Guinea are governed by the Mining Act 1992, the Mining Safety Act 1977 and the Mineral Policy. The decision whether to partake in a mining project is exercised in accordance with this framework, and based on economic considerations and the individual circumstances of each mining project, with the ultimate aim to promote PNG's development.
- The State, via its nominee *Petromin PNG Holdings Limited*, may elect at the grant of a mining lease to acquire up to 30% participating interest in mining projects on a fully contributing basis with no financial carry. Landowners in Special Mining Lease projects areas are entitled to 5% equity in the project, from the State's share. The cost of equity is negotiated on a case-by-case basis. Under a Benefit Sharing Agreement and/or Memorandum of Agreement for mining projects, equity distribution is specified.
- For the Solwara 1 Project the State exercised its option to take the full 30% equity share after the mining lease was granted. Petromin and Nautilus signed a State Equity Option Agreement on 29th March 2011 which detailed the State's participation as an undivided beneficial interest (expressed as a percentage) as tenant in common in all the project's properties and assets.
- The State's equity participation in Solwara 1 demonstrates Government's confidence in the future prospects of the project, and gives security in relation to the offshore tenement: with Government taking a responsible share in the risks of the pioneering project in the expectation of positive returns for the country.

(14) Company Perspective on DSM Negotiations: Harvey Cook, Neptune Minerals Inc.

- The costs for DSM exploration are extremely high: the areas of interest are typically remote and deep; vessel cost is high e.g. US\$3.5million for just a 10 day research cruise, and expensive technology (e.g. ROV) and human expertise is required. This is for a non-profit-yielding activity, that is highly speculative, given the absence of deep-sea mining precedent. This makes it a hard sell to shareholders and investors, on whom we must rely to provide the millions of dollars needed to explore. So the stakes are high for the companies.
- The single most important factor we seek when deciding where to operate is: security of tenure. If we are going to invest in exploration, we need to know we will be permitted to stay on that patch, and that our data and tenement will not be given to someone else. We would therefore like a clear and unambiguous path sets out in law, from exploration to mining.
- Our perspective is that we would like the legislation to be fairly prescriptive. We don't want too much room for negotiation, as this costs time and money, and leaves room for uncertainty that can de-rail a project at a later stage.
- We would also want to know upfront: how long licences are given for, how they are renewed or extended, what rights do exploration licence-holders have, and how does exploration convert to mining. Finally, which authorities are involved in the licensing process, and how many are involved in the ultimate approval process. We don't want to obtain a permit and later find out that due to a technicality we also have to navigate a separate process with a separate body.
- Upfront costs or taxation imposed by governments are also not appealing to DSM companies, given that this money will be coming out of an empty pocket: if the upfront costs become too high, our investors will pull out.
- Taxation can also be a disincentive. It is not that we are opposed to paying taxes and royalties – after we are working in your back yards! But we do hope that taxes will not be so prohibitive as to prevent a project from being viable. It is important to understand the cumulative impact of the entire fiscal regime.

- Other aspects that are also important to us include: political stability, rule of law, established maritime boundaries, personal and property safety.
- A social licence to operate is also important. DSM is a new industry. It is a sensitive area particularly in the Western Pacific where ocean culture is so strong in the community. It is a situation where there will be critics. Our view is that much of the criticism that we see is often erroneous. Our investors are largely American. This is because they have a high appetite for risk. At the same time they don't understand the Southwest Pacific region. Reports of opposition to Nautilus in PNG may cause investor concerns about our work in Tonga, for example. We would like to work with Governments who, if they have taken a decision to engage with DSM, have the courage of their convictions to speak to their people and to explain that decision. We see it as a partnership between the State and the company; and we need to stand shoulder by shoulder.
- We also support the precautionary approach. Although DSM companies are looking to make a profit; credible modern companies have moved away from past bad reputations. Serious players should demonstrate a corporate social conscience and willingness to adhere to environmental rules.

(15) Negotiation Role-Play

Participants were divided into groups representing (1) Governments (2) mining companies and (3) CSOs, in order to undertake a negotiation exercise, each playing a fictional role as if they were in a real negotiation setting, on the basis of information packs provided. The following observations were made by the facilitators after completion of the exercise:

Good examples observed from different teams:

- Division of labour made the negotiating process structured and efficient. One spokesperson (negotiator) backed by a team of advisors allowed the spokesperson to focus on key issues at hand – while requesting advice from time to time.
- A good team knew the law and policy parameters within which they could operate.
- A Government team asserting control over natural resources, was able to dictate the terms of proceedings of the negotiation.
- In a good grouping, both parties maintained a good relationship.
- Meeting face to face dispelled misunderstandings caused by written communication.
- Holding an initial meeting allowed both parties to get to know each other, and the style of negotiation to expect.
- Being well-prepared (e.g. coming with a good due diligence checklist), made a huge difference to a team's success in the negotiations.
- Openly engaging with civil society, and assisting a media release, went in Government's favour and meant the messaging was largely supportive.
- It was effective to maintain reference to arguments based on best environmental practices and the precautionary approach.
- Teams with a finance person at the negotiation table were able to handle the common situation where figures can change very quickly during discussion – that person was able to keep track and advise the team when the figures were coming out lower than previously anticipated.
- Opening with a set, but reasonable, financial bottom line (e.g. in-country investment of not less than \$1 million per annum and annual licence fees of \$10,000) was effective.

Challenges:

- Differences between parties in understanding or interpretation of technical or legal terms or definitions associated with DSM.
- Imbalance of bargaining power due to the lack of technical knowledge and experience in DSM negotiation.

- Difficulty in manoeuvring to get into a satisfactory negotiating position due the team in the negotiation having either too general or too specific instructions from leaders.
- Too much information to assimilate in such a short time – meaning not enough preparation.
- The vast experience gap between the company’s negotiating team and the local Pacific Island negotiating team.
- Having a Government team, without specified specialisms / roles.
- Being thrown by the unexpected.
- Too focussed on the time pressure, leading to too many compromises, that may have negative impact on the economy and the interest of future generations.
- Lack of knowledge and information to at hand to ensure effective decision-making.
- No facilitator present to keep to the structure and timeline set, and progress the negotiation.
- Stressful atmosphere.
- Including people at the negotiation who have political influence on decision making, for example a representative from the Prime Minister's office.
- The person taking the minutes also trying to participate in the negotiation.
- Having to decide spontaneously on substantial issues raises without knowing the public view.
- Lack of precedent – and trying to decide figures without expertise/ knowledge on financial benchmarks of DSM.
- Negotiations taking place before a Seabed Minerals Bill is enacted, led to a lot of pressure to try and include everything into the agreement – which may undermine the Bill’s provisions.
- The difficulty to tie financial calculations (tax, royalties, bonds, etc.) within a short time on a “still-to-be-found-resource” which is very much at present an unknown entity.
- Using personalised language like “I”, “we” or “us” at the negotiation table, and avoid taking any element of the discussions personally. Be respectful of the ‘other side’.
- Spending too much time on introductions – you should have already researched and be well-informed of the other party at the negotiation table.
- Working through the points in the order they arise on the term sheet, rather than in the order of priority – and then running out of time to discuss the crucial issues.
- It is alright to walk away if a deal is not right – there’s always another time.

Civil society perspective:

- It was useful as an NGO representative to learn (i) that negotiations can take place without any public notice or information, and (ii) it is highly unlikely that NGOs would be permitted to participate in the actual negotiation – so we have to think about how to get community views across, and influence Government, and company, from outside the room. A good reality check!
- It is important that promises or guarantees made by mining companies (and governments) will translate into legal obligations, and are not just a theoretical statement to get the CSOs onboard.
- Companies and governments were very eager to involve the CSOs in the role play – this may not be practised in reality! But a transparent and inclusive process was certainly appreciated.
- Including a community development expert at negotiation is not common practice currently, but it could be a very good idea.

(16) Additional substantive contributions

- (i) Wences Magun (civil society, PNG):** In PNG we have negative experiences with onland mining: it seems to benefit some government officials, yet the benefits are not felt by the people. Information about DSM does not reach grass-roots level in-country, and this leads to opposition from civil society. We do not want to be used like guinea pigs. There is no rush. I would like to see more work done and caution taken especially for our future generations before we proceed. We want consultation, and laws and policy in place, before any licences are given.

- (ii) **Laisa Vereti (PIANGO, Fiji):** It is difficult for NGOs to fully inform our communities and engage with in-country consultations if we don't have sound, accurate relevant information to understand the issues. For example we know that mining companies put dollar signs to the resources, before they decide to proceed with a project, but we don't have this same information to inform our decisions. Feasibility studies and impact assessments must be required and must be shared. Perhaps a regional body or agreement is required to strengthen such regulatory requirements, equally across the Pacific. It is important also for Government properly to scope the NGO community before starting, to make sure you have all relevant thematic groups and community representatives involved.
- (iii) **Pelanatita Kara (Civil Society Forum Trust, Tonga):** We are pleased to report that over the last year we have seen improved information-sharing in Tonga. Government is including NGOs, and Nautilus has made regular public briefings. We do feel that relevant information is available and filtering down appropriately. We hope this will continue for consultations on the legislation. From the civil society perspective, we support a new national DSM regulation model, and a ring-fenced fund for the monies to be received. I also hope the Act to be passed in Tonga includes DSM-specific EIA procedures and processes.
- (iv) **George Hoa'ao (Solomon Islands):** Lack of information or understanding can be an issue for Government counterparts, as well as NGOs.
- (v) **Maurice Brownjohn (Parties to the Nauru Agreement ('PNA'), Marshall Islands):** The South Pacific uniquely has large ocean spaces with a few dotted islands. This leads to 'pockets' of High Seas (or for the seabed: the Area), where areas of international jurisdiction are fully enclosed by national jurisdiction (EEZs). These may become part of national jurisdiction where extended Continental Shelf claims are made. Otherwise it should be considered whether the Pacific Islands acting together can exercise any element of control or additional rights over those pockets, as has been achieved with fisheries. A mechanism like the PNA should be considered for DSM. Working together on a regional basis is likely to yield greater benefit from DSM development to the region, that each country working individually.
- (vi) **Nannette Malsol (Palau):** Government also needs to consider how the DSM regulation regime will interrelate with vessel standards. For fisheries, the flag State to which the vessel is registered has responsibility. For DSM we need to consider whether the Government (or the ISA) will also make requirements about this to be properly regulating the industry, or is this disproportionate regulatory overlap?
- (vii) **Mike Petterson (Director, SOPAC Division, SPC):** Pacific Island national geologists, once trained, tend to leave Government service for the (better-paid) private sector. Capacity-building is an essential function of SOPAC. We should also maintain in-house geological expertise for the region.
- (viii) **Paula Taumoepeau (TOML):** DSM presents capacity-building opportunities for Pacific Islands. Government can require developers to fund training for their nationals. Tonga Offshore Mining Limited (TOML) is providing a bursary for a Tongan national to study in DSM, and sponsoring maritime students at the Tonga Maritime Training Institute. Of course, in the exploration phase, there are high costs and no profits for the companies. For example, in Tonga the company has spent about US\$39million on exploration costs and counting – with no return. Governments should take this into consideration if wanting to set upfront costs or onerous requirements at exploration stage.
- (ix) **John Feenan (IHC Mining):** When an investor looks for a DSM site, they want other users (fisheries, boats transiting) to be excluded, not only on the fishing grounds but also for transiting. There would be an expectation to set up a buffer zone for the mining system [Jonathan Lowe, Nautilus Minerals: Solwara 1 has a 150 metre buffer zone around the area], but also to require the miners to try to minimise the impact on other users.
- (x) **Ashvin Degnarain (Mauritius)** Mauritius is a multi-cultural, bilingual, (dormant) volcanic island, an area size of 45 km by 65 km. Mauritius is a salient example of an island state that has made significant economic development over the past 45 years since independence. Mauritius has taken a creative approach to industry diversification and built an international profile by providing tourism, financial services, healthcare, call-centre services, arbitration, education, garment sector and an offshore transit platform for business operation in the

region: through investment, corporate and financial regimes attractive for foreign investors and capital. Double-tax treaties have been a strength. Mauritius has 2.3 km² of EEZ including a shared extended continental shelf claim with the Seychelles of 400,000 km²: we characterise ourselves as 'an Ocean State'. We are now contemplating the development of a new industry, DSM.

- (xi) **Sophie Egden (Bluewater Metals)** [responding to a question]: From a mining company's perspective a 5 year term for a DSM exploration licence is fine as long as it can be renewed. We would need a timeframe of more than 5 years for the actual mining phase, say 15-20 years. There are measures you can place in your legislation to ensure that the DSM companies speed up the process, and do what they said they would do e.g. minimum expenditure requirements and staged tenement area relinquishment during exploration phase.
- (xii) **Group Discussion:** Prof. Mike Petterson highlighted current 'blog' comments that had been picked up by media outlets, which accused SOPAC and a DSM Staff Member of 'working for DSM companies' rather than Pacific Islands. He clarified that these allegations are entirely false. Different country representatives shared their frustrations with inaccurate reporting like this, and affirmed their trust in, appreciation for, and the importance of the DSM Project's work. CSO representatives highlighted that these were fringe groups, and did not represent NGOs as a whole, and requested Governments not to be deterred from engagement with NGOs, because of these less creditable voices. It was also agreed that the DSM Project could invest further in Communications work in order to put accurate information into the public domain.

APPENDICES

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Fa'onehua Convention Centre [11th – 15th March 2013]

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