



SPC  
Secretariat  
of the Pacific  
Community

# ACHIEVEMENTS OF THE SPC-EU Deep Sea Minerals Project

STRENGTHENING THE MANAGEMENT OF  
DEEP SEA MINERALS IN THE PACIFIC

(March 2011-March 2014)

## Key Achievements

Developing the Pacific Regional Legal and Regulatory Framework for deep sea minerals. This world-first guide to policy and law development for deep sea minerals was endorsed by all 15 project member countries and launched, to global acclaim, by Pacific Forum leaders in 2012.

Supporting 15 in-country national stakeholder consultation workshops attended by over 420 participants

Supporting 6 countries to establish multi-stakeholder National Offshore Mineral Committees

Supporting 3 countries to run public awareness and consultation programmes

Coordinating 4 thematic technical training workshops and 2 regional meetings, bringing world-leading experts to over 500 participants

Training 17 Pacific Island lawyers from 11 countries in DSM law via the Project's internship programme

Collaborating with the United Nations Environment Programme and GRID-Arendal to publish the Deep Sea Minerals Report, an assessment of the regions' deep sea minerals resources. This report series contains chapters written by 60 world-leading experts on geology, biology, technology, law, environmental management, sociology and economics

Collaborating with the International Seabed Authority to publish a technical study on environmental management of deep sea mining activities (containing a world-first adaptable template for environmental impact assessment)

Producing a wealth of user-friendly information materials, including: 15 themed information brochures; two 25-minute documentaries; and range of valuable information available via the project website at: [www.sopac.org/dsm](http://www.sopac.org/dsm)

Supporting enactment of the Fiji International Seabed Mineral Management Decree and providing advice on draft deep sea minerals laws and policies in 9 other Pacific Island countries

Supporting international training opportunities for Pacific Island government officials, such as: Rhodes Law of the Sea summer school; geo-chemical analysis training with the US Geological Survey; and attendance at the International Geological Congress

The first phase of the SPC-EU Deep Sea Minerals (DSM) Project has worked to strengthen the management of deep sea mineral resources in the Pacific by assisting member countries to:

- Increase knowledge about their resources
- Develop national policy and law
- Build technical capacity
- Increase awareness and participation
- Strengthen regional cooperation

*“The primary goal of the SPC-EU Deep Sea Minerals Project is to support our member countries to establish responsible governance and management of their deep sea mineral resources.”*

Dr Colin Tukuitonga, Director General of the Secretariat of the Pacific Community

*“The Deep Sea Minerals industry has the potential to provide much-needed economic growth and development for the Pacific region. At the request of Pacific Island countries, the European Union worked closely with the Secretariat of the Pacific Community to develop a regional project that could help to increase much-needed support in the development of effective policies and management approaches for this emerging sector. The EU has a very keen interest to support real and lasting economic sustainability in the Pacific region and it is greatly encouraged by the achievements that the DSM Project has made towards this long-term goal.”*

Andrew Jacobs, Ambassador, European Union delegation for the Pacific

## What is the SPC-EU Deep Sea Minerals Project?

Because of the rapidly growing commercial interest in deep sea minerals, many Pacific nations urgently require new regulatory systems to ensure the responsible management of these important natural resources. The Pacific DSM Project was launched in 2011 to provide technical advice and assistance to enable the 15 member countries to make informed decisions about deep sea mining within their national jurisdictions.

The EUR 4.4 million European Union (EU) funded project is managed by the Secretariat of the Pacific Community's (SPC) Applied Geoscience and Technology Division (SOPAC). The participating countries are: the Cook Islands, the Federated States of Micronesia (FSM), Fiji, Kiribati, Republic of the Marshall Islands (RMI), Nauru, Niue, Palau, Papua New Guinea (PNG), Samoa, the Solomon Islands, Timor Leste, Tonga, Tuvalu and Vanuatu.



Figure 1. DSM Project Team: (L-R) Annie Kwan Sing - Legal Assistant, Akuila Tawake - Team Leader, Christine Prasad - Junior Geologist (SPC), Alison Swaddling - Environment Advisor, Hannah Lily - Legal Advisor, and Vira Atalifo - Project Support Officer.

The DSM Project team includes five staff with expertise in geology, law and environmental science. The DSM Project supplies initial information, advice and assistance to governments to develop national dialogue and support policy decisions about whether or not a country is interested in mining its deep sea minerals. The DSM Project aims to ensure that any national decisions about these deep sea mineral resources are supported by transparent and participatory processes and communities are protected from potential negative impacts.

If a participating country does decide to engage in deep sea mining activities, the DSM Project is designed to provide the technical assistance it needs to assess the risks and meet responsibilities under national and international law. This includes efforts to ensure that countries have in place an effective environmental management and monitoring regime for any offshore exploration and mining. International law requires any Pacific Island contemplating deep sea mining to honour commitments to protect the ocean environment, minimize pollution, and preserve rare or fragile ecosystems and ocean habitats.

If countries decide to issue exploration and mining licences for their deep sea mineral resources, it is also important to ensure that a proper financial return will be collected and managed responsibly. To this end, the DSM Project has also advised countries on joint ventures, contract negotiations, and applications to the International Seabed Authority – a body established to govern and manage activities in the International Seabed Area, commonly referred to as ‘the Area’.

## INCREASING KNOWLEDGE

*“SPC is about providing the right information to the countries. The decision to mine or not is not SPC’s, the decision to mine is the country’s. It is their resource. Our interest is that, before they make the decision, they must have the information that tells them of the benefits, as well as the consequences.”*

Dr Jimmie Rodgers, former SPC Director General

*“Pacific Island Countries must have the tools to make informed decisions about their potential offshore mineral resources and the DSM Project is providing the needed training to obtain those tools. The effort by the DSM Project is receiving global recognition for its work as a driving force in providing a truly holistic approach to the development of these resources.”*

Dr. James R. Hein, U.S. Geological Survey

It is essential that comprehensive information on all aspects of the mining process is made available to assist the people and Governments of Pacific Island countries to make informed decisions about these important deep sea mineral resources.

To help prepare Pacific Islands for these activities, the DSM Project has worked to provide relevant information to various stakeholders and interested communities on the state of knowledge about marine minerals. This has contributed to the empowerment of both government agencies and civil society organisations.

In an effort to provide stakeholders with relevant information on various issues relating to deep sea minerals, a website was established within the SPC-SOPAC Division website at: [www.sopac.org/dsm](http://www.sopac.org/dsm). This website is regularly updated with information about the Project and links to its reports, brochures, and other resource materials.

### The Pacific Deep Sea Minerals Report

The launch of the Deep Sea Minerals Report in December 2013 marked a significant achievement for the DSM Project in its ongoing effort to provide quality data and information, relating to deep sea minerals resources to stakeholders in the Pacific region.

The United Nations Environment Programme (UNEP)/GRID-Arendal collaborating centre in Norway was contracted to prepare a state-of-knowledge assessment of Pacific marine minerals based on previous marine scientific studies and exploration. The final Deep Sea Minerals Report series provides an important synthesis and review of existing knowledge and information on deep sea minerals in the Pacific for a wide range of audiences. It is also designed as a tool for managers and national experts who are engaged in developing national legislation, policy, technical and environmental guidelines and strategies related to various aspects of deep sea minerals.

This publication consists of a series of volumes on deep sea minerals, involving a network of some 60 of the world's leading experts. Volume 1 examines the geology and associated biology of the three principal deep sea mineral deposit types found in the Pacific region and the environmental and technical aspects related to deep sea mineral extraction. Volume 2 provides a 'green economy' context for examining how deep sea mining could be

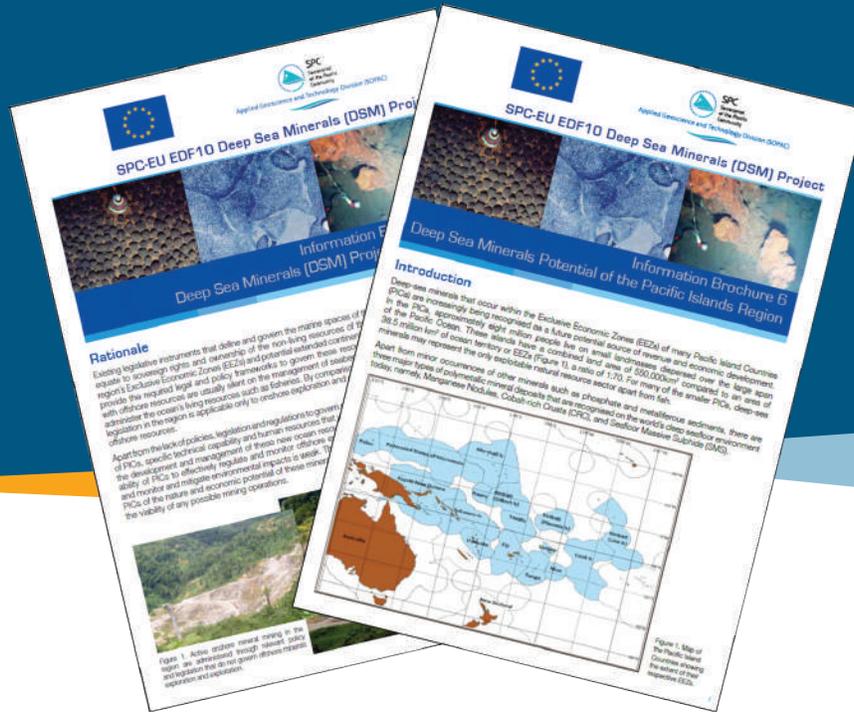
profitable, sustainable and meet the needs of Pacific Island people without sacrificing cultural heritage, community values or the health of ocean ecosystems.

The work of the DSM Project has helped to generate a series of important questions for countries to consider: Can minerals be extracted from the deep ocean seabed without significantly affecting environmental sustainability, marine life, and local communities? Can revenue from short-term DSM mining projects support long-term



development goals? Is it a good idea to start a new industry when exploitation of other resources in the region, such as fisheries and forest, have unsolved issues?

This report series collates information on the physical, biological, and technical aspects of deep sea mineral exploration and extraction and also investigates possible social, economic, and fiscal impacts and benefits to help find ways to answer these questions. To access these volumes please visit: <http://www.sopac.org/dsm>.



## Information Brochures Enhance National Decision Making

In order to enhance national decision making in the region, the DSM Project has consolidated existing information on deep sea minerals into a series of 15 user-friendly information brochures. These publications provide important information on a range of key topics, such as: the commercial potential of deep sea mineral resources; the proposed mining process and technology; public participation in decision-making and; the proposed process for disposing of mining waste. Additional brochures provide a specific focus on the seabed mineral potential within national jurisdiction of participating countries, such as: Kiribati; Tonga; Samoa; Fiji; Republic of the Marshall Islands and the Cook Islands. Additional brochures were also developed to guide countries on the application of the Precautionary Principle and engagement with the International Seabed Authority. All of these brochures can be accessed via the DSM Project website: [www.sopac.org/dsm](http://www.sopac.org/dsm).

*“Since the DSM Project held its first workshop, those of us working at the national level now have a much better understanding of the impacts deep sea mining could have on our marine environment and resources. It is a good initiative to have all Pacific Islands together in this way as it gives us an opportunity to learn from each other and share our experiences in this venture.”*

Tebete England, Minerals Development Officer, Kiribati

## Regional Marine Minerals Database

The establishment of a Regional Marine Minerals Database (RMMD) is a crucial component of the DSM Project. In 2012, the DSM Project employed a Data Management Officer in an effort to respond effectively to requests for DSM data and information, and to collate and format data in an accessible and readable form. This data contained technical scientific reports and Geographical Information System (GIS) datasets collected from 20 years of marine minerals surveys within the exclusive economic zones of 12 Pacific Island Countries. While the SOPAC Division has long acted as the custodians of this technical data for member countries, the RMMD has helped to ensure this data is accurately interpreted and packaged for ease of use. The RMMD is expected to be fully functional by the end of 2014.

## The Regional Legislative and Regulatory Framework

The DSM Project achieved a world-first when the Regional Legislative and Regulatory Framework (RLRF) was launched during the Pacific Forum Leaders Meeting in Rarotonga in August 2012. Endorsed by all 15 project member countries, the RLRF was designed to help countries to develop the national law and policy frameworks needed to improve the management of their marine mineral resources.

The former Deputy Prime Minister of the Cook Islands, The Hon. Mr. Tom Marsters, reflected that the RLRF was called for by Pacific Leaders at their Forum in Cairns in 2009 as one of the key priorities of the Pacific Plan. *"We must enter this new seabed mineral frontier with common standards and upon the best advice available, and this is exactly what the SPC-EU Regional Seabed Minerals Project is working to achieve. The Regional Legislative and Regulatory Framework also seeks to provide Pacific Islands with the tools necessary to make a decision about whether or not to engage with the emerging deep sea mining industry,"* he said.

In the 2012 Forum Communiqué, Leaders expressed their appreciation to SPC for the development of the RLRF and the successful delivery of priority action in the Pacific Plan: "Leaders welcomed the Regional Legislative and Regulatory Framework for Deep Sea Minerals Exploration and Exploitation, identifying it as a Pacific Plan priority action in 2009 and thanked the Secretariat of the Pacific Community (SPC) and the European Union (EU) for the assistance towards the Framework. Leaders recommended that Forum Island Countries (FICs) consider using the Framework in formulating relevant national policy, noting it highlights the need for a precautionary approach and addresses economic, social and environmental aspects to ensure sustainable resource use prevails".

Pacific Island countries have been encouraged to use the RLRF to harmonize legislation throughout the region and to use it as a guide to the formulation of national policy and law for the responsible regulation of seabed mineral activities.

## Advice on National Policy and Legislation

The DSM Project has helped a number of Pacific Island countries such as Cook Islands, Federated States of Micronesia (FSM), Fiji, Niue, Republic of Marshall Islands (RMI), Tuvalu and Tonga to draft or review national policy and legislation.

### Examples of legal advice provided to Pacific Islands at their request

Reviewed draft environmental permitting regulations of the Cook Islands to include deep sea requirements

Conducted legislative reviews of pre-existing laws and to provide an assessment report and identify gaps relating to seabed mineral regulation for: Kiribati, Tuvalu, Niue, the Federated States of Micronesia and the Marshall Islands

Worked with national legal officers to produce draft national Seabed Minerals Bills (and a user-friendly explanatory guide) for Tonga, Niue, Tuvalu, Federated States of Micronesia and the Marshall Islands

Provided a Bill template to meet international law requirements as a sponsoring State in the Area for Nauru, Kiribati, Tonga, Fiji and the Cook Islands

Supported a national multi-stakeholder committee in Fiji to draft and enact the International Seabed Minerals Management Decree 2013

Provided draft national deep sea licensing regulations, with prescribed application forms and licence terms and conditions for exploration and mining, for Tonga, Federated States of Micronesia, Tuvalu and Niue

Advised Nauru, Kiribati, and Tonga in relation to contractual and regulatory aspects of their sponsorship of exploration in the Area

Provided advice and assistance to the Cook Islands in its preparatory work and application to the International Seabed Authority, for exploration in the Area in a joint venture with a private company

Advised two other Pacific Island countries in initial discussions and negotiations about potential partnership with companies in the Area;

Provided substantive guidance, advice and drafting assistance on the development of a national deep sea minerals policy to Vanuatu, Kiribati, FSM, Tonga, Cook Islands, and Papua New Guinea

Reviewed a draft minerals Bill and provided commentary to the Fiji Government, with regards to necessary amendments to include deep sea minerals within the Bill's scope

Provided an intensive training placement, working with the DSM Project Legal Advisor for Government legal officers from Federated States of Micronesia, Solomon Islands and the Marshall Islands

*"It is a highly demanding and challenging job, but the RLRF is a very comprehensive, rational, user-friendly and clearly drafted document, which adds to the far-reaching significance of the Project. A first in international and regional history.... tremendous work!"*

Kening Zhang, Senior Legal Officer, International Seabed Authority

## Technical Training Workshops

The DSM Project delivered a series of highly successful and practical training workshops that have helped to build governance capacity and engage key stakeholders in the decision-making process for deep sea mineral resources. The regional technical training programme included a series of one-week regional training workshops where world-leading experts were invited to share their knowledge with participants from governments, civil society organisations and the private sector.

*“Because of the DSM Project, more information about deep sea minerals has been communicated to stakeholders and the wider public. The Project has also brought together all the different stakeholders to study this information, raise issues and define potential solutions. This project has served the citizens of the Pacific well.”*

Mr. Taaniela Kula, Deputy Secretary for Tonga’s Natural Resources at the Ministry of Lands, Environment, Climate Change and Natural Resources



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Figure 2. Dr Hein presenting at the 1st Training workshop in Fiji, 2012

### Geological, Technological, Biological and Environmental Aspects of Deep Sea Minerals (August 2012 in Fiji).

This workshop was facilitated by two world-renowned experts on deep sea minerals, Dr Jim Hein and Professor Chuck Fisher. Dr Hein is a senior scientist at the US Geological Survey with more than 35 years' experience, studying marine mineral deposits. Chuck Fisher is a Professor of Biology at the Pennsylvania State University with more than 30 years of studying biological communities associated with deep sea mineral deposits, particularly hydrothermal vents.

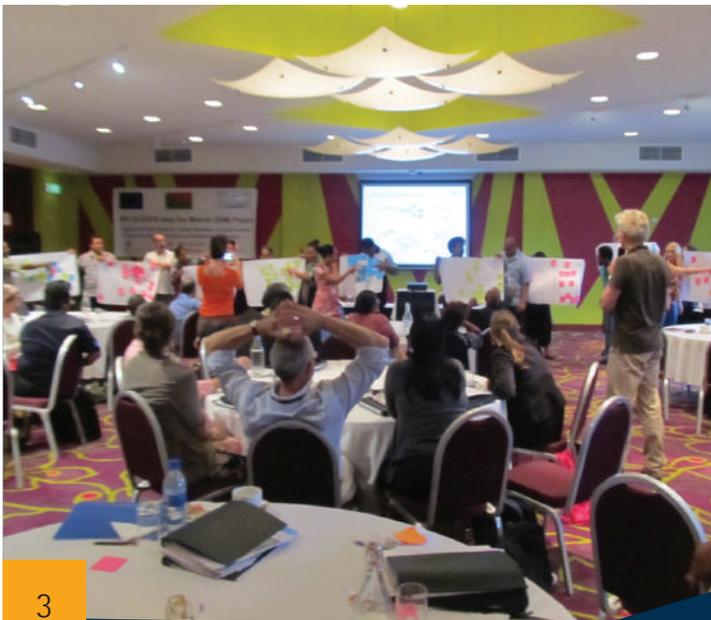


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Figure 3. Role-play negotiation session at the 2nd training workshop in Tonga, 2013

### Law and Contract Negotiations for Deep Sea Minerals (March, 2013 in Tonga).

This workshop used a mixture of presentations and role-play exercises to provide government officials with the knowledge, skills and confidence to negotiate effectively with well-resourced deep sea mining companies. The workshop participants also benefitted directly from listening to the negotiation experiences of a range of international experts, including Mary-Louise Vitelli, an international lawyer who specializes in negotiating on-land mining agreements between companies and governments of developing countries.



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Figure 4. Working groups presenting their outcomes at the 3rd Training Workshop in Vanuatu, 2013

### Social Impact and Stakeholder Participation (June, 2013 in Vanuatu).

This workshop was primarily designed to increase understanding of the potential social impacts of deep sea mineral activities. The workshop included presentations by international experts, including Professor Colin Filer, from Australia National University, who specialises in the social impacts of mining, and Tim Offor, an expert on stakeholder participation processes. The workshop ended with a practical role play on how to increase community and wide stakeholder participation in State decision-making processes for development projects.



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Figure 5. Panel Discussion at the 4th Training workshop in Fiji 2013.

### Environmental Management for Deep Sea Minerals (December, 2013 in Fiji).

This workshop, organized in collaboration with the Secretariat of the Pacific Regional Environment Programme (SPREP), was designed to help countries to identify any environmental management needs before any deep sea mining activities occur in the region. The workshop included international experts on deep sea ecosystems, such as Professor Cindy Van Dover from Duke University in the United States and Dr Malcolm Clark from New Zealand's National Institute of Water and Atmosphere (NIWA).

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A 5th workshop on financial issues (establishing fiscal regimes, and the responsible investment of revenues from deep sea mining) is to be held in May 2014 in the Cook Islands, in partnership with the International Monetary Fund's Pacific Financial Technical Assistance, and with the attendance of world-leading experts on seabed mineral taxation and royalty regimes, public financial management of extractive industry income, and sovereign wealth funds.

*"During the DSM training I was able to become part of history as our countries start to look at the various opportunities and critical issues we face in the future development of our deep sea mineral resources."*

Yolanda Lodge, Assistant Attorney General for the Republic of Marshall Islands

*"I want to thank SOPAC for taking the lead in mobilising all the stakeholders to come. I think this is the first time a workshop like this, was organised for all stakeholders: the government representatives, miners, and the civil society to come and learn the skills of negotiation, and developing contracts that is appealing to all parties in order to get a favourable benefit."*

Mr Wenceslaus Magun, Mas Kagin Tapani Association, Papua New Guinea – Representative of the Deep Sea Mining Campaign

All workshop materials can be accessed at: [www.sopac.org/dsm/index.php/technical-training](http://www.sopac.org/dsm/index.php/technical-training).

## Legal Internship Scheme in Deep Sea Minerals Law

As part of the DSM Project's capacity building initiative, the legal internship scheme was established in 2012 to provide legal assistance and training to citizens of the 15 member countries. The internship scheme is open to applications from young Pacific Island lawyers (students or graduates). Selected candidates, once approved by their governments, spend two months working with the DSM Project, receiving training, conducting legal research and analysis, or assisting with legal drafting under the supervision of the Project team lawyers.

A separate scheme for government officials is also offered. Government lawyers from around the region are funded to spend an intensive two-week placement with the DSM Project, working alongside the Project's Legal Advisor to review existing laws and develop or improve new DSM laws for their country.

To date, the internship scheme has allowed 6 government officials and 11 aspiring lawyers to get first-hand experience of the international law framework, governing the deep sea minerals sector.

*"The internship allowed me to work with a project that is leading the way in addressing deep sea mining issues, and gave me a regional perspective on the legal issues. Furthermore, it led to other incredible opportunities, such as my current position as the legal officer at the Cook Islands Seabed Minerals Authority, as well as representing the Cook Islands at deep sea mining workshops in Tonga and Fiji. Overall, it was a great experience, and is certainly a must for lawyers interested in this area."*

Ms Alex Herman, Legal Officer, Cook Islands Seabed Minerals Authority

More information about the legal internship, and the Pacific Island lawyers who have been trained through the scheme, can be found here: <http://www.sopac.org/dsm/index.php/internship-program>.

## Other Training Opportunities

In addition to the formal legal internship, ad hoc training and work opportunities with the DSM Project in Fiji have also been given to Pacific Island nationals in other disciplines, for example:

- the Director of the Mineral Division in Kiribati spent one week in 'immersion' training with the DSM Project before taking up her government post;
- an environmental health graduate from Papua New Guinea joined the team for three months in 2013;
- a Fijian geology graduate undertook a six-month attachment to the DSM Project in 2013-2014; and
- an Applied Science graduate from the Cook Islands was sponsored on a three-month Project internship, focused on GIS and technical training;

- Co-Sponsored a Cook Islands Government legal officer to attend the Rhodes Academy summer school on the Law of the Sea in 2013;
- Arranged and funded an annual internship opportunity at the International Seabed Authority headquarters in Jamaica for two Pacific Island Government lawyers from Fiji and Tonga.

## Analysis of Cook Islands Manganese Nodules

In early 2013, the DSM Project provided financial support to enable Dr Duane Malcolm, a Cook Islands national, to visit the US Geological Survey (USGS) and be trained on different methods of sample analysis, data interpretation for Manganese Nodules. It was agreed that Cook Islands manganese nodule samples, kept at that SPC SOPAC Division storage facility in Suva should be

analysed for various metallic elements, including Rare Earth Elements. Dr Jim Hein of USGS, an internationally-acclaimed deep sea mineral expert geologist, personally examined and selected 26 manganese nodule samples that were collected during the 1976, 1978 and 1980 surveys. These nodule samples were packed and sent to the USGS in Santa Cruz for analysis by Dr. Hein, which also provided a training opportunity for the Project-sponsored Cook Island official.



Figure 6. Nodules sampled from the Cook Islands. Photo courtesy of the Cook Islands Seabed Minerals Authority.

## INCREASING AWARENESS AND PARTICIPATION

The DSM Project has encouraged Pacific Island Countries to build public awareness and stakeholder participation in the management of deep sea minerals in the Pacific. The DSM Project has worked to raise awareness, increase transparency and involve key stakeholder groups in the regional and national decision-making processes related to deep sea mineral resources. The DSM Project has dedicated significant resources to increase public awareness through its publications, the media, supporting Government's direct consultations with communities and stakeholder groups, and community events, such as the successful youth debate event held in the Cook Islands.



Figure 7. National consultation workshop in the Cook Islands, 2012

### National Consultation Workshops

The DSM Project carried out initial consultation workshops in all 15 of the participating countries in order to present the DSM Project to in-country (governmental and non-governmental) stakeholders and to discuss various issues and concerns, relating to deep sea minerals and mining. The workshops provided an opportunity to collectively identify and agree on national deep sea mineral priorities and develop a DSM Project implementation work plan for each country.

*“We would like to talk and negotiate with the deep sea mining companies on a level playing field and, with that, I thank SOPAC and the EU for funding this workshop here in Tonga. All of us in the Pacific need to come to terms with that and we need to work together as a team.”*

Hon. Samiu Kuita Vaipulu, Deputy Prime Minister of Tonga

### National Consultation Workshops

Cook Islands,	Rarotonga	11 Apr 2012
FSM	Pohnpei	3 July 2012
Fiji	Suva	28 Mar 2012
Kiribati	Tarawa	19 Sep 2011
RMI	Majuro	28 Jun 2012
Nauru	Yaren District	5 Oct 2011
Niue	Alofi	3 Apr 2012
Palau	Koror	10 Jul 2012
PNG	Port Moresby	2 May 2013
Samoa	Apia	8 Mar 2012
Solomon Islands	Honiara	23 May 2012
Timor Leste	Dili	23 Oct 2012
Tonga	Nuku'alofa	1 Feb 2012
Tuvalu	Funafuti	9 May 2012
Vanuatu	Port Vila	16 May 2012

In addition to each national consultation workshop, separate meetings were held with a broad range of stakeholders, such as civil society groups, community representatives and the private sector, in an effort to increase awareness of key issues related to deep sea minerals. A questionnaire was also distributed to stakeholders to help ascertain each country's current legal framework and relevant national policy, identify the key gaps and to establish the particular support that each country would require from the DSM Project.

*“The DSM project has significantly increased knowledge and awareness about deep sea minerals and it has also helped to identify gaps in the legal and regulatory regime of my Government, especially weaknesses in our institutional and human capacities.”*

Ambassador Gerson Jackson, FSM Embassy, Fiji



Figure 8. A local community member is interviewed as part of a DSM Project video that focuses on the concerns of those communities living closest to the proposed Solwara 1 deep sea mining site on the central west coast of New Ireland province in Papua New Guinea.

## Documentaries Increase Awareness of Deep Sea Minerals Issues

The DSM Project has supported the production of three documentaries to help increase public awareness about the potential benefits and impacts of deep sea mining in the Pacific.

The first 25-minute film titled **"Under Pressure"** examines the deep sea mining issue from a number of different perspectives, including anti-deep sea mining NGOs, politicians, government agencies, and deep sea mining companies. This film reached millions of Pacific Islanders after being broadcast on Fiji TV's Close Up current affairs program and regionally via the Pacific Way. It has also been viewed thousands of times on the SPC SOPAC Division website and screened throughout the Pacific as a resource for schools and universities.

Professor John Collen, Senior Fellow at Victoria University of Wellington's School of Geography, Environment and Earth Sciences, said the film was very impressive and enjoyable to watch: "I thought the competing views were handled very well and it gave those of us from outside the region a real insight into the pressures on all involved. I've given it to my environmental science students who are working on manganese nodules in order to give them some background to their research, and I plan to use it in lectures next year - so many thanks for that!" he said.

Following the success of **"Under Pressure"**, the DSM Project produced a second 25-minute film that focuses on the potential environmental issues related to the extraction of deep sea mineral resources. This film, titled **"Out of Darkness"**, includes some spectacular underwater footage and interviews with leading scientists such as Dr Malcolm Clarke from NIWA, Dr Jim Hein from the US Geological Survey and Dr Ray Binns from CSIRO.

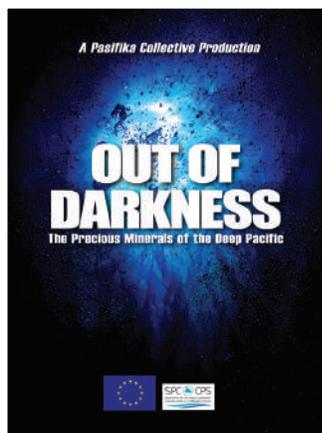
A third film titled **"Life on the Margins"**, currently in production, will focus on the concerns of those communities living closest to the proposed Solwara 1 deep sea mining site, located some 30 kilometres from the central west coast of New Ireland province in Papua New Guinea.

This documentary is designed to highlight the need for effective community engagement in the development of DSM policies throughout the Pacific.

*These films can be viewed on the SPC SOPAC Division website ([www.sopac.org](http://www.sopac.org)) and free copies of the DVD can be obtained by emailing: [viraa@spc.int](mailto:viraa@spc.int).*

### UNDER PRESSURE

Deep Sea minerals resources in the Pacific





*Figure 9. Mr Winterford Eko from PNG's Department of Mineral Policy and Geohazard Management led a delegation to discuss the development of the country's Offshore Mining Policy with communities along the Central West Coast of New Ireland.*

## National Awareness Raising Initiatives

The DSM Project provided financial support for a number of national activities to raise public awareness about the management issues related to deep sea minerals resources.

In December 2013, the DSM Project sponsored a community consultation and awareness-raising visit in Papua New Guinea to communities along the central coast of New Ireland. Community leaders from the Central West Coast of New Ireland invited the Papua New Guinea Government to visit their communities to explain the development of its new Offshore Mining Policy.

The DSM Project provided funding support for PNG's Department of Mineral Policy and Geohazard Management to coordinate a delegation of representatives from key government agencies to hold public meetings with all the communities along the central west coast, such as Messi, that are located near the main east coast town of Namatanai.

Hundreds of community members turned out to a series of open-air meetings to hear the touring delegation explain the process behind the development of the country's Offshore Mining Policy and to share their concerns and hopes, regarding the potential development of the deep sea mining industry. The DSM Project also provided financial support for a small film crew to video all the public meetings in order to help the PNG Government record these concerns to share with fellow policy makers in Port Moresby.

The film crew also interviewed a range of community members for inclusion in "Out of Darkness". Community concerns ranged from environmental impact concerns to recognition of local ownership over marine resources and ensuring that any funds derived from mining be appropriately used to support improvements to local infrastructure and employment opportunities.



*Figure 10. Cook Islands students at the Deep Sea Minerals Youth Debate, 2013*

The Cook Islands held a successful **National Youth Debate** on Seabed Minerals in October 2013 with the support of the DSM Project. The Cook Islands Seabed Minerals Authority worked with the Te Ipukarea Society, a conservation Non-Government Organisation, to encourage a number of young Cook Islanders (14-19 years) to participate in this national debate. The debate enabled young people to discuss the pros and cons of deep sea mining from a technical, societal, legal and environmental perspective.

The winner of the debate, 15-old Teherenui Koteka, was invited to accompany the representatives from the Cook Islands to attend the DSM Project Workshop that was held in Fiji in early December 2013. During her visit to Fiji, Tehere also met with the EU Ambassador to the Pacific, Andrew Jacobs. Mr Jacobs congratulated the Titikaveka College student on her win. "I know that during the debate, Teherenui showed astuteness, confidence and eloquence. She is a great representative of an aspiring, environmentally-aware young generation in the Pacific which bodes well for the future of the region," he said.

The DSM Project hopes this initiative will lead to the development of similar youth debates in other Pacific Island countries that will assist its effort to increase public understanding of the key issues related to the management of deep sea minerals resources across the Pacific region.

In Kiribati, the DSM Project provided the Government with support to use the 'Nimaua Akea' (Five Zero Programme) on **Kiribati Radio** to share information on deep sea mining with all islands, including South Tarawa and the Lines and Phoenix Groups. The program consisted of a daily sponsored information session where listeners were provided with background information by the broadcaster and then invited to call in to answer questions, such as: What are deep sea minerals? Where are they found? What are the types of deep sea minerals found in Kiribati's Exclusive Economic Zone (EEZ)? What are these minerals used for? The people who answered correctly were given the opportunity to send messages to friends and family. The program ran three times, each for a week in duration, in November 2013, December 2013 and February 2014.

## SUPPORTING REGIONAL COOPERATION

The DSM Project has worked successfully to create the foundations for increased cooperation in the management of the region's deep sea mineral resources.

Since its inception in 2011, the DSM Project has been working with a broad range of stakeholders to share knowledge, seek common ground, and develop comprehensive national seabed mining policies, laws, and practices to be implemented by participating countries. Many of the DSM Project's activities have sought to enhance regional harmonisation of policies, laws and practices, where, to do so, is in the Pacific Islands' best interests. Pacific Islands, using the RLRf and the DSM Project's drafting assistance for policy and law, should achieve broadly similar national regulatory regimes, implementing principles of international best practice. The regional workshops have provided a great opportunity for the participating countries to come together on a regular basis to build national capacity and to share ideas and experiences.

Increasingly, an interest to explore possible options for more formalised regional coordination has been expressed with a view to:

- increase the region's influence on the international stage;
- uphold minimum standards and harmonised financial terms across the region;
- provide a predictable and stable operating environment across the region;
- enable intra-governmental sharing of knowledge, technical know-how and scientific data;
- facilitate cross-boundary projects; and
- pool technical support resources and monitoring capacity in a regional hub.

SPC has committed to work with Pacific leaders and other relevant agencies to investigate the options for different models of regional cooperation for DSM management. SPC SOPAC Division Director, Professor Mike Petterson, says "SPC would like to work closely with the Pacific Island Forum Secretariat and member countries in developing a comprehensive programme to assist island countries in sustainably, developing deep sea minerals. The SPC SOPAC Division and key support agencies should work together in developing the appropriate range of needed expertise for the whole Pacific community in areas, such as: the geosciences; environmental and biological science; ecosystems expertise; economics; law; community relations; and resource ownership."

*"The SPC-EU Deep Sea Minerals Project is very important because it is helping us to make sure that what we put in place is well-coordinated and that Pacific Island countries can learn from each other. The SPC-EU Deep Sea Minerals Project means that we're learning from each other every time we go to one of their workshops, send emails around, and listen to the experience of the other nations."*

Harry Kore, Director of Papua New Guinea's Mineral Policy and Legislation Division at the Department of Mineral Policy and Geohazards

*"I think the exciting prospect for the Pacific Island situation with deep sea minerals is that everybody is on board. There's a very clear willingness to adopt the precautionary approach, to adopt the ecosystem principle and to try and do things right."*

Malcolm Clark, Principal Fisheries Scientist, New Zealand National Institute of Water and Atmospheric Research (NIWA)

*"With the coordination provided by the DSM Project, and through the meetings it has arranged on scientific, administrative, and legal issues, member nations of SPC have gained the knowledge and expertise required to derive maximum advantage from, and ensure proper governance of, future seafloor mining activities in their marine jurisdictions."*

Dr Ray Binns, Honorary Fellow, CSIRO Earth Science and Resource Engineering

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