

Mission report for the consultancy work undertaken for the CNRT  
In order to contribute to the discussions of the  
Seas, Rivers, Islands and Coastal Areas Intergroup of the European Parliament  
on deep sea exploration and mining.

### ***Deep sea mining – What next for science?***

17<sup>th</sup> November 2016  
European Parliament, Brussels (Belgium).

#### **1. Introduction**

1. The National Centre for Technological Research (CNRT) was invited to contribute to the discussions held on 17<sup>th</sup> November 2016, 9h00 to 12h00, by the Seas, Rivers, Islands and Coastal Areas Intergroup of the European Parliament on deep sea exploration and mining (« *Deep Sea Mining – What next for science ?* »). This session was structured around two discussion panels. The first panel aimed to provide an overview of the latest data and information related to the resource potential of the deep sea bed (« *Resource potential* »). The objective of the second panel was to focus more specifically on the challenges associated with the development of this emerging industry (« *Challenges of deep sea mining* »). The agenda of the session is attached in Annex 1.

2. The contribution of the CNRT fit within the context of the second panel. It was expected that such contribution would provide the opportunity for sharing a short report on the different initiatives already developed or under development in the Pacific with a particular emphasis on those supported through the Pace-Net Plus network, and in this context, to focus on the societal challenges surrounding the development of the deep sea mining (DSM) industry within the Pacific region.

#### **The Seas, Rivers, Islands and Coastal Areas Intergroup of the European Parliament<sup>1</sup>**

The Seas, Rivers, Islands and Coastal Areas Intergroup of the European Parliament is one of the 28 Intergroups that were established on 11<sup>th</sup> December 2014 by the Conference of Presidents. In accordance with established practice, this Intergroup has been established in order to foster informal exchanges of views on particular issues, and for promoting contact between members of Parliament and civil society.

The Seas, Rivers, Islands and Coastal Areas Intergroup brings together more than 80 members of Parliament from 6 different political groups and from 19 Member States.

The Chair of the Seas, Rivers, Islands and Coastal Areas Intergroup is currently held by Mrs Gesine Meissner. The Board comprises: Alain Cadec, Rosa Estaras Ferragut, Michela Giuffrida, Massimo Paolucci, Tonino Picula, Sofia Ribeiro, Ulrike Rodust, Ricardo Serrão Santos, Isabelle Thomas, Sergio Gaetano Cofferati et Gerben-Jan Gerbrandy.

3. The European Parliament has on a number of occasions demonstrated its interest in maritime issues and their holding particular strategic interest for the European Union (UE). In this context, the Seas, Rivers, Islands and Coastal Areas Intergroup significantly contributes to maritime issues being addressed in a cross-cutting manner and being afforded the necessary visibility.

4. Thus the attention given to the development of deep sea exploration and mining by the Intergroup, and its associated challenges and opportunities, should be seen as an important initiative. Its strategic nature has been highlighted by the recent adoption of the joint communication of 10<sup>th</sup>

---

<sup>1</sup> Additional information can be found at : [<http://www.searica.eu/en/>].

November 2016 by the European Commission and the High Representative for Foreign Affairs and Security Policy in the field of international ocean governance<sup>2</sup>. Two lines of priority actions identified within the context of this strategy are of special interest for the development of the DSM industry. One deals with the objective of “reducing human pressure on the oceans and creating the conditions for a sustainable blue economy” and the other, with the objective of “strengthening international ocean research and data”. The proposed actions will now be discussed with the EU Member States in the Council and the European Parliament.

## **2. Summary of the discussions**

5. Due to the innovative nature of the topic addressed on 17<sup>th</sup> November 2016 by the Seas, Rivers, Islands and Coastal Areas Intergroup, a large audience was in attendance (approximately 120 persons) including Parliament members, civil servants of the UE, representatives of the industry and “lobbyists”, representatives of academia as well as representatives of non-governmental organisations with a focus on conservation of the marine environment.

6. To introduce the topic, **Mr Mark HANNINGTON (GEOMAR-OECD)** provided general information on the economic and commercial context at the international level within which exploration and exploitation of deep sea minerals are taking place. One important point of his presentation stressed the evolution that has occurred in this sector at the beginning of the 1990s and which resulted in commercial entities superseding State entities in the conduct of the exploration activities. As a consequence, it became more and more difficult to access information on the activities undertaken on the deep seabed. **Mrs Lowri EVANS (Director-general, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, European Commission)** emphasized the fact that although the EU supports the development of the concept of the “circular economy”, it is widely recognised that it will not be enough to meet the demand for minerals that the European economy needs. In this connexion, the EU is of the view that although exploration and mining of deep sea minerals resources is an important component of the effort undertaken to support “Blue growth”, it is of critical importance to ensure that the knowledge deficit which characterises these activities be reduced. As a result, the EU is contemplating the opportunity of increasing significantly its involvement in oceanic and marine research (science, economy, law etc.).

7. The first discussion panel was chaired by Mrs **Sofia RIBEIRO**, member of Parliament and Vice-President of the Intergroup. The presentation from **Mr Phil WEAVER (Managing Director, Seascope (UK), Coordinator, MIDAP Project and coordinator, 5-year evaluation of the International Seabed Authority 2016 – on the evolving science and institutional landscape to exploit marine minerals)** focused mainly on the activities currently undertaken in the international seabed area managed by the International Seabed Authority (ISA -- entity established by the United Nations Convention on the Law of the Sea adopted in 1982, which entered into force in 1994). It was emphasized that most of the exploration activities currently undertaken were located in the Clarion-Clipperton Fracture Zone in the Pacific Ocean. The speaker also stressed that this zone covered approximately 6 million km<sup>2</sup> and that most of the activities currently undertaken covered some 1 million km<sup>2</sup>. **Mr Robert VAN DE KETTERIJ (Managing Director for the IHC MTI, Royal IHC’s knowledge centre, and Coordinator of “Blue Mining »)** in his presentation highlighted – mostly from a technical perspective – some challenges faced by those companies which are willing to invest in this emerging industry. The speaker emphasized the importance

---

<sup>2</sup> European Commission, Press release, “International ocean governance: EU’s contribution for safe, secure, clean and sustainably managed oceans”, 10 November 2016. The text can be found at: [[http://europa.eu/rapid/press-release\\_IP-16-3619\\_en.htm](http://europa.eu/rapid/press-release_IP-16-3619_en.htm)]. See also the Joint communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, “International ocean governance: an agenda for the future of the our oceans”, JOIN(2016) 49 final, 10 November 2016. The text can be found at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016JC0049&qid=1480579594196&from=FR>].

of providing European companies with an enabling regulatory and financial framework to offer incentives to invest massively in research and development, in order to develop prototypes meeting prescriptive and technical requirements that will be soon adopted by the ISA. **Mr Pierre-Marie SARRADIN (Head of the Deep-Sea ecosystem study Research Unit, IFREMER)** focused his presentation on the state of biological knowledge of the deep sea by sharing information on current initiatives and projects. In conclusion, the speaker also highlighted the capacity of the ISA to adopt regulations that will be applicable to mining activities and that will promote the use of best technology as a strategic aspect to which States pay attention.

8. The second discussion panel was chaired by **Mr Ricardo SERRAO SANTOS**, member of Parliament and Vice-President of the Intergroup. After having presented the coordination role of the CNRT in the context of the Pace-Net Plus network in the Pacific and the discussions and initiatives in progress on the development of a sustainable DSM industry in the Pacific, that will respect the environment and local communities, **Mrs Marie BOURREL-McKINNON (Legal consultant, CNRT)** provided some elements to set the context of the development of this industry in the Pacific region. An overview of the societal challenges that may be associated with the development of such industry in the Pacific was provided, and three priority actions suggested. The presentation is attached in [Annex 2](#). The presentation provided by **Mrs Ann VANREUSEL (Professor of Marine Biology, University of Ghent (Belgium), Partner JPI « Oceans mining impact project »)** focused on the environmental challenges of DSM. The speaker shared the results of a study undertaken some months ago on exploration sites located in the Clarion-Clipperton Fracture Zone, and more particularly on the conditions under which sites used for experiments in the 1970s-1980s have recovered over time. The final conclusions of this research confirm that exploration activities may have an important impact on the fauna of the deep seabed. This research also shows that impacts diminish very slowly and that in certain cases, no real improvement has been detected. An important element of the presentation made by **Mr Matthias HAECKEL (GEOMAR, coordinator Project JPI « Oceans mining impact project »)** lay in the necessity that the ISA update currently available documents on methodology and prescribed parameters in order to ensure that they reflect current scientific and technical knowledge. Further, the speaker noted the critical importance that the ISA promote standardisation of techniques used by companies for exploration of the deep seabed, which would enable the use of comparable data and thus allow for comparative studies. Finally, the speaker stressed that it would be of critical importance for the ISA to ensure that through the work currently in progress for the development of the exploitation regulations (Mining Code): (i) the notion of “harmful impacts” be defined; (ii) that contactors be required to assess environmental and social risks and, (iii) risk assessments be conducted with greater transparency, notably by requiring the involvement of independent entities. The last presentation, from **Mrs Ann DOM (Deputy Director, Seas at Risk)** highlighted the detrimental impacts of multiplicity and fragmentation of stakeholders involved in deep sea exploration and exploitation. The speaker also emphasized that it was still difficult to identify with precision the impacts that should be anticipated in relation to deep sea activities as well as the communities that would be potentially impacted.

### **3. General comments**

9. The discussions held by the Intergroup were of great interest mainly because of the wide diversity of opinions represented by participants and thanks to the quality of the work of facilitators and chairs of the panels.

10. The attendance of CNRT provided the opportunity to draw the attention of several individuals and interest groups on the activities undertaken in the Pacific region through the Pace-Net Plus network.

11. Our presentation generated significant interest from participants and most importantly from Parliament members, the industry (DCNS, GEOMAR etc.) as well as from academics. The experience


acquired working in the Pacific region with government officials, traditional leaders, civil society representatives and intergovernmental organisations (ISA, UN, SPC, SPREP, etc.) in deep sea exploration and mining was most valuable for providing the audience with concrete examples of the topics addressed during the discussions, and it would appear that this was really appreciated.

12. The critical importance of oceanic and marine research was identified by all stakeholders as a strategic priority, and the opportunity to strengthen partnerships (within the EU and outside) was equally identified as essential. In addition, the grant of mid- and long-term funding by the European Commission to support research and innovation would seem to be one of the priority actions identified at this point to support the work of the EU in the field of international ocean governance. No firm decision has been taken yet on these different issues, which is why we recommend to monitor the evolution of the situation whilst remaining engaged with European institutions.

Marie Bourrel-McKinnon  
Chamonix, France,  
30.11.201

## Annex 1 –Agenda

# INTERGROUP SEAS, RIVERS, ISLANDS AND COASTAL AREAS



---

## Deep-Sea Mining – What next for science?

*A discussion with European funded research and innovation projects on what next for publicly-funded activities in Europe*

17 November 2016  
9:00 – 12:00  
European Parliament – Room PHS 58001

Participants are kindly requested to register as soon as possible [here](#) in order to guarantee and organise the access to the EP. The day of the conference, should they need a badge, Participants are kindly requested to present themselves at the INFOPOINT of the European Parliament *Explanade Simone Veil* at 08:15

### Introduction

Mrs Gesine MEISSNER, MEP, President of the Intergroup

### Science Keynote: Why is this important ...

Mr Mark HANNINGTON, Helmholtz Professor of Marine Mineral Resources, GEOMAR (Germany) and University of Ottawa (Canada) – Author, Report for the OECD on the economic and resource potential of marine mineral deposits.

### Policy Keynote

Mrs Lowri EVANS, Director General, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, European Commission

### Discussion 1: Resource Potential

Moderator: Mrs Sofia RIBEIRO, MEP, Vice-President of the Intergroup

Mr Phil WEAVER, Managing Director, Seascope (UK), Coordinator, MIDAS project and coordinator, 5-year evaluation of the International Seabed Authority 2016 – on the evolving science and institutional landscape to exploit marine minerals

Mr Robert van de KETTERIL, Managing Director for the IHC MTI, Royal IHC's knowledge center, and Coordinator of Blue Mining

Mr Pierre-Marie SARRADIN, Head of the Deep-sea ecosystem study Research Unit, Ifremer

### Discussion 2: Challenges of Deep Sea Mining

Moderator: Mr Ricardo SERRÃO SANTOS, MEP, Vice-President of the Intergroup, Professor of Marine Biology, University of the Azores

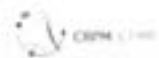
Mrs Marie BOURRIEL-MCKINNON, Legal Consultant, CNRT "Nickel & son environnement" (FR, New Caledonia), Partner in the PACE-NET Plus project.

Mrs Ann VANREUSEL, Professor of Marine Biology, University of Ghent (Belgium), Partner in JPI Oceans MiningImpact project – on the ecosystem challenges as recently published in Nature

Mr Matthias HAECKEL, GEOMAR, Coordinator of JPI Oceans MiningImpact project

Mrs Ann DOM, Deputy Director, Seas at Risk

Organized with the support of the CPMB, Seas, Rivers, Islands and Coastal Areas Intergroup Secretariat



**Annex 2 : Powerpoint presented by Marie Bourrel-McKinnon.**

**CNRT  
NICKEL**  
Centre National de Recherche et de Technologie

# **'Challenges of DSM'**

## **What societal challenges especially in developing countries and on small islands?**

**Marie Bourrel-McKinnon**  
*Legal consultant*

Services, Centre for International Migration Studies,  
31 rue de la République, BP 14238, 96247 Noumea, New Caledonia  
marie.bourel@cnrt.nc      www.cnrt.nc

**CNRT  
NICKEL**

Integrating Sea, Rivers, Islands and Coastal Areas, 17 November 2016, Brussels

PACE-NET Plus

CNRT NICKEL

Landcare Research  
Research Whenua

The Association of Environmental Scientists

IRE

INCO

EUSP


IFC

UNCTAD

PACE-Net Plus Think Tank  
Auckland, December 2014

**'Reconciling mining and the sustainable development in the Pacific countries'**

- 60 experts (scientists, senior gov officers, lawyers, policy makers, industry, CSO representatives...) from Pacific countries (Australia, Fiji, Cook Islands, Solomon Islands, New Caledonia, Palmetated States of Micronesia, New Zealand, Papua New Guinea, Samoa, Tonga), Europe (Germany, France) & Canada.
- 2 seed-funding projects (bi-regional teams):
  - "Risk assessment tools for the better management of ecosystems for the deep sea"
  - "Pacific center for social responsibility and natural resources" (PACSen)



## DSM IN A PACIFIC CONTEXT

Renewed interest in DSM

- 1<sup>st</sup> commercial SMS mining venture should start in PNG in 2018
- Several DSM exploration licenses granted by other P-SIDS
- And other P-SIDS actively seeking foreign investment in this new industry

2013 : exploration contracts signed, or pending signature, for about  
**1,843,350 km<sup>2</sup>** of the global seabed (Bj.heim)

Half signed by coastal States  
relating to operations in their  
respective EEZs

Most of these are  
P-SIDS

Opportunity to support their  
economic growth & development

Strengthen self reliance & limit  
their dependence on foreign  
development aid

**Regional Political commitment:** long-term economic  
sustainability & social development

1999: Madang Guidelines

2012: Pacific Leaders Forum Communiqué

2014: 3<sup>rd</sup> SIDS Conference – SAMOA Pathway (par 30)

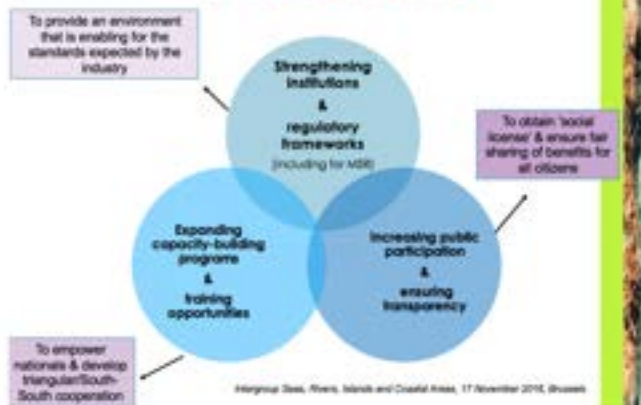
2015: SDGs (SDG 14)






Country (13 P-ACPs + 3 OCTs)	DSM potential	EEZ	International Seabed Area
Cook Islands	MN	✓	✓
FSM	CR/SMS	✓	✓
Fiji	SMS	✓	-
French Polynesia	SMS/MVORC	✓	-
Kiribati	MVORC	✓	✓
KRM	CR	✓	✓
Nauru	-	✓	✓
New Caledonia	SMS	✓	-
Niue	CR	✓	-
Palau	CR/Phosphate/SMS(MN)	✓	✓
PNG	SMS	✓	✓
Samoa	-	✓	✓
Solomon Is.	SMS	✓	✓
Timor-Leste	(MN)	✓	✓
Tonga	SMS	✓	✓
Tuvalu	MN/SMS	✓	✓
Vanuatu	SMS	✓	✓
Wallis & Futuna	SMS/CR	✓	-

## CONCLUDING REMARKS - WHERE TO FROM HERE ? -



Thank you for your attention  
Questions ?

CHRY  
CLUSTER

InterGroup Seas, Rivers, Islands and Coastal Areas, 17 November 2016, Brussels