## **COOK ISLANDS**



## Seabed Minerals Authority Runanga Takere Moana



# 2019 presentation



# Seafloor Manganese Nodules.

#### Sea floor

## Cook Islands Manganese Nodules

Seabed nodules ~30kg/m<sup>2</sup>





cc CINHT after Hakurei-Maru 1986

### The Cook Islands, in the heart of Polynesia











# Our future in good hands



# Seabed Minerals in the Cook Islands

- Water depth: 4,500~5000+m
- Area of EEZ:

2 million km<sup>2</sup>

- Area of nodules ≥+5 kg/m<sup>2</sup>: 750,000 km<sup>2</sup>
- Target metals: Cobalt, Nickel, copper, manganese, titanium, REE and possibly Vanadium
- Cobalt grade: 0.41%
- (Cronan 2013) Mn Nodule Resource Base - 10,267 Mil.t

**Co-Mn-Ti-REE- V resource** 

- Jim Hein REE assessment report
- Kenex GIS compilation, predictive modelling and probabilistic resource estimates





# Cook Islands Nodules High abundance (30-47 kg/m2) .....far from the islands and very deep





# Striking the right balance

- The Cook Islands has taken an unprecedented effort to seek the best international advice and consultations
- The Cook Islands has enacted the world's first legislation dedicated to SBM activities, needs effective **monitoring of compliance** when implementation begins
- We must balance competing desires (1) to welcome foreign investment in SBM and (2) to protect and enhance our national, social, economic and environmental well-being

Deep Sea Minerals in the Pacific Islands Region: A Legal and Fiscal Framework for Sustainable Resource Management





## **Renewed interest in DSM**

# World's demand for metals continues to rise



#### Land resources are stretched



Increased focus on minimising physical footprint, and social disturbance

#### By Theo Leggett

Business reporter, BBC News

You may never have heard of lanthanum, cerium or neodymium, but these and other so-called "rare earth" metals play a vital role in many modern technologies.

Cerium, for example, is an abrasive used in the manufacture of flat screen televisions.

Lanthanum is a catalyst much prized by the oil industry, while neodymium is found in computer



Minerals holds strategic importance to States, beyond direct profitability

## **Benefits Should Outweigh Costs!**

Costs

## Benefits

- New income from fees, taxes and royalties
- Enhanced training and employment opportunities for nationals
- Local service industries?
- Infrastructure??

Measures can be taken to maximise those benefits, and minimise those costs

- Setting up State apparatus for licensing, monitoring, enforcement etc.
- Environmental impacts
  - Fisheries? Tourism?





# Harvesting or exploitation phase



## **SPB Cross-section**



## **Increasing Density stratifies the ocean**



Profiles\_Temp-Sal-Density

German R/V Sonne 2007 biological survey of Manihiki Plateau troughs

- Macrofauna (40-0.3mm)
  - and Meiofauna (>0.03mm)
- "impoverished", "not very diverse" &
- "the overall density of animals was low" than CCZ Why?
- 1. lack of plankton and low level of marine snow
- 2. seabed filter feeders often have carbonate

skeletons and trough seabed below CCD.



Key enviro concerns

## Environmental Studies – Eco-system based approach



## Environmental Studies – Plume characterisation



Suspended solids
Partical size analysis
Total and Dissolved metals
pH
Dissolved Oxygen
Nutrients

**Environmental Impact Assessment (EIA)** 

Protection and preservation of the marine environment

Common Heritage of mankind

Precautionary approach

Proportional application of measures

Impact and Preservation Reference Zones

□ Test mining and Initial scoping for exploitation

## Environmental Impact Assessment (EIA) – Approach

Stage	Task	Aim/Objectives	Work/output (examples)
Scoping	Environmental Scoping	To identify the potentially significant direct and indirect impacts of the proposed mining programme. To be developed during the exploration stage.	Preliminary consultation with key consultees. Identify targets for specialist studies
Environmental Impact Assessment	Consultati on	Consult with statutory and non-statutory organisations and individuals with an interest in the area and the proposed	Knowledge and information on issues of concern, sources of information, and means of assurance of EIA information
	Primary data collection	To characterise the existing environment	Background data and information (including existing literature and
	Specialist studies	To further investigate those environmental parameters which may be subject to potentially significant effects	Specialist studies) Specialist reports (e.g. plume studies, benthic analysis etc)
	Impact assessment	To evaluate the existing environment, in terms of sensitivity. Evaluate and predict the impact (i.e. magnitude) on the existing environment. Assess the significance of the predicted impacts	Series of significant adverse and beneficial impacts
	Mitigation measures	To identify appropriate and practicable mitigation measures and enhancement measures.	The provision of solutions to minimise adverse impacts as far as possible Feedback into the design process, as applicable.
	Environmental Impact Statement	Production of the Environmental Impact Statement in accordance with guidance	Environmental Impact Statement

# Environmental Impact Assessment (EIA) Mining System Design



## **2019...PROPOSED CHANGES TO SBM LAW**



- bed Minerals Authority anga Takere Moana
- Seabed Minerals Act passed in 2009
- Exploration Regulations passed in 2015
- Legal review of 2009 Act undertaken
- Existing SBM Act was legally acceptable for Exploration phase
- ALL SBM LICENCING ON HOLD SINCE MAY 2018.

#### **Proposed Seabed Minerals Bill 2018**

- Draft Bill, Policy and Sector Plan on SBMA website
- Bill being consulted with Opposition and stakeholders
- Based on international best practices
- Expert legal assistance from Commonwealth Secretariat and New Zealand Parliamentary Counsel Office (NZPCO)

<u>**4 Key changes:</u>** To streamline and improve the **2009 SBM Act** and **2015 Regulations**</u>



# **4 KEY CHANGES**

- 1. Streamline 2009 Act & 2015 Regulations More readable and accessible
  - NZ drafting style
     <u>Some provisions in 2015 Regulations moved</u> to the new Bill
  - More suited in the primary legislation than Regulations
- 2. Improve to SBM Advisory Board/Committee
  - Relates to community engagement and functions
- 3. Enhance alignment with <u>Marae Moana Act 2017</u>

#### 4. ISA Part

# **Bill Consultations Oct 2018- April** 2019

- Bill Consultation Report completed.
- Wide range of Consultations in Raro & Outer Islands
- Collation of Feedback is completed.
- 40 Feedback contributors
- Approx. 10 key issues.
- Evaluation continuing...
- Some new Policy issues for Minister to consider

# BILL AND LICENCING PROCESS

#### **APRIL/MAY/JUNE**

- Final Bill Consultation Report to be disseminated.
- Bill to CLO/NZPCO for re-drafting
- Final draft Bill to be released (Public, Opp./WG/TAG etc)
- Due Diligence contract. Tender Areas selected.
- Minister/CAC/MM/Cabinet/CLO JUNE.
- Bill prepared by CLO for Parliament to pass\*
- Draft SBM Licencing Regs (QR to pass) based 2015 Regs. JULY/AUGUST/SEPT/OCT/NOV.
- Open and close 2nd Tender of Exploration Applications. NOV/DEC
- Grant/refuse Applications

2020-2025- Licenced SBM Exploration commences



#### 

# ISA Contract -July 2016

- Cook Islands Investment Corporation was granted an area in the CCZ by the ISA
- 75,000km2 Value- US\$227 billion
- Partnership with Belgian company GSR
- Exploration Work to commence 2015/16
- Training and Employment opportunities
- EEZ Reserve Area –special arrangement



• The Cook Islands will set and apply a <u>regime of good</u> <u>controls</u> for operations in our national SBM sector

•We need to prepare and be willing to sustainably develop the resources in our EEZ & CCZ

# Cook Islands people leading... Education, training and capacity Building required

**Capacity building and training is required of Cook Islanders** to be able to wisely manage and benefit from this exciting resource, in **social**, **environmental and financial terms** 

# Future benefits for our people We need help to ensure the responsible management of our deep sea activities, environment and finances in the near future

- Sovereign Trust Fund based on Norway model
- Help develop our Outer Islands, Schools, Hospital, roads, harbours etc.





#### **Cook Islands Seabed Minerals Authority**

In November 2009, the Seabed Minerals Act 2009 was passed by the Cook Islands Parillament, with unanimous support from both the Government and Opposition members of Parilament. This Act was the world's first national legislation dedicated to regulating seabed minerals activities...

On the 26 June 2012, Cabinet approved that-

- a- The Act commence operation on 1 March 2013; and
- b- The Seabed Minerals Authority be established.

On the 29 August 2012, a senior Cook Islands lawyer, Mr. Paul Lynch LIb /B.A. MBA. was appointed the first Seabed Minerals Commissioner, by the Honourable Tom Marsters, Minister of Minerable Tom Marsters, Minister of Minerable Tom August and Cabinet.

On 13 September 2012, the Seabed Minerals Authority office in Avarua was officially opened by the Minister.

On the 1st March 2013, the Seabed Minerals Act 2009 officially commenced operations. The Authority received its first direct national funding from the Government budget.

On the 8th March 2013, the Authority was officially opened by the Honourable Tom Marsters, Minister of Minerals and Natural Resources, who also-

A. appointed the first members to the Seabed Minerals Advisory Board; and B. Declared the limited areas of Seabed Minerals activity in the Cook Islands EEZ.

#### **Read More About the Authorities Background**



#### Purpose & Role

The overarching vision of the Seabed Minerals Authority is to develop and mature the Seabed Minerals (SBM) sector of the Cook Islands in order to maximise the benefit of our national seabed minerals resources



More Data Needed Collecting more information about the marine environment is a "critical need" if people are to make informed decisions.





About Us The Seabed Minerals Authority was established on 26th June 2012 and works in various facets. Find out more here

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Mining Nodules Can developing countries share in the wealth of this immense mineral resource?

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#### Stage of Activity

Stages of activity can be broadly divided into three stages: Prospecting, exploration and mining, Prospecting and explore suitable mining sites that can be mined with minimal environmental impact, then utilise this data to initiate small scale mining as a test for viability and impact

## 

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#### Contact Us

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Thank you Paul Lynch –SBM Authority