

Disclaimer:

The content of these slides are intended to provide a high-level overview of the Cook Islands Seabed Minerals Sector. As the regulator of this sector, we confirm that the following content is accurate and factual, based on the most recent information and data collected within the Cook Islands' Seabed Minerals Authority.

For more information and any questions, please contact us via email: sbma.media@cookislands.gov.ck

Meitaki ma'ata for engaging with our materials responsibly.





Seabed Minerals Authority
Runanga Takere Moana
COOK ISLANDS

Karere no runga i te Takere Moana

Updates on the
Seabed Minerals Sector

New Zealand Diaspora
18 – 22 November 2024



A vision spanning 50 years

“A sustainable minerals future for Cook Islanders”

“The sea represents as much to the people of small Pacific Islands as the land

...the **sea could become a dominant factor in the development of the Cook Islands.**

...the discovery and extraction of minerals from the seabed may become a possibility.

In the event of that possibility becoming a reality, it would be only **fair and just for the Cook Islands to receive the benefits from the seabed**” – 3rd Law of the Sea Conference, 1974

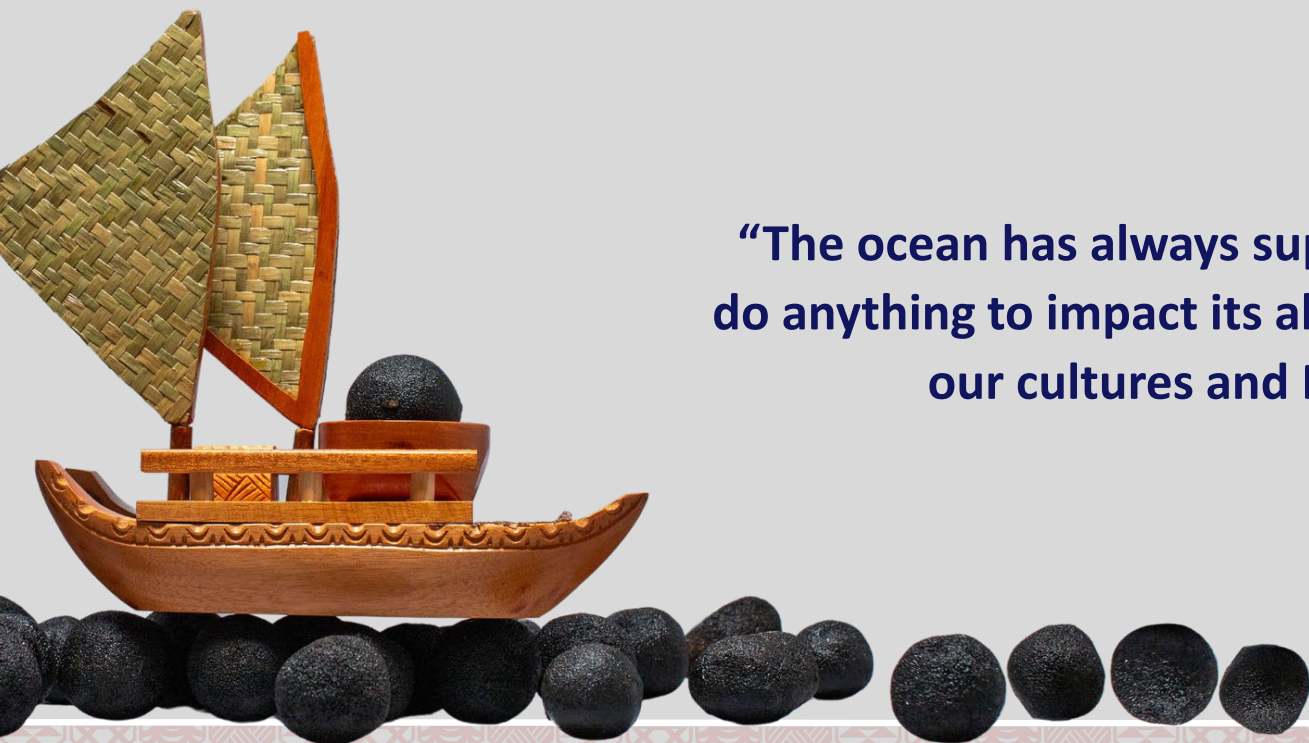


Sir Albert Henry
First Cook Islands Prime Minister

“The ocean has always supported us, and we will not do anything to impact its ability to continue to support our cultures and Pacific way of life”



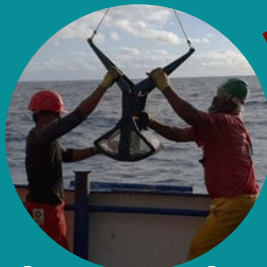
Hon. Mark Brown
Current Cook Islands Prime Minister
SBM Minister since 2013





Environmental Protection

Highest Environmental Standards applied to ensure protection of our Marae Moana



Knowledge and Research Advancement

Journey of knowledge and discover of Marae Moana

Cook Islands SBM Sustainability Goals



Economic Diversity

Cook Islands overly reliant on tourism. Economic vulnerability highlighted during COVID-19



Transition to Low Carbon Economy

Minerals are necessary to enable the clean energy transition

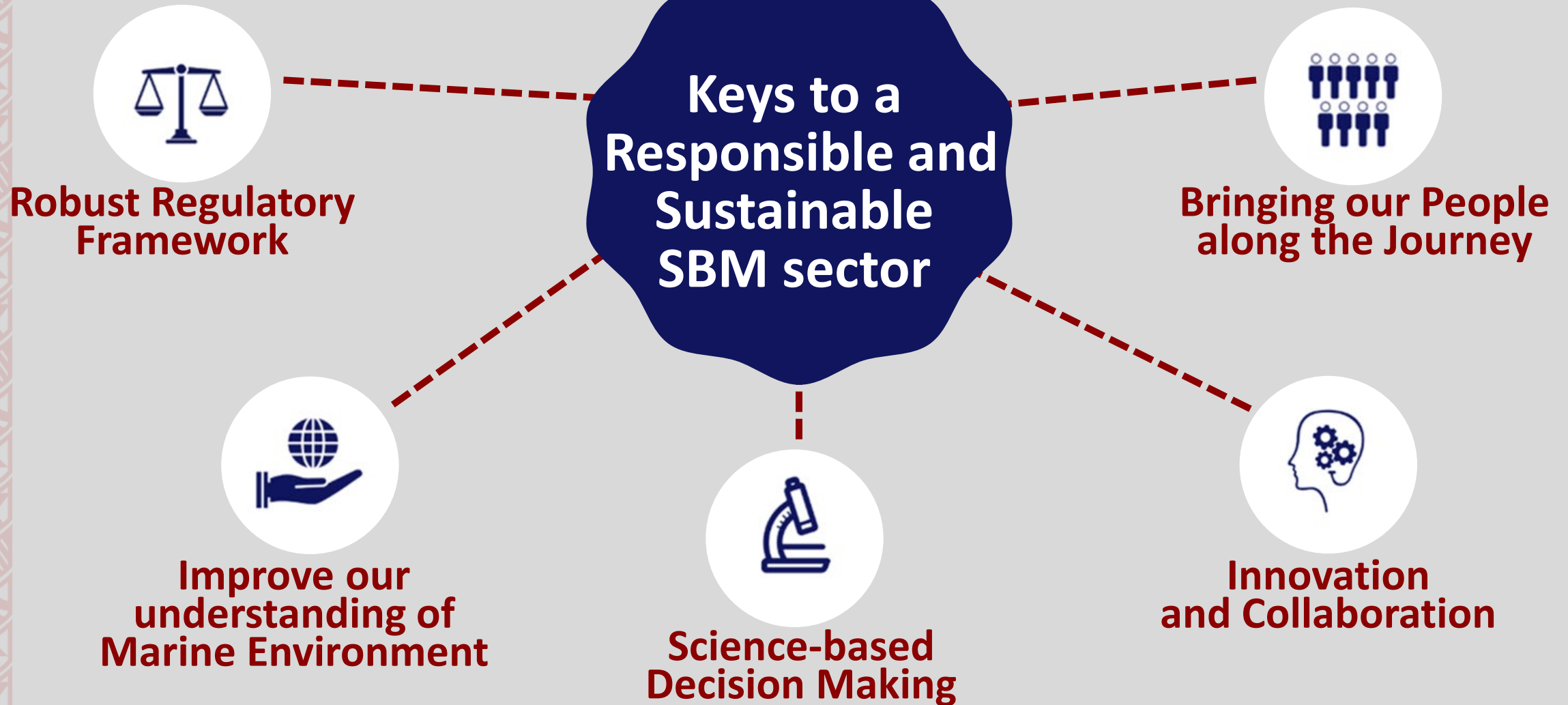


People Empowerment

New opportunities for our Cook Islands people: jobs (govt, industry, research), scholarships, training. Use of local goods and services



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The Cook Islands remains committed to responsibly and sustainably developing our seabed minerals sector in line with the precautionary approach, taking a science-based approach to decision making, and having in place a robust regulatory framework.

Three Pillars of Society - Nga Kuru Pou Toru

SBM sector developed in partnership with the 3 pillars. SBM Advisory Committee –includes the 3 pillars and our various sectors of society (e.g youth, academic)



Aronga mana o te Enea Traditional Leaders

Are Ariki (Chiefs), Koutu Nui (sub-chiefs) and Aronga Mana are traditional Cook Island leadership bodies



Aronga mana o te Evangeria Religious Leaders

Religious Advisory Council advise on key issues affecting the social, economic, and cultural development affairs of the people of the Cook Islands



Aronga mana o te Ture Government

National and island governments, ministries and agencies

Bringing our people along the journey – no one left behind

Cook Islands people are our number one stakeholder – consultations on all inhabited islands, and now meeting with Diaspora





Setting the scene

What are seabed minerals? Why is there interest? Who are the stakeholders involved? What are the key issues?

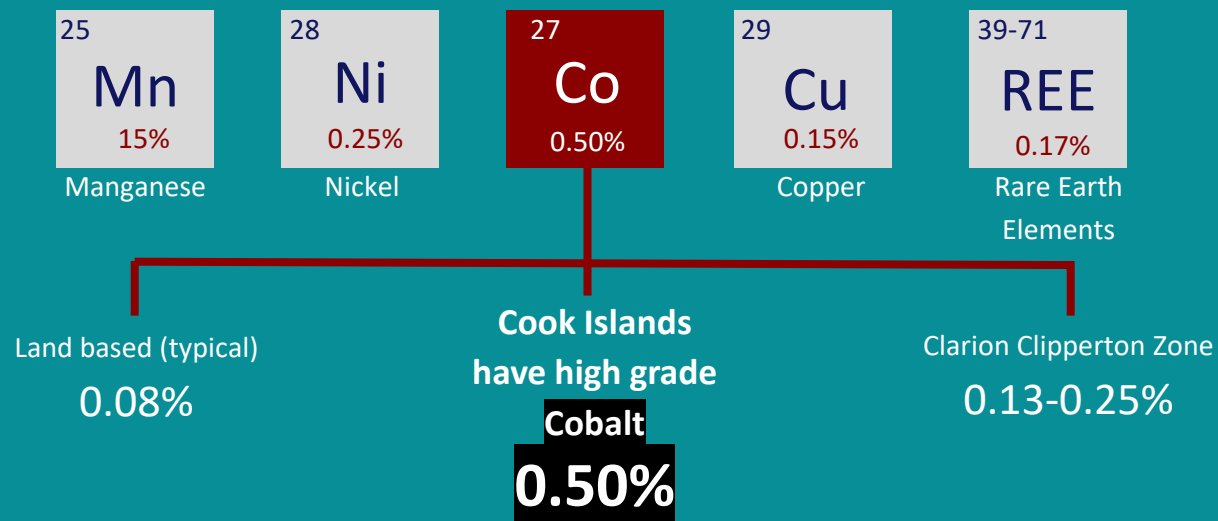


Cook Islands Nodules

Estimated total
nodules
**6.7 billion tonnes
(wet)**

Includes >300
Mt
@ 26.7 kg/m²

Contains: **cobalt**, iron, nickel,
copper, manganese, REEs



Abundant nodules on the seabed in the 16-
Area
source: Japan International Cooperation Agency
1986



Minerals used in Everyday Life

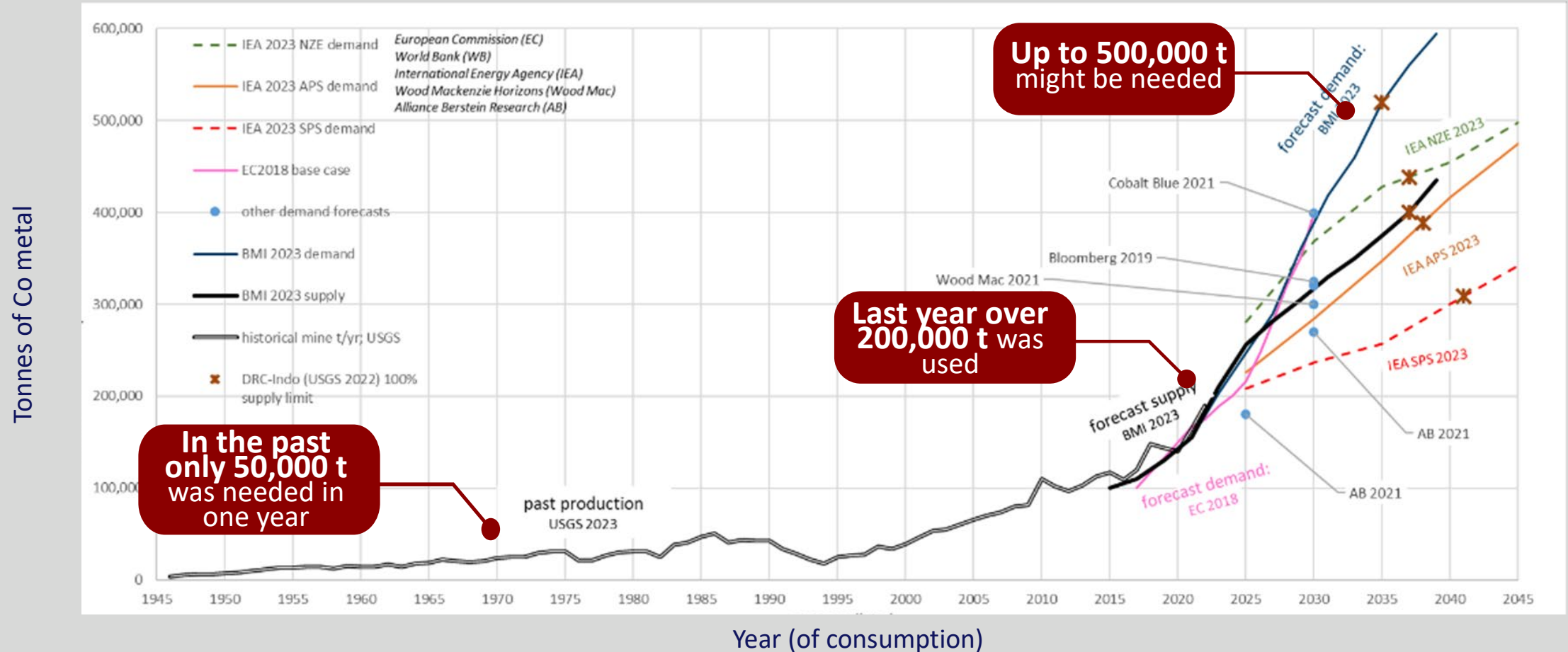
Critical minerals are used in **smart phones**,
and green technologies such as **solar panels**,
batteries, and **electric cars**.

Cobalt is a critical part of battery cathodes

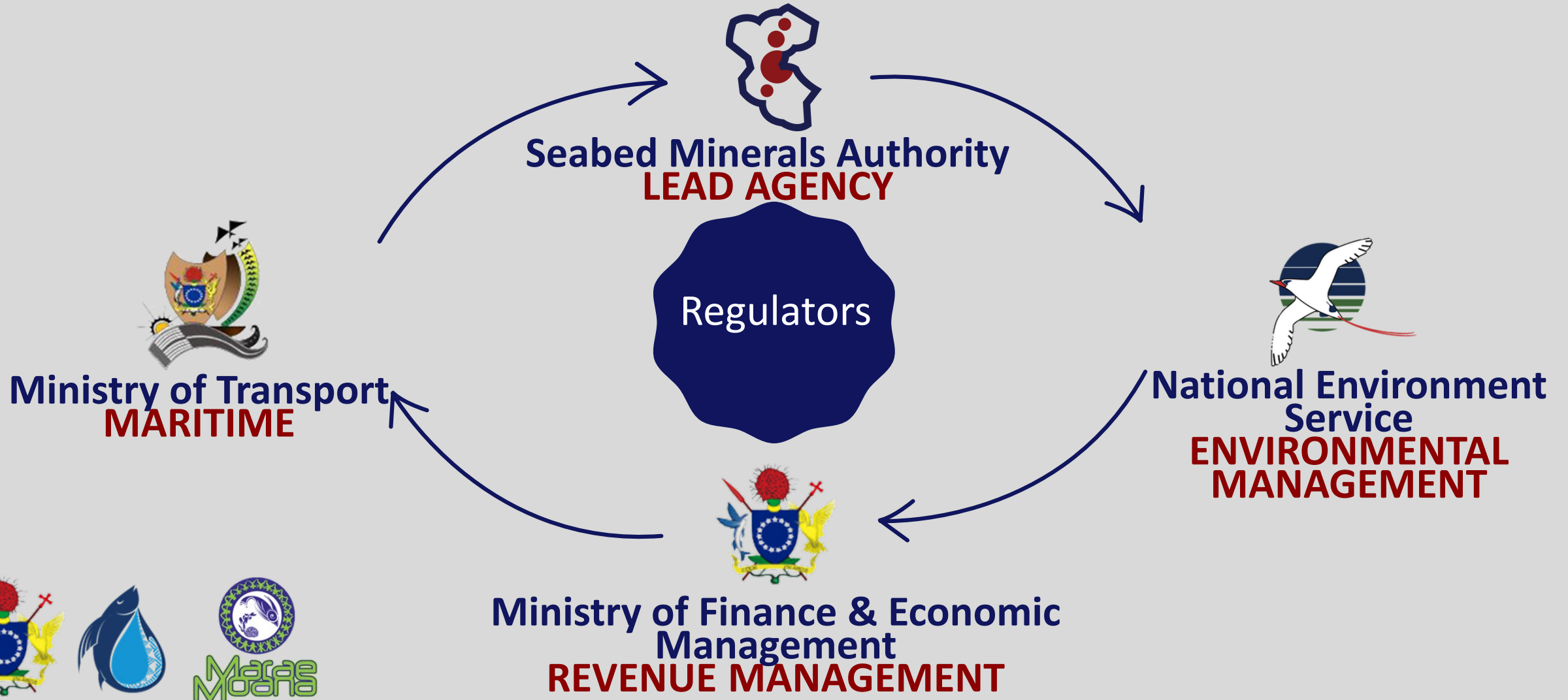


Independent experts agree that more cobalt than ever will be needed

After accounting for recycling, substitution, etc



Government agencies involved in SBM sector



Other stakeholders involved in Cook Islands SBM sector

COMMUNITY LEADERS

SBM Advisory Committee



PUBLIC

Cook Islands people



TECHNICAL EXPERTS

SBM Licensing Panel



CIVIL SOCIETIES

Environmental, Social, Cultural NGOs



INDUSTRY

Exploration Companies

Key Issues Raised By Our People

- **Governance**
 - Will decisions be robust, fair, transparent?
 - How do you prevent risk of corruption?
 - If we go ahead, how do we ensure the Cook Islands gets a fair return?
 - If we go ahead, how do we ensure the revenue received is well managed
- **Social**
 - How will we protect our Cook Islands way of life? Our customs, culture and values
 - How do we ensure that Cook Islanders benefit?
- **Environment**
 - How do we ensure we protect our Marae Moana?

Feedback and input received incorporated into planning, policies, decision-making and development of Cook Islands SBM sector.





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Robust Regulatory Framework

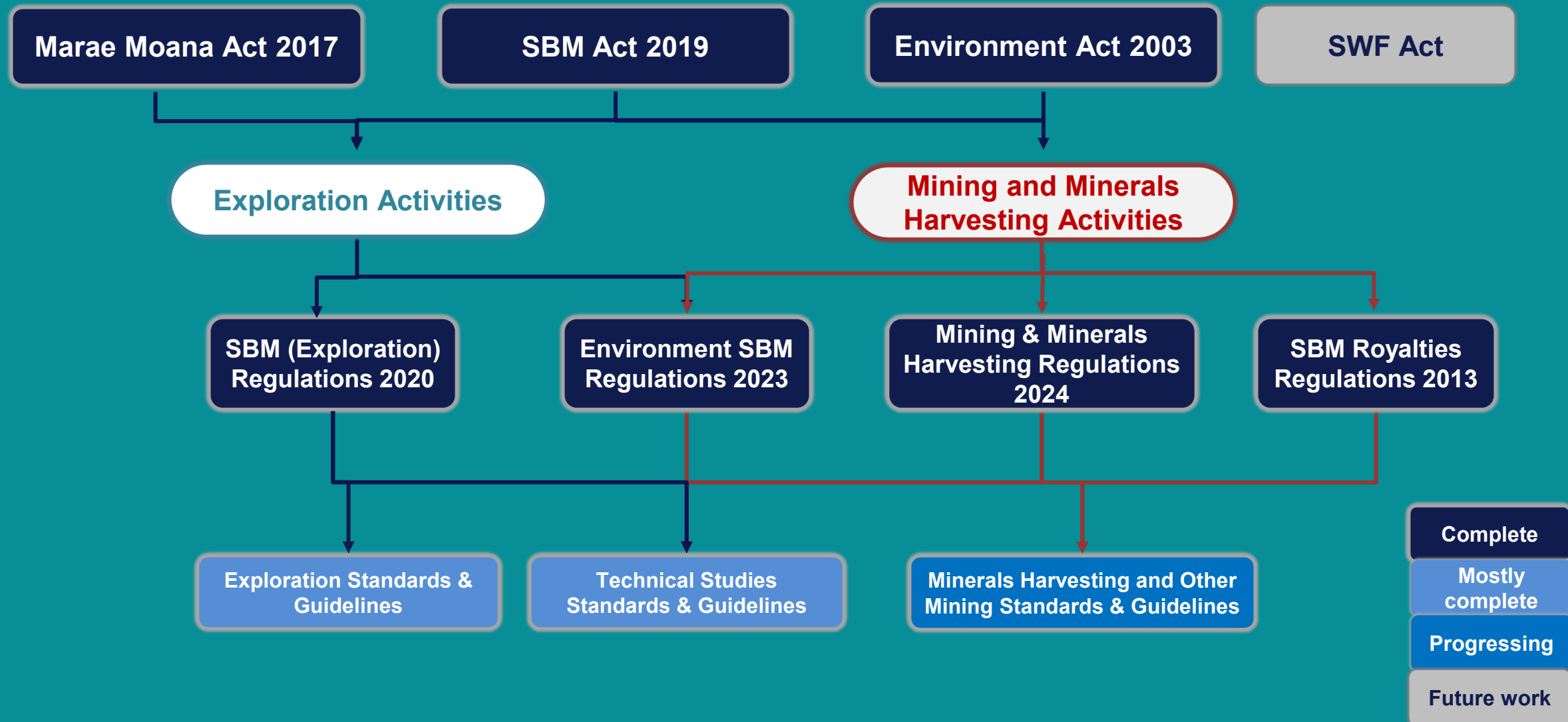
Putting in place strong laws and processes for robust decision-making



Cook Islands SBM Regulatory Framework

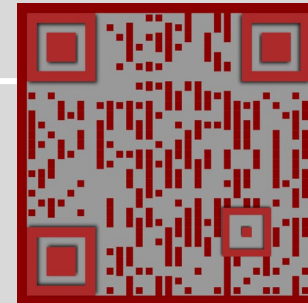
Decades spent putting in place Acts and Regulations to ensure SBM activities are well regulated and managed

Acts
Regulations
Standards & Guidelines



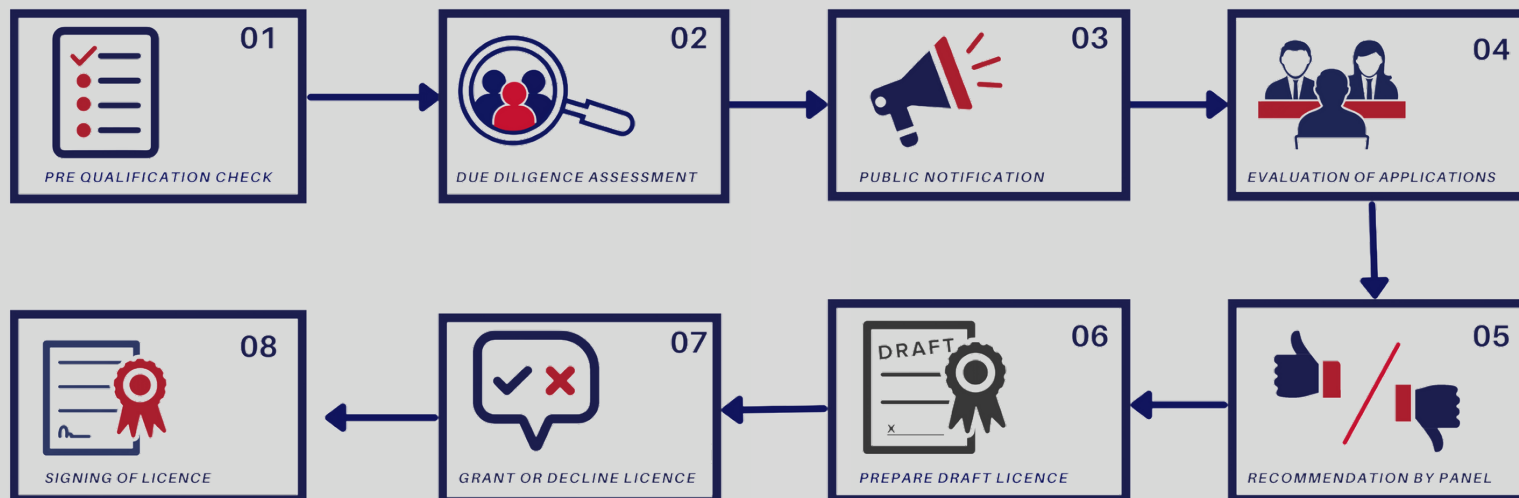
Licence decision-making

Robust and transparent decision-making process. Checks and balances in place.



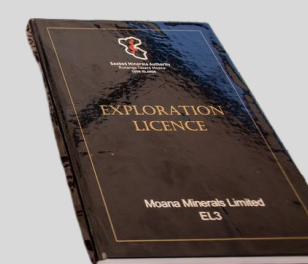
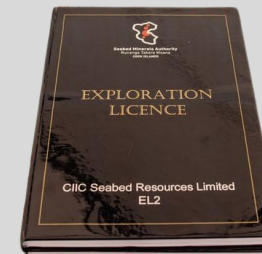
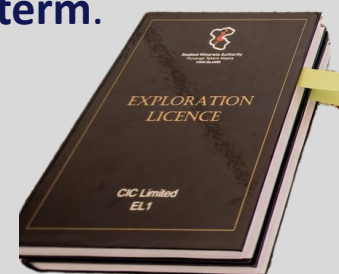
Different bodies with decision-making powers:

- **SBMA** – Due diligence, **Licensing Panel** – evaluations, **Advisory Committee** – community input, **Minister/Cabinet** – decision to grant or not.
- SBMA must approve due diligence and Licensing Panel must recommend to approve, otherwise the Minister / Cabinet has no power to grant.



2020-2021 Exploration Licence process

- **16-month process. 4 applications. 3 licences issued February 2022. 5-year term.**
- Contracted Australian due diligence firm to assist SBMA
- Public comment period
- Independent experts evaluated and recommended applications –
- Exploration Licences publicly available on SBMA website



Improving our understanding of our Marine Environment

Exploration Research will enable the gathering of more information and data to better understand our Marae Moana

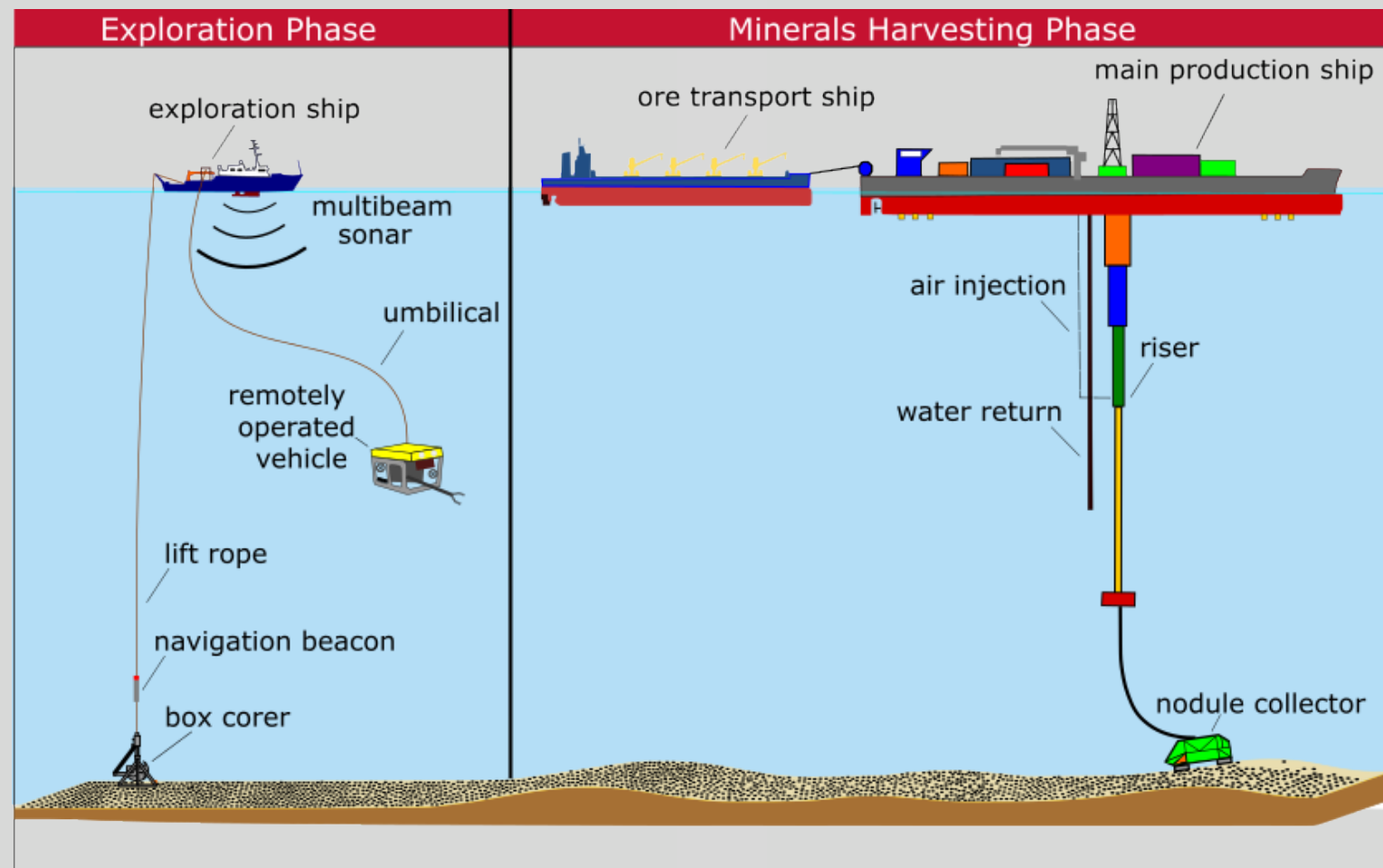


SBM Activities

- Exploration phase for next few years
- Collection of environmental data is key
- Will help inform our future decision on whether we can move to next phase

Until such time:

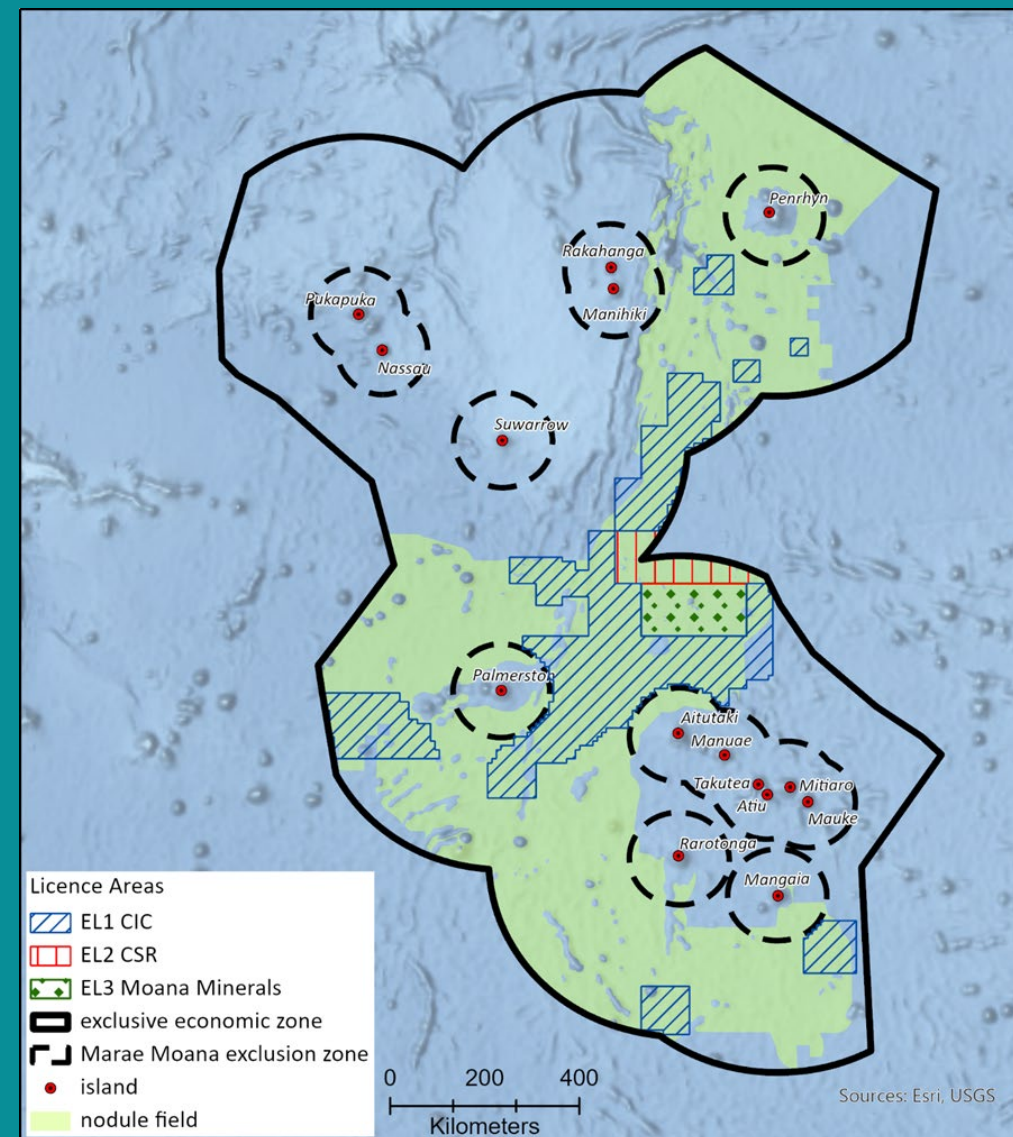
- **Government is only allowing Exploration activities**
- **No Minerals Harvesting (or Mining) activities are allowed**
- **Continue with ongoing exploration scientific research**



Cook Islands Exploration Programme

Improving our understanding of the marine environment and making science-based decisions

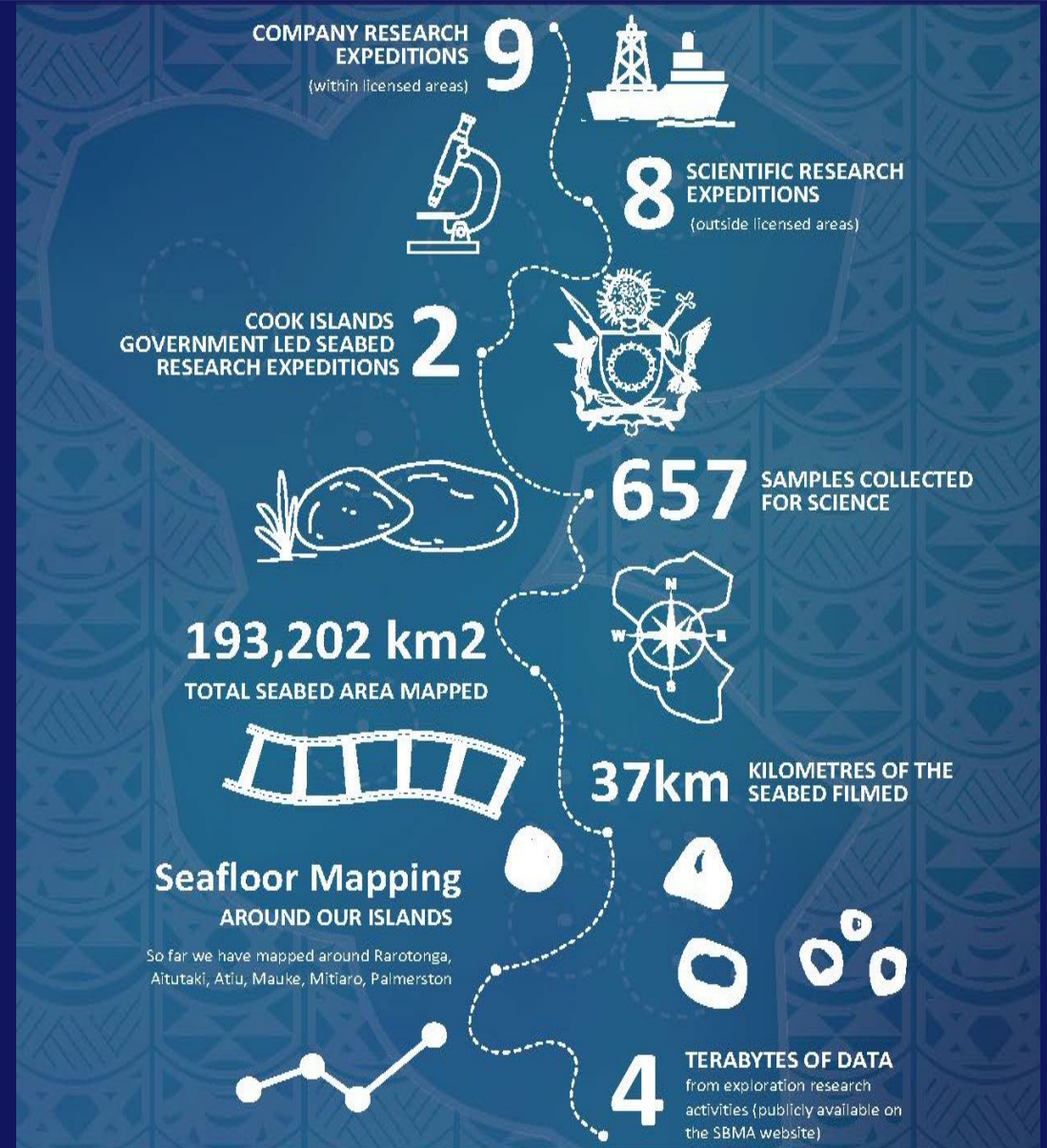
Cook Islands waters, land and SBM resource	Exclusive Economic Zone (EEZ) approximately ~ 2 million km² . 15 islands 237 km² . We are 99.9% ocean and 0.01% land. SBM nodule fields span ~900,000 km²
Marine Protection	~ 100 km protection zones around all 15 islands representing almost 300,000 km² or 15% of EEZ – no commercial fishing or SBM allowed.
Total area licenced	~ 260,000 km² representing ~ 13% of EEZ to be explored.
Exploration in the Cook Islands	~ \$190m committed expenditure during exploration phase. ~70% towards environmental & technical studies.
Benefits to the Cook Islands	~ \$27m projected injection into local economy during exploration phase. Includes jobs, goods & services, training, community programmes



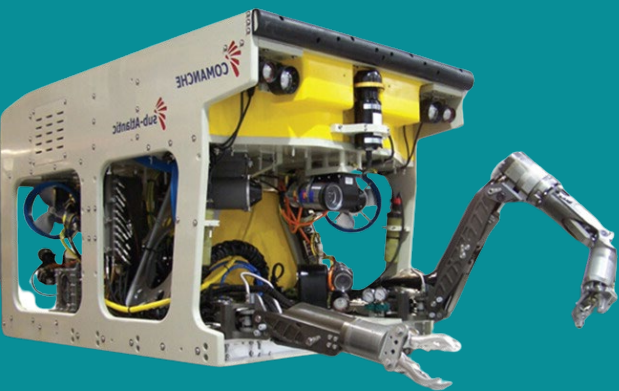
2022-2024

Exploration Activities

- Mapping the seafloor
- Collecting samples
 - Nodules, muds, water, biology
- Collecting other data
 - Biomass, temperature, salinity, turbidity and more



ROV footage of Cook Islands seafloor

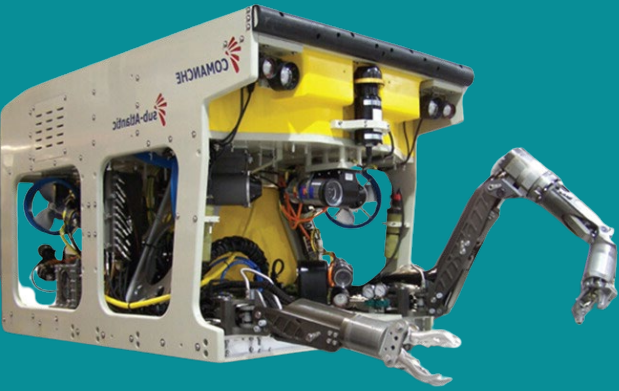






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ROV footage of Cook Islands seafloor



Want to see more?
Visit our YouTube for 8 hours non-stop ROV
footage:

<https://www.youtube.com/watch?v=FSp3l8sUUrl>

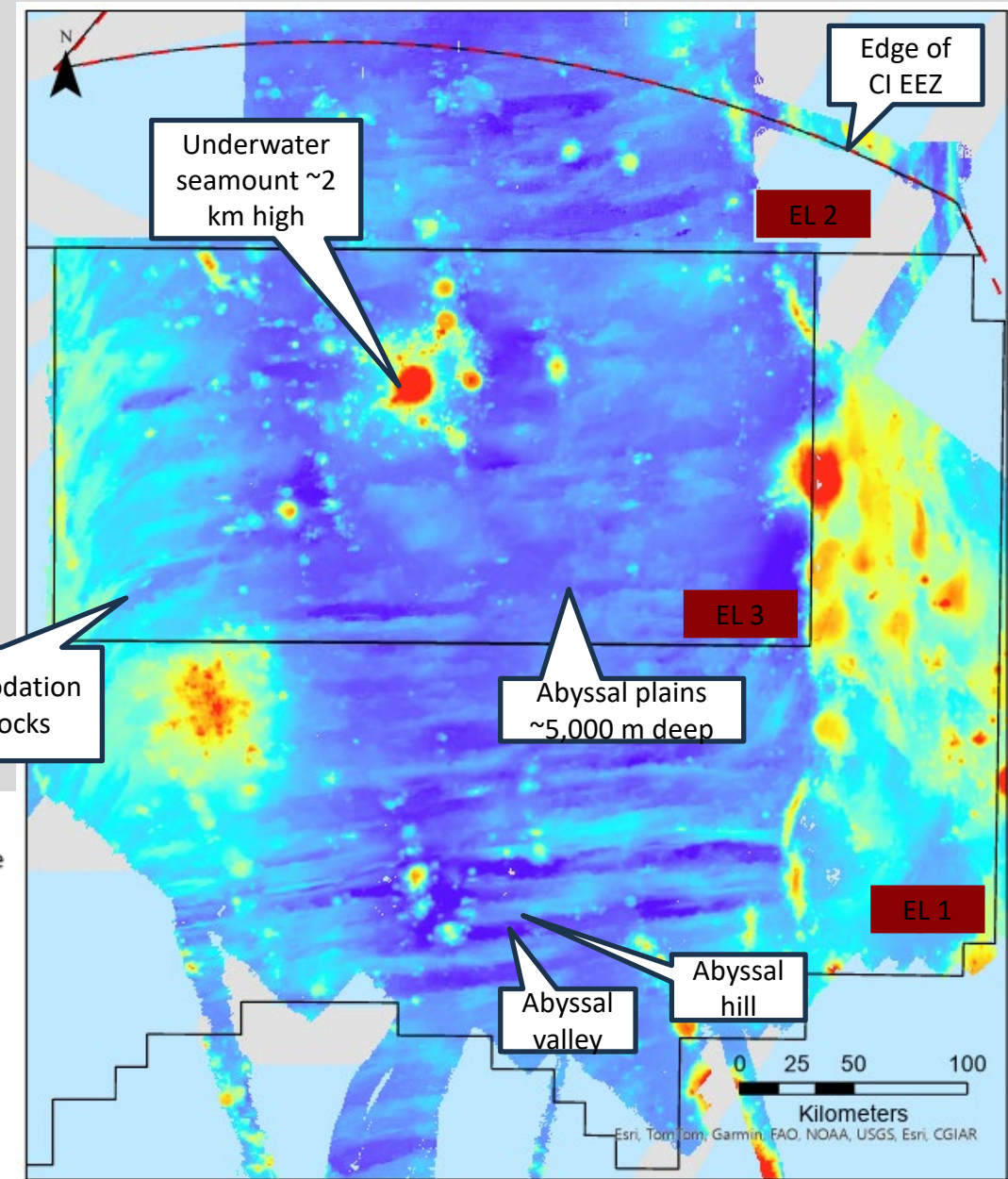
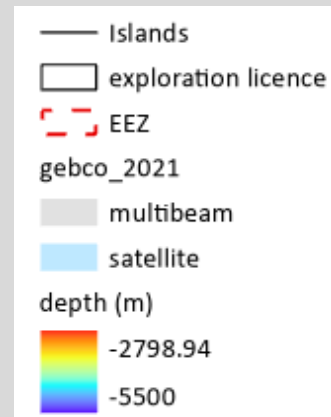
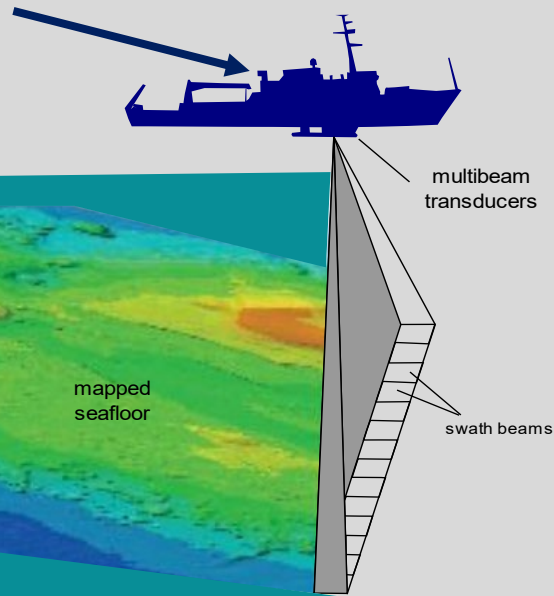


New seabed mapping

Bathymetric data tells us about our seabed.

We can see and map features:

- Geologically it helps us find seabed minerals for resource management
- Environmentally it helps us map habitat-types for conservation management



New sampling

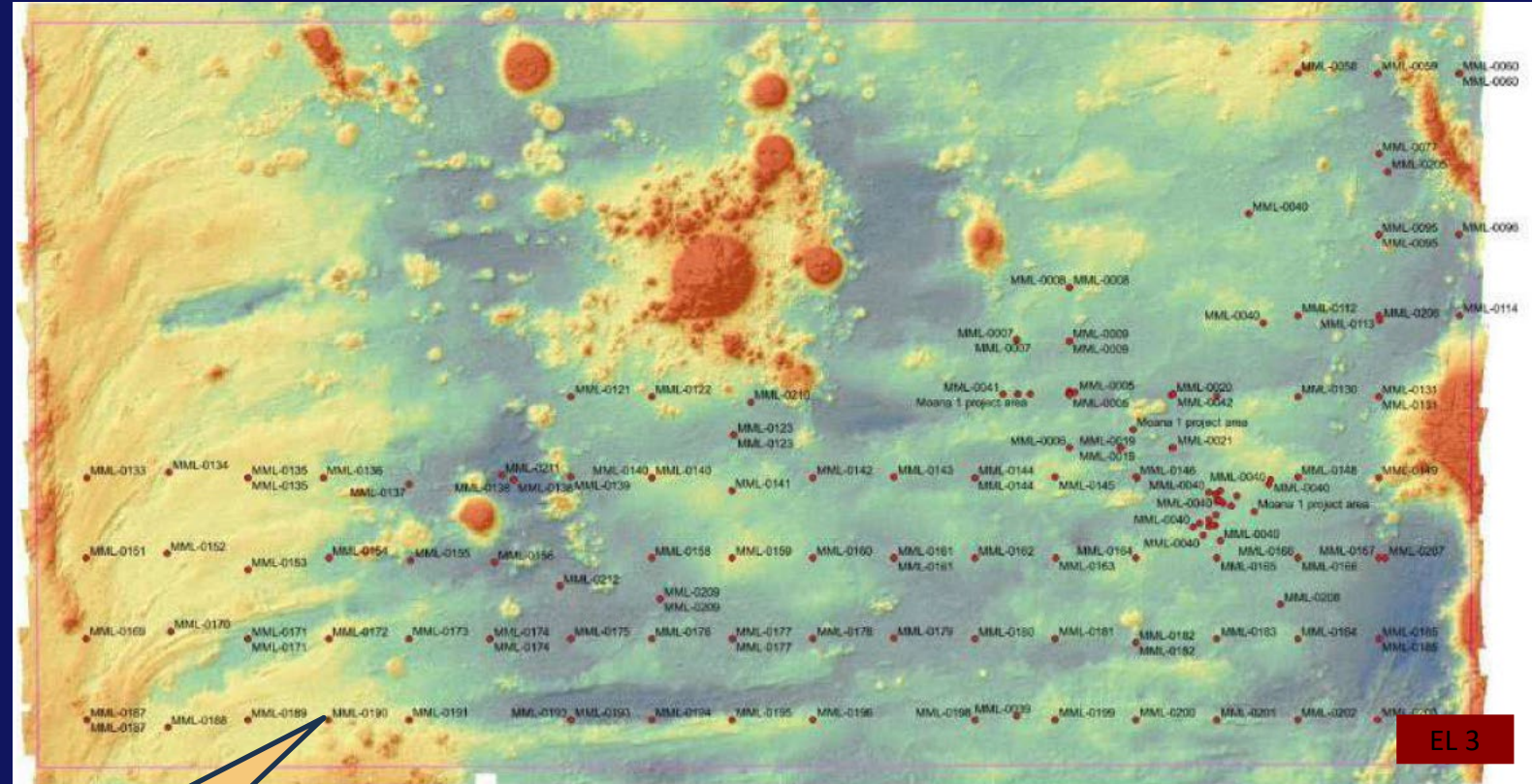
- Mostly free-fall grabs for geology
- Some box-corers for:
 - Geology
 - Biology
 - Geotechnical analysis



free-fall grab



box-corer



New sample
site

Baited Lander short video

Similar megafauna species observed in eastern high seas pocket and north of Aitutaki:

- Various **amphipods**.
- **Rattail fish**, likely *Coryphaenoides armatus/yaquinae*
- **Cusk eel**, likely *Bassozetus nasus*.
- **Shrimp**, possibly *Benthescymidae* gen. *indet.*
- **Swimming scale worm**
Acrocirridae gen. *indet.*



Footage available on Youtube:

<https://www.youtube.com/watch?v=Nyjk4OmH21M>



UNIVERSITY of HAWAI'I[®] at MĀNOA
Ke Kulanui o Hawai'i ma Mānoa





WISE 2024
Baited Camera
-5189 meters



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Science-Based Decision Making

Using scientific information and knowledge to guide our choices



Environmental issues

Government will require an Environmental Impact Assessment to ensure environmental concerns are addressed prior to any possible permit

Fisheries

- require no significant adverse effects between seabed operations and fisheries.
- regional and project scale studies to best understand how this might be possible.

Noise and light

- require that these are also monitored, managed and mitigated
- Information today shows that noise mainly from surface vessel

Ecosystem function

- changes need to be monitored and understood at different scales
- require that biodiversity and functions are preserved within the habitats

Sediment plumes

- require that plumes are monitored, managed and mitigated
- latest scientific tests show that most of the plumes only travel several metres above seafloor and a few hundred metres across before mostly settling – indicates that significant impacts are local.
- more tests needed within the Cook Islands.

'Dark oxygen', seafloor carbon etc

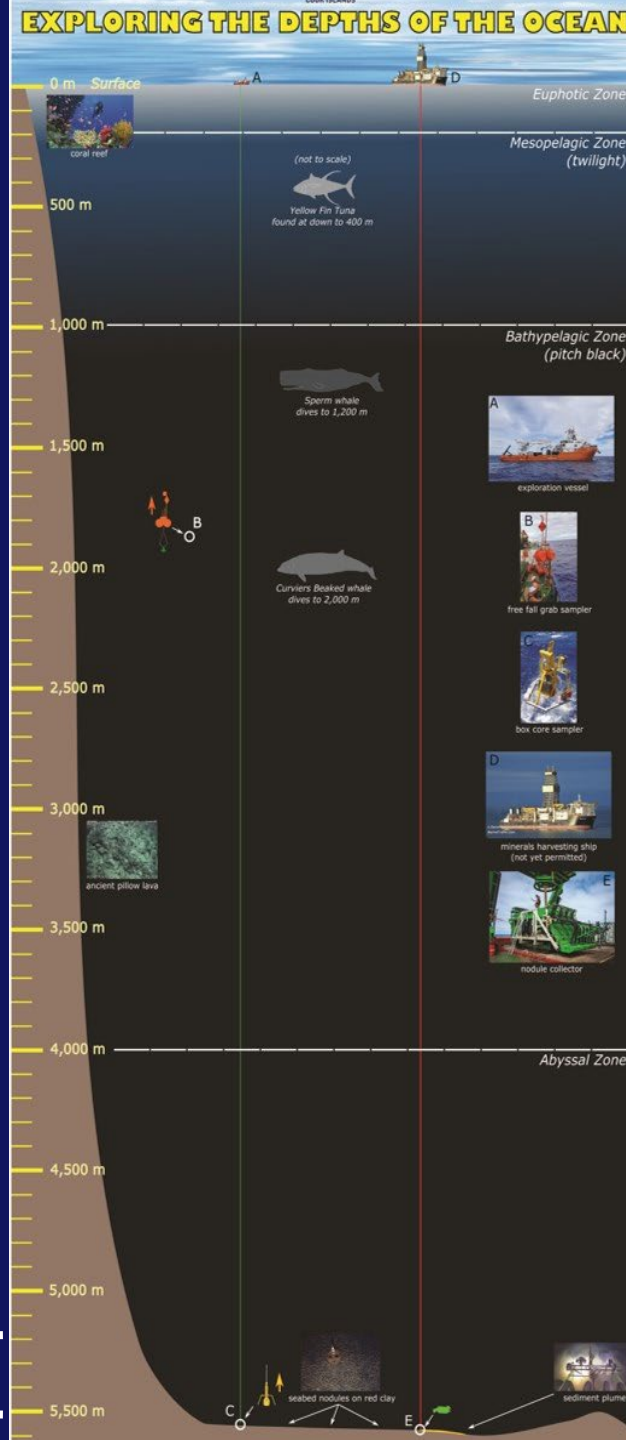
- along with other chemical parameters, oxygen and carbon levels are monitored and managed
- scientific community needs to reconcile the various studies before Government take a position on this

Near surface

Water column

Near seabed

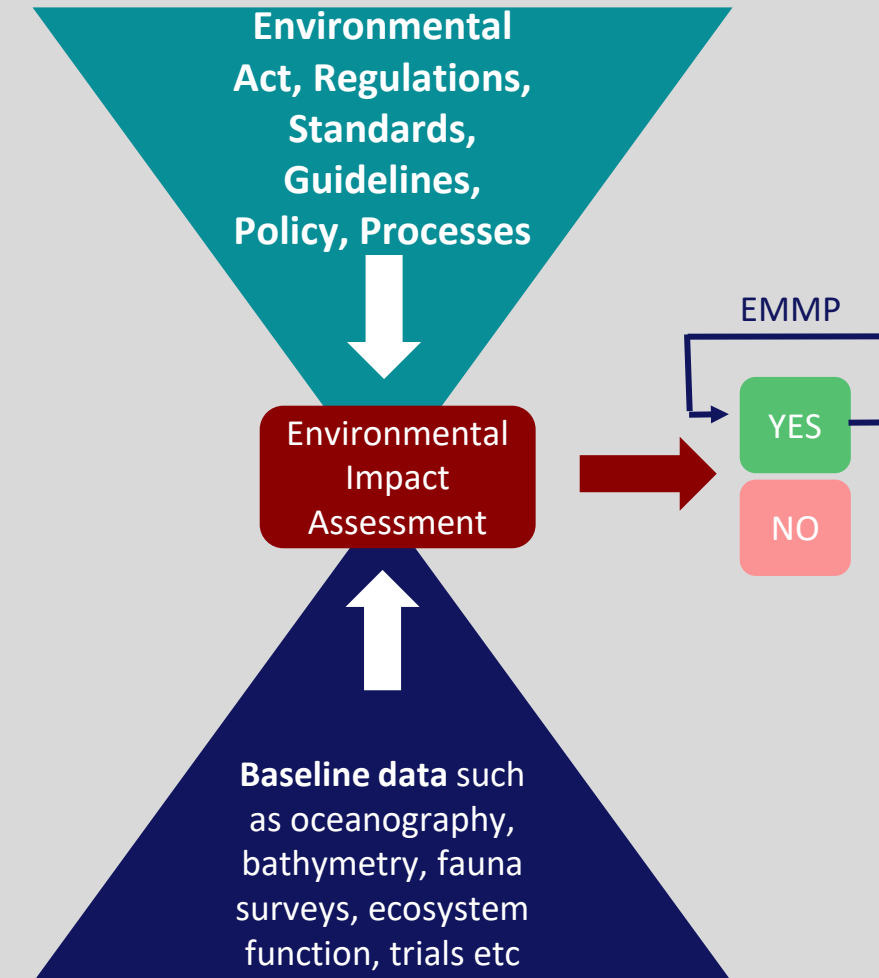
<- ~5,000 m ->



Science-based decision making

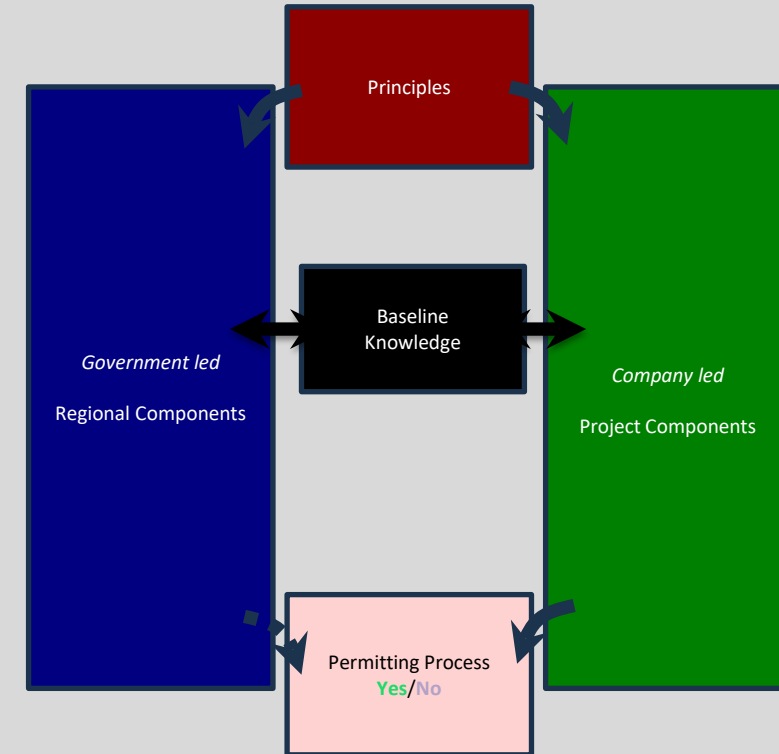
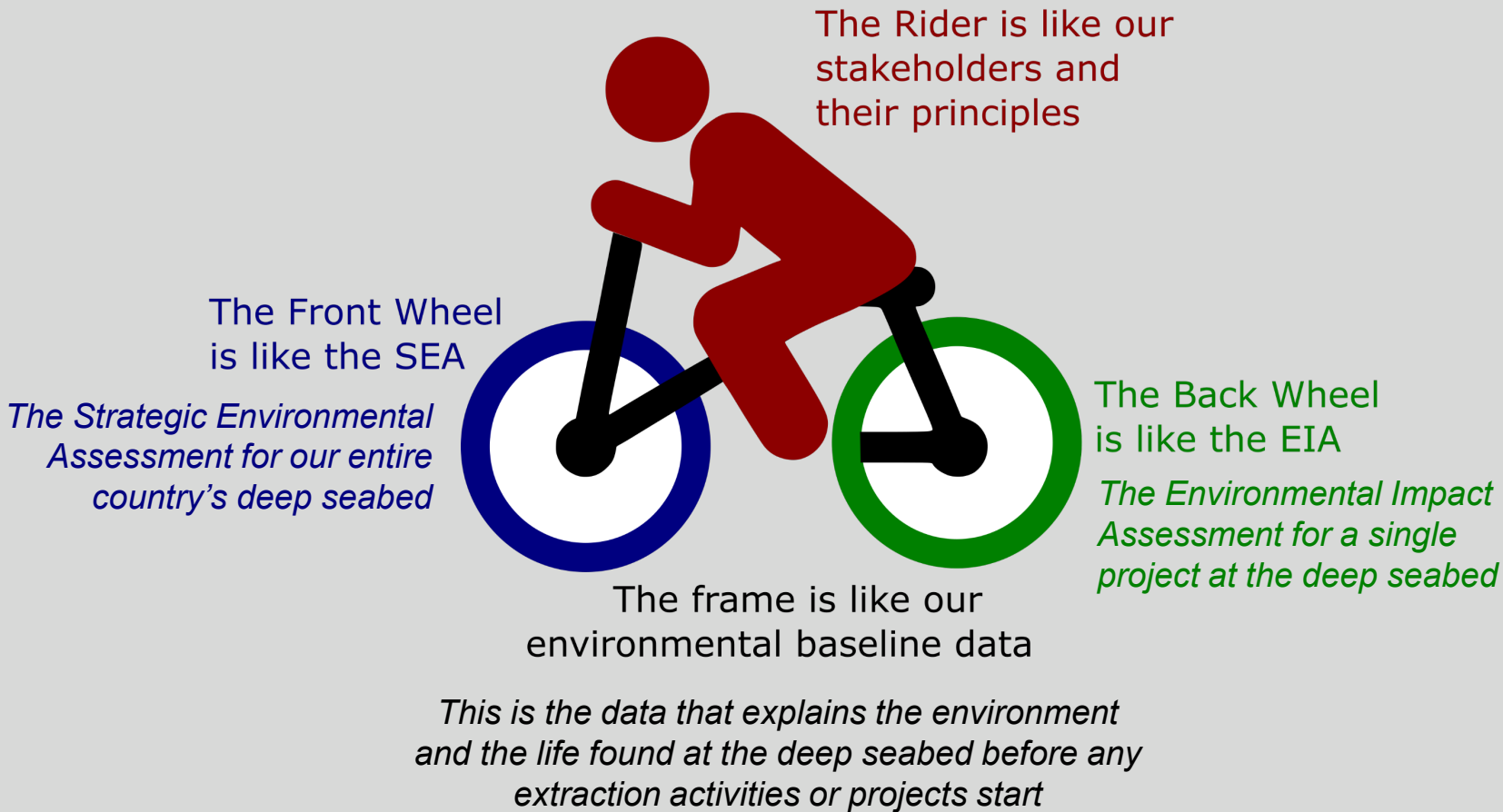
Environmental Impact Assessment needed before any decision to go beyond exploration

- Per law, an **Environment Impact Assessment (EIA)**, before any project permit can be issued by National Environment Service.
- It needs to be comprehensive and independently reviewed (per **scientific method**).
- Per one aspect of the **precautionary approach**, the onus is on licence holders to convince that it is acceptable.
- Until such time:
 - **Government is only allowing Exploration activities**
 - **No Minerals Harvesting (or Mining) activities are allowed**
 - **Continue with ongoing scientific research**



EMMP: Environmental Monitoring and Management Plan (for extraction operations)

The EBMF can be considered to be like a bicycle



Scale of Cook Islands Marae Moana/EEZ and potential harvesting

Important to understand SCALE of our EEZ and potential harvesting area

No decision yet on whether to allow harvesting

Minerals Harvesting Scenario by

- EEZ with/without nodules
- 3 operations
 - Over 1 year
 - Over 30 years

Cook Islands EEZ: $1.96\text{m km}^2 = 4,900$ squares



Area of Cook Islands EEZ **with no** nodules



Area of Cook Islands EEZ **with** nodules = **2,259 squares** including



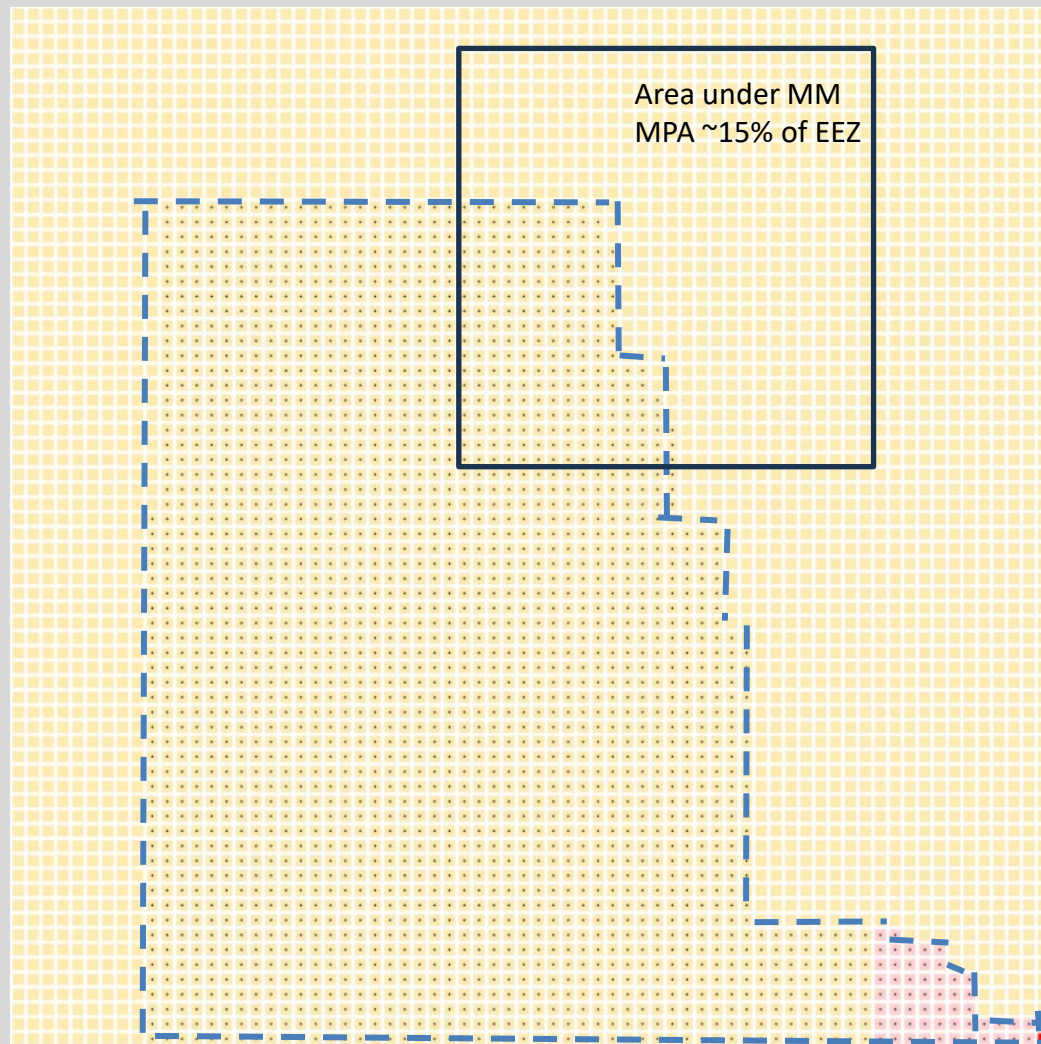
Minerals harvesting over **1 year** / **0.04% of EEZ**



Minerals harvesting over **30 years** **1.2% of EEZ**

Hypothetical operation only

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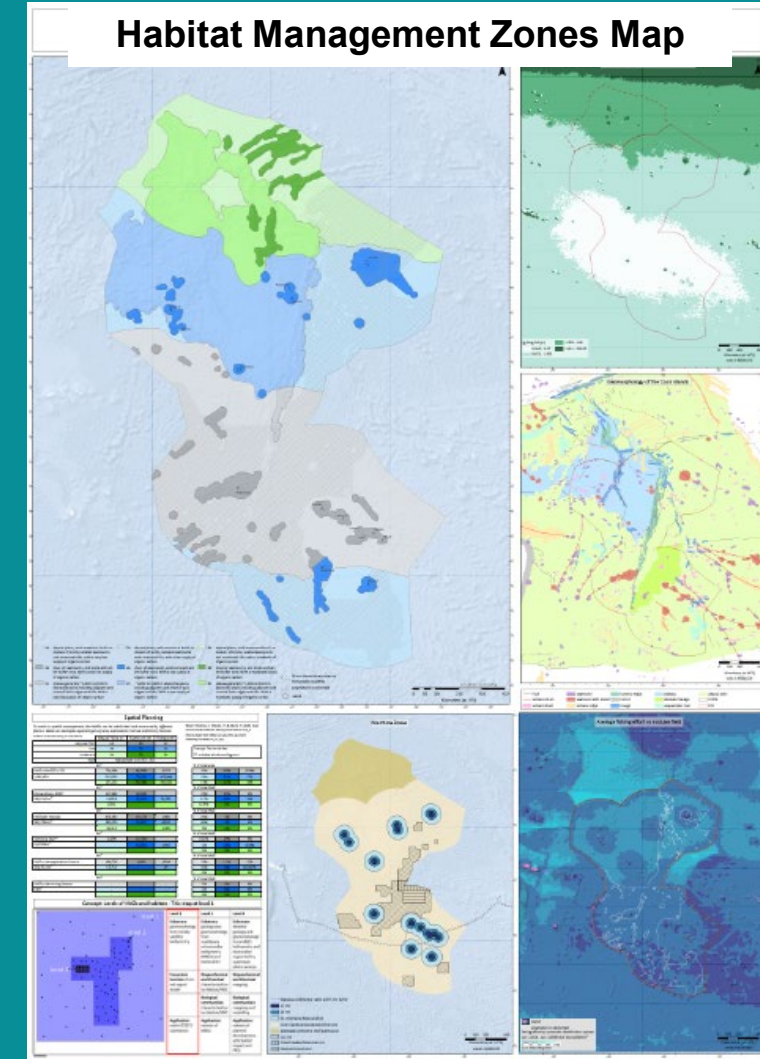
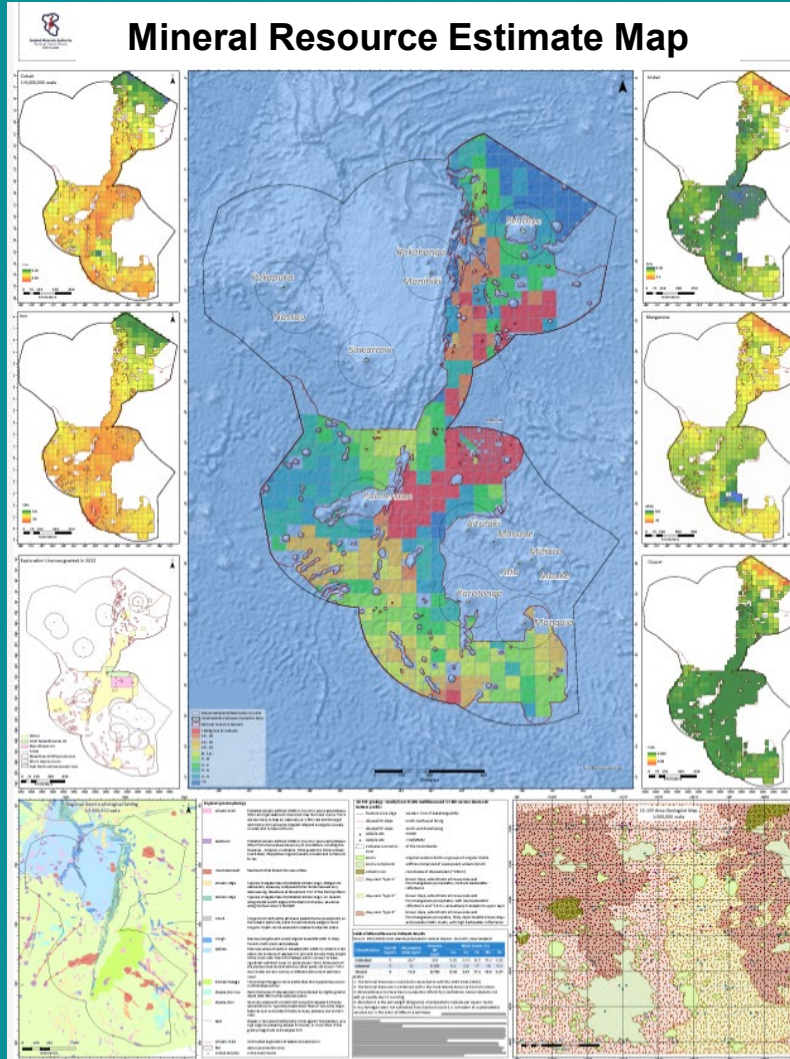
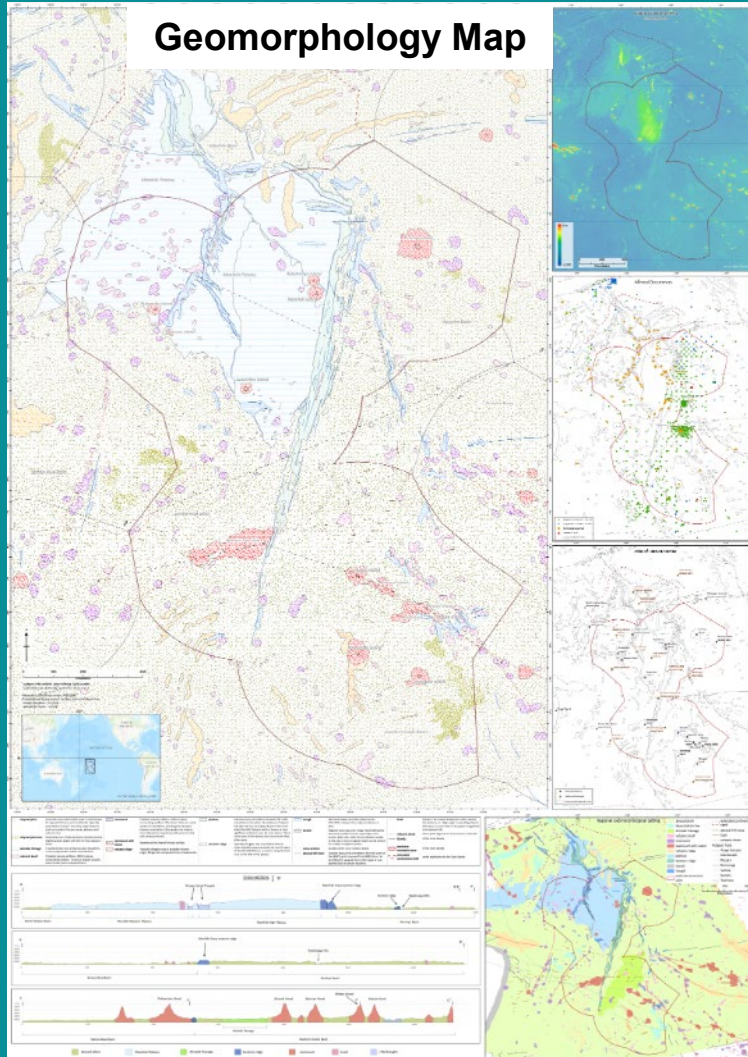


Collaboration and Innovation

Collaboration amongst stakeholders & innovation has led to knowledge creation and many “firsts” for the Cook Islands including first Government led deep seabed expedition and first complete geomorphological map

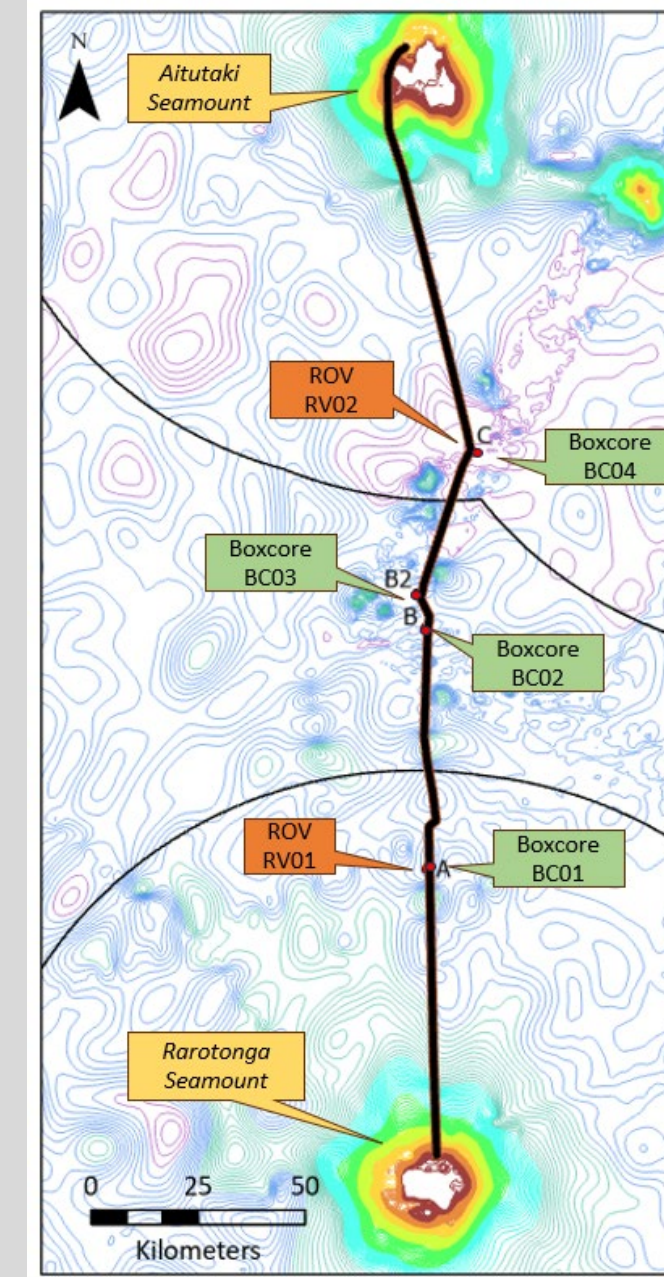


New Regional Maps tell us about our landscape our resources and our marine environment



Aitutaki Rarotonga Transect Expedition 2023

- 2-day expedition being run by SBMA in collaboration with the Natural Museum of History (London, UK) and the National Oceanography Centre (Southampton, UK)
- pilot for locally managed marine science research.
- Leveraging off current SBM exploration operations - keeping the budgeted cost low.
- first to study the seamount slopes and abyssal plain between the two islands



Women in Science Expedition (WISE)

Primary Objectives

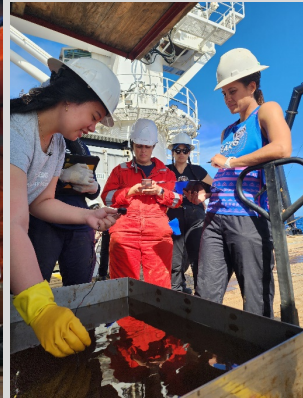
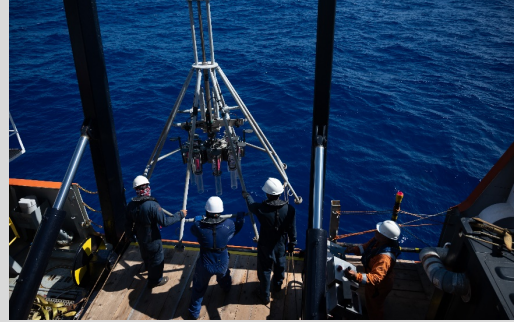
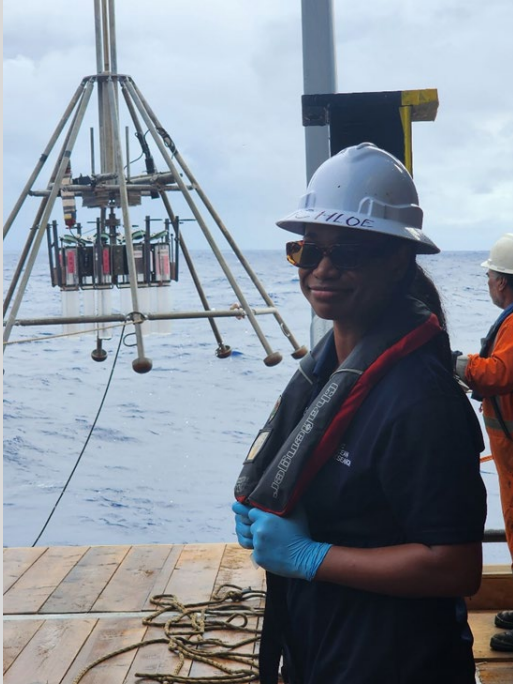
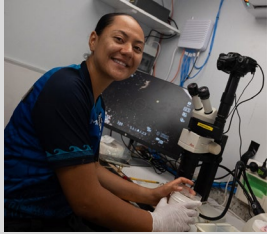
- Capacity building of young and emerging scientists from the Pacific Region
- Collection of seabed samples

The Team

- 14 trainees – 75% female
- 5 advisors
- 12 nationalities
- Rima Browne – Chief Scientist
- Tanga Morris – a lead scientist
- John Parianos – Offshore Manager



WISE in action





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Bringing our People along the Journey

Empowering our people through engagement, capacity development, and new opportunities



Bringing our people along the journey



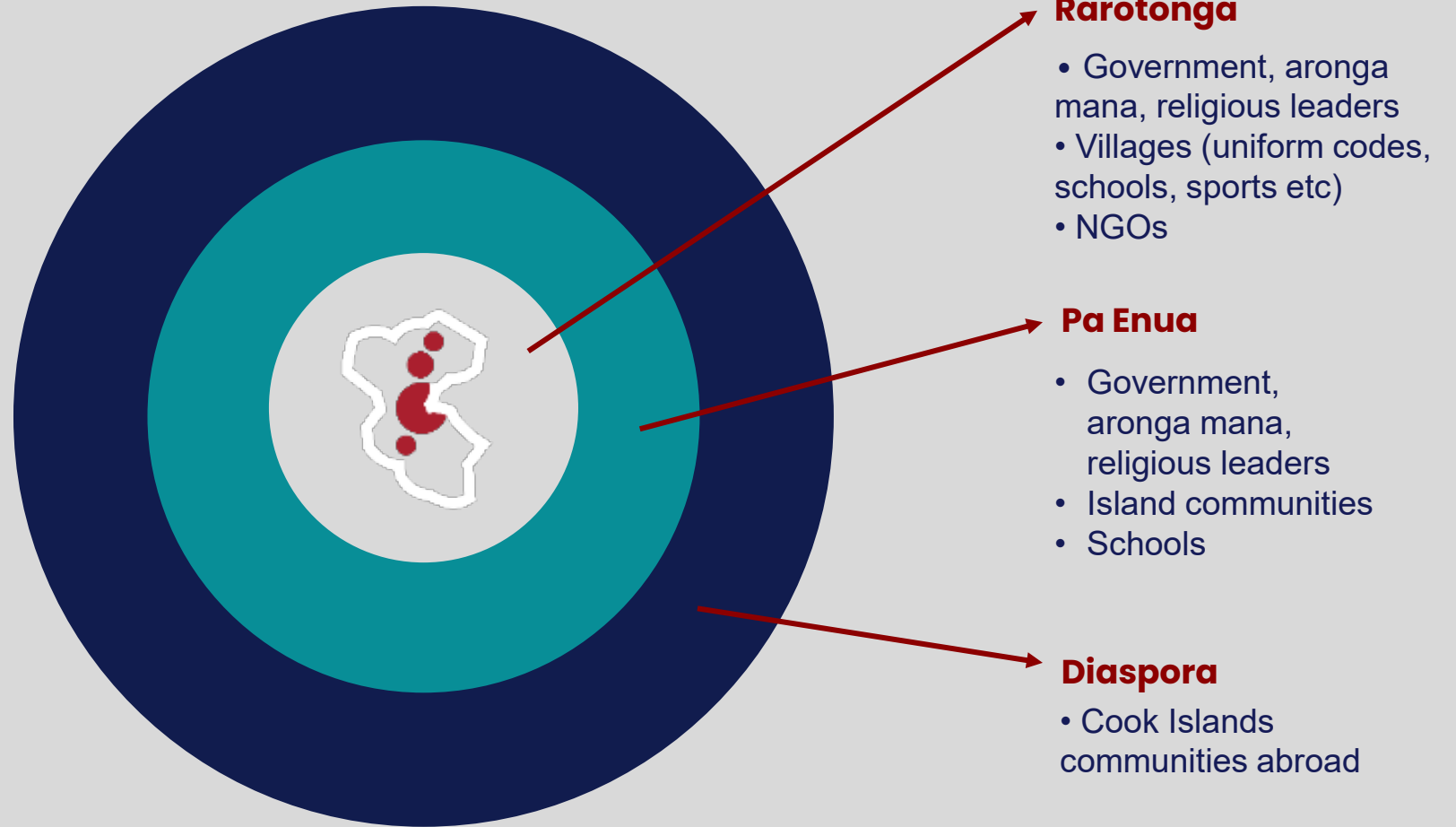
Key stakeholder

Cook Islands people



Objectives

- Raise awareness, inform, educate
- Bring our Cook Islands people along the journey



“Nobody Left Behind”

People empowerment through capacity development

SBM sector has created opportunities for Cook Islanders: jobs, internships, training, at sea expeditions, scholarships and more



Current and upcoming opportunities



SBMA jobs

Licensing & Compliance Officer
Inspector
KNO Officer
Partnerships Officer

Metallurgical Engineers
Accountant
Logistics Manager
Social Media Officer
Community Liaison Officer

Private sector jobs

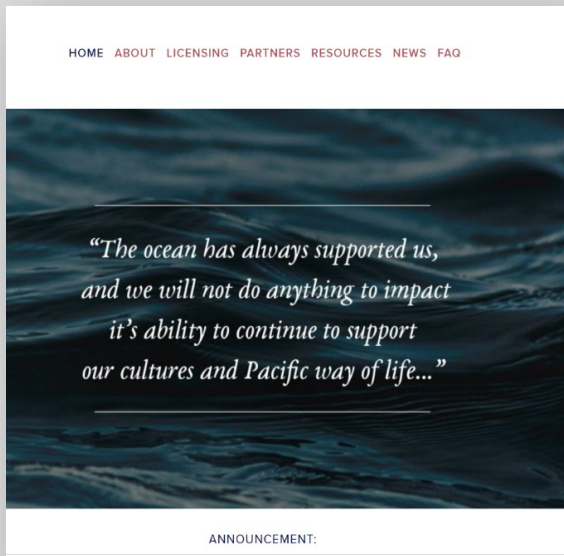
Data Technician
Geologist
Environmental Scientist
Ship crew and Officers
Marine Engineers

Training

Internships
At sea training
Scholarships for Bachelors &
Masters studies

Want to know more?

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Resources



[www.sbma.gov.ck/
publications](http://www.sbma.gov.ck/publications)



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Perspectives from our Cook Islands Pillars...





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George Williamson
SBM Advisory Committee Member



Kaumaiti Tou Ariki
President of the House of Ariki



Bishop Tutai Pere
Chair of the SBM Advisory Committee

MEITAKI MA'ATA



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sbma@cookislands.gov.ck



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Question & Answer

<https://www.youtube.com/watch?v=FSp3l8sUUrl>



Please complete our survey by scanning the QR codes



English Survey



Cook Islands Maori Survey



Programme

1. Welcome Prime Minister and Delegation
2. Pure Akamata
3. Introductions by High Commissioner Kairangi Samuela
4. Introductions by Delegation
5. Prime Minister's Opening Address
6. Seabed Minerals updates + Q&A (~2 hours)
7. 60 year Celebration updates + Q&A (~20 mins)
8. Prime Minister Closing Remarks
9. Pure Akamutu

