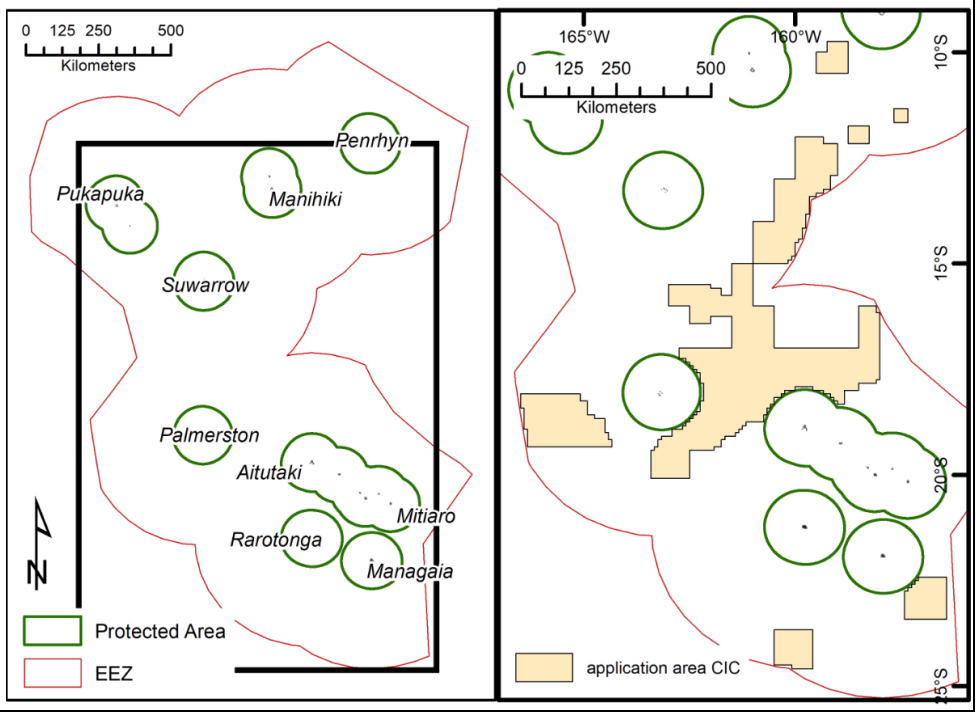
CIC Limited
20/21 Application for a seabed minerals exploration license

Short Public summary version 1

Application Details	
Stage of Activity	Exploration
Name of Applicant	CIC Limited
Parent Company Name	CIC LLC
City and Country of origin	Headquarters Rarotonga, Cook Islands (Consortium Members from Florida, USA and Rotterdam, Netherlands)
Past experience(s)	Applicant CIC Limited, its Consortium, scientists and Technical Advisory Board consist of leading accredited academics and experts in the fields of marine sciences, environmental studies, ocean minerals and deep-ocean exploration who have decades of experience in their respective fields. In the case of Consortium members, Boskalis and Odyssey, these companies have successfully executed some of the world's most complex deep-ocean exploration and ocean mineral research projects, some of which are outlined in the CIC 2020 Tender Application for an Exploration Licence.
Area of application	
Summary of area and number of blocks applied for	211,545 km^2 2,592 blocks (within 10 contiguous areas)
Licence term applied for	5 years
Map of exploration area	

1. Exploration Work Plan

CIC Limited's (CIC) Exploration Programme will provide research about the polymetallic nodule mineral resources and the marine environment within the Cook Islands' Exclusive Economic Zone (EEZ). This information will allow us to produce a resource statement, an Environmental Impact Assessment (EIA), and an economic feasibility study. Where appropriate we will use International Seabed Authority (ISA) templates for baseline studies and EIA development.

The Goals of the Exploration Programme

- Survey and Map the Licence Area: This will capture a starting "picture" of the area.
- Environmental Baseline Studies: This research will teach us about the plants and animals that live in both the sea and the seafloor in the EEZ.
- Acquisition of Representative Samples: Recovering samples of nodules and the surrounding sediment will help us understand their mineral components, the sea life near them, and how metals could be produced from them in an environmentally sound and sustainable manner.
- Environmental Monitoring and Management: The research will help determine the best plans for managing and monitoring nodule harvesting programs if they are approved by the Cook Islands.
- Sharing the Knowledge: The information we collect will be shared with Cook Islanders and other stakeholders to enhance understanding of their nodule resource and their surrounding deep-sea environment.

During the Five-year Exploration Licence Period

- We will conduct many research cruises, starting 90 to 120 days after a licence is granted.
- CIC will use two research ships that will accommodate technical and scientific crews to conduct many different types of research using the world's most advanced deep-ocean technology.
- Cook Islands' crew, trainees, and government observers will be on CIC's ships.
- A 70m - 80m ship will undertake five cruises lasting 30 to 45 days during the licence period.
- A 40m ship will be used more frequently and will likely be based in the Cook Islands.

Shipboard Research Tools

A. Ship-Mounted Multibeam Sonar for recording depth, bottom features, and structure.

B. Remotely Operated Vehicle (ROV) to sample and photograph nodules, sediment, and sea life.

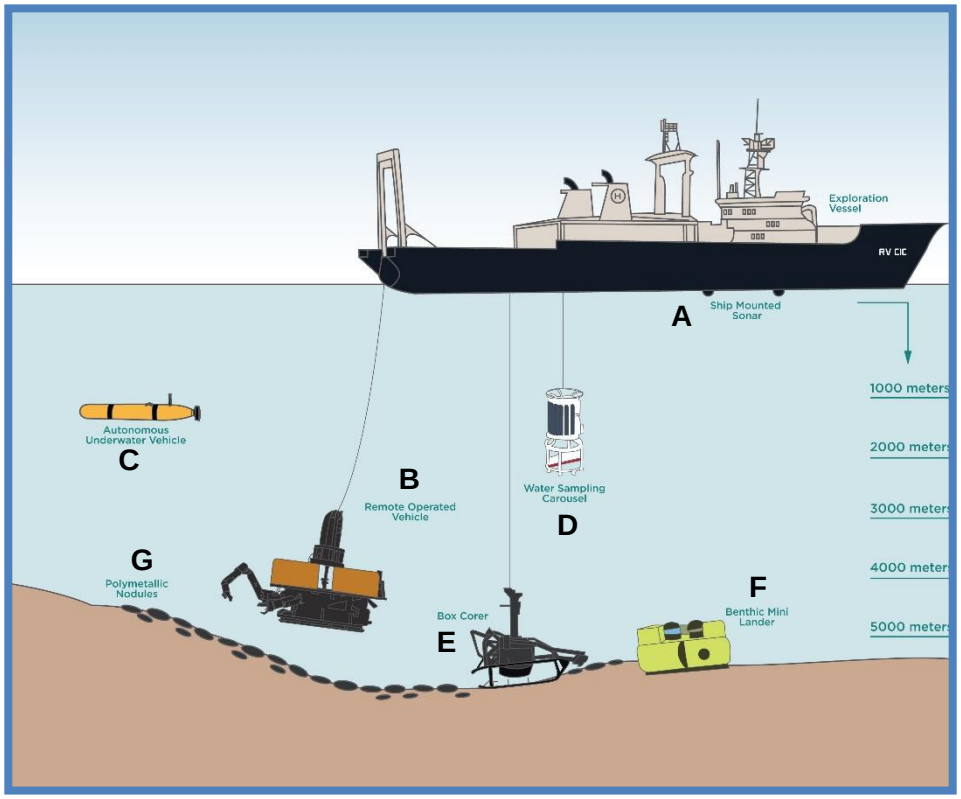
C. Autonomous Underwater Vehicle (AUV) for sonar imaging, sampling, and photos of seabed.

D. Water Sampling Carousel for water column chemistry and environmental sampling.

E. Box Corer to collect samples of nodules for resource and environmental assessment.

F. Benthic Mini Lander to sample sediment and nodules.

G. Polymetallic Nodules lying unattached on the ocean floor.



2. Environmental Management Programme

The Main Objectives of the Environmental Research at This Stage

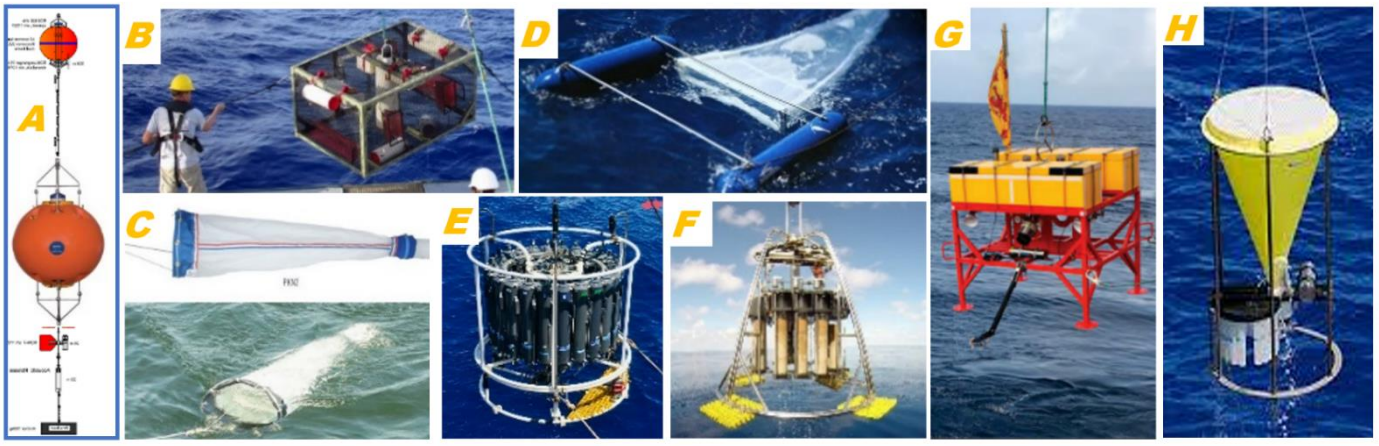
1. Establish the environmental baseline of the application area by conducting research to:
    a. Describe and record the populations of plants and animals in nodule-rich areas.
    b. Understand the relationships between the different groups of seabed animals.
    c. Suggest protected seabed areas for permanent preservation of species and habitat.
2. Understand and document potential impacts of exploration and other activities, including:
    a. Observe bird and marine mammal activities in the vicinity of the research ship.
    b. Modify any activity that appears to cause impacts on marine life.

Our Commitments to Environmental Responsibility Include

1. Collaborating with government and local stakeholders in environmental management planning.
2. Adhering to the nine principles of ecologic sustainability in the Marae Moana Act 2017.
3. Oversight by the Environmental Chief Scientist, a Qualified Person (QP)/Competent Person (CP) for resource assessment, and the Technical Advisory Board for all activities.
4. Following the critical environmental points that Gerald McCormack published in his book *Cook Islands Seabed Minerals: A Precautionary Approach to Mining*.

Independent Scientists from Around the World Will Collaborate with Our Scientific Team

CIC is working with the University of South Florida College of Marine Science (USA), the University of North Carolina – Chapel Hill (USA), Eckerd College (USA), The University of Hawai'i (Manoa), Kochi University (Japan), The International Marine Minerals Society (IMMS), The United States Geological Survey, The Natural History Museum of London (UK), and The National Oceanography Centre at the University of Southampton (UK) with more institutions expected to join the team in the future. The project's scientists will be encouraged to publish their data through a peer-review process to make it available to both the scientific community and the general public.



Research Technology Used for Environmental Baseline Research and Monitoring

A. EIVA™ Moored ADCP (Acoustic Doppler Current Profiler) and other instrumentation.
B. Baited Fish Trap for capturing specimens to evaluate local fish population diversity.
C. Plankton Net for capturing plankton and other tiny sea life in the water column.
D. Surface plankton net for capturing plankton and other tiny sea life on the ocean surface.
E. Water Sampling Carousel with CTD (Conductivity, Temperature, Depth) to test water chemistry.
F. OSIL™ Mega Corer with added pads for stabilization to gather sediment samples.
G. Baited camera for documenting fish and invertebrates to evaluate population diversity.
H. Time Lapse sediment trap to measure sedimentary and plume deposition.

3. Benefits to the Cook Islands

The at-sea exploration programme and onshore support activities will lead to opportunities for Cook Islanders and will provide direct benefits to local businesses to enhance the Cook Islands' economy.

Training/Education Opportunities

- Educational and training programs will provide an opportunity for Cook Islanders to gain experience in the skills needed for roles in the seabed minerals and maritime sectors.
- Cook Islanders who have scientific or exploration experience, who qualify as trainees, or who have exceptional local knowledge about the Cook Islands' waters and sea life will be encouraged to join the exploration and science teams.
- CIC will provide assistance to Cook Islanders who want to pursue technical certifications and licences, college and/or graduate degrees in applicable fields of marine science and exploration.

Local Businesses/Economy

- Onshore testing and laboratory facilities for sampling analysis are planned to be set up locally.
- Local air/vessel charter services, transportation logistics and port facilities will be used.
- CIC will purchase fuel, food and supplies from local businesses for ship's operations and crew.
- In emergencies, CIC will utilize the nearest islands' facilities and use local support vessels.

Arts & Culture

The CIC team is committed to supporting Arts, Culture and Sports programs in the Cook Islands and has already participated in many projects. The Cook Islands Traditional Arts Trust (CITAT) is fulfilling CIC's pledge to invest in local cultural and educational projects such as:

- Sourcing, transporting, and donating medical equipment for the COVID-19 pandemic in cooperation with *Te Marae Ora*, the Ministry of Health.
- Cooperating with the Ministry of Education's Arts Department for an Arts curriculum in the schools.
- Supporting Autism Cook Islands and contributing to fundraising efforts for the Kara Run 2020.
- Securing sponsorship funds to support the Tavioni Arts program & Vananga.
- Contributing support and funds to the Cook Islands' 2020 Olympic kayak team.

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Exploration and Environmental Work Programmes and Budgets – Years 1 - 5		
Year 1:	Multibeam Mapping of CBGs, Environmental Moorings Deployment and Annually Recurring Research Activities[1]	$22.9M NZD[2]
Year 2:	Environmental Moorings Maintenance/Data Acquisition and Annually Recurring Research Activities[1]	$12.2M NZD[2]
Year 3:	Environmental Moorings Maintenance/Data Acquisition and Annually Recurring Research Activities[1]	$12.2M NZD[2]
Year 4:	Development of an Environmental Impact Assessment, Resource Statement, Economic Feasibility Study and Annually Recurring Research Activities[1]	$12.2M NZD[2]
Year 5:	Finalisation and Submission of an Environmental Impact Assessment, Resource Statement, Economic Feasibility Study and Annually Recurring Research Activities[1]	$12.2M NZD[2]
Total (NZD millions):		**$71.7M NZD[2]**
[1] Annual Recurring Research Activities include Coring, Bulk Sampling, Hi-Resolution Seafloor Mapping, Environmental and Geotechnical Data Collection, and Opportunistic Marine Mammal and Bird Logging *[2] Costs/activities in the table are approximations based on previous experience*		