Why does the Cook Islands want to do exploration?

SBM is a developing industry worldwide. Currently countries are working on developing the best approach in the safe recovery of these polymetallic nodules, while ensuring the lowest impact on the marine environment.

The purpose of the exploration phase is to collect scientific data to provide for better informed decisions for this potential industry that will affect us all.

What does exploration involve?

Essentially data collection activities, such as:

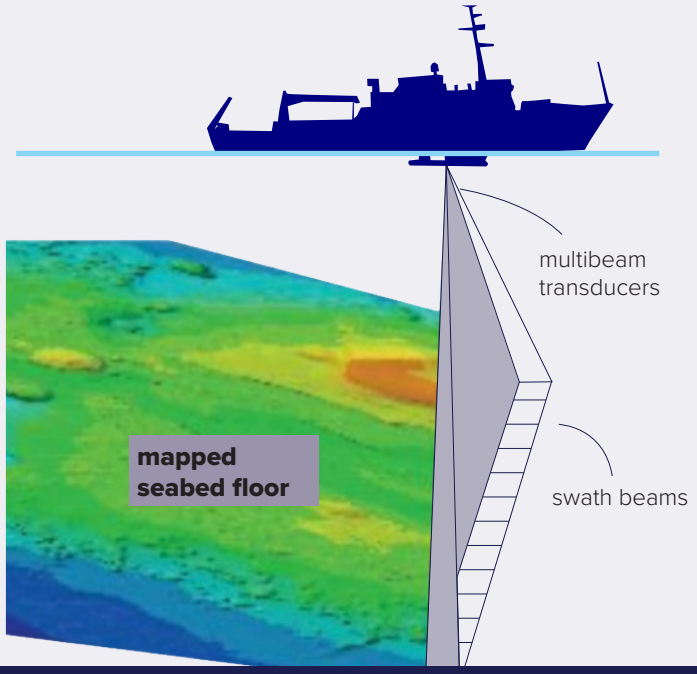
- Mapping of the seafloor to better understand the sub-areas that might control geology and marine biology (see box below)
- Sampling to better understand the value of the mineral resource of nodules that are there.
- Sampling and measurements of the environmental baseline, so that studies of potential future impacts are referenced accurately to the current state.
- Engineering, economic modelling of potential minerals harvesting systems.
- Impact assessment of any proposed minerals harvesting systems, including testing.

MAPPING THE SEABED FLOOR

Multibeam echosounding (MBES) is the most effective way to get a detailed map of the seafloor.

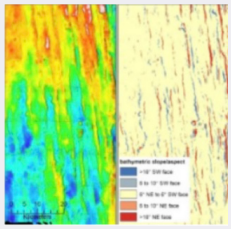
Fans of sound are sent to the seabed and their echos listened for.

The resultant maps constrain the mineral resource model and help define habitats for environmental study. MBES is often mounted on expedition boats, but can also be mounted on AUVs and ROVs



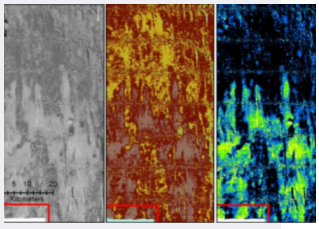
MBES produces:

1. Bathymetry
This is the height of the seafloor and steepness of features

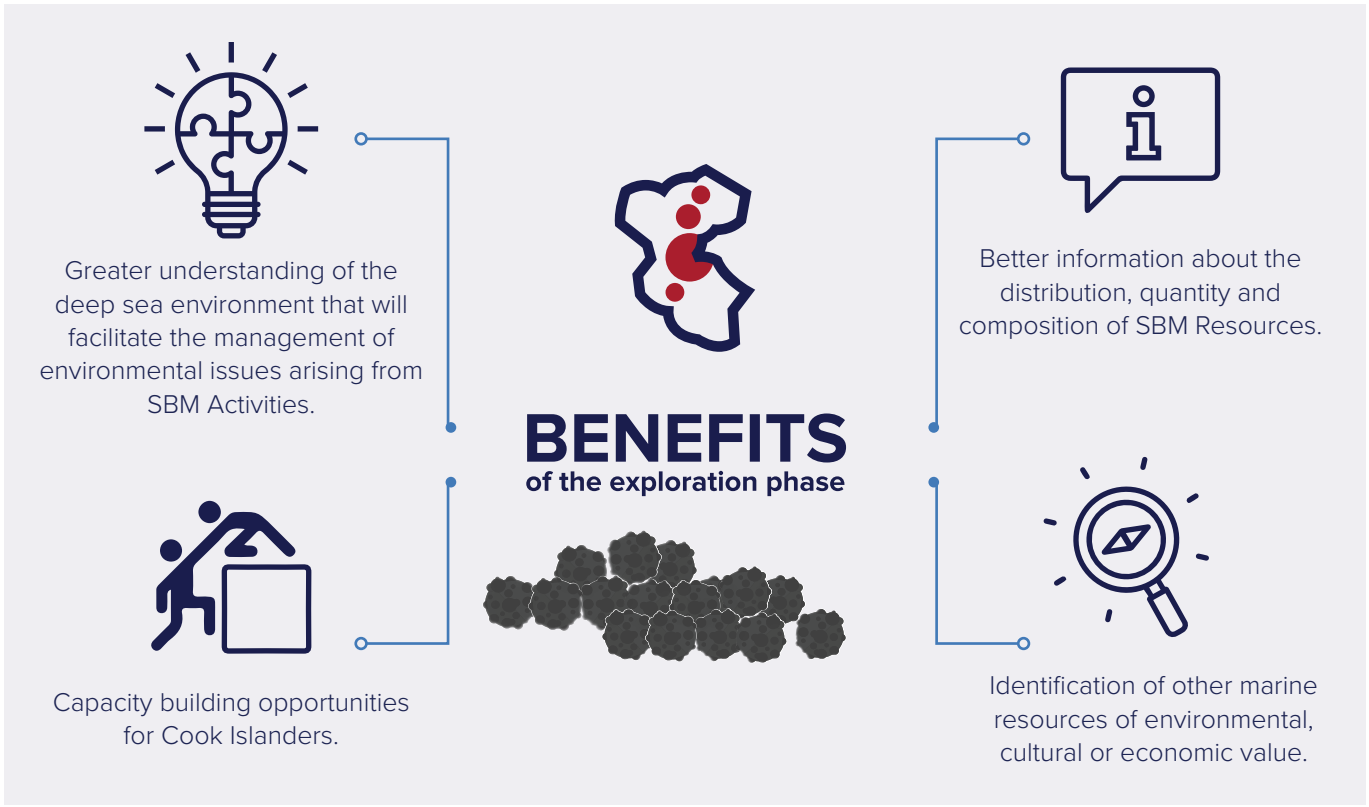


bathymetry bathymetry, bathymetric slope/aspect

2. Backscatter
This is the hardness of the seafloor which can tell you what it is made of



backscatter, coloured for nodules, for sediment



Are the impacts associated with the exploration phase well understood?

Yes, and they are expected to be minor based on experience of the same work carried out in other areas. Exploration of our world oceans have taken place since the 1870s. In international waters in an area called the Clarion Clipperton Zone (CCZ), exploration of polymetallic nodules has been occurring for 50+ years.

The forthcoming environmental regulations classify exploration activities with those that create slightly more impact requiring an environmental consent or permit and tighter monitoring during exploration.

How long will Exploration take?

Exploration licences are issued for up to five years. Licensees can apply to renew their exploration licence for two successive further periods not exceeding five years. However, there are conditions that licensees must satisfy before a renewal is approved.

How will activities be regulated?

The Authority is confident in its robust regulatory framework which will be used to regulate all SBM activities that take place under the jurisdiction of the Cook Islands.

Duties carried out by the Authority will include:

- Monitoring performance of licence holders against their approved work plans
- And taking enforcement actions for non-compliance with the Act or a licence holders licence conditions

What is required before testing of mineral harvesting equipment?

One of the fundamental legal obligations placed on a licence holder during exploration is to collect and analyse sufficient environmental baseline data, to enable environmental impact assessments (EIA) of potential mineral harvesting activities.

An EIA must be conducted before any testing of mineral harvesting equipment. Sufficient data and information collection will be required to demonstrate that impacts that may arise from testing and predictions made are to an acceptable level.

Where can I find out more information?

Please visit the Authority's website and join our Facebook page which we update regularly with the latest information. www.sbma.gov.ck