



6 November 2020

Northern Territory Environment Protection Authority
Level 1, Arnhemica House,
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Darwin NT

The Australian Institute of Marine Science (AIMS) is pleased to contribute to the public consultation on the NTEPA's Review of seabed mining in the NT – Environmental impacts and management (the Review).

AIMS is based in Darwin, Townsville and Perth. Our facilities include world-class laboratories and research aquarium (National Sea Simulator) and two ocean-going coastal research vessels. We drive innovative, world-class scientific and technological research to support sustainable growth in the use and effective environmental management of Australia's tropical marine estate.

AIMS has worked along the coasts, in the ports, and on the oceans of Northern Australia for almost five decades – in collaboration with governments, industry and Traditional Owners.

Drawing on this experience I would like to offer the following comments as the NTEPA finalises its draft Review.

Information and Knowledge

AIMS strongly supports decision-making being based on an adequate level of environmental information and knowledge.

This includes knowing what biological communities are found in different locations, why and when they occur there, and what sustains those communities. It also means understanding the effects on ephemeral biodiversity, like megafauna that may pass through locations during migrations, and benthic populations such as seagrass beds that may fluctuate in size and diversity depending on seasonal and longer term-climate cycles.

It is also useful to know how different locations are connected, to determine the potential of activities in one region impacting distant locations through currents transporting potential contaminants or enabling recovery after a disturbance by supplying larvae and juveniles.

Developing this level of understanding of ecosystems requires two key knowledge elements:

- baseline understanding of the geographical distribution of biological communities, and
- longer term observation to capture the natural processes that cause change in these communities.

Ecosystem services

A major knowledge gap across Northern Australia's coastal region is the value contributed by the ocean's biodiversity to the ecosystem services enjoyed by coastal communities.

Ecosystem services can have substantial economic, social, and cultural value to coastal communities. In-shore reefs for example can provide protection of coastal property, the fish communities they support can provide economic livelihood, and their contribution to cultural identity can be highly significant. An increase in knowledge would allow decision makers to judge the balance between the direct economic returns from resource extraction, and any consequent diminishment of ecosystem services.

AIMS, being aware of knowledge gaps in the NT, commissioned with the help of Charles Darwin University the *NT Marine Science End User Needs Analysis*¹ to provide a foundation from which to plan for the marine research needed to support policy, regulatory, strategic and operational decisions related to the Northern Territory marine environment.

I commend this study to you.

Traditional Owners

The *NT Marine Science End User Needs Analysis* found there are pressing needs relating to the engagement of Traditional Owners in the management and economic development of the northern marine environment.

These include better understanding of the opportunities and constraints on Traditional Owner participation in the use and management of sea country for economic benefit to their communities, and in shaping the wider social and economic life of the Northern Territory, drawing on rights and obligations to sea country and its resources.

As we grow the knowledge base for the Northern Territory, AIMS recommends that parties draw upon all sources of information, including Indigenous knowledge from communities that have lived in land and sea country for multiple generations, building up long-term observations of their environment.

Blending the knowledge of Indigenous Australians with present day information, and collaborating with Traditional Owners of land and sea country when undertaking Western science provides not just an improved and enriched understanding of the environment, but also provides opportunities to build economic capability among Indigenous groups in northern Australia.

Further information

AIMS expands on these views in two recent submissions made to public inquiries held by the Parliament of Australia (which are available from their websites):

- AIMS' submission on 19 September 2019 on the *effectiveness of the Australian Government's Northern Australia agenda*. See Submission 19: [\[link\]](#)
- AIMS's submission on 15 November 2019 on the *Inquiry into the Opportunities and Challenges of the Engagement of Traditional Owners in the Economic Development of Northern Australia*. See Submission 31. [\[link\]](#)

Thankyou for the opportunity to comment. I would be pleased to elaborate on any aspect.

Yours sincerely



Dr Paul Hardisty
Chief Executive Officer

¹ Australian Venture Consultants Pty Ltd (2018). *NT Marine Science End User Needs Analysis*. <https://www.aims.gov.au/nt-end-user-needs-analysis>