



Australian Government

AUSTRALIAN INSTITUTE  
OF MARINE SCIENCE

TOWNSVILLE

DARWIN

PERTH

26 June 2020

Committee Secretary  
 Joint Standing Committee on Foreign Affairs, Defence and Trade  
 PO Box 6021  
 Parliament House  
 Canberra ACT 2600

Dear Committee Secretary,

The Australian Institute of Marine Science (AIMS) is pleased to make a short submission to the Joint Standing Committee on Foreign Affairs, Defence and Trade's *Inquiry into the implications of the COVID-19 pandemic for Australia's foreign affairs, defence and trade*.

Our response is focussed on the term of reference on which we are able to speak from experience and direct knowledge, drawn from our almost 50 years of operation in Northern Australia: *What policy and practical measures would be required to form an ongoing effective national framework to ensure the resilience required to underpin Australia's economic and strategic objectives*.

AIMS is based in Townsville, North Queensland, with significant research facilities also located in Darwin and Perth. These facilities, our world-class research aquarium (the National Sea Simulator) and our two ocean-going coastal research vessels, allow AIMS to conduct innovative scientific and technological research to support sustainable growth in the use, and effective environmental management and protection, of Australia's tropical marine estate from Queensland over to Western Australia.

We believe this northern marine estate is yet to reach its full potential, and can support further sustainable economic growth, and thus contribute to underpinning the region's security in the post-COVID19 world.

### **Harnessing the Northern Australia agenda to spur growth and safeguard security**

The Australian Government's Northern Australia agenda is key to developing Australia's northern regions, and has in recent years facilitated large investments in agricultural and resources sectors, and in critical enabling infrastructure such as roads. However, knowledge gaps – particularly in the marine estate – remain an impediment to the North's development. This is because current knowledge of coastal and marine environments is not at the scale and level of detail needed to enable investment in development opportunities.

Australia is a marine nation: our marine estate is the third-largest in the world, with Northern Australia's marine estate in particular home to some of the most diverse and iconic ecosystems and species on the planet.<sup>1</sup> In 2015-16, Australia's marine industry contributed \$71.4 billion in value-add to Australia's economy, and employed approximately 393,000

<sup>1</sup> *Australian Institute of Marine Science (AIMS) Strategy 2025*, <https://www.aims.gov.au/about/aims-strategy-2025>

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full-time equivalent workers. In pre-COVID-19 projections, the marine industry was forecast to add as much as \$100 billion dollars per year to Australia's economic wealth by 2025.<sup>2</sup>

However, vast knowledge gaps, particularly in the northern marine bioregion, are inhibiting growth in our marine industries, due to a lack of understanding of the robustness, and factors which undermine the health, of the natural assets that underpin them. Much of Northern Australia's coastline and oceans remain poorly mapped, researched and understood. This knowledge deficit represents a particular challenge, and risk, for government, regulators and industry, who are called upon to make policy, regulatory, strategic and operational decisions regarding human use of, and impacts on, the northern marine environment, with inadequate knowledge. The lack of knowledge is an impediment to well-informed decision-making. It leaves investors, industry and regulators unable to assess the economic viability of prospective ventures, resulting in foregone investment opportunities.

A diversified northern economy, with a strong marine sector based on the sustainable use of reefs and fisheries, that helps lead to more people living and working in the north would have benefits for Australia's northern security. A refresh of the Northern Australia agenda which supports the provision of research underpinning the decisions of marine industries would help enable informed investment in these industries, contribute to environmentally sustainable economic growth, and help build the physical presence that would contribute to strengthening our northern borders.

#### **Partnering with Traditional Owners to increase monitoring of sea country**

Engaging with the Traditional Owners of sea country across Northern Australia in marine monitoring activities provides another opportunity to help fill critical knowledge gaps, build economic development and increase national security. Traditional Owners' knowledge of sea country includes generations of environmental observations and is an indispensable source of information for the management of Northern Australia's marine environment.

AIMS, through its collaboration with Traditional Owners, has learned that greater research impact and value can be created – and new insights gained – if AIMS' science can be joined with Indigenous knowledge, interests, capacity and capability. These projects also support the aspirations of Traditional Owners for greater capacity and empowerment in sea country monitoring, research and decision making for economic development.

AIMS is consulting with Traditional Owner groups to scope the potential for a formal marine monitoring alliance, with the aim of building a more comprehensive picture of Northern Australia's marine environment. The proposed Northern Australia Marine Monitoring Alliance (NAMMA) would generate knowledge to inform and support marine management decision-making at a range of scales, from local sea country interests to the cross-regional and national picture. It would also co-create and collate more monitoring data across the Top End to improve the geographic coverage of cross regional analysis for reporting on the status of and trends in the tropical marine environment.

In undertaking this monitoring, Indigenous alliance members will use small vessels to deploy, and then retrieve, video- and sensor-based equipment in order to collect data. This alliance would therefore have the potential to deliver both science and security outcomes through improving knowledge on the northern marine bio-region, and effecting an increased marine presence in the northern parts of Australia's Exclusive Economic Zone. Further, the scientific

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<sup>2</sup> *AIMS Index of Marine Industry*, December 2018, <https://www.aims.gov.au/aims-index-of-marine-industry>; Oceans Policy Science Advisory Group, 2013, *Marine Nation 2025: Marine science to support Australia's blue economy*.

marine monitoring capability will be exportable to our Indo-Pacific neighbours, providing an economic return to Australia and contributing to regional security.

### **Marine science strengthening regional alliances**

The increasing emergence of climate change impacts on the world's oceans, while presenting significant risks to lives and livelihoods, also presents an opportunity for Australia to consolidate its alliances in the Indo-Pacific region through marine research collaborations, producing benefits for science, security and soft diplomacy.

Coral reefs provide vital ecosystem services for over half a billion people, including food, livelihood, a rich source of medicines, and the protection of coastlines. However, these reef ecosystems are particularly vulnerable to impacts from rising sea temperatures, increased ocean acidification, and damage from more frequent and more intense storms and cyclones. With the Indo-Pacific region home to 75 per cent of the world's coral reefs, AIMS anticipates an increased need from our near neighbours in the coming years for Australian scientific and financial assistance to help preserve and restore threatened reef ecosystems.

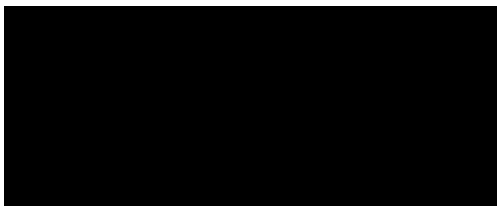
Coral reef resilience, adaptation and restoration science – in which AIMS and Australia have world-leading expertise and capabilities – is vital to ensuring the sustainability of these reefs and the ecosystem services they provide to Indo-Pacific communities, which have deep cultural and economic ties to their coastal and marine environments. Further, with almost 50 per cent of reefs in the Pacific currently considered threatened, ecological monitoring is critical to inform and guide the most efficient management interventions.

AIMS is already working in the region with Pacific island partners on two research efforts: the Global Coral Reef Monitoring Network (GCRMN) and the ReefCloud project. Both are supported with funding from the Department of Foreign Affairs and Trade, and aim to build capacity and advanced capabilities in monitoring, decision-making and management of marine estates. However, there is potential to do much more in the region on reef adaptation and restoration science. There is thus a unique opportunity for Australia to lead the global effort to protect coral reefs, particularly in places like Indonesia and the Pacific, which would also improve security and soft diplomacy outcomes.

In summary, AIMS supports the proposition that growth in Northern Australia's marine industries, underpinned by solutions science, will help drive sustainable economic development, increase local populations, and sustain a Northern Australia that supports improved national security outcomes.

AIMS welcomes the Joint Committee's review of this submission and would be pleased to elaborate on any aspect if requested.

Yours sincerely,

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Dr Paul Hardisty  
Chief Executive Officer