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Mr Rick Wilson MP  
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Standing Committee on Agriculture and  
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Dear Mr Wilson

Thank you for your invitation for the Northern Territory Government to make a submission to the Australian Parliament's Standing Committee on Agriculture and Water Resources inquiry into the Australian aquaculture sector.

The Northern Territory has had a long and active involvement in promoting and supporting aquaculture industry development. We are proud to be the home of Australia's largest barramundi farm and also producers of premium quality cultured pearls. In the near future we also expect to be the site of one of the world's largest black tiger prawn farms.

My Government is currently implementing our blueprint for economic development outlined in the recently released Territory Economic Recovery Commission report and aquaculture is seen as an important component of this program.

I am pleased to provide you with a submission to your Inquiry on behalf of my Government.

Yours sincerely

A large black rectangular redaction box covering the signature of Michael Gunner.

MICHAEL GUNNER

- 4 JUN 2021

# Inquiry into the Australian aquaculture sector

Submission by the Department of Industry, Tourism and Trade on behalf of the Northern Territory Government to the Standing Committee on Agriculture and Water Resources: Inquiry into the Australian aquaculture sector

## Introduction

The Northern Territory aquaculture industry, comprising of Barramundi, Pearl, microalgae (spirulina), Sea Cucumber (trepang) and ornamental producers, had a production value of \$47.5M in 2019/20. The sector is comparatively small in comparison to other jurisdictions however performs at a high level. The Territory sector features the largest Barramundi farm in Australia, premier cultured pearl producers and innovators applying new approaches to increase production and develop new species. Species under development include the sea ranching of sea cucumbers and the development of tropical Blacklip Rock Oyster farms, both in partnership with Aboriginal communities.

Currently most commercial farms are located within the Darwin region which can be attributed to reasonable access to essential services, staffing, and transport as well as logistical efficiencies. Operators in remote regions are either targeting niche, high value markets or are at sufficient scale to overcome the economic challenges of operating in a remote region.

Project Sea Dragon, which is planning to undertake large-scale prawn farming operations, has progressed through the regulatory approvals stage and has established an Indigenous Land Use Agreement with Traditional Owners. The project is still seeking investment capital and when it becomes operational will be the only prawn farm operating in the Northern Territory.

The Northern Territory Government is committed to supporting existing aquaculture businesses as well as encouraging and facilitating new investment. The recently created Ministerial portfolio of 'Agribusiness and Aquaculture' highlights the Government's intent in the promotion and development of this important industry. Aquaculture has also been identified as one of the priority industries under the recently released Territory Economic Reconstruction Report as part of the planned growth of the economy to reach a value of \$40 Billion by 2030.

## Opportunities and barriers to expansion

There is significant interest from Aboriginal Land Councils and communities to realise the potential employment and food security benefits of aquaculture, particularly in remote communities. A tropical rock oyster industry is an opportunity to involve remote communities and Aboriginal people in the aquaculture industry.

A four year, \$4.1 million project is addressing key barriers to the development of this new aquaculture sector<sup>1</sup>. The Department of Industry, Tourism and Trade (DITT), the Cooperative Research Centre for Developing Northern Australia, the Anindilyakwa Land Council and the Yagbani Aboriginal Corporation from South Goulburn Island, are partners in the commercialisation trials for the hatchery production and farming of the native Blacklip Rock Oyster in the Northern Territory. DITT is also working with researchers at Charles Darwin University, University of Tasmania, SafeFish, food safety experts and the Fisheries

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<sup>1</sup> <https://crcna.com.au/research/projects/northern-australian-tropical-rock-oyster-research-and-development>



## Inquiry into the Australian aquaculture sector

Research and Development Corporation to establish technical guidelines for tropical Shellfish food safety, noting the unique context and operating environment of Northern Australia.

Changes to the nature of fund delivery from the Northern Australia Infrastructure Facility (NAIF) have supported a \$60m investment by Humpty Doo Barramundi to deliver on farm improvements and increased infrastructure and farm capacity, providing greater employment opportunities in the industry. Project Sea Dragon is also pursuing funding from the NAIF. Investments like these are supporting Northern Territory businesses to grow and capitalise on our competitive advantages. Likewise, the provision of enabling infrastructure and improved supply chain logistics are important to promote development.

The Northern Australia Aquaculture Situational Analysis, which was undertaken by the Cooperative Research Centre for Northern Australia, identified biosecurity as one of the highest priorities<sup>2</sup>. Preventing the introduction of diseases through appropriate screening and management of imported high-risk (raw) marine products is essential to the sustainability and development of the Australian aquaculture industry. The detection of White Spot syndrome virus has heightened attention to this issue, however the growing threats posed to our other important industries needs additional consideration and leadership by the Federal government.

The availability of a skilled workforce was also identified in the Northern Australia Aquaculture Situational Analysis. Projected growth in the industry will require an additional 1400 new jobs by 2030. This will require increased training and workforce capacity, throughout management structures from farm hand to management. Training packages need to cater for delivery to Aboriginal and diverse cultural groups and be suitable for delivery in remote and workplace environments. Investments to grow research and training capacity of Northern Territory institutions is required to provide job ready people.

The Northern Territory is the only jurisdiction in Australia which has of Country of Origin Labelling (CoOL) of seafood at retail sale (restaurants and takeaways etc). This is achieved by a licence condition included in the Fish Retailer's Licence under the *Northern Territory Fisheries Act 1988*. CoOL provides a point of sale differentiation which has resulted in increased sales of local seafood. The Territory's Barramundi farm, and indeed the Australian farmed Barramundi industry, has been actively lobbying for further product differentiation at point of sale, by reserving the name *Barramundi* for only Australian produced product. The industry argues that Barramundi is derived from Australian Aboriginal language and that imported fish should not be eligible to receive this label (in a similar way to the name Champagne being reserved to sparkling wines from the Champagne region in France).

In tropical northern Australia prospective industries include those where high value species are targeted for niche markets or where mass production methods can achieve economies of scale in the production of lower value species. The proximity of northern Australia to economic and population growth in Asia and beyond offer aquaculture export opportunities, but these must be carefully marketed to be distinct and competitive alongside locally produced product in these areas.

Aquaculture development offers significant economic and employment opportunities for Indigenous people living in coastal northern Australia, particularly using low technology, sea-based approaches suitable for Indigenous cultural practices and lifestyles. Given 85% of the NT coastline (including the intertidal) is owned by Aboriginal people and 30% of the NT population is Indigenous, it is imperative that aquaculture development programs include a significant Indigenous fisheries sector. In addition, promoting and investing in Indigenous-owned fisheries businesses in the NT offers a unique and potentially powerful mechanism to drive fisheries (including aquaculture) development in remote areas of the Territory. It also offers the potential for a unique branding opportunity which would set Indigenous-owned businesses apart in the market place. The NT Government's Department of Industry, Tourism and Trade has been

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<sup>2</sup> CRC NA Northern Australia Aquaculture Situational Analysis. 2020.

<https://www.crcna.com.au/research/projects/northern-australia-aquaculture-industry-situationalanalysis-study>



highly innovative in setting up foundational programs to establish remote Indigenous-owned fishing and aquaculture businesses across the NT. Opportunities to streamline and increase the effectiveness of regulatory frameworks

Aquaculture businesses are exposed to complex regulatory frameworks often involving approvals, permits and licencing from multiple layers of government, (local, State and Federal). These processes can add significant cost and time to projects, particularly when operating in an information poor environment. The environmental impacts of aquaculture are often poorly understood which can lead to injudicious application of the precautionary principle and over regulation. If the real (as opposed to perceived) risks of aquaculture were better understood and communicated it may lead to more effective regulation and be more cost-efficient for industry. A better understanding of environmental impacts, informed by science-based assessments of risks, may also support faster throughput of development applications.

Establishing consistent policy and guidelines for aquaculture activities and developments across governments and agencies could potentially lead to improved approval processes. Whilst each site and operation should still be considered individually, developing a standardised assessment process, incorporating the known features, risks and mitigations of established aquaculture systems may support faster and improved decision-making.

## The ability for businesses to access and commercialise innovations to expand aquaculture

The Darwin Aquaculture Centre DAC is a government owned facility that conducts research, development and extension to support the Northern Territory aquaculture industry. The facility has conducted research on barramundi, golden snapper, giant clams, trepang, mud crabs, corals, black jewfish, tropical oysters and a number of other temperate and tropical species.

For many years the DAC has enabled the development of best practice techniques to support innovation within the industry. Examples of this are the;

- Guide to Barramundi Farming<sup>3</sup>
- Development of commercial production systems for Mud Crab (*Scylla serrata*) Aquaculture<sup>4</sup>
- Sea ranching release techniques for cultured sea cucumber<sup>5</sup>
- Larval development and optimisation of hatchery techniques for the native tropical Blacklip Rock Oyster<sup>6</sup>

The Department collaborates with NT aquaculture businesses to address technical barriers to expansion and increase their profitability. This is delivered through joint research projects as well as licencing areas of the Darwin Aquaculture Centre to enable private sector research and hatchery production.

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<sup>3</sup> Schipp G., Bosmans J., Humprey J., 2007, Northern Territory Barramundi Farming Handbook, Department of Primary Industry, Fisheries and Mines, Northern Territory Government

<sup>4</sup> Shelly C., Williams G., Ruscoe I., Paterson B., Mann D., 2008, Development of commercial production systems for Mud Crab (*Scylla serrata*) Aquaculture in Australia: Hatchery and Nursery, FRDC Project 2000/210

<sup>5</sup> Taylor A., Nowland S., Hearnden M., Hair C., Fleming A., 2016, Sea ranching release techniques for cultured sea cucumber *Holothuria scabra* (Echinodermata: Holothuroidea) juveniles within the high-energy marine environments of northern Australia, Aquaculture 465 pp 109-116

<sup>6</sup> Nowland S., O'Connor W., Penny S., Osborne M., Southgate P., 2018, Water temperature and salinity synergistically affect embryonic and larval development of the tropical black-lip rock oyster *Saccostrea echinata*, Aquaculture International 27 pp. 1239-1250