Queensland
Good jobs
Better services
Great lifestyle

Queensland Aquaculture Strategy 2024–2034

CONSULTATION PAPER

Queensland Government

Acknowledgment of Country

We respectfully acknowledge Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and Elders of the lands and seas on which we meet, live, learn and work.

We acknowledge those of the past, the ancestors whose strength has nurtured this land and its people, and who have passed on their wisdom. We acknowledge those of the present, for their leadership and ongoing effort to promote Aboriginal peoples and Torres Strait Islander peoples and cultures. We acknowledge those of the future, who will inherit the legacy of our efforts.

We recognise it is our collective efforts, and responsibility as individuals, communities and governments, to ensure equality, recognition and advancement of First Nations peoples across all aspects of society and everyday life.

Disclaimer

The material presented in this consultation paper and the discussion of possible actions or options do not represent Queensland Government or departmental policy. They are presented for the purposes of guiding discussion and consultation only.

Cover: Coral Coast Barramundi – Coral Coast Barramundi Farm, Bowen, Queensland © Matt Blythe

Contents

Introduction

In June 2023, the Queensland and Australian Governments jointly announced an investment of $185 million to significantly reduce high-risk fishing activities impacting the Great Barrier Reef (**the Reef**). The suite of measures underpinning this investment formed part of Australia's commitments to the United Nations Educational, Scientific and Cultural Organization (**UNESCO**) to enhance protections for the Reef.

Soon after, the Queensland Government established the independent Future Fisheries Taskforce (**the Taskforce**) to provide expert advice to government on a structural adjustment package for the transition of wild-caught fisheries on the Reef impacted by the phase out of gill-net fishing. In its report, the Taskforce considered that these changes could reduce local seafood supply, particularly from 2027 with the phase out of gill-net fishing, and called on government to consider this issue.

Queensland's growing aquaculture industry may form part of the response to this into the future.

A key recommendation of the Taskforce was to develop a whole-of-government aquaculture policy and strategy to provide clear direction for the future of the aquaculture industry in our state. This strategy will take into account existing work and stakeholder consultation undertaken to date, and balance aquaculture expansion with Queensland's obligations and responsibilities to protect the Reef and other sensitive operating environments.

To inform the development of a strategy, expected to be released later in 2024, the Queensland Government is undertaking public consultation and inviting feedback from all Queenslanders.

This consultation paper has been developed to support the consultation process, including proposing discussion questions for consideration.

It outlines a draft vision for the future of aquaculture in Queensland. Linked to this vision are four proposed focus areas including: a productive industry, environmental performance, community returns, and contemporary governance. A range of foundation and growth actions are proposed under each focus area supporting the vision, for input by stakeholders.

Like Queensland's other primary industries, any future growth in the aquaculture industry will need to be informed by environment, social and governance excellence, and backed by a robust research, development and extension capability.

Get involved

To have your say and inform the development of Queensland's aquaculture strategy visit:
daf.engagementhub.com.au/aquaculture-strategy-consultation

Preliminary

What is aquaculture?

Generally, aquaculture is the farming of aquatic organisms, including fish, molluscs, crustaceans and marine aquatic plants. It can be undertaken in a range of settings, including fresh water, brackish water and marine systems, and can be practised under a range of intensities.

Farming implies some form of intervention in the rearing process to enhance production, such as regular stocking, feeding and protection from predators. Extensive systems rely more heavily on natural aquatic productivity and increasing levels of control and management apply to more intensive production systems.

Vision for consultation

To support the development of the proposed Queensland Aquaculture Strategy 2024–2034 (**the Strategy**), a draft vision has been developed:

Our vision is that Queensland is a thriving, world-leader in sustainable aquaculture. Our state's aquaculture industry is respected for its high-quality produce, innovation and environmental stewardship.

Supporting this vision are a set of four focus areas including:

- Focus area 1: Productive industry
- Focus area 2: Environmental performance
- Focus area 3: Community returns
- Focus area 4: Contemporary governance.

The Department of Agriculture and Fisheries (**DAF**) has already undertaken consultation with industry including as part of the Queensland Aquaculture Industry Forum in 2023. The outcomes of this consultation, which informed the development of this paper, are outlined under 'Consultation to date' on page 22.

Public and industry feedback on this vision, the focus areas, and high-level areas for action is requested to inform the final Strategy. Head to pages 15–18 to read more.

The first part of this consultation paper includes an overview of the aquaculture industry globally, nationally and within Queensland. It provides a high-level summary of the key opportunities and challenges to be considered in the final Strategy.

INSIGHTS

What is your vision for aquaculture in Queensland?

Is there any element which is missing?

Strategy purpose and alignment

Purpose

The purpose of the proposed Strategy is to:

- articulate a clear vision for the future of aquaculture in Queensland
- establish focus areas and actions to deliver the vision for aquaculture
- identify research priorities and best practice regulatory approaches
- enable Queenslanders to make the most of the opportunities that aquaculture offers, while balancing the environmental and social values which make our state great.

INSIGHTS

Should there be any other purposes for the Strategy?

Alignment

The Strategy will seek to complement and build on Queensland's existing work to date to develop a modern policy framework for aquaculture, and other relevant pieces of work including the:

- Queensland Competition Authority final report on Aquaculture Regulation in Queensland (2014) and the Government response (2016)
- Queensland Aquaculture Policy Statement (2016)
- Aquaculture Transformation Program (**ATP**) (2023)
- Queensland Low Emissions Agriculture Roadmap 2022–2032
- Queensland AgTech Roadmap 2023–2028.

Development of the Strategy will also have regard to broad priorities and principles outlined in other Australian jurisdictions and by the Australian Government including through the Australian National Aquaculture Strategy (2017) and the Australian Government Aquaculture Statement 2024.

Oyster farming in Queensland © State of Queensland

Status of aquaculture

Global picture

The Organisation for Economic Co-operation and Development (**OECD**) and United Nations Food and Agriculture Organization (**UNFAO**) report, *Agricultural Outlook 2023–2032*, projects that global seafood consumption will reach 21.2 kilograms (kg) per person per year in 2032 – up from an average of 20.4 kg in 2020–22 (2023). Global fish production will continue to expand to meet rising demand into 2032, however, at a slower rate than in the preceding decade and with most of the additional production projected to be generated by the aquaculture sector (*OECD and UNFAO 2023*). Reflecting this, aquaculture is expected to account for 55 per cent of global fish production by 2032, an increase in market share since it first overtook wild-caught fisheries at 50 per cent in 2020–22 (*OECD and UNFAO 2023*).

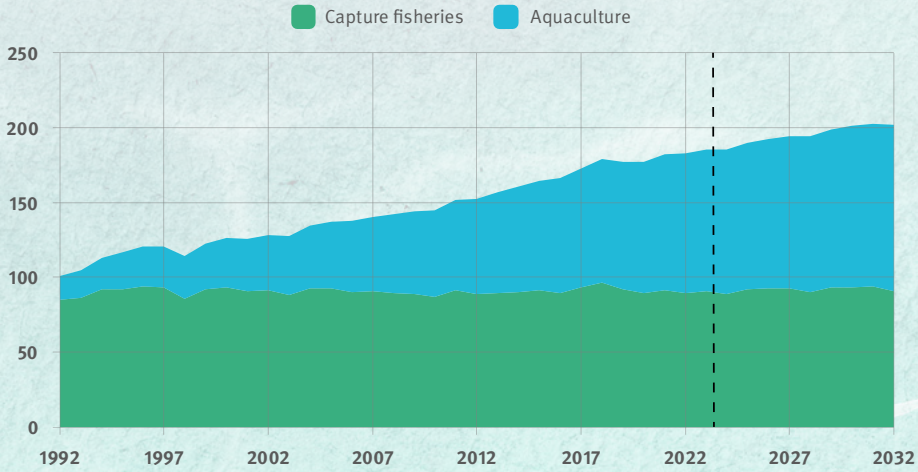


Figure 1: World capture fisheries (in million tonnes) and aquaculture production showing increasing proportion of aquaculture (OECD and UNFAO 2023).

Australian industry snapshot

The recent Australian Bureau of Agricultural and Resource Economics and Sciences (**ABARES**) publication, *Australian fisheries and aquaculture outlook to 2028–29*, suggests that aquaculture in Australia is expected to continue increasing its overall contribution to seafood production – including growing from 60 per cent of total production value in 2023–24 to 64 per cent by 2028–29 (*Tuynman et al. 2024*). This total production value is expected to equate to $2.21 billion by 2028–29 driven by expected production increases in a range of aquaculture species, predominantly salmonid production (*Tuynman et al. 2024*).

Total seafood consumption in Australia topped 350 kilotonnes (kt) in 2021–22, making seafood Australia's fourth preferred source of protein in that period (based on per person consumption rates) (*Tuynman et al. 2023*). Australia's seafood consumption has been relatively stable over the last decade and was approximately 14 kg per person annually in 2021–22 (*Tuynman et al. 2023*).

Queensland industry snapshot

Queensland has a reputation as a producer of safe, high-quality and nutritious fresh produce. While Queensland is a growing aquaculture producer, our state's industry is known for its sustainability and high-value aquaculture products.

Queensland's aquaculture industry includes a spectrum of operators, from locally-run, small to medium size businesses to large enterprises. The majority of aquaculture operators in Queensland are small in scale, the remainder are a handful of large producers accounting for a significant proportion of production. Currently, there are 104 aquaculture operations in Queensland. Of these, 22 are oyster farms within tidal waters and the remaining are land-based farms utilising ponds, raceways, tanks, and recirculating production systems.

Queensland aquaculture businesses by annual revenue

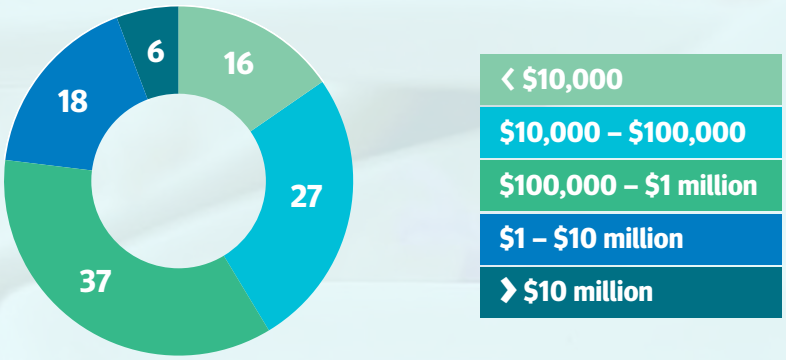


Figure 2: Queensland aquaculture businesses by annual revenue (DAF unpublished).

The total value of the Queensland aquaculture industry in 2022–23 was estimated to be $263 million, up from $225 million in 2021–22 and an increase of 17.1 per cent (*DAF 2024*). Gains in value in 2022–23 were predominantly in the prawn, freshwater, aquarium, and oyster sectors (*DAF 2024*). The industry currently operates across three main regions of production including Cairns, Mackay, and the Gold Coast (*DAF 2024*). However, the Torres Strait, Townsville area, southern inland areas, and Moreton Bay also account for aquaculture production (*DAF 2024*).

Within the Australian context, Queensland aquaculture represented approximately 11.6 per cent of the national aquaculture industry in 2022. While a significant proportion of the Australian aquaculture industry is made up of salmon and trout production (more than 69 per cent of industry revenue) (*IBISWorld 2023*), there is no salmon or trout production in Queensland.

In 2022–23, Queensland's production was characterised by two main sectors – prawns (72.6 per cent) and barramundi (24.5 per cent) (*DAF 2024*). The next largest sector was freshwater fish (1.8 per cent) (*DAF 2024*). The industry also supports other niche and high-value sectors including red claw, oyster, cobia, and grouper production. A focus for the industry will be supporting this continued diversification into sustainable and high-value products into the future and for a variety of markets.

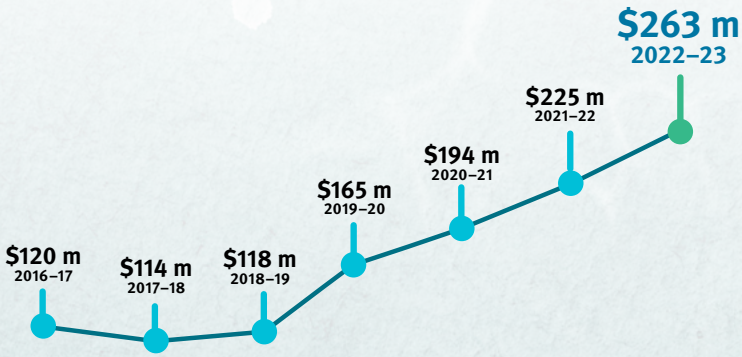
INSIGHTS

Given the spectrum of operators in Queensland, what do you think will be important for a Queensland aquaculture strategy to respond to the needs of all operators?

Samples of prepared Condabilla produce
© Condabilla Fish Farm, Chinchilla

Production summary 2022–23

OVERALL PRODUCTION VALUE

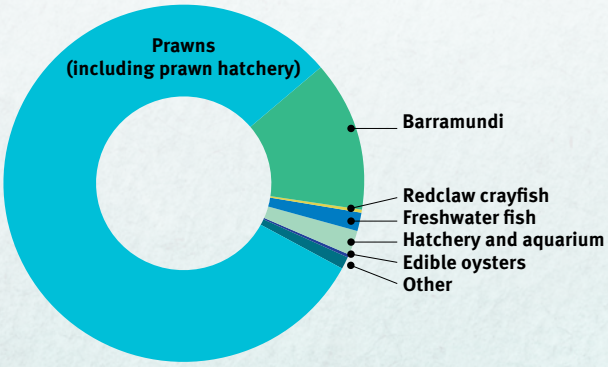


The **total value** of the **Queensland aquaculture industry** has **increased** by

17.1%

PRODUCTION (tonnes)	2021–22	2022–23
Prawns	8727	9826
Redclaw	31	22
Barramundi	3992	3315
Freshwater fish	197	242
Other	76	124
TOTAL	13,023	13,528

PRODUCTION VALUE



LABOUR

The combined Queensland aquaculture industry employed

2021–22
889 JOBS

2022–23
855 JOBS

REGIONAL SUMMARY

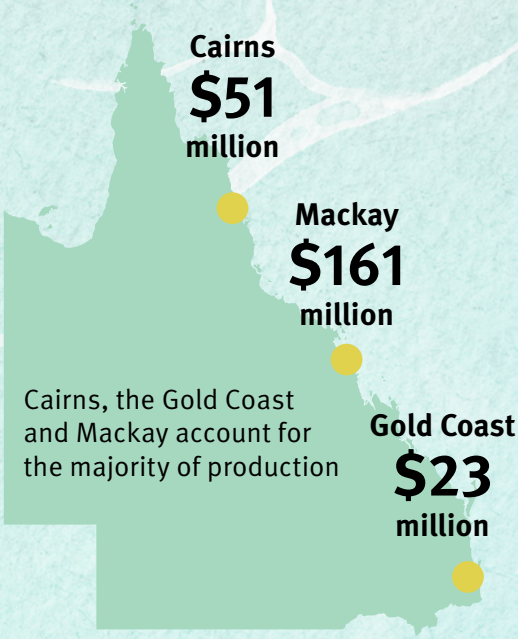


Figure 3: Production summary of Queensland's aquaculture industry 2022–2023 (DAF 2024).

Queensland's unique operating environment

Queensland is home to a range of unique and globally significant ecosystems. This includes multiple UNESCO World Heritage sites like the Great Barrier Reef, as well as internationally Ramsar-listed sites such as the Great Sandy Strait and Moreton Bay and other diverse and protected natural environments. This operating context is of relevance to the aquaculture industry and those producers operating in areas within and adjacent to the Reef and other sensitive natural environments across the state.

The Great Barrier Reef contains the world's largest collection of coral reefs, with 1500 species of fish, 400 types of coral, and 4000 types of molluscs (*UNESCO n.d.*). The Reef encompasses much of Queensland's east coast – extending from the coastal hinterlands and estuaries, and up to 250 kilometres offshore (*UNESCO n.d.*). It provides habitat for a range of threatened, endangered and protected species including dugong, marine turtles and dolphins.

The importance of the Reef lies not only in the coral reef ecosystem but also in the inshore areas and oceanic waters and the connectivity across these habitats. There is no other world heritage property which contains such biodiversity (*UNESCO n.d.*). These environments are of cultural and economic importance to Queensland's First Nations peoples who have lived and depended on sea country for their wellbeing and livelihoods for many thousands of years.

The Reef holds significant value for all Queenslanders, Australians and the global community. It has a recognised economic, social, and cultural value of more than $56 billion supporting thousands of jobs across tourism, fishing, recreational and scientific activities (*Deloitte Access Economics 2013*).

The Queensland and Australian Governments have committed to enhancing protections for the Great Barrier Reef in line with recommendations from UNESCO. Monitoring of progress against these commitments is ongoing and will inform decisions about the status of the Reef in the future. There are a range of key measures relating to improving water quality in the Reef, ensuring sustainable fishing practices, and mitigating the impacts of climate change that the Queensland Government is continuing to pursue.

INSIGHTS

What are the key domestic and global market pressures driving sustainable and ethical production in the fisheries industry?

What opportunities does this create in the Queensland context? How can industry be supported to respond to these challenges and ensure the preservation of Queensland's sensitive natural environments?

Aerial view of the Daintree river © Tourism and Events Queensland

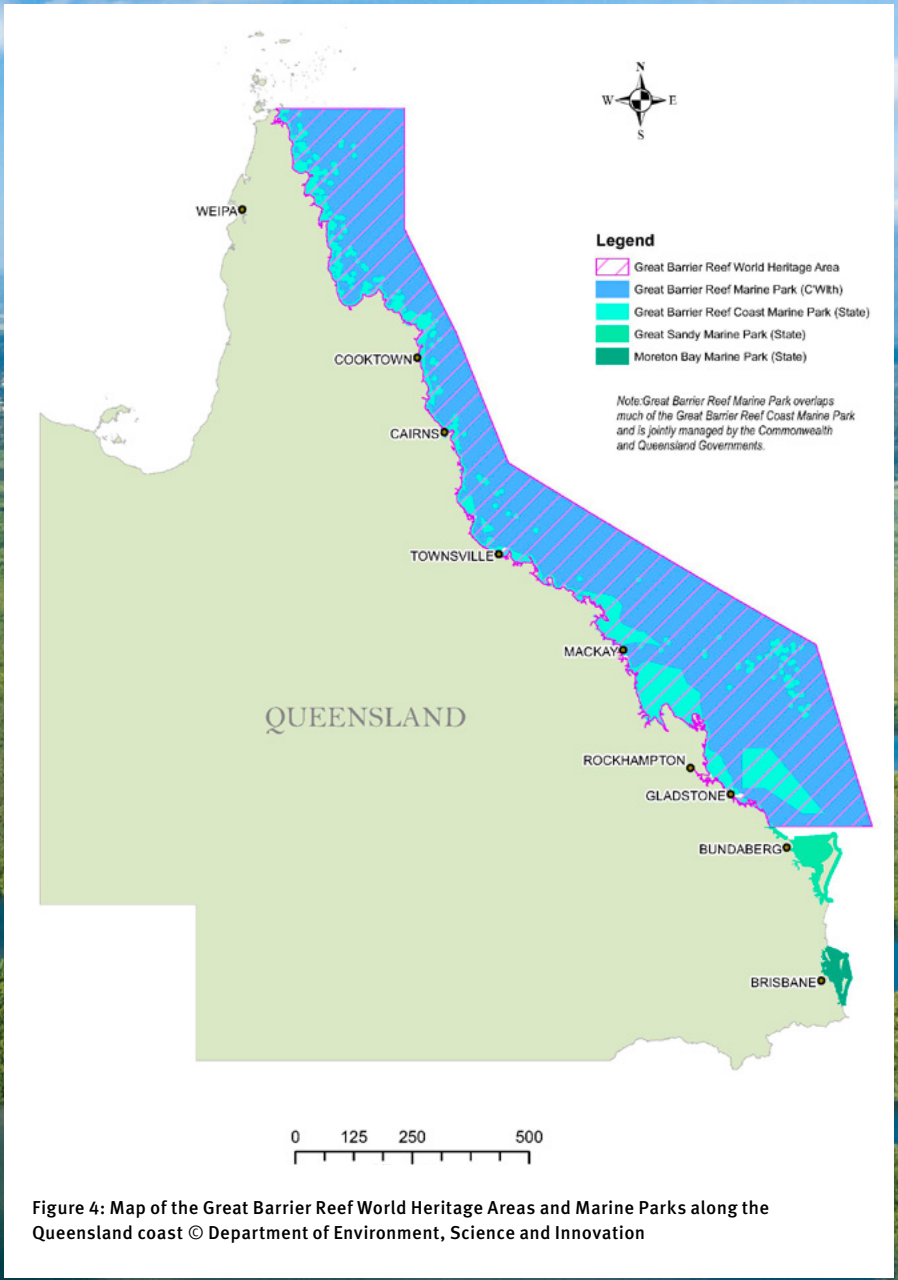


Figure 4: Map of the Great Barrier Reef World Heritage Areas and Marine Parks along the Queensland coast © Department of Environment, Science and Innovation

The potential impact of aquaculture discharge on sensitive receiving environments is a key issue for Queensland's aquaculture industry. Considerations for managing this challenge include integrated planning approaches and the development and uptake of innovative technologies to reuse water, treat discharge or change production models. Not all operators release wastewater and products into receiving environments, however, it remains a relevant consideration for ensuring ongoing growth in Queensland's aquaculture industry is ecologically and economically sustainable.

Queensland's strengths, opportunities and challenges

A Queensland aquaculture strategy will need to account for Queensland's existing strengths, while targeting new opportunities to support an ecologically sustainable, diverse, and innovative aquaculture industry. This will also mean identifying and targeting industry challenges and barriers to sustainable growth. While some of these challenges will require long-term planning and investment by industry, it is important they are highlighted.

Queensland already maintains a reputation as a trusted supplier of safe, high-quality and high-value produce. This is coupled with the right environmental conditions for temperate and tropical aquaculture species and suitable tracts of land to support development.

This is balanced against our commitment to protect and preserve our sensitive natural environments reflected in robust regulatory frameworks. As the need to respond to climate change and disaster preparedness intensifies, it is likely these obligations and responsibilities will only be enhanced. Increasingly, ecological and economic sustainability will be a core part of the future of the aquaculture industry in Australia (*IBISWorld, 2023*). This will be coupled with consumer expectations related to the sustainability and local production of produce. Ensuring these values are embedded and replicated across all parts of the Queensland industry as it grows will need to be a key focus for the Strategy.

Industry engagement by DAF has also indicated strong interest from Aboriginal peoples and Torres Strait Islander peoples in aquaculture. A final Strategy will outline how it will support the continued involvement of First Nations communities and businesses in the ongoing growth of the aquaculture industry in Queensland. Development of the final Strategy should also align with the aims of the National Agreement on Closing the Gap, especially Outcome 8 (strong economic participation and development of Aboriginal and Torres Strait Islander peoples and communities) and Outcome 15 (Aboriginal peoples and Torres Strait Islander peoples maintain a distinctive cultural, spiritual, physical and economic relationship with their land and waters).

Any sustainable growth in the industry will need to continue to be supported by a robust research, development, and extension program to respond to identified challenges in the industry. Government has already heard from industry and the Future Fisheries Taskforce on what these challenges are including waste management (particularly nutrient emissions), species diversification, replicating innovative strategies at farm scale, and consumer recognition of Queensland aquaculture products.

INSIGHTS

What other strengths, opportunities and challenges do you see for the future of the aquaculture industry in Queensland?

What other research priorities and best practice regulatory approaches should be included in the final Queensland Aquaculture Strategy?

Queensland has a demonstrated capability in research and innovation, and increasingly the uptake of new technologies is supported by leadership from and partnership with industry. Continued investment in a scaled and coordinated research, development and extension program for aquaculture will remain critical.

CASE STUDY 1

Bribie Island Research Centre

The Queensland Government's Bribie Island Research Centre (**BIRC**) was the first dedicated multi-functional aquaculture research facility to be built in Australia.

The BIRC plays a significant role in technological development and extension to the aquaculture industry in tropical and subtropical Queensland, as well as fisheries management and aquatic ecological research. Its primary activities include:

- research and development into areas of significance to Queensland aquaculture
- contract research and consultation for industry
- management of native freshwater fisheries
- encouraging development of local industries that support aquaculture
- providing information on new and existing technologies to prospective aquaculturalists.

The BIRC has strong collaborative links with the Commonwealth Scientific and Industrial Research Organisation (**CSIRO**) and several universities including James Cook University, University of the Sunshine Coast and the University of Queensland as well as a number of industry partners, such as the Australian Prawn Farmers Association.

Aerial view showing the DAF Bribie Island Research Centre © State of Queensland

The importance of building and fostering a skilled workforce to support future growth in Queensland's aquaculture industry is also acknowledged. A critical component of future growth will be ensuring the industry's workforce has the necessary skills. The Queensland Government has recognised this and provided support for the establishment of the TAFE Queensland Aquaculture Centre of Excellence.

CASE STUDY 2

TAFE Queensland Aquaculture Centre of Excellence

Officially opened on 6 November 2023, the $2 million Aquaculture Centre of Excellence (**the Centre**) at TAFE Queensland's Whitsunday campus provides specialised training in fish farming, hatchery and pond management to grow Queensland's aquaculture industry.

The Centre's aquaculture production training facilities focus on barramundi and red claw as the species of choice in the first instance, and includes a scientific laboratory and smart centre where students can record and maintain test results, so that graduates are job-ready.

TAFE Queensland also delivers training in marine technology and maintenance, aqua technology and maintenance, and associated trades including automotive, electrical, plumbing and mechanical in connection with the Centre. These trade activities are essential in training the workers that are needed to support Queensland's aquaculture industry.

The Centre has enabled TAFE Queensland to launch an "Aquaculture and Agriculture Tech Skills Hub", in partnership with the Australian Government, Greater Whitsunday Alliance, Regional Development Australia and Central Queensland University.

The Centre is part of the $100 million Equipping TAFE for our Future program, which focuses on providing Queenslanders with access to modern infrastructure to support high-quality training, particularly for priority industries like aquaculture.

Interior view of the TAFE Queensland Aquaculture Centre of Excellence © TAFE Queensland

Proposed focus areas and actions

Proposed focus areas

Our vision is that Queensland is a thriving, world-leader in sustainable aquaculture. Our state's aquaculture industry is respected for its high-quality produce, innovation and environmental stewardship.

The draft vision is reflected in the below figure, which summarises the key elements proposed to be included in the final Strategy.

Four focus areas, which frame a coordinated approach to making the most out of aquaculture in Queensland, are proposed:

- Focus area 1: Productive industry
- Focus area 2: Environmental performance
- Focus area 3: Community returns
- Focus area 4: Contemporary governance.

A range of high-level actions are proposed under these focus areas for consultation.

INSIGHTS

Do the focus areas and success statements, page 16, capture the right issues and goals?

Figure 5: Key Strategy elements

FOCUS AREA 1

Productive industry

While highly productive, aquaculture in Queensland is still a relatively young industry. There remain many opportunities to grow and enhance our state's aquaculture industry into the future, including through investing in innovation and diversification, and taking advantage of opportunities presented by increasing demand for aquaculture products.

WHAT DOES SUCCESS LOOK LIKE?

Queensland aquaculture attracts investment and continues to grow into a leading primary industry for Queensland. High-quality seafood is innovatively and sustainably produced for Queenslanders and beyond, and industry is backed by a skilled workforce.

FOCUS AREA 2

Environmental performance

Queensland's broad expanses and lengthy coastline are home to internationally significant biodiversity; our natural environment is pristine and unique.

This environment is highly important to the people of Queensland and beyond. Our state's Aboriginal peoples and Torres Strait Islander peoples have cared for this land and coast for many thousands of years. They hold ongoing cultural rights and interests in conserving and protecting the environment and productive capacity of their land, territories, waters, coastal seas, and other resources.

From an industry perspective, maintaining a healthy and well-managed natural environment is key to long-lasting productivity. Responding to challenges such as climate change, disaster preparedness and biosecurity will be a key part of Queensland's environmental performance into the future. Sustainable aquaculture practices may also need to factor in broader commitments such as the delivery of land and catchment management targets under the Reef 2050 Water Quality Improvement Plan.

WHAT DOES SUCCESS LOOK LIKE?

The value of Queensland's natural and cultural environment is protected and supports the sustainable production of seafood through aquaculture. The aquaculture industry is attuned to the state's unique natural environment, is best practice and strives for continuous improvement.

FOCUS AREA 3

Community returns

The investment of Queensland's aquaculture industry continues to benefit rural and regional communities through supporting local jobs and economies. It is through these inputs that aquaculture indirectly contributes to local wellbeing and prosperity, including through providing employment opportunities for young people in regional communities.

Aquaculture can also provide an opportunity for First Nations Queenslanders to realise their economic aspirations. By working in partnership with First Nations operators and communities, there will be a better understanding of their interests in the future of Queensland's aquaculture industry and how to strengthen their role in the industry.

A sustainable Queensland aquaculture industry supports access to fresh, quality seafood for communities throughout our state and beyond.

WHAT DOES SUCCESS LOOK LIKE?

Aquaculture industry investment continues to benefit Queensland communities through supporting local jobs and regional economies. Queensland aquaculture products are recognised as sustainable and high-quality.

FOCUS AREA 4

Contemporary governance

Queensland's aquaculture industry is governed by a robust regulatory framework which aims to ensure that we can make the most of the opportunities that aquaculture offers, whilst balancing the environmental and social values which make our state great.

WHAT DOES SUCCESS LOOK LIKE?

Queensland's regulatory framework for aquaculture is fit-for-purpose and responds to the needs of all stakeholders.

Proposed actions

The following actions are proposed for consultation to support the achievement of the focus areas and our vision for aquaculture in Queensland.

The final Strategy will include a more detailed and specific set of actions informed by consultation.

Table 1 – Proposed high-level actions

ACTION	STRATEGY ALIGNMENT
Consider the alignment and integration of initiatives under the ATP and other relevant initiatives with a new Queensland Aquaculture Strategy.	✓ Productive industry ✓ Environmental performance ✓ Community returns ✓ Contemporary governance
Investigate opportunities to grow emerging and First Nations businesses, support innovation and uptake of new technologies through a grants program.	✓ Productive industry ✓ Environmental performance
Examine the impact of Aquaculture Development Areas (**ADAs**) on Queensland's aquaculture industry.	✓ Productive industry
Investigate opportunities to support industry to achieve third-party accreditation recognising the high-quality and sustainable nature of Queensland aquaculture products.	✓ Productive industry ✓ Environmental performance ✓ Community returns
Develop a Queensland Government Aquaculture Research Plan to frame our research priorities as recommended by the Future Fisheries Taskforce. Consider ways to ensure that research planning continues to closely align with Queensland's aspirations and needs into the future.	✓ Productive industry ✓ Environmental performance ✓ Contemporary governance
Continue to undertake research and development to support innovation and acceleration in Queensland's aquaculture industry.	✓ Productive industry ✓ Environmental performance ✓ Contemporary governance
Continue to investigate opportunities to pursue innovation and cost-effectiveness in waste treatment and management for aquaculture.	✓ Productive industry ✓ Environmental performance
Further consider the recommendations of the Griffith University *Review of Nutrient Release from Aquaculture Activities – Final Report* in relation to enhancing water quality monitoring (*Tabrett et. al. 2024*).	✓ Environmental performance ✓ Productive industry
Examine the feasibility of establishing an aquaculture demonstration site to highlight research and innovation and provide training and extension opportunities.	✓ Productive industry ✓ Environmental performance ✓ Community returns
Look for further opportunities to enhance existing services to industry, such as extension services supporting the uptake of new research and technology.	✓ Productive industry ✓ Environmental performance
Enhance existing tools and develop guidance materials to support aquaculture businesses navigate different regulatory pathways.	✓ Contemporary governance ✓ Productive industry
Examine opportunities to broaden government communications to ensure that information on aquaculture in our state is accessible, understandable and transparent.	✓ Community returns ✓ Contemporary governance
Consider opportunities to better integrate existing aquaculture stakeholder engagement initiatives. Investigate opportunities for stakeholder involvement in governance and oversight of the implementation of the Strategy.	✓ Contemporary governance ✓ Productive industry

Table 1: Existing actions continued...

ACTION	STRATEGY ALIGNMENT
Engage with Queensland First Nations groups to better understand their aspirations for aquaculture and support First Nations aquaculture initiatives.	✓ Community returns ✓ Productive industry
Investigate opportunities to optimise the welfare of animals used in Queensland aquaculture.	✓ Community returns ✓ Environmetal performance ✓ Contemporary governance
Investigate opportunities to use aquaculture to improve access to fresh seafood and improve health outcomes for Queenslanders.	✓ Community returns ✓ Productive industry
Investigate ways to build capacity and support biosecurity and emergency preparedness within Queensland's aquaculture industry.	✓ Productive industry ✓ Environmental performance
Investigate workforce training and development opportunities. Identify ways to build upon existing secondary and further education initiatives to drive interest in aquaculture.	✓ Productive industry ✓ Community returns
Investigate actions for securing new and retaining existing market access for Queensland aquaculture products including through supply chain and supporting industries.	✓ Productive industry
Examine potential opportunities to showcase Queensland aquaculture.	✓ Productive industry ✓ Community returns
Ensure the success of any strategy is effectively monitored and evaluated.	✓ Contemporary governance

The final Strategy will provide a more detailed set of actions including overarching timeframes, implementation approaches and governance following the finalisation of consultation.

INSIGHTS

Do these high-level actions support the focus areas?

Are there any actions which could be added?

Are there actions that are considered critical or should be prioritised over others?

Our progress to date

The Queensland Government is committed to making the most out of Queensland's aquaculture industry into the future.

The Strategy will aim to ensure that government is working with stakeholders efficiently and effectively. Aligning our initiatives under a common strategy will help government and stakeholders better understand where Queensland is going and where opportunities exist. This also helps us to see where our strengths are, and where we can improve. A final Queensland Aquaculture Strategy will consider how existing initiatives are incorporated.

Aquaculture Transformation Program

The Aquaculture Transformation Program was initiated in 2021–22 by the Queensland Government with $1.5 million in funding. In 2022–23 a further $7.5 million was committed by government to support the transformation of Queensland aquaculture over five years. The ATP scope includes four priority areas:

- regulatory reform and guidance
- industry development
- research, development and extension
- an aquaculture incubator.

The objectives of the ATP are to investigate opportunities to streamline regulatory pathways, transfer knowledge to accelerate innovation and enable the industry to respond to change and support growth. A key outcome of the ATP is providing solutions to overcome barriers to growth with the goal of establishing a world-leading industry that is environmentally sustainable, provides fair employment in regional areas and produces healthy seafood products that are appreciated by consumers.

The ATP has secured significant successes to date and delivered positive industry impact, including:

- the establishment of oyster hatchery operations and the production of blacklip and Sydney rock oyster spat for industry grow out trials in North Queensland and Moreton Bay
- the development of breeding technologies and fingerling production of grass emperor
- husbandry and broodstock research on whiting and mullet
- development of value-added barramundi products.

Other achievements include the finalisation of a scoping study for establishment of an aquaculture incubator at the BIRC, the implementation of an aquaculture authority to streamline ongoing operational management of aquaculture facilities, successful networking with industry and other stakeholders via designated extension and industry development staff, and organisation of the Queensland Aquaculture Industry Forum to collaborate with industry.

A summary of the existing actions which comprise the ATP is included in the Appendix below.

Further consideration will need to be given to how this work will form part of a final Strategy, including how elements of the ATP should be reflected.

Existing actions

A summary of existing actions currently or previously undertaken by Queensland Government agencies which support the development of aquaculture in Queensland is included in the Appendix below.

Aquacultured black tiger prawns
© State of Queensland

Next steps

The results of public consultation will be collated and used to inform final actions under the Queensland Aquaculture Strategy 2024–2034, agencies responsible for implementation and timeframes. The final Strategy will also outline ongoing governance mechanisms for implementation, how actions under the Strategy will be monitored and reviewed, as well as how ongoing engagement with industry and stakeholders will be maintained over the course of the Strategy.

The primary agencies which will be involved in delivering a final Strategy include:

- Department of Agriculture and Fisheries
- Department of Environment, Science and Innovation (**DESI**)
- Department of Treaty, Aboriginal and Torres Strait Islander Partnerships, Communities and the Arts
- Department of Housing, Local Government, Planning and Public Works
- Department of State Development and Infrastructure
- Department of Employment, Small Business and Training
- Department of the Premier and Cabinet.

As lead agencies, it is proposed that DAF and DESI will chair a cross-agency inter-departmental committee to oversee implementation of the Strategy.

INSIGHTS

How would you prefer to hear about the progress of the Strategy?

What should form part of monitoring and evaluation for the Strategy?

A plate of prepared Condabilla produce
© Condabilla Fish Farm, Chinchilla

Consultation to date

DAF hosted an aquaculture industry forum in October 2023, which brought together stakeholders from industry, regulators, academia and non-government organisations. A consultant was engaged to facilitate the forum and prepare an outcomes report. It identified six themes:

- supporting industry through coordinated planning and delivery of critical infrastructure
- simplifying and streamlining regulatory frameworks
- supporting environmental, social and corporate governance
- supporting growth of the 'ocean economy'
- promoting aquaculture awareness and literacy
- building capacity and capability by investing in skills and training.

In August 2023, DESI established an aquaculture working group, aimed at those operating under an environmental authority under the *Environmental Protection Act 1994*. The objective of the working group is to provide for regular engagement between DESI, other relevant state government agencies, universities and the aquaculture industry to work through day-to-day operational and regulatory matters as well as responding to a set of identified challenges.

This working group convened a one-day workshop on 15 November 2023 with the aim of identifying key priorities for the working group. Three key issues for industry were identified to explore further through sub-working groups:

- technology review (regarding nutrient treatment/retention)
- pivoting between species (e.g. examine regulatory process to transition between species)
- nutrient offsetting.

These DESI facilitated sub-working groups continue to meet to discuss possible options to address these challenges. The final Strategy will look at ways that this engagement mechanism can be formalised and brought within the scope of the Strategy.

Appendix

Table 2: Existing ATP actions

ATP ACTION	STRATEGY ALIGNMENT	DUE FOR COMPLETION
Developed a user-friendly survey platform for annual production returns by aquaculture operators.	✓ Contemporary governance ✓ Productive industry	completed
Identification of marine and land-based areas suitable for aquaculture development as ADAs. Further work will be subject to consultation with key agencies.	✓ Productive industry	mid-2025
Legislative amendments to streamline planning and fisheries legislation through introducing an aquaculture authority for new developments.	✓ Productive industry ✓ Contemporary governance	early-2025
Established an internal DAF aquaculture network for information-sharing.	✓ Contemporary governance	ongoing
Established the Principal Agribusiness Development Officer (Aquaculture), to identify and promote aquaculture development opportunities and provide guidance to potential investors.	✓ Productive industry	mid-2027
Establishment of the Queensland Aquaculture Industry Forum for industry engagement and collaboration to identify industry priorities.	✓ Productive industry ✓ Contemporary governance	mid-2027
Research project to develop industry-ready methodologies to breed and grow diverse, new finfish species for aquaculture.	✓ Productive industry ✓ Environmental performance	mid-2027
'Digital aquaculture' project to deliver automation systems based on existing technologies and off the shelf components that are relatively affordable and readily available.	✓ Productive industry	mid-2027
Research project and semi-commercial scale production of oyster larvae and spat, including development of industry-ready methodologies to breed and grow tropical oyster species.	✓ Productive industry	mid-2027
'Pond health' research project which takes a whole-of-farm approach to optimising farm biosecurity, system health and productivity. Effective uptake is supported through regular engagement and extension activities.	✓ Productive industry ✓ Environmental performance	mid-2027
'Deadly aquaculture' initiative in which government scientists provide expertise and on-ground extension services to First Nations aquaculture proponents.	✓ Productive industry ✓ Environmental performance ✓ Community returns	mid-2027
Establishment of new role tasked with converting several ATP and other projects into large programs of work and working with industry on key issues and technologies.	✓ Productive industry ✓ Environmental performance ✓ Community returns	mid-2027
Development of diversified and value-added products to increase the opportunities for and grow the value of barramundi farming in north Queensland.	✓ Productive industry ✓ Community returns	mid-2027
Establishment of an aquaculture incubator at the BIRC to test innovative ideas without the need to set up a small operation at pilot scale.	✓ Productive industry ✓ Environmental performance	mid-2027
Project to trial wave suppression infrastructure in oyster areas in Moreton Bay and review regulatory and policy frameworks to allow for this infrastructure.	✓ Productive industry ✓ Contemporary governance	mid-2025

Table 3: Existing agency actions

DEPARTMENT OF AGRICULTURE AND FISHERIES		
ACTION	**STRATEGY ALIGNMENT**	**DUE FOR COMPLETION**
Project to develop hatchery standards for fish stocking in Queensland to improve risk management around fingerling quality, genetic integrity and biosecurity.	✓ Productive industry ✓ Environmental performance ✓ Community returns	end-2024
Review of existing broodstock policy, which outlines management arrangements for the collection of broodstock from wild fisheries to be used for aquaculture.	✓ Productive industry ✓ Environmental performance	mid-2025
Review of oyster management plan for Moreton Bay Marine Park to reflect changes to infrastructure and technology used in the oyster industry.	✓ Productive industry ✓ Environmental performance	end-2025
Allocation of oyster areas in Moreton Bay which have been surrendered or cancelled through an expression of interest.	✓ Productive industry	mid-2025
Research, development and extension project to improve the viability of the Sydney rock oyster sector, and initiate commercialisation of new tropical rock oyster varieties for expansion beyond South-East Queensland.	✓ Productive industry ✓ Community returns	mid-2026
Research project to evaluate the efficacy, practicality and cost-effectiveness of existing methods and emerging techniques for controlling over-catch of oyster spat under commercial production settings.	✓ Productive industry ✓ Environmental performance	mid-2025
Research project investigating pond microalgae bloom management for healthy prawns and productive ponds.	✓ Productive industry ✓ Environmental performance	completed
Research project investigating the efficacy of trichlorfon water disinfection for influent water biosecurity on prawn grow-out farms.	✓ Productive industry ✓ Environmental performance	completed
Research project to preliminarily evaluate electro-stunning technology for farmed barramundi.	✓ Productive industry ✓ Environmental performance	completed
Project to develop policy and support for the aquaculture industry to better understand the demand curve of customer preferences for seafood to position Queensland aquaculture initiatives.	✓ Productive industry ✓ Community returns	mid-2024
Project developing a profile on all relevant technology applications for the removal of nutrients and validation for adoption of at least one piece of technology.	✓ Productive industry ✓ Environmental performance	completed
Research project investigating controlling the composition of microalgae blooms on pond-based aquaculture farms and reducing the total nutrient concentration in farm discharge water.	✓ Productive industry ✓ Environmental performance	2026

Table 3: Existing actions continued...

DEPARTMENT OF ENVIRONMENT, SCIENCE AND INNOVATION		
ACTION	**STRATEGY ALIGNMENT**	**DUE FOR COMPLETION**
Establishment of a working group to identify industry concerns relating to matters regulated by DESI.	✓ Productive industry ✓ Environmental performance	ongoing
Research project to monitor the water quality of receiving environments in ADAs.	✓ Productive industry ✓ Environmental performance	completed
Review of aquaculture industry's water quality management practices.	✓ Productive industry ✓ Environmental performance	mid-2026
Reef catchments science partnerships.	✓ Productive industry ✓ Environmental performance	ongoing
Project applying innovative approaches to develop a functional equivalency of nutrients from catchment versus point sources, with a focus on aquaculture and sewage treatment plants.	✓ Productive industry ✓ Environmental performance	March 2024
Queensland Water Modelling Network modelling related to water quality offsetting – a modelling framework for nutrient offsets.	✓ Productive industry ✓ Environmental performance	mid-2024

Glossary

TERM	DEFINITION
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences
ADAs	Aquaculture Development Areas
ATP	Aquaculture Transformation Program
BIRC	Bribie Island Research Centre
the Centre	Aquaculture Centre of Excellence
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAF	Department of Agriculture and Fisheries
DESI	Department of Environment, Science and Innovation
OECD	Organisation for Economic Co-operation and Development
the Reef	Great Barrier Reef
the Strategy	Queensland Aquaculture Strategy 2024–2034
the Taskforce	Future Fisheries Taskforce
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFAO	United Nations Food and Agriculture Organization

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