

The perfect environment for an innovative and successful aquaculture industry

Aquaculture is among the fastest-growing food production sectors in the world and is expected to become an increasingly important source of the global fish supply.

Tasmania is internationally recognised for its top quality aquaculture and wild fisheries products. Species that are commercially farmed in Tasmania include abalone, Atlantic salmon, blue mussels, ocean trout, Pacific oysters and seahorses. Wild fisheries include abalone, rock lobster, scallops, giant crab, scalefish, shellfish, seaweed, bull kelp and undaria.

With 3 200 km of unpolluted coastline, aquaculture production comes naturally to Tasmania. The cool and pristine Southern Ocean waters that surround the state provide ideal temperatures and one of the world's healthiest environments for the raising of premium aquaculture products.

The Tasmanian seafood sector is the most valuable seafood industry in Australia. Annually, the total gross catch is worth over \$946.9 million (2016-17) and the total processed and packed value is worth over \$1 231 million (2016-17)¹.

1. Tasmanian Seafood Industry ScoreCard 2016-17, DPIPW



The Tasmanian Government recognises that the development of the salmonid industry is important to the economic future of the state. The Tasmanian Government continues to work with industry to pursue sustainable growth opportunities, particularly the development of farming areas and supporting infrastructure and encouraging research, development and extension.

Aquaculture, principally salmonids and edible oysters, accounts for approximately 75 per cent of the value of Tasmanian seafood. Wild capture fisheries account for the remaining 25 per cent of production, with the most valuable being abalone, rock lobster and crab. Tasmania has the world's largest sustainable wild abalone fishery, accounting for around 25 per cent of the annual global yield.

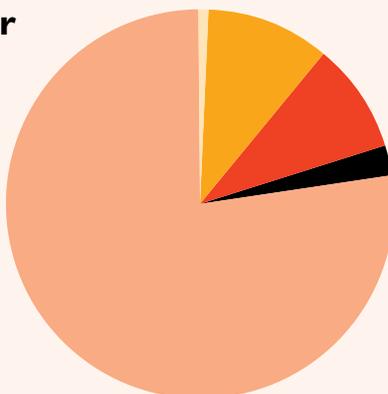
Salmonid (salmon and trout) aquaculture is Australia's highest-value seafood product and Tasmania has the largest marine salmon-farming area in Australia. Producing 63 000 tonnes annually, farmed salmonids have become the leading farming activity in Tasmania. Leading businesses in the industry have vertically integrated production and processing systems, increasing their efficiency and ensuring control and quality of the product.



The Tasmanian seafood sector

Annual Gross Catch (\$m)

Atlantic Salmon	\$739
Other*	\$8
Rock Lobster and Crab	\$85
Abalone	\$87
Oysters	\$26



*Other includes scallops, octopus, squid, mussels and other marine fish.

Source: Tasmanian Seafood Industry ScoreCard 2016-17 – Department of Primary Industries, Parks, Water and Environment

Why choose Tasmania?

Stable, flexible and innovative workforce

Tasmania provides a committed, highly skilled workforce capable of creating first-class aquaculture products. The Tasmanian workforce is regarded as highly adaptable to demand, with a rich culture of creativity and innovation. The workforce is stable, with Tasmania having the second highest staff retention rates and lowest industrial disputation rates in Australia.

This is underpinned by an education and training system which collaborates with industry to ensure that training needs are met. Seafood Training Tasmania, established by the Tasmanian seafood industry, is the main industry training organisation in the state.

Key markets

The Australian market consumes the majority of Tasmania's farmed Atlantic salmon and Pacific oysters, while South-East Asia, principally China, is the key market for product from Tasmania's prominent wild-capture fisheries. Tasmania is the only state in Australia capable of supplying sea-run ocean trout 12 months of the year.

Accessibility

In most instances Tasmanian aquaculture operations will be located less than 100 kilometres from plant to port, providing fast access to distribution channels. Air-freighted produce can arrive at interstate and overseas markets within 48 hours of dispatch and there are frequent freight shipping services from Tasmania's major ports.

Brand advantage

Consumers, especially those buying higher-value products, are increasingly focused on quality, provenance, environmental sustainability and ethical production practices. The Tasmanian industry is continuing to meet and exceed standards relating to the environment and ethical and humane treatment of fish, with Tasmanian companies continuing to become accredited to best practice standards. Tasmania is well regarded for its ability to provide high-quality products that meet all of these consumer requirements.

Disease freedom

Tasmania's geographic isolation, quarantine and biosecurity measures mean the island is relatively free from diseases and pests commonly affecting aquaculture production elsewhere.

High environmental compliance and a strong legislative framework allow for world-leading food safety, animal health and animal welfare standards which provide a significant market benefit. For example, Tasmania is one of only two states in Australia that exports live oysters to Japan.

Innovation

The Tasmanian aquaculture industry is highly innovative. It utilises modern technology and processing systems combined with the best growing and handling conditions to achieve premium products. Tasmania has world-class handling methods, sophisticated quality-assurance and transport systems, and excellent research support. Tasmania also provides a premium location for product development and testing. Continued industry expansion relies on research that fosters the development of quality products from healthy, genetically superior animals raised on efficient, sustainable feeds.

Strong marine and maritime industry base

Tasmania's aquaculture industry has proven capabilities across a number of technical areas. The industry is renowned for using sustainable farming systems, innovative operational systems and advanced processing facilities. Many innovative supporting activities have either been developed or set up in Tasmania to help grow the industry.

Tasmania is home to a variety of innovative products:

Advanced manufacturing

- » Australia's largest producer and supplier of plastic sea-cages, purpose built to prevailing weather conditions, currents, water depths and seabed characteristics
- » Mooring systems and solutions
- » Cage and predator net design, construction and deployment
- » Revolutionary net vacuum cleaning systems
- » Mort collection systems
- » Polyethylene workboats
- » Purpose built feeding vessels and barges that carry the most feed volumes and have the most feed points of their kind in Australia
- » Farm boundary marking and solutions with optional solar powered lighting
- » The world's largest live fish pump with a purpose-built grader and electronic counter
- » Underwater lighting systems



- » Plastic welding services including manufacturing, fabrication and repair capabilities to the aquaculture and industrial and agricultural irrigation sectors
- » Ground-breaking fish packaging
- » Seal exclusion technology, including world first seal-proof cages
- » World leading fish feed producers.

Software

- » World leading software for aquaculture producers to construct detailed, comprehensive, accurate, financially optimised and real-world plans about all significant aspects of their business
- » World leading supplier sensor based feeding control technology
- » State-of-the art feed monitoring systems that use real-time technology, such as underwater cameras, to measure uneaten feed and adjust feed delivery to the appetite of the salmon.

Logistics

- » Purpose design and built harvest fish transportation trailers
- » Purpose design and built live fish trailer sets to transport live fish from spawning ponds to farms.

Research and development capabilities

Tasmania is home to a vibrant and internationally respected science and research community.

Aquaculture has an exceptional reputation for strong and productive research and development partnerships between industry, university and government. The following is a list of the main research entities associated with aquaculture in Tasmania.

The University of Tasmania (UTAS)

The Institute of Marine and Antarctic Studies (IMAS) at UTAS is recognised for carrying out world-class research. Its aquaculture program is a leader in the development of alternative species for temperate aquaculture while also meeting the needs of established aquaculture industries. With over 20 scientists and technicians the program has a large portfolio of projects operating at a local, national and international level.

The institute itself has received large infrastructure investments in recent years and has continued to grow in size and reputation since its establishment.

The Experimental Aquaculture Facility representing a partnership between industry, the University and Government is the first of its kind in the Southern Hemisphere. It is a controlled environment in which to undertake directed, commercially relevant research that is fundamental to ensure the economic sustainability of the global aquaculture industry. Primary species to be investigated are rock lobsters, marine finfish, oysters, seahorses, prawns, barramundi and Atlantic salmon.

The Australian Maritime College (AMC) at UTAS is Australia's national centre for maritime education, training and research. Industry-partnered research at AMC includes projects such as ocean renewable energy, aquatic fish health and the design of energy-efficient fishing technology.

Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Through its Marine and Atmospheric Research Division (CMAR) CSIRO's aim is to advance Australian climate, marine, and earth systems science. The division's headquarters are located in Hobart, Tasmania.

In the aquaculture field CMAR investigate genetics, nutrition and production. The research is undertaken with commercial partners and fosters the development of quality products from healthy, genetically-superior animals raised on efficient, sustainable feeds. There is a specific focus on Atlantic salmon, Pacific oysters, abalone, barramundi and prawns.

Fisheries Research and Development Corporation

This is a co-funded partnership between its two stakeholders, the Australian Government and the fishing industry. Its role is to plan and invest in fisheries research, development and extension activities in Australia.

Sense-T

Sense-T was a first mover in the internet of things and big data in Tasmania. It is using data sensing technologies and data analytics to help see alignments and opportunities, to improve decision making and create real impact.

Sense-T is helping farmers improve yields, helping the wine industry better understand disease, transforming Tasmanian food value chains and helping the salmon industry improve environmental practices. It is also tracking tourist's movements that provide industry insights and enhance visitor experience.

Based at the University of Tasmania, Sense-T is a partnership between the University, CSIRO and the Tasmanian Government, and is also funded by the Australian Government.



Explore the opportunities and your future potential in Tasmania

The Office of the Coordinator-General is the Tasmanian Government's investment promotion and facilitation arm, it provides free confidential services and professional advice to investors, including:

- » dedicated project teams and case management
- » a focus on lead projects that have the potential to transform a supply chain or that leverage Tasmania's advantages and resource endowments
- » planning pre-audits to support approval processes.

The Office of the Coordinator-General's specialist team will provide you with tailored assistance by providing information and support, which includes:

- » connections with local industry associations and government departments
- » information on business opportunities, investment regulations and government assistance
- » insights on business costs, skills availability, taxation and research opportunities
- » expert advice in Tasmania's industry capabilities and strengths
- » site visits to identify suitable locations in Tasmania for your business
- » links with potential partners
- » connections with infrastructure and service providers
- » information on industry strategies.

Current investment opportunities

As Australia's largest producer of seafood, it is critical that investment continues, ensuring the Tasmanian industry remains strong and viable into the future.

The state's ability to leverage direct access to research and innovative capabilities places it in an extremely strong position.

Opportunities for investment exist in:

- » farming innovation
- » value-adding and downstream processing operations
- » aquaculture production, particularly in new species
- » operations.

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