



Department of
Primary Industries and
Regional Development

*We're working for
Western Australia.*

Western Australian aquaculture industry snapshot

A summary of the Western Australian Aquaculture Industry –
Overview for potential investors and other stakeholders



There are different types of investors

All are needed and welcome in the Western Australian aquaculture industry

Important notice: The recent COVID-19 pandemic has affected the community and aspects of the global economy. Disruptions to supply chains, air freight and other business activities are acknowledged. Collaborative efforts by governments, industries and communities will chart the way forward knowing global demand for food and the supply of the many products from Western Australia's primary industries will continue. The information presented in this Industry Snapshot as at February 2020 serves as a reference point for continued industry innovation and growth.



'Regional Champions' constantly invest across the supply chain in production, research and development, processing, logistics, sales and marketing.



Innovative and emerging Western Australian aquaculture companies drive innovation, new product development, production expansions and marketing.



Multi-region operators (global and Australian based headquarters) constantly invest in Western Australian aquaculture across the supply chain.



Industry bodies and research organisations all invest in the Western Australian aquaculture sector, providing scientific support and innovative solutions across the whole value chain, from tank to plate.



State and Federal Government – across multiple agencies and departments – invest heavily in the industry through research, grants, education and support.



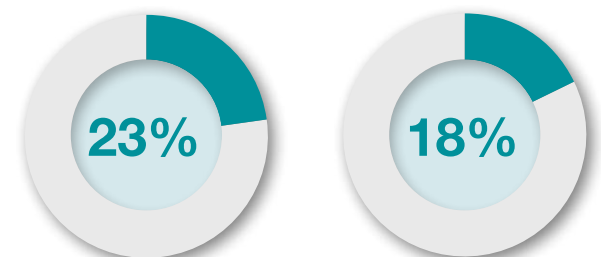
Twenty year growth rate of seafood import volume

CAGR; tonnes; import volume



China

South Korea

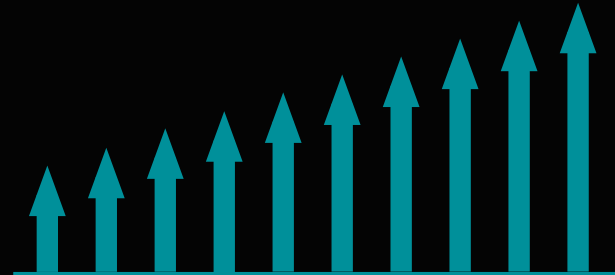


Vietnam

UAE

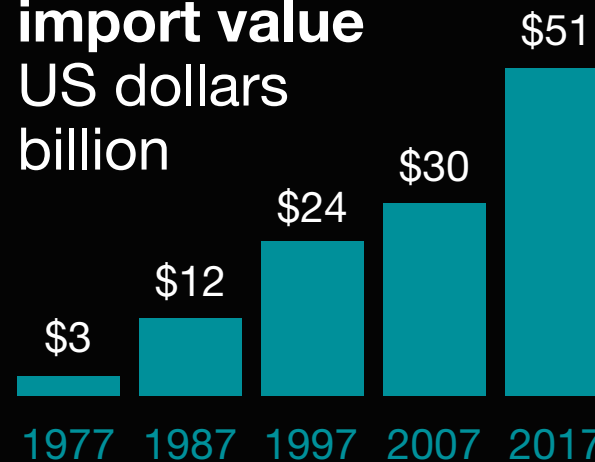
CAGR = Compound annual growth rate
 Source: UN FAO FishStat, Project analysis
 UAE = United Arab Emirates

Growing seafood demand from Asia and the Middle East



US \$21 billion growth in demand over the last decade

Total seafood import value US dollars billion



Markets include: China, Indonesia, the Middle East, all other Asia and North Africa

Western Australia is well positioned to deliver



Shipping times and time zones from Perth



Western Australia is the closest, most accessible Western region to Asia; it is in the same, or adjacent, time zone as Beijing, Manila, Hong Kong, Tokyo, Singapore, Kuala Lumpur and other regional centres.



Flights from Perth

Western Australia has regular flights out of Perth to Asia and the Middle East and global destinations. In addition, the Busselton Margaret River Airport (225 km south west of Perth) has completed a runway upgrade, providing an international alternative for the South West.



As at April 2020, the COVID-19 pandemic has reduced air freight carried on passenger aircraft due to fewer flights. Until resumption of regular flights, chartered air-freighters will serve export supply chains.



“The trial flights out of Broome, plus the flights from Port Hedland and Karratha are good for regional aquaculture.”

CEO, Aquaculture Company



Excellent trade access

“Australia has excellent trade access with low to no tariffs with many regional partners.”

CEO, Diversified Agrifood Company

FTAs = Free trade agreements

As at 21 February 2020

Source: Department of Foreign Affairs and Trade

Western Australia is well positioned to supply South East and East Asia with fresh, high quality products consistently



Fresh and pristine

“Firms are able to source fresh seafood from the pristine environment of Western Australia.”

Executive, Seafood Exporter

Consistent quality

“Western Australia has a good reputation as a reliable supplier, with good product performance and a stable supply.”

General Manager, Exporter

Conducive

“Western Australia has a regulatory environment conducive to aquaculture. Government is very supportive.”

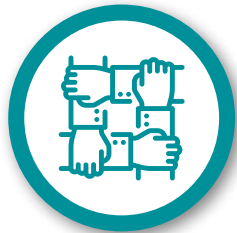
General Manager, Exporter

Western Australia can produce more



Resources

- Extensive coastline and land areas for aquaculture
- Opportunities for productivity increases
- Small local population to feed (2.6 million people)
- Well managed fisheries, water and environmental regulation



Skills and systems

- Educated population
- Modern aquaculture systems
- High productivity
- Strong capacity in training
- Well organised industry
- Advanced traceability and food safety systems



Reputation

- Premium, traceable and sustainable
- Brand Western Australia
- Clean and green
- Strict biosecurity standards – low level of disease in aquaculture systems
- High levels of food safety
- Modern handling and processing facilities

Comparative advantages

Close to key markets

- Capable producer with a history of production for export to Asia and beyond
- Western Australia is well positioned to supply fresh and processed seafood into Asia

Experienced industry

- Developing an experienced industry in aquaculture
- Modern deepsea technologies and know-how
- Ongoing research, development and investment in genetics and productivity increases
- High technical and scientific knowledge
- Well organised industry

Environment conducive

- Vast areas of fresh, clean, pristine coastlines and oceans
- Abundant areas with lease space for aquaculture
- Open waters available for development
- High levels of biosecurity due to isolation
- Vast range of temperature states and environments for a range of species

Strong political support

- Aquaculture Development Zones
- ASC funding available for certification
- Strong sustainability and animal welfare credentials
- Trusted and traceable systems and processes
- Political and economic stability
- Political will and support from State Government
- Commonwealth funding support via Fisheries Research and Development Corporation

ASC = Aquaculture Stewardship Council

What do we have?

Western Australian aquaculture produces multiple species



Pearls



Abalone



Marron



Blue Mussel



Barramundi



Yellowtail Kingfish



Yabby



Rock Oyster



Silver Perch

Image source: <https://www.daf.qld.gov.au>

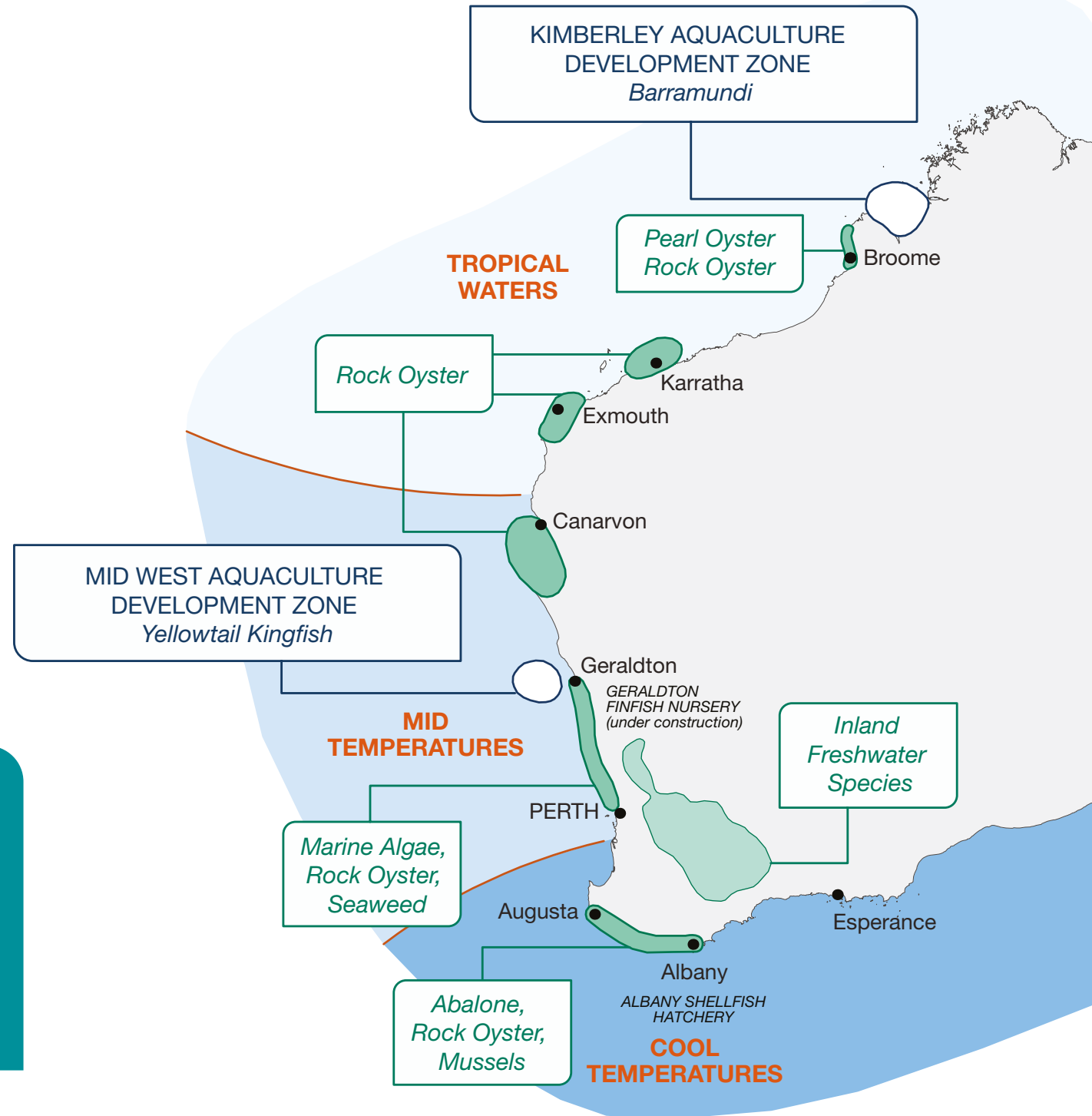


Numerous others

Western Australia's aquaculture industry is spread along the coast

“WA has a huge coastline with so much potential. The time to invest is now. The biggest opportunity is for scale production.”

General Manager, Seafood Company



Western Australia's aquaculture production is increasing

5.9 %
10yr CAGR



Aquaculture production
2007-2017

4.3 %
10yr CAGR



Revenue per firm
2007-2017

Western Australia's aquaculture productivity is increasing

14 %
10yr CAGR



Tonnes per firm
2007-2017

0.8 %
10yr CAGR

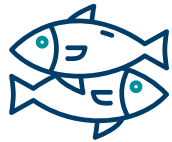


Tonnes per employee
2007-2017

*CAGR = Compound annual growth rate
Source: ABARES, ABS, Project analysis*

Export focused aquaculture

Growth potential



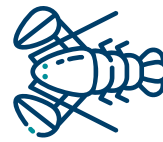
Finfish

- Attracting significant investment
- Waves of new entrants driving innovation
- Clear local capability to deliver on trusted supply



Shellfish

- Attracting significant investment
- Suitable coast for development
- Wide range of premium producers
- Future growth focused on export markets



Marron / other fresh

- Low capital cost
- Close to South East Asia for transportation
- Demand in Asia



Other

- Growing demand from Asia and Middle East
- Clear local capability to deliver on trusted supply
- Investment in planning and projects underway

Key export



Pearls

- Long history and brand awareness
- High quality
- Low cost, low intensity system

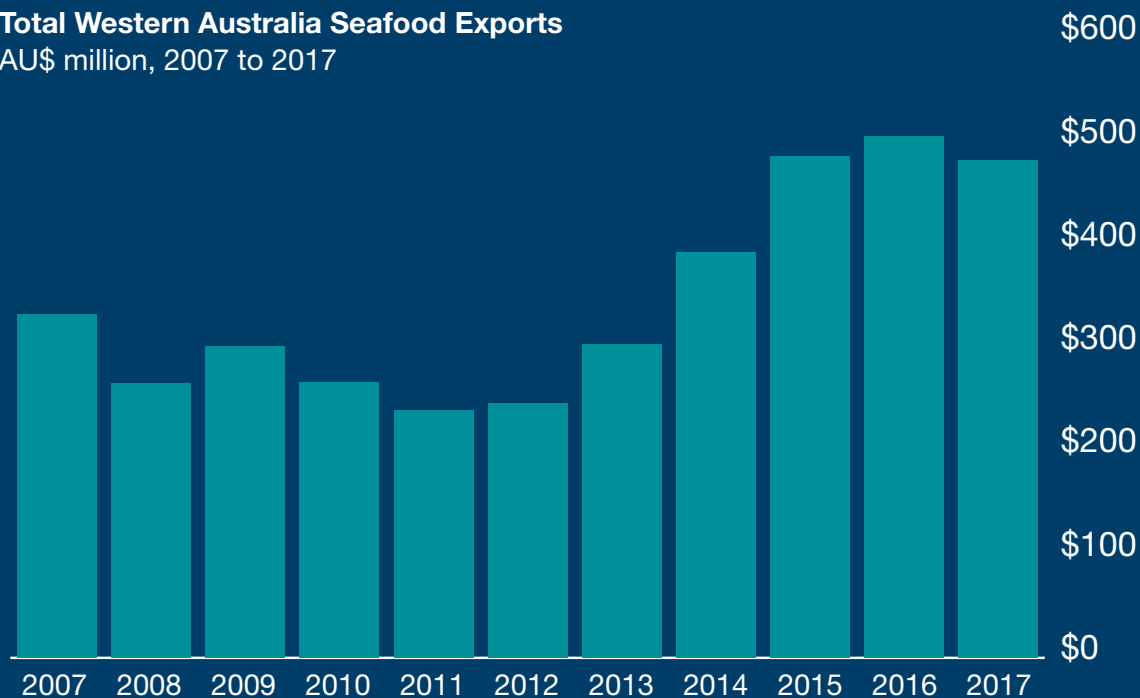
Western Australian seafood exports are growing

14%
5yr CAGR



CAGR = Compound annual growth rate

Total Western Australia Seafood Exports
AU\$ million, 2007 to 2017



Note: No aquaculture breakout available; excludes pearls; Source: ABS, Project analysis



3 different production systems

Land-based aquaculture

- Mainly engaged in farming crustaceans or molluscs and shellfish in tanks or ponds onshore
- Recirculating systems (freshwater and marine)
- Many Wheatbelt farmers (yabby, marron)
- Animals live freely in farm dams
- Low cost, low intensity systems
- Algae ponds
- Spat and juveniles hatched onshore

Marine longline, rack and other

- Aquaculture mainly engaged in offshore farming of molluscs and seaweed using longlines (rope) or racks
- Mussel farming on longlines
- Oyster farming on racks and longlines
- Abalone artificial reefs
- Pearling longlines, pearl seeding, state of the art vessels and labs

Marine cages

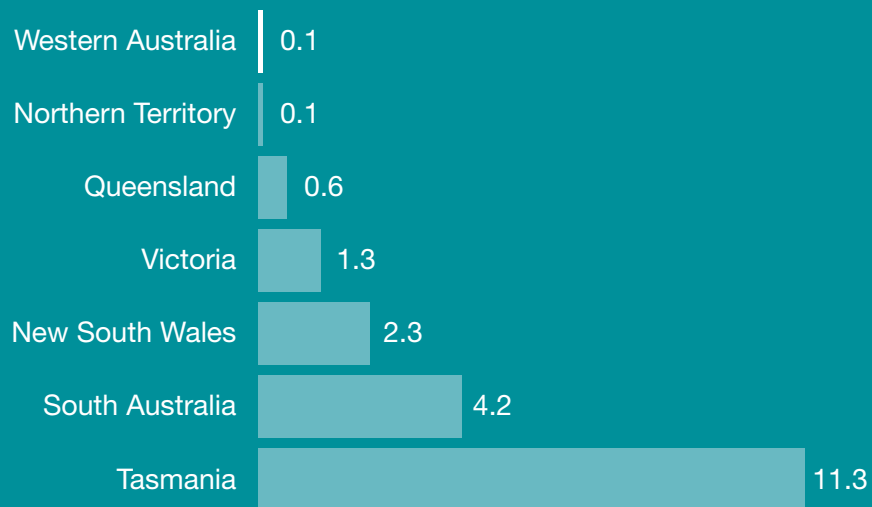
- Operations mainly engaged in offshore farming of finfish using cages
- Fish growout in cages
- Use modern deep sea technology
- Primarily targeted at export market
- Opportunity for large scale production
- Leverages feed availability
- Suitable ocean currents

Western Australia's coast is underutilised versus other states

Western Australia utilises a **small amount of coastal area** for aquaculture and produces on **smaller production units** than competitor states

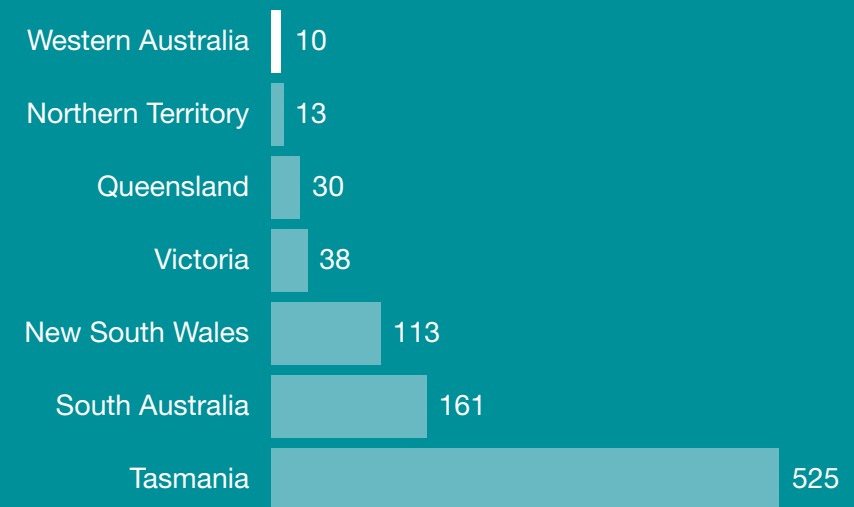
Coastal Utilisation

Aquaculture tonnes produced per kilometre, 2017



Smaller Production Units

Tonnes per firm, 2017





There will be **solid demand** for aquaculture in the future

“It is clear that aquaculture will continue to fill the growing supply-demand gap in the face of rapidly expanding global fish demand and relatively stable capture fisheries.”

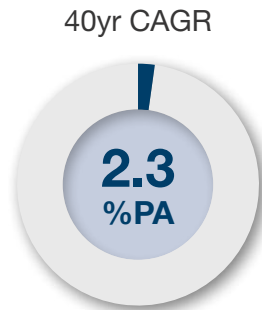
World Bank Fish to 2030, 2013

“Aquaculture continues to increase its contribution to the world’s seafood supply, growing at a steady rate of about 4.5 per cent... Consumers typically increase their spending on animal proteins such as seafood at the expense of other food categories as their income increases, and the generation of this extra demand has pushed prices upwards even as total supply continues to rise.”

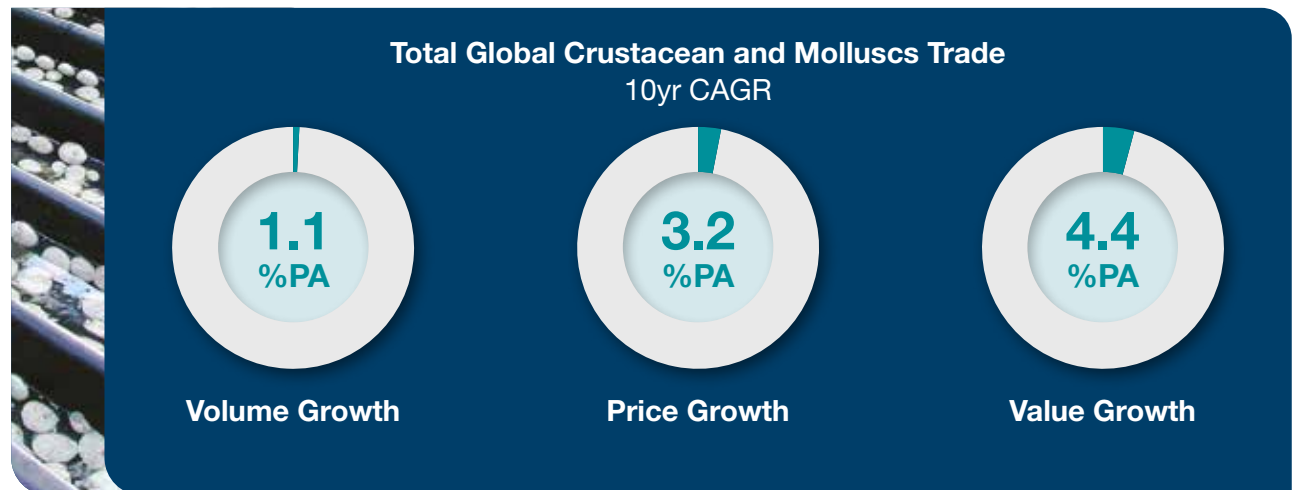
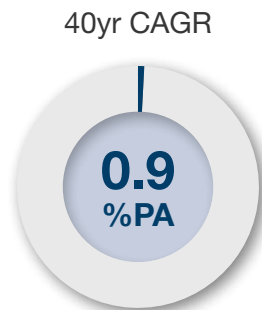
UN Food & Agricultural Organisation, March 2018

High level macro drivers support **solid export demand** for seafood products

Aggregate Global Seafood Production Growth



Seafood Consumption Growth per Person



Attracting global investment

barramundi
A S I A

Leading global barramundi
farming company



Japanese global seafood
and food company

Investment is occurring



**2018-
onward**

Pilbara Rock Oyster Research and Development Project - trialling rock oyster production in north west of WA (Pilbara and Kimberley) with JV partners.



2019

Invested in juvenile production and planning for investment in expansion.



**2016-
onward**

Project Sea Dragon is a large scale \$1.5 billion prawn aquaculture development across Northern Australia (planning and construction phase). Includes brood stock in Exmouth and planned processing facility in Kununurra.



**2008-
2018**

Invested \$100 million in Cone Bay in long term lease, boats, cages to develop barramundi industry. Planning underway to increase scale to 30 000 tonnes per year within 10 years for domestic and export markets. Involves multiple sea sites, land based brood stock nursery sites and packaging and processing.



2018

Owned by Minderoo Foundation

- Investing in rock oysters trials around Shark Bay.
- Acquired Blue Lagoon Mussels and leases in Cockburn Sound.
- Acquired Great Southern Shellfish oyster farming business and leases in Albany.
- Acquired Ocean Foods International oyster sites in Albany in 2020.



**2016-
onward**

JV with Ocean King Fishing securing lease of 596 hectares in Wylie Bay. Sea ranching on artificial reef in Augusta. Invested in new processing facility in Augusta.



2019

Raised \$3 million in 2019, plan for land-based hatchery and grow out facility. Esperance agreement for 34 hectares for tanks for green-lip abalone. Plans for 500 tonnes per year by end 2023.



**2016-
onward**

Significant investment in establishing yellowtail kingfish at Champion Bay near Geraldton; an associated company has a licence for an 800 hectares area in the Mid West Aquaculture Zone, allowing for production of 12 000 tonnes per year.



2018

Lease to farm yellowtail kingfish in Mid West, Aquaculture Development Zone WA after trials in NSW; 2 200 hectares site capacity for 24 000 tonnes per year (in progress).



**2016-
2019**

Western Australia Government has invested in building and operating the:

- Albany Shellfish Hatchery (\$2.3 million)
- Geraldton Ocean Finfish Nursery (in progress, \$7 million)
- Developed the Kimberley and Mid West Aquaculture Development zones, invested up to \$3 million.

The Western Australian aquaculture sector has a strong group of thriving companies

Finfish	Shellfish	Freshwater	Pearls
			

Returns across the supply chain

Australia's **high performing sectors** are showing **strong returns** across the supply chain

Aquaculture Operations

9%

Profit Margin, 2020

Seafood Wholesaling

3.4%

Profit Margin, 2019

“Once the business is established we would make on average 10-20% return on capital.”

CEO, Aquaculture Firm,
Western Australia

Note: Industry averages, excludes pearling
Source: IBISWorld, Company annual reports, Project analysis

Four investment themes

Four investment themes exist to create growth in the Western Australian aquaculture industry

Investing in **feed supply**

Opportunities exist to construct aquaculture feed production operations leveraging local resources

1

Investing in **value chain efficiencies**

Opportunities exist to streamline and optimise Western Australian aquaculture value chains to market (e.g. packaging, technology, co-shared facilities)

2

Investing in **new and innovative products**

Opportunities exist to continue to develop new product species and production systems tailored to local conditions

3

Investing in **growing production**

Opportunities exist to produce significantly more aquaculture in the new dedicated zones

4

Value propositions exist that promote **opportunities for investment**



Co-investing with existing organisations

- Opportunity to co-invest with existing leasees
- Opportunity to match skills to develop a successful finfish sector



Developing seaweed and macro-algae

- Opportunity to utilise macroalgae for nutraceuticals, bioactive compounds, functional foods, pharmaceuticals, agar
- Strong provenance story
- Existing small scale trials
- Carbon sequestering



Increasing kingfish production

- Yellowtail kingfish high value fishery
- Opportunity for regional diversification
- Growing demand for aquaculture

The Department of Primary Industries and Regional Development is ready to assist you

For further information please contact:

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w agric.wa.gov.au/agribusiness-food-trade

The Department of Primary Industries and Regional Development commissioned Coriolis Australia Pty Ltd to provide the information in this publication in consultation with selected industry stakeholders.

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