Economic Development, Jobs, Transport and Resources

Victorian Aquaculture Strategy 2016-2021

Final Draft 1 for Comment: Working Paper Only

11 July 2016

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Image: Jade Tiger abalone farm, Indented Head

Introduction

This Aquaculture Strategy has been developed by the Department of Economic Development, Jobs, Transport and Resources in conjunction with the Victorian aquaculture industry.

The vision for this strategy is:

A productive, growing and sustainable local aquaculture industry valued by the community

The high level outcomes of this strategy are:

- Productive aquaculture farms using sustainable practices
- High quality seafood for Victorians and export
- Aquaculture is supported and valued by the community
- An efficient regulatory environment that supports business

Foreword (to be finalised upon approval)

As wild fisheries stocks approach the limits of sustainable seafood supply, the aquaculture industry is playing an increasingly important role in meeting the global demand for seafood products.

The Victorian Government is growing marine aquaculture opportunities through the development of a safe harbour at Portarlington and making available offshore sites within the Pinnace Channel Aquaculture Fisheries Reserve. This development will drive social and economic benefits for Victoria's regional communities.

This draft strategy builds on current policy commitments and provides a blueprint to guide public and private sector investment for the industry.

The release of this draft strategy provides an opportunity for stakeholder feedback on the proposed measures to address key issues facing industry development.

I encourage all relevant stakeholders to read this document and provide written comment to the Department of Economic Development, Jobs, Transport and Resources by 15 August 2016.

Background

The world's population is growing faster than the supply of fish. According to the Food and Agriculture Organisation (FAO) of the United Nations, most of the world's fisheries are either fully exploited or over-exploited and consequently further increases in global consumption of seafood will be met by aquaculture. In 2013, aquaculture provided 43.1% of the global seafood consumed (FAO, 2016). This figure increased from 30.6% in 2003 (FAO, 2016). These macro level trends are important as a significant percentage of Victorian aquaculture products are exported. The chart below compares the value of Victorian aquaculture with the state's wild catch fisheries.

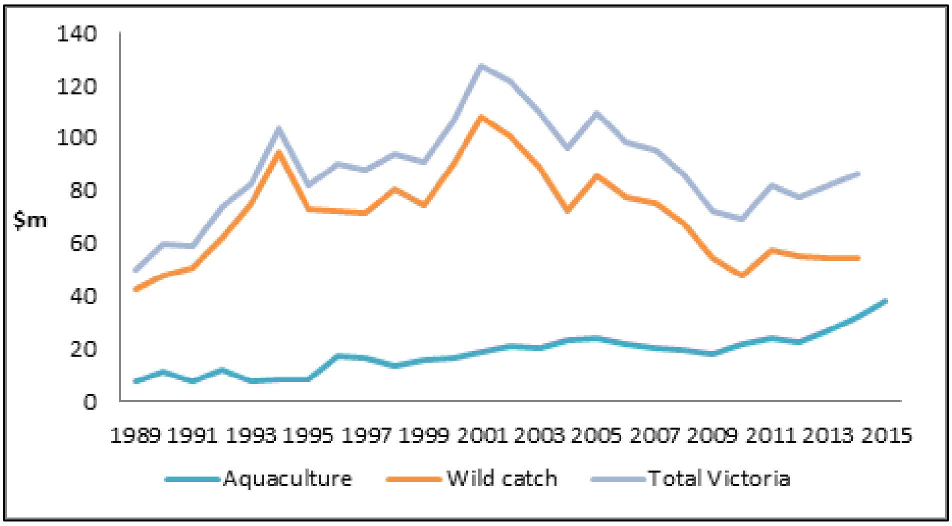

Figure 1: Comparison of the value of Victorian aquaculture with the state's wild catch fisheries

In Australia, seafood consumption increased at an average annual rate of 1.1 per cent between 2003-04 and 2013-14 (ABARES 2015), however, almost 70% of Australia's total seafood comes from imports mainly from Southeast Asia, New Zealand, China, South Africa, and the USA (ABARES 2015). This means that there is an opportunity for Victorian aquaculture to help fill this growing need for fresh seafood and capitalise on its close proximity to markets such as Melbourne.

In 2014/15, Victoria's aquaculture gross value of production was $37.9 million. Nearly half was edible exports (mainly abalone, trout, barramundi and mussels) sold primarily into Asian, Middle Eastern and US markets. A further 9% ($2.8m) was non-edible production (aquarium fish). The remainder was sold within Australia through fish markets or direct to retailers, supermarkets, restaurants distributors and consumers.

Over the next five years, Victoria's population growth is likely to drive continued increases in demand for both imported and locally produced seafood. This presents supply opportunities for the local aquaculture industry.

The expansion of the aquaculture sector will also support Victoria's growing recreational fishing sector. Aquaculture enhances recreational fishing opportunities by creating new or improved habitats around farm infrastructure, improving local species diversity and providing a sustainable supply of bait (e.g. mussels) for use by recreational fishers.

Status of the industry

Victoria's aquaculture industry increased its gross value of production value by 58% between 2004/05 and 2014/15. The 2014-15 figure of $37.9 million represents approximately 3% of Australian aquaculture production (ABARES 2015). This can be compared with Victorian wild catch fisheries production of $54.6 million in 2013/14.

Production by value is dominated by the abalone (43%), and the salmonid sector (27%), followed by native finfish (14%), bivalve shellfish (9%), ornamental fish (4%), and yabby (<1%). [#]

[#] Fisheries collects data on the weight of production, which is multiplied by prices supplied by industry to obtain estimated values and percentage calculations

In terms of Australia, Victoria is the largest producer of freshwater trout (82%) and farmed abalone (51%) in Australia and a significant producer of mussels (29%), barramundi and goldfish (ABARES 2015).

The chart below shows Victorian aquaculture production by sector since 1989.

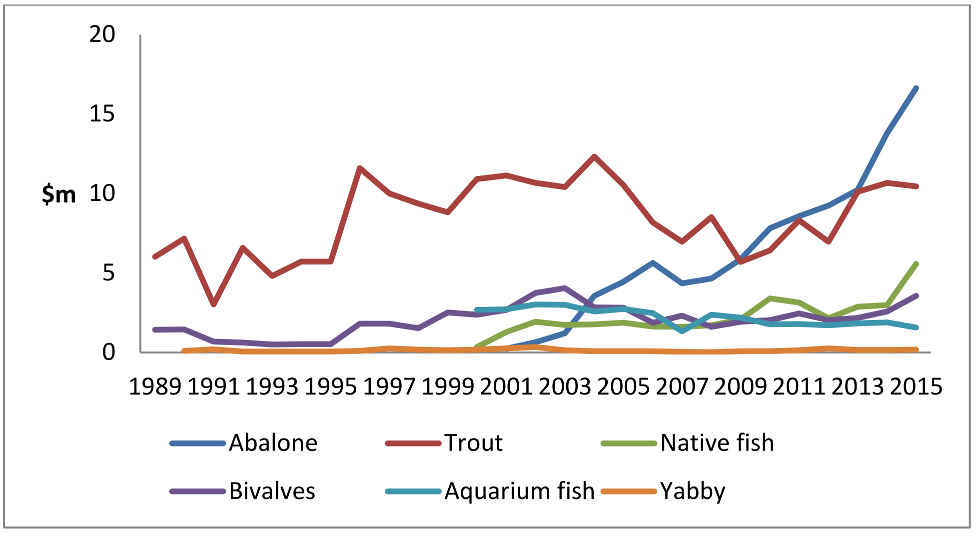

Figure 2: Victorian aquaculture production by sector

There is a strong regional presence of aquaculture throughout Victoria. In some cases, industry sector clusters share suitable growing environments such as for salmonid farming in the cooler north east region. Figure 3 below shows the key aquaculture production locations across the state.

Sizeable investment is occurring as abalone farms expand to meet growing Asian and domestic demand. Recirculation technology is increasingly being used where control of the environment enables production of high-value warm-water finfish such as barramundi for export markets.

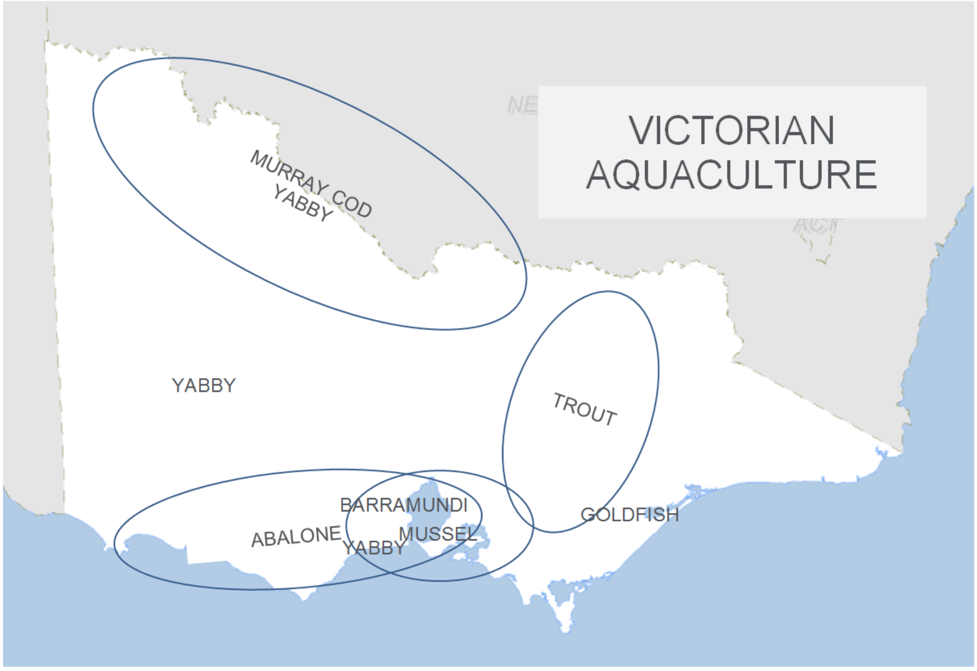

Figure 3: Key production locations for Victorian aquaculture

Victoria’s competitive advantages

The Victorian aquaculture industry is diverse and operates within a range of regional, climatic, social and biological environments, some of which are ideally suited to commercial aquaculture. Victoria's climate has a more suitable growing environment for abalone, trout, mussels and goldfish in comparison to most other Australian states. Its northern areas are better suited to the grow-out of Murray cod, yabby and other native warm water species.

There are twelve aquaculture reserves (two land based and ten offshore) set aside for the purpose of aquaculture. These aquaculture reserves are near to the markets of Melbourne and overnight delivery to Sydney markets. This proximity to large urban hubs provides the opportunity to command high returns for fresh product sold into seafood markets or restaurants as well the ability to export product via the Melbourne / Sydney international airports.

More broadly, Victoria’s diverse population provides particular market opportunities, as part of an existing wholesale seafood network or as niche products direct to local restaurateurs.

Image: Rainbow trout are grown in the cool waters of the Murrindindi region (Photo courtesy Goulburn Valley Trout)

Growth opportunities

Some of the key industry development opportunities include:

- Offshore marine bivalve shellfish aquaculture
- Land-based and offshore abalone aquaculture
- The use of Recirculating Aquaculture System for intensive farming of salmonids
- Barramundi and native fish farming in intensive Recirculating Aquaculture System
- Open water Murray cod aquaculture for Asian markets or for public waters stocking.

The changing operating environment

Major trends and factors taken into account in the development of this strategy include:

- The increasing competition for access to coastal land, river frontage and for use of sustainable supplies of fresh water
- Regional employment and the growing population in coastal regions of Victoria
- The increasing vertical integration of aquaculture operations with tourism opportunities in regional areas (for example: fish outs and food trails)
- The increasing demand from consumers for clean, 'green' sustainable fisheries products
- The complexity and impact of national and state-based regulatory frameworks for Victorian aquaculture
- The increased need for economies of scale and the impact of industry consolidation
- The impact of extreme weather events and climate change
- The increasing price and scarcity of fresh water requires greater efficiency and commercial multiple use strategies
- The inability of wild capture fisheries to satisfy Australia's seafood demand.

Image: Algae being grown in bags to feed the 600 million selectively bred mussel spat produced at the Queenscliff shellfish hatchery

Vision for Victorian aquaculture

A productive, growing and sustainable local aquaculture industry valued by the community

The high level outcomes of this strategy are:

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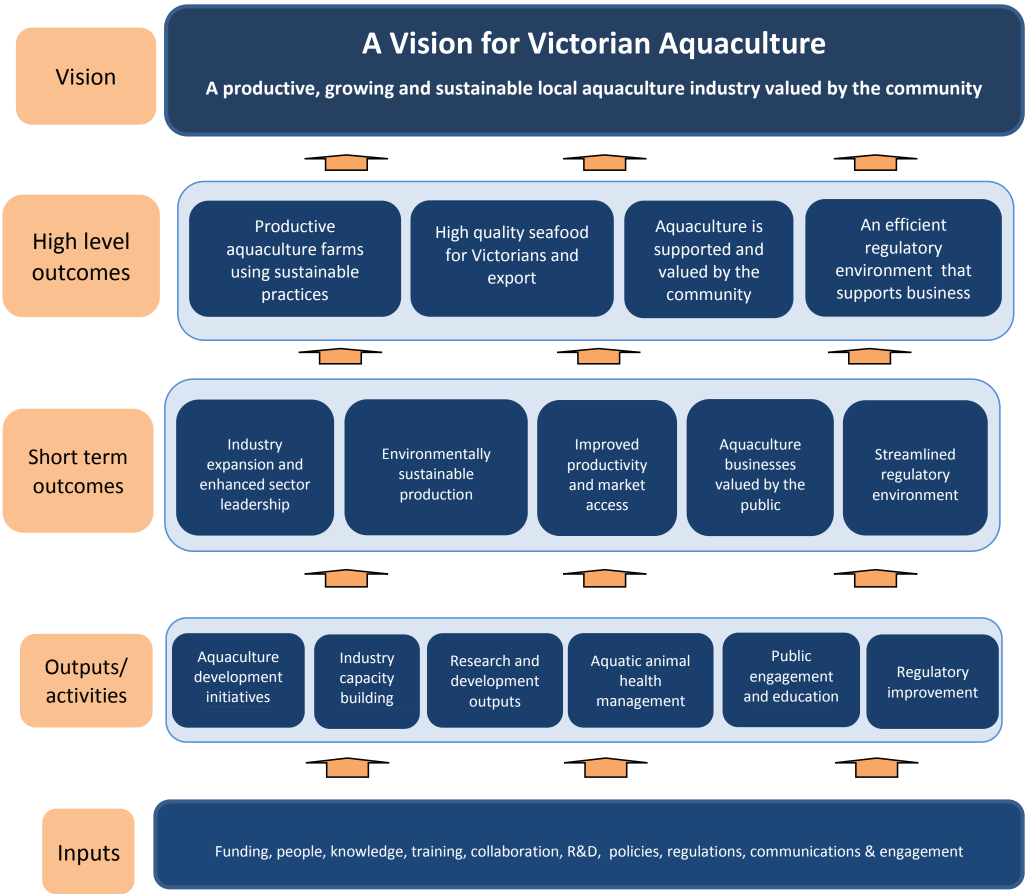

Figure 4: Intervention logic

Image: Blue mussels

Focus areas for action

This strategy includes a number of focus areas for action over the life of this strategy.

These are summarised under the following themes:

- **Aquaculture development initiatives**
  - Expand marine aquaculture by allocating remaining offshore marine waters (by 2017)
  - Assist with the development of harbour berthing for aquaculture operators (by 2017)
  - Prepare management plans for Point Lillias and Avalon Aquaculture Reserves (by 2016 and 2017 respectively)
  - Secure land-based shellfish hatchery capacity beyond 2021(by 2018)
  - Engage with Victorian indigenous groups to identify aquaculture development opportunities (on-going)
- **Industry capacity building**
  - Identify and support leadership training opportunities for industry members (by 2019)
  - Facilitate industry representation by supporting an aquaculture forum (on-going)
- **Research and development outputs**
  - Identify and prioritise research and development needs (annually)
  - Implement collaborative aquaculture research and development projects (on-going)
  - Facilitate international knowledge and technology transfer to the local industry (on-going)
- **Aquatic animal health management**
  - Review shellfish quality assurance regulations to ensure all risks are being managed and to identify technical efficiencies (by 2016)
  - Identify and progress actions to help secure and retain market access for aquaculture products (on-going)
  - Update the abalone translocation protocol (by 2016)
  - Investigate mechanisms used elsewhere for disease event recovery to improve local practices (by 2019)
- **Public engagement and education**
  - Develop a strategic communications plan for the sector, including identifying opportunities for greater use of social media (by 2016)
  - Seek funding to commission a socio-economic assessment of the Victorian aquaculture industry (by 2017)
  - Communicate results to build community awareness of and support for aquaculture (by 2018)
- **Regulatory improvement**
  - Engage with other regulatory authorities to streamline regulatory requirements in priority areas identified by the industry (on-going)
  - Advocate for the standardisation of translocation protocols between states where possible (by 2017)
  - Review aquaculture licensing to identify opportunities to streamline by simplifying or reducing licence classes and standardising inland licence conditions (by 2019)
  - Provide input to development of national policy and guidelines (on-going)
  - Support discussions to reduce costs and red tape associated with minor use permits for agricultural chemicals (ongoing)

Implementation

A number of actions will be implemented over the next five years to achieve the vision and outcomes outlined in this strategy. This will be achieved through active ongoing collaboration between the Aquaculture Industry, Victorian government agencies, indigenous groups and Commonwealth agencies where relevant.

Image: Aerial view of the Goulburn River Trout farm

Review

Annual updates will be provided to the industry through the Aquaculture Forum on the progress of the Strategy. After five years a review will be undertaken to assess the effectiveness of the strategy in stated objectives. This will identify improvements that can be included in a future aquaculture strategy.

Image: Boris Musa, CEO Mainstream Aquaculture, with a world famous selectively bred Golden Barramundi

Image: Abalone farms are expanding – Coastal Seafarms, Portland is increasing the number of slab tanks

Acronyms

ABARES	Australian Bureau of Agriculture and Resource Economics and Sciences
FAO	Food and Agriculture Organization of the United Nations
DEDJTR	Department of Economic Development, Jobs, Transport and Resources
DELWP	Department of Environment, Land, Water and Planning
Industry	All aquaculture licence holders
Fisheries	Fisheries Victoria is a division within DEDJTR
DAWR	Department of Agriculture Water and Resources (Commonwealth)
EPA	Environment Protection Authority

References

FAO, 2016 *http://www.fao.org/3/a-i4899e.pdf*

ABARES, 2015 Savage, J & Hobsbawn, P 2015, Australian fisheries and aquaculture statistics 2014, Fisheries Research and Development Corporation project 2014/245. ABARES, Canberra, December. CC BY 3.0.

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This document is also available in an accessible format at economicdevelopment.vic.gov.au

Image: New office complex at Southern Ocean Mariculture abalone farm at Port Fairy