



## Factsheet

# Victoria's fisheries and aquaculture: economic and social contributions **Mussel aquaculture**



Mussel production is one of the largest and most important sectors of the Victorian aquaculture industry, producing high quality, affordable and environmentally sustainable seafood.

Mussel farms are located in Port Phillip Bay, near Melbourne, and are the only commercial mariculture species grown in Victoria. Oceanic currents flush the nutrient rich water of Port Phillip Bay, making it an ideal environment for growing this filter feeding mollusc. Mussels are grown at sea on anchored ropes. Ropes are mostly seeded from an industry-operated hatchery, however some seeding from natural spatfall still occurs.

Periodically, environmental and biological factors have influenced the growth of the mussel sector, with the drought in the 2000s reducing wild mussel spatfall and subsequent production. Since then, mussel producers have become one of the fastest growing sectors in the Victorian seafood industry.

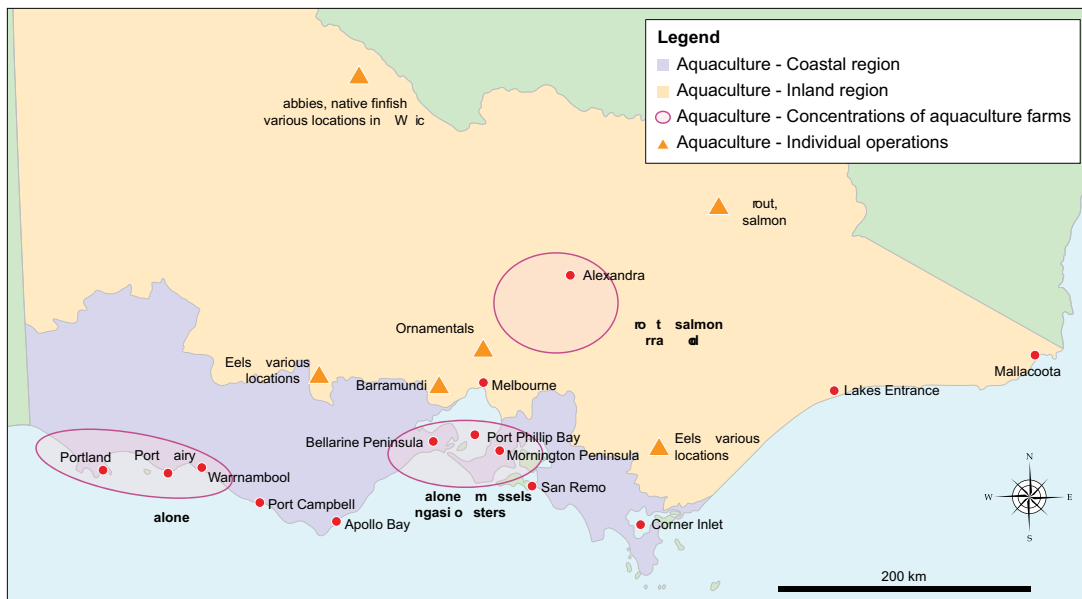
Currently the majority of mussels produced in Port Phillip Bay are sold in Melbourne and other metropolitan Australian markets, along with substantial direct and local sales.



This factsheet draws on research conducted by the University of Technology Sydney (UTS), for the Fisheries Research and Development Corporation, to investigate how the Victorian fishing and aquaculture industries contribute to the wellbeing of regional communities, and to Victoria overall.

For more information, see [uts.ac/VictoriaFisheriesAquaculture](https://uts.ac/VictoriaFisheriesAquaculture)

Victoria's fisheries and aquaculture: economic and social contributions FRDC Project No 2017-092



State professional fisheries	Western Zone	Central Zone	Eastern Zone
Abalone	Western Zone	Central Zone	Eastern Zone
Rock lobster and Giant crab	Western Zone	Central Zone	Eastern Zone
Ocean access	Pipis	High proportion of latent licences*	Octopus
Inshore trawl			Mostly operate out of Gippsland
Purse seine			Mostly operate out of Gippsland
Scallop			Many latent licences, mostly operate out of Gippsland
Scallop dive		Port Phillip Bay	
Bay and Inlet		Port Phillip Bay	Corner Inlet
Wrasse			
Sea urchin dive		Port Phillip Bay	Mallacoota
Eel (inland)	Wild harvested in coastal river basins south of the Great Dividing Range, in tandem with stock enhancement and aquaculture		
Bait	Most licences* are in Gippsland with the rest a mix of inland/inshore across rest of the state		
Commonwealth professional fisheries			
Southern and Eastern Scalefish and Shark Fishery	Outside 3nm, Landing ports: Portland, Port Welshpool, San Remo and Lakes Entrance		
Bass Strait Scallops	Outside 3nm, Landing ports: Queenscliff, Apollo Bay, San Remo and Lakes Entrance		
Southern Squid Jig	Outside 3nm, Landing ports: Portland, Queenscliff		

\*Pipis and Octopus are currently managed under Ocean Access licences but with separate management plans, main fishing grounds identified

## Economic diversity and resilience

### Mussels and the wider aquaculture industry make significant economic contributions to Victoria

In the 2016/17 financial year aquaculture contributed:

- \$100 million of added value
- \$56 million of household income
- 988 full time jobs

In the 2016/17 financial year mussel aquaculture contributed:

- 9% of the total value of the Victorian aquaculture production

### Mussel aquaculture provides diverse employment and business opportunities

- Mussel aquaculture supports opportunities from on-the-farm work through to associated businesses, including those providing inputs; in transport, processing and sale; and tourism and hospitality operations.
- Mussel aquaculture provides important flow-on economic activity and employment to Melbourne and other regional towns.
- Farms require diverse and often high-level skills, but also provide entry-level jobs.

### Mussel aquaculture farms contribute to regional economic diversity and stability

- They diversify economic opportunity in regional towns, which is critical for resilience.
- They generate jobs in places where there are few alternative industries.
- They provide economic stability by being active through the year, versus seasonal work, e.g. tourism.
- With the removal of most wild catch fisheries in Port Phillip Bay, mussel farms have provided new opportunities.

### Coastal communities recognise the economic importance of the Victorian seafood industry

- 81% of residents surveyed believe the sector supports their local economy and provides jobs.
- 85% believe it helps create economic diversity in their community.
- 76% believe it's important for supporting their community during the tourist off-season.

## Food supply

### Mussel aquaculture provides access to a nutritious and important food source

- Mussel aquaculture produced 1,136 tonnes of seafood in Victoria in 2016/17.
- The mussel sector is an important supplier of seafood to Melbourne, where the majority of mussels are sold.
- Mussels are a high-quality seafood product and very affordable to consumers.
- 90% of Victorians surveyed believe it's important to produce local seafood and reduce reliance on imports (over 70% of seafood consumed in Australia is imported).

### Victorians and regional communities prefer local seafood

- 85% of Victorians surveyed prefer Australian seafood and 24% prefer Victorian seafood.
- The preference is even stronger in fishing/aquaculture towns, where 40% prefer seafood from their town or region.
- 74% of Victorians surveyed feel it is very or extremely important to know where their seafood comes from.
- They prefer local seafood because they believe it's fresher, safer and higher quality, and they want to support the Australian economy and industry.
- Victorian seafood caters for local consumers' preferred species and price points, and their ethnic diversity.
- People go to great effort to buy Victorian seafood, regularly travelling substantial distances to buy and eat mussels direct from producers around the Bay.
- Portarlington is increasingly well known as a "mussel town". Many restaurants and wineries on the Bellarine Peninsula promote and serve fresh local mussels.

### The post-harvest sector experiences high demand for local seafood

- Food localism among consumers is a growing trend benefiting seafood businesses around the state.
- Retailers and wholesalers say having Victorian produce helps project an image of freshness and quality.
- 62% of post-harvest businesses surveyed say the demand for local seafood is growing.
- 80% say demand for Victorian seafood is greater than for imported seafood.
- 58% say demand for Victorian seafood is greater than for interstate seafood.
- 96% of hospitality businesses surveyed say their customers want to know the origin of their seafood.

## Tourism and recreation

### Victorian communities believe the aquaculture industry contributes to tourism

- 67% of residents from Victorian regional towns believe the most important contribution the local seafood industry makes to communities is through the interactions and benefits flowing to tourism.

### Consuming seafood is part of the travel experience for international and domestic visitors

- Visitors place increasing importance on local food provenance and food production experiences.
- 81% of Victorians surveyed say eating local seafood is an important part of their holiday experience.
- 94% of tourism businesses surveyed say eating local seafood is an important part of the tourism experience.
- International visitors, particularly from Asia, are the tourists most interested in eating local seafood, which includes cultural delicacies such as shellfish, from a clean environment.
- There's considerable unmet demand, with 54% of tourism businesses surveyed reporting that regional tourism suffers from a lack of access to locally produced seafood.

### Seafood experiences contribute to developing regional tourism

- The Portarlington Mussel Festival generates major tourism and hospitality benefits for the region, attracting 30,000 people every year, who consume up to 10 tonnes of mussels in the one-day festival. Mussels are donated by mussel producers and the festival provides an opportunity to showcase their produce.
- The availability of mussels year-round provides "food tourism" experiences to visitors, where they can eat mussels while overlooking the Bay and the mussel farms.

### The mussel industry also benefits recreational fishers

- Recreational fishers are more likely than non-fishers to want to buy fresh and local seafood, with 82% saying they consider origin 'very' or 'extremely' important versus 72% of non-fishers.
- The harbour redevelopment in Portarlington was built to support the mussel industry but has enabled increased ferry and recreational vessel berths.
- In Port Phillip Bay, mussel growers invite recreational fishers to fish around their farms, which attract fish.

**"[I say to recreational fishers] come in, we've got lots of fish there. If you go on the mussel farm and you look at our fish finder there's just masses of fish going through ... We've got tens of thousands of ropes [and] it's all the other stuff that's growing around the mussels, it creates a habitat. It's like a reef."**

**(Mussel farmer, Bellarine Peninsula).**



## Environmental health

### The mussel aquaculture industry is environmentally sustainable

- Mussels are a filter-feeders and as a result, they contribute to clean, healthy marine environments.
- Mussels farming has a very low carbon footprint relative to other protein sources, and compared to land-based aquaculture sectors.

### Mussel farmers act voluntarily to improve the marine environment

- Mussel farmers are involved in rebuilding native oyster beds in Port Phillip Bay. The industry is providing oyster seed and mussel shells for substrate and habitat.

### The fishing and aquaculture industries voluntarily collaborate with researchers

- Collecting samples and providing logistics.
- Sharing their experience and local knowledge.
- Sitting on voluntary advisory groups and research committees.

## Social Fabric

### Aquaculture contributes to the sense of identity in regional communities

- 83% of residents surveyed agree fishing and aquaculture is important to cultural heritage and identity.
- Seafood festivals, supported by local industry, foster social connections and reinforce community identity.

### The mussel aquaculture industry plays an important role in community life

- 79% of residents surveyed agree that local seafood families are active community members.
- Mussel farms support and donate to local events and charities.
- The Portarlington Mussel Festival is an important generator of revenue for the town. The community-run festival retains profits from the sale of donated mussels to fund community activities. This also provides an opportunity for community members to co-operate on a valued local event, and for local young people to gain new experiences.

**“To me it is almost unique. I have not seen that sort of community connectedness in all my years of working in communities. Often times you see the strong connected fabric in a community around an emergency or a disaster or something like that. This is [different], the community is drawn together for a festival, for one day of the year, basically. It’s become a bit of a celebration.”**

**(Community member and festival organiser, Portarlington)**



## Challenges and Opportunities

### Maintaining a constant supply of mussels to market

Mussels are one of the few aquaculture species that are seasonal. There is a need to maintain supply in the low season in order to maximise the contributions of the mussel sector to Victorian communities.

- There may be opportunities to partner with research and development organisations to further develop mussel breeding and rearing techniques to make supply more consistent.

### Strengthening relationships between the seafood and tourism industries

The study found that the links between the Victorian seafood industry and tourism industry are weak. That said, communities, tourism operators and seafood producers all recognise the clear opportunity to improve connections.

This can be done, most obviously, through food supply (as described above) and by capturing the growing international tourist market.

Beyond food supply, the key opportunity to improve the contribution of the sector to tourism and regional economies is by developing fishing and aquaculture tourism 'experiences'.

Experiences are about tourists interacting with and experiencing the seafood industry. An example of an 'experience' is an 'on-boat' tour of the mussel farms. Aquaculturists don't necessarily have the time or skills to develop and promote tourism opportunities, so it will be necessary to build relationships and partnerships with tour operators, tourism boards and local governments.

### Improving public understanding of the mussel sector and its contributions

The project revealed there's often poor understanding of the mussel industry among the Victorian public, both in metropolitan areas and in communities themselves. There's substantial opportunity to improve engagement with the public, in turn helping to address misperceptions, reduce any tension and conflict, build support for the sector and strengthen its future.

Key areas of misperception or lack of knowledge include:

- The misperception that mussels are unsafe for consumption, especially those farmed close to urban areas.
- The extent of the sector's environmental credentials.
- The contribution to food supply – does the Victorian public want local seafood or only imports?

Specific responses could include:

- Sharing information transparently with communities to demonstrate environmental and food safety credentials.
- Industry-led engagement activities with Victorian communities to improve awareness of the sector through the fostering of cross-sector and cross-industry relationships within communities and regions.
- Enhancing and expanding voluntary environmental activities beyond the immediate operations of the farm.



