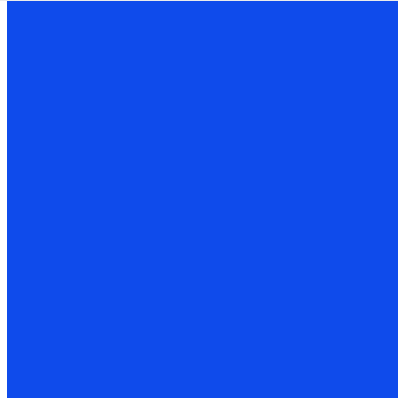
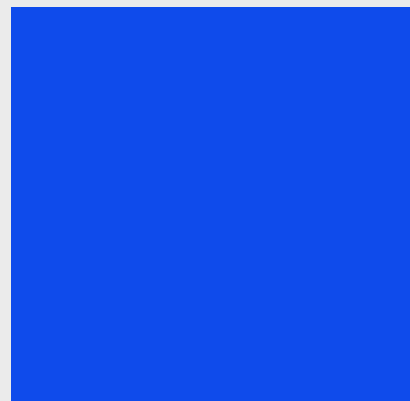
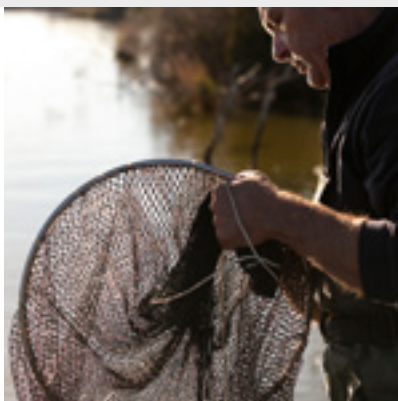


Faculty of Arts and Social Sciences



Factsheet

Valuing Victoria's professional eel fisheries: measuring social and economic contributions



Wild harvest eel fisheries and stock-enhanced eel fisheries have an extremely long and unique history in Victoria. Indigenous capture, growing and harvesting of eels in constructed ponds in the lava flows of Budj Bim in far western Victoria stretches back at least 8,000 years. The Budj Bim Cultural Landscape has recently been recognised as a UNESCO World Heritage site. Today, strong connections with eel fishing remains and is an important way for Indigenous community members to maintain community bonds and connections to their traditional country.

The first commercial eel catches in Victoria were recorded in 1914 and professional licenced eel fishers continue to operate throughout southern Victoria. Eel production is unique as it includes wild fishing and stock enhancement which are intrinsically linked. In many cases, an operator will hold both wild catch fishing and stock enhancement licences. Also unique is the high level of collaboration and knowledge sharing within the eel industry.

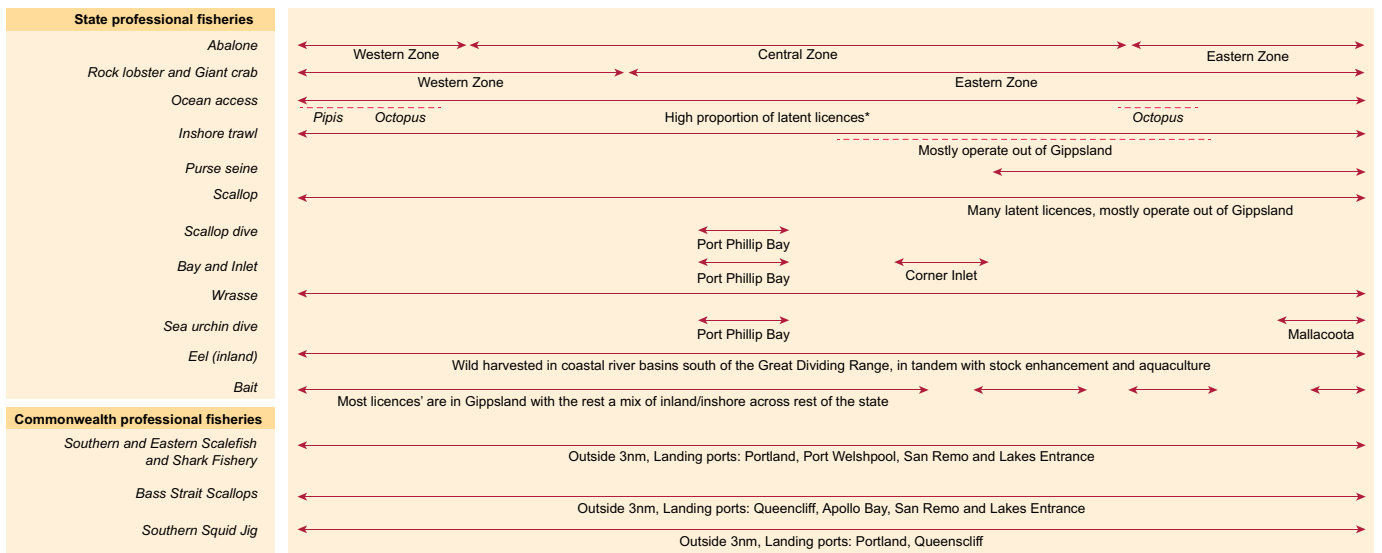
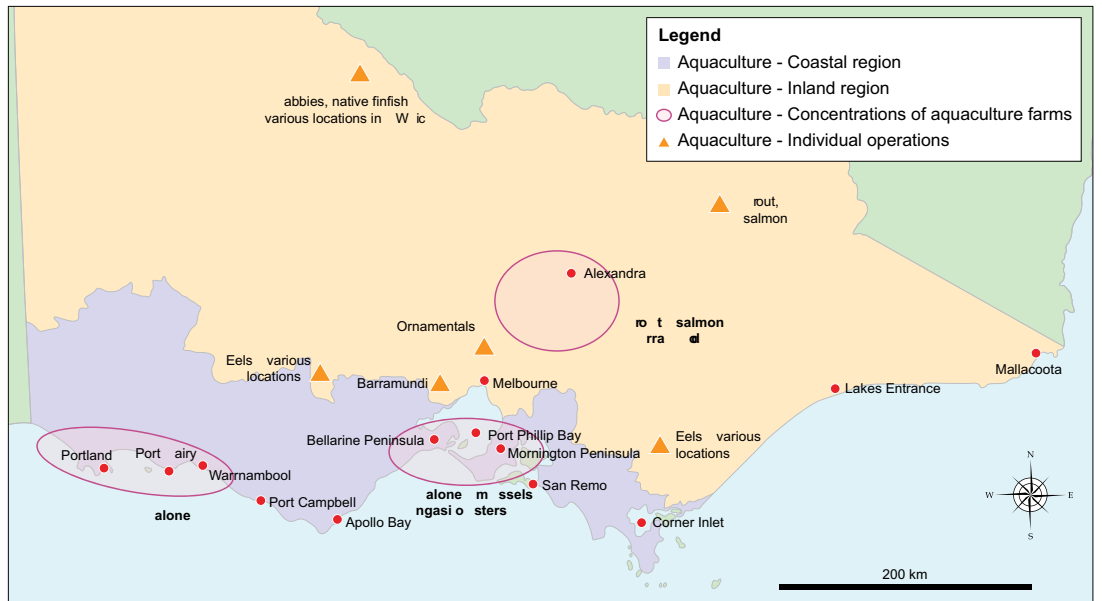
Eels are fished using fyke nets from coastal river basin waters allocated to commercial eel licences. There are two species of eel in Victoria. The majority of the catch (~80%) is short finned eel which is found across the state. The long finned eel is only found in eastern Victoria. Both species of adult eels are captured for the market but juvenile short finned eels are also caught for stock enhancement. Juvenile eels caught in Victoria or interstate (when possible) are released into selected lakes or impoundments (culture waters) for on-growing under natural conditions and recaptured once marketable size. There is currently no intensive aquaculture (using recirculating systems and requiring husbandry) for eels in Victoria.

Historically, a significant component of commercial eel production in Victoria came from culture activities. The protracted and significant drought which began in the mid-1990s, however, has reduced both culture and wild short finned eel production due to the loss of suitable culture waters and access to juvenile eels. Catches have dropped from over 300 tonnes per year to just over 50 tonnes. The decrease in supply has resulted in reduced export markets for eels and now most Victorian eels are sold domestically. A new eel fishery management plan was developed in 2017 to support the growth and development of the eel sector.



For more information, see: uts.ac/VictoriaFisheriesAquaculture

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



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

About the study

This research project, conducted by the University of Technology Sydney (UTS), for the Fisheries Research and Development Corporation, investigated how the Victorian fishing and aquaculture industry contributes to the wellbeing of regional communities, and to Victoria overall.

This summary presents findings relevant to the professional eel fisheries and communities they work in. The study found the industry contributes to regional community wellbeing in five main ways:

- economic diversity and resilience
- food supply
- tourism and recreation
- environmental health
- social fabric

The project explored these contributions over two years and involved economic surveys of the fishing industry; in-depth interviews, workshops and surveys in regional communities; a large phone survey of the Victorian public; and surveys of tourism, hospitality and other businesses in seafood supply chains. The research also explored challenges and opportunities for the fishing and aquaculture industry.

Economic diversity and resilience

Fisheries and aquaculture make significant economic contributions to Victoria

In the 2016/17 financial year fishing and aquaculture contributed:

- \$323 million of added value.
- \$186 million of household income
- 3,101 full-time equivalent jobs

Eel fisheries provide diverse employment and business opportunities

- The eel industry supports opportunities from on-the-boat through to associated businesses, including those providing inputs; in transport, processing and sale; and hospitality.
- They require diverse and often high-level skills, but also provide entry-level jobs.
- They generate satisfying work for people who might otherwise find it hard to find jobs.

Eel fisheries 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 tourism.

“If you took a little town like Skipton, Skipton Eels would be one of the mainstays in that town. The primary production of sheep and cattle around there and the eel fishery, that's probably one of the main stayers in that town. So, from that perspective it's probably very important.”

Regional 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.
- 68% are very or extremely concerned about job losses if fisheries should be further restricted.

Food supply

The eel industry provides access to a nutritious and important food source

- Eel producers in Victoria supply both the domestic market and export market to Asia.
- Eel producers supply a specialty Asian market in Australia
- While export is somewhat dependent on increased supply, Australian eels are well known for their high quality compared to overseas competitors
- Eels are highly nutritious - they are high in omega-3 and rich in vitamins and minerals

Victorians and regional communities prefer local seafood

- 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).
- 85% of Victorians surveyed prefer Australian seafood and 24% prefer Victorian seafood.
- The preference is even stronger in fishing 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 fishers.
- 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 'stock up'.

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 seafood industry contributes to tourism

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

Consuming seafood is part of the regional 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 eels, 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.



The eel industry also benefits recreational fishers

Professional fishing and recreational fishers are often portrayed as being at odds. However, the study found evidence throughout the state that professional and recreational activities positively intersect.

- 82% of recreational fishers are very or extremely interested in professional fishing.
- 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.
- Over 80% of recreational fishers surveyed prefer to use local, commercially caught bait.
- Eel producers supply bait for recreational fishers which is very popular for catching gummy shark.
- Eel producers harvest carp and other invasive species, improving recreational fishing opportunities
- All of the industry's wild and cultured waters are shared spaces with recreational fishers and the eel industry have a good relationship with local anglers.
- Eel fishers have a deep local ecological knowledge of their water systems and regularly share knowledge and tips with recreational anglers
- Eel producers stock public waters with juvenile eels, providing an improved resource for recreational angling
- 58% of professional fishers surveyed had helped recreational users of waterways in distress in the past five years. Eel fishers regularly help recreational users who get into trouble.

Environmental health

The eel industry provides data for managing Victorian fish stocks and the marine environment

- Data collected as part of regulatory oversight and management is used for managing commercial and recreational fisheries sustainably and for monitoring ecosystems.
- 82% of all Victorian fish stocks assessed are classified as 'sustainable' or 'recovering'.

The eel industry acts voluntarily to improve stocks and the aquatic environment

- Eel fishers harvest and remove pest carp and other noxious species from freshwater systems, improving water quality.
- The eel industry report and take care of injured wildlife they find while on the water.

The eel industry voluntarily collaborates with researchers

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

Social Fabric

The eel industry contributes to the sense of identity in regional communities

- 83% of residents surveyed agree fishing and aquaculture is important to cultural heritage and identity.
- Many coastal towns were founded on fishing and much infrastructure was set up by fishing families.
- Seafood festivals (e.g. Lake Bolac Eel Festival), supported by local industry, foster social connections and reinforce community identity.
- Fishing, particularly for eels, has played a prominent role in the life and culture of Aboriginal communities across western Victoria for thousands of years and continues to do so.
- Co-operative relationships between Aboriginal communities and the professional sector were formalised in a Memorandum of Understanding in 2005.
- The eel fishery is unique in Victoria in that it is the only fishery in which Aboriginal communities hold a commercial interest. Aboriginal and non-aboriginal licence holders work together commercially.

The eel industry plays an important role in community life

- 79% of residents surveyed agree that local fishing families are active community members.
- Eel businesses support and donate to local events and charities.
- The eel industry provides work, a support network and role models for vulnerable young men.

Challenges and Opportunities

Providing improved access to Victorian seafood

The need – and opportunity – to provide greater access to locally produced and diverse Victorian seafood was raised frequently during the project. Given reduced seafood production in Victoria, regional communities in particular saw a clear need to develop new, sustainable opportunities to address demand (while also considering barriers such as continuity of supply and price). Increasing supply and continuity of supply of eels, is essential for the continued survival of the industry.

- Greater understanding of the barriers to production and profitability with support and advocacy to overcome barriers is required
- Advocacy for restoring waterways used for eel production
- Recognising Victorian eel's unique selling points and the opportunity to build brands around this to sell locally.
- If supply is increased there would be opportunities to increase exports of eels as a niche product which is differentiated from cultured eels from Asia
- Developing financially viable opportunities for new relationships between eel producers and Aboriginal organisations to develop businesses to sell eel products, especially to specialty markets
- Strengthening the hospitality sector's ability to work with local and seasonal seafood species.
- Developing opportunities to utilise bycatch species such as carp.

Strengthening relationships between the eel 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 a tour offered by an eel industry operator. Fishers won'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, local governments and Aboriginal organisations.
- There is also an opportunity to build on the Lake Bolac Eel Festival and create more eel festivals around the State that coincide with the eel migration event.

Improving public understanding of the seafood sector and its contributions

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

Key areas of misperception or lack of knowledge include:

- The misperception that Victorian seafood production is unsustainable
- The extent of the sector's environmental credentials, which go beyond what's regulated
- The contribution to food supply – does the Victorian public want local seafood or only imports?

Specific responses could include:

- 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 immediate operations of eel fishing

