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| **From:** | Ian Sale |
| **To:** | Tasmanian Salmon Study Secretariat |
| **Cc:** | Alison Millar |
| **Subject:** | Submission to salmon study from "Friends of the Bays" |
| **Date:** | Thursday, 2 July 2026 4:25:06 PM |
| **Attachments:** | Salmon Study submission  FOTB.pdf |

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Please find attached a pdf version of our submission to the salmon study. Please confirm receipt.

Regards

**Ian Sale**
**Friends of the Bays, South Arm**

[redacted]

# SUBMISSION TO INDEPENDENT SALMON STUDY 2026, Phase 1

# FRIENDS OF THE BAYS

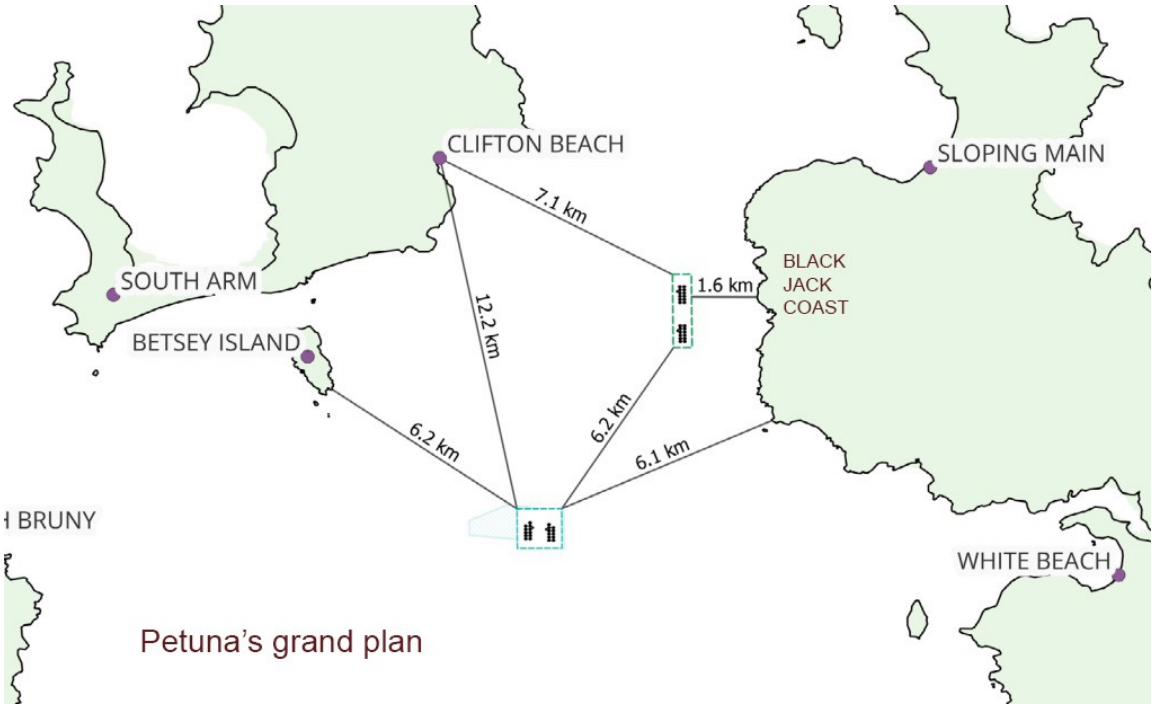



PHOTOGRAPH OF REEF OFF BLACK JACK COAST (Tasher Waller, May 2026)



Feather stars and sponges at Black Jack Coast (Tasher Waller, May 2026)

**Friends of the Bays** is a community group formed in 2023 after media coverage of Petuna's aims to establish substantial salmon farms in northern Storm Bay south-east of Betsey Island and at an area on the west coast of Tasman Peninsula commonly called Black Jack Coast.



Sourced from Petuna documentation

While our primary focus is on Storm Bay and its adjoining waters, and our membership is largely drawn from communities around Storm and Frederick Henry Bays, we have concerns about the salmon industry in general in relation to matters including -

- Environmental effects on coastal waters
- Harmful interactions with wildlife
- Use of antibiotics
- Noise and light pollution over the 24 hour cycle
- Specific locations - Macquarie Harbour, Long Bay, Okehampton Bay
- Animal welfare, namely the salmon itself - an existence akin to battery farming, subject to high mortalities, disease.

- Political capture - both of our major political parties are uncritical supporters of the industry, where some participate in cringeworthy stunts such as spruiking the benefits of salmon.

Turning to the topic listed in the Study Plan:

Phase 1: Current knowledge, concerns, evidence, risks, threats and responses

Phase 1A:  Current status overview, especially industry, environment and public health

**Topic #1  Overview of the global salmon industry – the big picture for Australia, Norway, Chile, Scotland, Canada, New Zealand. Contributions to global and local demand for protein. Role in food security.**

We submit that the scope of the global salmon industry should also include Iceland, Ireland, Denmark (Faroes) and the USA (currently Maine but the history of salmon farming in Washington State is instructive).

There was open pen salmon farming in Washington State but this came to an end after the catastrophic collapse of a Cooke farm which allowed a huge fish escape. It was found that the farm had been poorly maintained. The state legislature subsequently banned salmon farms statewide.

With the possible exception of the Faroes, open pen salmon farming has met resistance in all locations. For example, in Iceland a Gallup poll conducted in July 2024 at the request of the Iceland Nature Conservation Association (INCA) found 65.4% of Icelanders opposed open-net salmon farming, against just 13.9% in favour. Almost 70% went further, wanting to ban sea cage farming outright, and almost 62% considered the welfare of sea-cage-farmed salmon to be poor.

Jón Kaldal of INCA said opposition had never been higher in Gallup's polling history, with more people now favouring an outright ban than in any previous survey. The same survey showed strong opposition across age groups, income levels, gender, every constituency in the country, and voters of all parties.

A CSIRO study (March 2026) suggests that Iceland is not an outlier - a survey of 931 Tasmanians by the Commonwealth Scientific and Industrial Research Organisation found salmon aquaculture was the only local marine industry classified as "contested," with all non-industry stakeholder groups now holding strongly or borderline negative views.

By contrast, other aquaculture sectors fared much better — shellfish and seaweed farming attracted low conflict and broadly favourable attitudes. Notably, CSIRO found concerns were driven by environmental performance and governance issues.

We would submit that in almost all locations the open pen salmon industry struggles to hold social license. To try and reverse this poor image the industry mounts advertising campaigns such as one currently showing here in Tasmania. They also try to cultivate good will by providing sponsorships to struggling sports clubs. Fair play! But going into primary schools with someone dressed as a salmon on the basis of providing career advice is surely unacceptable.

The salmon industry here also argues that salmon aquaculture addresses food insecurity. There is an export market, e.g. China, India, but salmon is a premium product, only accessible to the well off.

Tasmanian salmon is not feeding the world’s hungry people. Indeed, sourcing fish meal as a component of salmon food from areas such as West Africa and Peru may be depleting an important food source for the people who live there.

**Topic #2 Assessment of environmental values and impacts and benefits of Salmon Farming in Tasmania and lessons from beyond Australia.**

For our group, a fundamental problem is a lack trust and confidence in those responsible for monitoring environmental issues, specifically the EPA but also elements of IMAS staff who, in our perception, have close and continuing relationships with the salmon industry.

In relation to the EPA, we suspect that it is poorly resourced, and that is a partial explanation of what is widely perceived as ineffectiveness and timidity. That lack of resourcing requires that they outsource the task of making observations to the industry they are regulating. We can see no reason at all to be confident that this industry is diligent and trustworthy. But the EPA may have little choice as they may not have the personnel or budget to make their own observations.

A recent example illustrates the problem. Huon Aquaculture is subject to frequent complaints regarding noise and light pollution in the area of Port Huon. The EPA outsourced to Huon the task of surveying noise issues. Huon hired Pitt & Sherry to conduct this work. The two engineers who conducted the study make reference to constraints in their work, but it is unclear what instructions they received from their client (Huon).

One obvious deficiency was a failure to adequately measure low frequency noise (LFN), which is precisely the type of noise that arises from marine engines. They appear to have relied heavily on modelling, but were then largely unable to validate this approach.

They did not seek to make measurements from inside residences, something that is essential when considering LFN.

They identified three work vessels that clearly exceeded prescribed noise levels but seem to accept that it would be unreasonable for Huon to replace or avoid use.

Ten weeks ago we wrote to the director of the EPA asking what she intends to do about these three vessels. She has not replied.

We say that the EPA is more receptive to what Huon wants rather than deal with an issue identified in the report Huon commissioned. Exposure to noise, in particular low frequency noise, has demonstrable health consequences. That is presumably why there are environmental standards - which the EPA appears unable or unwilling to enforce.

It is our submission that this salmon study engage with the EPA to understand what if any resource issues exist, and whether they have become unable to discharge their obligations. We would also recommend an examination of the purpose and performance of the EPA Board, and whether this is aiding the organisation to be independent.

The previous CEO of the EPA made remarks close to his departure that alluded to concerns he held about decommissioning the industry should that become required. We would not be alone in wondering whether climate change and rising water temperatures might make the industry unviable. If that occurs, what are the plans for removal and remediation of infrastructure - and can adequate decommissioning be enforced?

Our group also holds concerns about some IMAS scientists in relation to independence and objectivity. This first arose from our study of a report prepared by Lacharité and Ross (then part of the Salmon Interactions Team), *The Statewide Finfish Aquaculture Spatial Planning Exercise*. We became aware of this report after it was cited by Petuna as being supportive of their intention to acquire a second lease in Storm Bay.

This IMAS report can be found at https://www.imas.utas.edu.au/__data/assets/pdf_file/0009/1558341/REPORT-Statewide-Finfish-Planning-Exercise-Dec2021-updated-Mar2022.pdf

This report caused us both astonishment and dismay. For example, it included the map reproduced below:

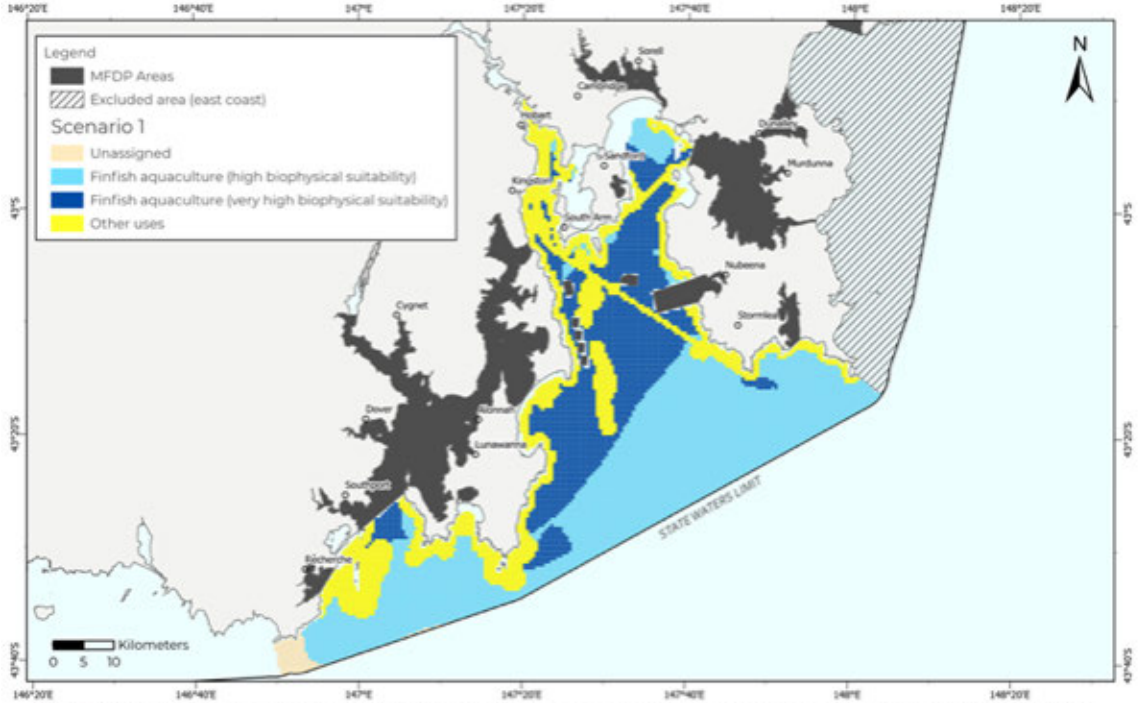



**Figure 16.** Output of Scenario 1 implemented in the software Marxan with Zones in the southeast of Tasmania. This scenario is considered a 'baseline' aiming to provide equal importance to finfish aquaculture and maintaining existing uses, activities and areas of high ecological value. Quantitative targets achieved for finfish aquaculture are 70% and 85% for high and very high biophysical suitability, respectively (see **Table 4**).

At first glance it appeared that the IMAS team had concluded that there were suitable areas for finfish farming through much of Storm Bay and Frederick Henry Bay, and that there were also suitable areas within the Derwent estuary such as off the coast of Howrah and Tranmere and South Arm.

We made it our business to understand the methodology adopted by the IMAS team. We understood Assoc Prof Jeff Ross to be the leader of this project. He had completed an earlier and similar study involving D'Entrecasteaux Channel.

We came to learn that the study was entirely a desk top exercise. There were no field visits or observations. There was input from what was called an 'advisory committee'. Several members of this body had salmon industry links. The only 'community' member of this body had previously held a senior executive position with Huon Aquaculture. We came to doubt whether this committee was independent, and whether it functioned in an advisory or steering role.

Our impression was that while Prof Ross and colleagues were experts on matters such as the physical character of the coastal waters - depths, currents, sea bed characteristics, wave heights and so on, they could not claim to possess expertise on social and cultural issues. But they did so, attempting to measure community and cultural values and recreational use patterns. Again, this was a desktop exercise. They relied on a dated and idiosyncratic study conducted by Aquenal, or turned to their advisory committee for subjective estimates on the volume of use of boat ramps around much of the state as being an index of recreational value.

Further, it became clear that arbitrary decisions were made, e.g. what distance should a fish pen be from residences. There was no empirical evidence for these decisions or a 90% qualifier that further diluted any limit.

This exercise produced results that would have been exceptionally pleasing to the industry. Indeed, according to the report, areas off several Hobart suburbs would be highly suitable for finfish farms.

In short, we believe this exercise to be an exercise that was designed to pave the way for further salmon farming in various areas around the state with a methodology so generous to the industry that it was able to find that salmon farms could be suitably installed near suburbs on Hobart's eastern shore. There was a veneer of genuine science but otherwise the methodology appeared dubious and cynical.

We have written a detailed critique of this project which we are happy to provide. Drilling down into this exercise has left us with a distinctly jaundiced view of the independence of some IMAS scientists

It is our view that salmon farming in Tasmania has had deleterious effects on our coastal waters. Some obvious problem areas include Long Bay, where algal excess is clearly apparent, and Macquarie Harbour where there has been a history of overstocking, mortalities, and legal conflict between the salmon companies. We are now in a scenario where the harbour is being oxygenated in a manner that probably carries more benefit for the salmon companies than the perilously threatened Maugean Skate, a project that is funded by our taxes rather than the industry.

T**opic #3: Health impacts of salmon farming, including: public health, ecosystem health, wildlife impacts and salmon health.**

As a (retired) medical specialist, my most pressing concern in this topic is the heavy use of antibiotics in salmon aquaculture. Florfenicol is the main current agent, but Tasmanian salmon companies have also used oxytetracycline and trimethoprim. While the health of the ecosystem is a concern, it is the risk of accelerating antibiotic resistance that in my view must take priority.

We have been reliably informed that Dr John Whittington (CEO, Salmon Tasmania) has expressed an opinion that as florfenicol is never used in human medicine its use will not lead to antibiotic resistance issues in the human sphere. We would urge this enquiry to explore whether this opinion is prevalent in the industry, i.e. their scientific staff and veterinarians. It is a simplistic and mistaken view, and would be particularly concerning if it was widespread. We hope this enquiry will be able to inform themselves on the question of antibiotic resistance, and the biological mechanisms that allow it to occur and to spread, rather than take the Salmon Tasmania's CEO opinion as uncontested..

Antibiotic use would be much less but for the occurrence of widespread infection by Piscirickettsia salmonis, which first caused a severe disease outbreak during the summer of 2025. This has been a major problem in Chile for more than 30 years, and remains a persistent source of problems for the Chilean salmon industry. As a direct effect of this disease Chile has become the heaviest user of antibiotics in salmon aquaculture by far, with florfenicol the major agent used. Numerous vaccines have been tried but found wanting.

Chile has come under pressure to moderate antibiotic use but reduction has been limited. It would be reasonable to fear and prepare for the

possibility that Tasmania may go down the same pathway that Chile entered during the 1990s.

Tasmania has already become a heavy antibiotic user. It has been revealed that the industry used 5300 kgs of florfenicol over a period of four months, until its use was curtailed after trace amounts were found in commercial species some distance from the site of treatment. The last reported production total for the Tasmanian industry was 68,000 tonnes. These figures allow the Antibiotic Consumption Index to be calculated, and international comparisons to be made.

| Producer | ACI (g antibiotic/tonne) | Year |
|---|---|---|
| **Norway** | ~0.5 g/t | 2024 |
| **Scotland** | ~8.15 g/t (revised) | 2024 |
| **Canada** | 36 g/t | 2023 |
| **Tasmania** | 78 g/t | 2024–25 |
| **Chile** | 302 g/t | 2024 |

Our group has reached out to eminent Chilean researcher, Felipe Cabello, now Emeritus Professor of Microbiology, New York Medical College. Professor Cabello has been a critic of excessive antibiotic use, poor regulation and husbandry in Chile. He has advocated for adopting the One Health approach. He has also raised the possibility that antibiotic use in Chile may actually be driving the continued outbreaks. In short, Chileans use florfenicol because nothing else works, but that use may reduce the resistance of fish and promote persistence of the bacteria in the environment. We would recommend reaching out to him or other Chilean scientists.

We had imagined that there might have been greater attempts by the Tasmanian industry and government departments to have more extensive dealings with Chilean scientific opinion. However, we can find no evidence that this has occurred.

In the EPA's 'Reflections and Learnings - 2025 Mortality Event Report' there is mention of a workshop involving Chilean delegates. However, a RTI request revealed that this workshop was arranged by a salmon feed company (Boomer) to promote a new formulation claimed to increase fish resilience. Some Chilean industry veterinarians participated in this marketing exercise.

Brief excerpt from list of F. Cabello publications

*Chemical use in salmon aquaculture: a review of current practices and possible environmental effects*

L Burridge, JS Weis, F Cabello, J Pizarro, K Bostick - Aquaculture, 2010 - Elsevier

https://doi.org/10.1016/j.aquaculture.2010.05.020

*Antimicrobial use in aquaculture re-examined: its relevance to antimicrobial resistance and to animal and human health*

Felipe C Cabello 1 , Henry P Godfrey, Alexandra Tomova, Larisa Ivanova, Humberto Dölz, Ana Millanao, Alejandro H Buschmann

Environ Microbiol. 2013 Jul;15(7):1917-42

*Aquaculture as yet another environmental gateway to the development and globalisation of antimicrobial resistance*

Felipe C Cabello 1 , Henry P Godfrey 2 , Alejandro H Buschmann 3 , Humberto J Dölz
Lancet Infect Dis. 2016 Jul;16(7):e127-e133

*Heavy use of prophylactic antibiotics in aquaculture: a growing problem for human and animal health and for the environment*

FC Cabello - Environ Microbiol. 2006 Jul;8(7):1137-44

Turning to effects on wildlife, we are certain that there will be a number of submissions concerning ecosystem effects (e.g. Maugean skate), and interaction with infrastructure and salmon workers (e.g. seals, cetaceans, seabirds).

Rather than repeat the concerns of others, which we share, we wish to make specific mention of the Red Handfish (RHF) as it involves our region.



Red Handfish female guarding eggs (Tasmanian Times)

The RHF may be one of the rarest of fishes and is recognised as critically endangered. There are two small populations living on small reefs in Frederick Henry Bay. RHF have modified fins allowing them to walk on the sea bed. They have little capacity to swim. Therefore they are limited to the reef where they hatched.

Habitat loss has been a factor in the decline of this species, particularly the excessive growth of urchins which then graze on seagrass, kelp, etc. One of the factors behind the increase in urchins is the taking of one of their main predators, rock lobsters. However, a study from Norway has shown that increase in nutrients from fish farming also stimulates urchin growth.

The salmon industry, backed by government, has plans to expand into the northern areas of Storm Bay, thereby coming close to the entrance of Frederick Henry Bay. This bay, and Norfolk Bay even more so, are shallower and have lesser flushing than Storm Bay, leading to the risk of accumulation of nutrients in these waters which in turn stimulates so-called nuisance algae, and raises the risk of algal blooms. An algal bloom in the vicinity of the RHF habitat could easily lead to extinction in the wild.

**Topic #4: Detailed examination of Tasmania Salmon Industry Regulation and compare with international regulations for compliance and effectiveness – best practice**

The Tasmanian salmon industry frequently claims to be the most regulated in the world. So do all the other salmon regions, even the Chileans. Carefully crafted regulations may be present, but are useless unless monitored and enforced - a problem that occurs worldwide.

We would argue that Cooke, owners of Tassal, have a poor reputation for breaching regulations and even outright illegality (e.g. Kelly Cove, New Brunswick in 2009[1]). Cooke have even found a way of getting into trouble in Chile. Trusting this company to self-regulate is fundamentally stupid.

The salmon study explanatory notes refer to the Big Five (Salmon producing countries). You may have been misinformed about who is in the top 5 - here is a list:

Norway — ~1.45 million tonnes (2025), the world's largest producer (~52% of global supply)

Chile — ~0.88 million tonnes (2025), the world's second-largest producer

Scotland — 200,000+ tonnes annually, the world's third-largest producer

Faroe Islands (Denmark)— 100,000+ tonnes annually; overtook Canada in 2025 to become the fourth-largest producer

Canada — 150,000+ tonnes (2025), now fifth-largest

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[1] Kelly Cove Salmon (subsidiary of Cooke) acquired significant quantities of cypermethrin-based pesticide (illegal in Canada) from a US supplier in 2009 which they then transported across the border into Canada, using it to treat severe sea lice infestations across their Bay of Fundy salmon farms. Hundreds of dead and dying lobsters were hauled up in traps in 2009 and 2010, with an Environment Canada investigation revealing the cause.
On 26 April 2013, Kelly Cove Salmon struck a plea deal. All 19 counts facing Kelly Cove Salmon, Cooke, and two executives were withdrawn and 2 new counts against Kelly Cove Salmon were added, to which the company pleaded guilty. These counts related to the use of cypermethrin at 15 aquaculture sites in the Bay of Fundy.

Tasmania - around 68,000 tonnes

Iceland — much smaller scale, roughly 20,000–30,000 tonnes nationally (rapidly expanding, including new land-based projects)

USA — minor producer, roughly 15,000–20,000 tonnes (mainly Cooke Aquaculture in Maine, plus growing land-based RAS capacity)

New Zealand — farms King (Chinook) salmon rather than Atlantic salmon; around 14,500+ tonnes nationally, with the dominant producer (NZ King Salmon) harvesting roughly 5,800–6,100 tonnes; longer-term plans to grow toward 70,000+ tonnes via open-ocean expansion

**Phase 1B: Economic and sociocultural costs and benefits**

**Topic #5 The direct and indirect contribution of the salmon industry to the Tasmanian economy, including: regional economies, employment opportunities and career pathways, and the industry's role in developing skills and knowledge**

We have nothing to contribute in relation to Topic #5 *as set out*, but can point out that the Phase 1B heading refers to costs *and* benefits but costs are not mentioned in the Topic #5 topic summary. This may be an inadvertent bias.

We believe that there have been costs. For example, property owners in areas such as the Huon River near Port Huon may fear that proximity to salmon aquaculture infrastructure has had an effect upon their amenity and the value of their properties. There is only limited research on this issue. We have identified three peer-reviewed studies, two of which identify negative effects -

Peer-Reviewed Studies
1. Evans, K.S., Chen, X. & Robichaud, C.A. (2017)
"A Hedonic Analysis of the Impact of Marine Aquaculture on Coastal Housing Prices in Maine"
Agricultural and Resource Economics Review, 46(2), 242–267.
https://doi.org/10.1017/age.2017.19

2. Spanou, E., Kenter, J.O. & Graziano, M. (2020)
"The Effects of Aquaculture and Marine Conservation on Cultural Ecosystem Services: An Integrated Hedonic–Eudaemonic Approach"
Ecological Economics, 176, 106757.

3. Graziano, M., Fiaschetti, M., Gross, J.W., Alexander, K.A., Longo, A. & O'Higgins, T. (2025)
"A room with a blue view: the impact of Blue Economy activities on housing prices across Scottish regions"
Journal of Rural Studies (in press).
https://doi.org/10.1016/j.jrurstud.2025.xxx

We would also argue that installation of rafts of salmon pens may inhibit other activities such as tourism. In our own region we are aware that there has yet to be any development of tourist cruises such as those of the Pennicott company who operate a wide variety of cruises.

Recently we arranged to charter a tourist boat to visit northern Storm Bay, in part because we wished to gain some understanding on the feasibility of cruises in this area, and the quality of attractions. The cruise was judged a success by our passengers, and we intend to repeat the exercise. We have also learned that the charter company we hired intends to develop cruises in this region. These could run from Hobart, which would make for a day trip. Alternatively, lighter craft such as RIBs could run out of Cremorne, a shorter trip.

There are a number of attractive and interesting destination points, and there is also much wildlife, including whales. Dive trips could also be run out of Cremorne. Such tourism activity would have greater added value to the local region.

Salmon farms however would be serviced from North-West Bay or Hobart as there is no suitable port location. Therefore, there would be no added value for the communities around Storm and Frederick Henry Bays.

**Topic #6 The social and cultural benefits and costs to Tasmanian community, including the effect of industry activities on infrastructure, amenity, and Indigenous peoples' knowledge and perspectives for land and sea country**

We concede that there is a social benefit arising from salmon industry employment, direct and indirect, but there has also been a considerable degree of hyperbole in public claims. There has also been increasing automation, technology advances and use of AI that have caused loss of jobs in some areas.

There is a social cost. The industry has caused detriment to some - people who live near fish farms or shore installations, or have experienced problems in selling their properties. Some, who have raised complaints,

have been subject to abuse and harassment. Some also have a loss of amenity arising from what is effectively an appropriation of coastal waters previously used for recreation - fishing, sailing, swimming, diving, kayaking, art and photography.

Many of us grew up believing our coastal waters were a public domain. Now there are areas we cannot go to, or would no longer want to go to.

On a wider scale, the industry has been a major cause of division in the community to a level not seen since the early 1980s when the Gordon below Franklin dam proposal caused much conflict. As in those times a significant portion of the population find that both major political parties are aligned against them. Opponents of the industry are regularly belittled as being part of the 'anti-everything brigade', or being 'cashed-up' mainlanders who have moved in, or similar. Social media can be something of an accelerant in this type of discourse.

**Friends of the Bays** is an incorporated community organisation and a registered charity. It was formed in 2023 by the late Mick Lawrence - surfer, film-maker, advocate. The groups Facebook site has more than 3000 followers, many of whom live in coastal communities. The group has hosted and participated in several public rallies, has convened public meetings, and has led a tour to explore our bays. The group is implacably opposed to the spread of salmon farming further into Storm Bay.

This submission was prepared by Dr Ian Sale on behalf of Friends of the Bays. [redacted]



Storm Bay breakers. Photo by Richard Bugg