Hon Clare Glade-Wright MLC
Independent Member for Huon

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Submission to the Salmon Study

Introduction

I thank the Committee for the opportunity to make a submission to the Salmon Industry Study.

In my inaugural speech, I spoke about my electorate, and how the health of the Huon Estuary and D'Entrecasteaux Channel is a defining issue for the community, hosting 85% of Tasmania aquaculture.

The beautiful waterways, with their striking views and quiet serenity, are part of what draws people to live there. There are hundreds of kilometres of coastline, bays, beaches and coves, where people recreate.

The Huon also has a strong community of cold-water swimmers who know the waters intimately and speak to me about the importance of the swimming for mental health and social connection. Their close observations is a form of citizen science we should value.

Many of these people expressed concerns about what they are observing with sea grass beds disappearing, and shell fish becoming less prevalent. I hear too of the noise and light disturbance that anyone living near an aquaculture facility experiences on a daily and nightly basis.

I have learned that the public debates around salmon farming is highly polarised. On one side there can be a tendency toward alarmism. On the other side there can be a tendency toward dismissal. Neither of those approaches is particularly useful.

Recommendation for a Derwent Estuary Styled Program in the Channel and Huon Estuary

I have spent considerable time speaking with various scientists to understand the underlying science. What was explained to me, is a far more nuanced picture than is often presented.

The evidence certainly does not support the idea that the Huon waterways are some kind of ecological wasteland. There are many indicators that continue to show resilience within the system.

Equally, however, the science does not support the view that there is nothing to worry about. Many scientists are concerned about the risk of a sudden collapse of the eco system.

The concern is that multiple pressures are acting simultaneously on an ecosystem that is already facing the additional challenge of a rapidly changing climate resulting in the frequency and severity of marine heatwaves.

Agricultural land run off, ageing septic systems and wastewater infrastructure and aquaculture contribute nutrient loads into the marine environment.

A healthy system can absorb stress. A resilient system can adapt to change. But as pressures accumulate, there is a growing risk that ecosystems can approach tipping points beyond which recovery becomes increasingly difficult. I like to think about this like a fish tank, which can suddenly become green. That is a sign of ecosystem collapse, and that is what is at risk in the waterways of my electorate.

At present, there is monitoring occurring by the EPA, but much of that work remains fragmented.

For nearly three decades, the award-winning Derwent Estuary Program has tended to the improvement of health in the River Derwent. It has brought government, councils, scientists, industry and community together, and through public reporting, trend tracking and evidence-based decision making, it has built trust through transparency.

A similar program in the waterways of my electorate could help us move beyond arguments about individual sources of impact and instead focus on the health of the system as a whole. It could provide the independent, transparent and accessible information that communities have repeatedly told me they want.

During my campaign I launched a petition calling on the government to implement a healthy waterways program, and it was signed by The Weedy Sea Dragons and D'Entrecasteaux Dippers, who swim in the Channel, The Channel Aquaholics from Woodbridge, The Conningham cormorants, and the Conningham Cephalopods from Conningham, The Dunking Southern Rights from Dennes Point, The Cygnet Sea Urchins from Randalls Bay, and the Franklin Frosties from Franklin, along with over 500 individual signatures.

The challenge before us is not choosing between the environment and the economy. The challenge is ensuring that both can thrive together. That is the test that matters to me.

And that is why I believe a Derwent Estuary styled Program offers the most constructive path forward for our community and for the waterways.

The purpose of this submission is not to argue for the immediate closure of Tasmania's salmon industry. The salmon industry provides employment, economic activity and regional investment. However, the industry's social licence depends upon public confidence that environmental impacts, public health risks and cumulative ecological effects are being properly understood and managed.

A One Health Approach Is Required

Antimicrobial resistance is a global public health challenge, and a One Health approach recognises that human, animal and environmental health are connected.

Antibiotic use in open marine environments therefore raises issues beyond fish health alone.

Whether this is occurring in Tasmanian waters remains unanswered. The absence of surveillance is not evidence of no risk. Regulation must be able to detect risks before they become entrenched.

For this reason, antimicrobial resistance research should be a permanent part of Tasmania's aquaculture oversight.

Antimicrobial Resistance (AMR)

A significant gap currently exists in Tasmania's understanding of antimicrobial resistance (AMR) associated with salmon aquaculture. The Salmon Industry Study presents an important opportunity to address that gap.

The Study's existing scope includes public health impacts, antibiotic use, environmental risks and regulatory oversight. Given these terms of reference, antimicrobial resistance should be treated as a central issue rather than a peripheral one.

Much of the public debate to date has focused on antibiotic residues. While residue monitoring is important, it is only one part of the picture. Residue monitoring asks:

- Where did the antibiotic go?
- How much remains in the water, sediment or fish tissue?

Antimicrobial resistance monitoring asks a different and equally important question:

- What biological changes may antibiotic use have caused within microbial communities?

These are not the same question. The EPA's 2026 Environmental Risk Assessment concluded that measured florfenicol residues presented a low risk of unacceptable harm to aquatic organisms within the scope of the assessment. However, the same assessment explicitly noted that impacts on bacterial communities and antimicrobial resistance were not addressed and remained the subject of further work.

Antibiotic residues may decline below reporting limits, yet resistance genes can persist within bacteria and continue to spread through environmental pathways. A monitoring system that

measures chemical residues alone cannot determine whether resistance genes have been selected for, amplified, or transferred within marine ecosystems.

Research from Chile has identified measurable antibiotic resistance genes beneath salmon pens, while a Monash University study detected traces of antibiotic-resistant genes in supermarket salmon.

For this reason, a comprehensive understanding of environmental and public health risk requires both chemical residue monitoring, **and** antimicrobial resistance surveillance.

Recommendation: Mandatory Antimicrobial Resistance Monitoring in Salmon for Human Consumption

The Committee should also recommend a dedicated Tasmanian research program investigating antimicrobial resistance in salmon intended for human consumption, and make it a permit condition for the use of florfenicol.

Evidence reviewed during preparation of this submission highlights growing international interest in the presence of antimicrobial resistant organisms and resistance genes associated with retail food products. Please refer to the submission made by the AMA (Australian Medical Association – Tasmania Branch)

While existing evidence does not establish a direct human health impact arising from Tasmanian salmon production, neither does it provide assurance that such risks have been comprehensively investigated.

Tasmania should not wait for a problem to emerge before undertaking the necessary research.

The findings should be publicly reported and contribute to Tasmania's broader antimicrobial resistance strategy.

Such research would provide the evidence needed to inform future policy decisions and strengthen public confidence in seafood safety.

Recommendation: Mandatory Antimicrobial Resistance Monitoring in the environment

The Committee should recommend that any future license approval include mandatory antimicrobial resistance monitoring as a lease condition.

Specifically, any future approval should require:

- Baseline antimicrobial resistance assessments before treatment commences.
- Monitoring during treatment events.
- Ongoing post-treatment surveillance.
- Monitoring of sediments, surrounding waters and relevant wild species.
- Independent scientific review of results.
- Public reporting of outcomes.

This monitoring should utilise contemporary methods including genetic surveillance capable of detecting resistance genes and changes in microbial communities.

The costs of such monitoring should be recovered from industry proponents as part of the cost of operating in public waterways.

If antibiotics are considered necessary for fish welfare, then comprehensive independent monitoring must be considered part of the cost of using those antibiotics.

Public Transparency and Real-Time Reporting

Tasmanians have a right to know when antibiotics are being used in public waterways.

A recurring concern raised by my community is that information regarding antibiotic use is not readily accessible to the public in a timely and transparent manner.

The Committee should recommend establishment of a publicly accessible online reporting portal that provides:

- Antibiotic type;
- Quantity used;
- Dates of application;
- Locations;
- Permit conditions;
- Monitoring results;
- Compliance reports; and
- Follow-up regulatory actions.

Communities should not need to rely upon freedom-of-information requests, media reporting or parliamentary questions to access information about activities occurring in shared public waters.

Transparency strengthens public trust.

Transitioning Open-Water Salmon Farming Out of the Channel and Huon Estuary

Are sheltered inshore waterways the most appropriate locations for large-scale industrial salmon production into the future?

I believe the answer is increasingly no.

I believe there is a strong argument that the future of aquaculture in Tasmania should move further out to sea, and into deeper waters. The community just want their beaches back. This view is reinforced by the Upper House inquiry into fin fish farming, which recommended removing aquaculture from sensitive waters. inq.finfish.rep.20220519.finalreport.jm.001.pdf

If we can find ways for aquaculture to continue prospering in deeper, more exposed offshore environments, it would restore amenity, reduce conflict, and allow greater public enjoyment of beaches and coastal environments. And most importantly it would reduce the risk of eco system collapse. Surely that represents a positive outcome.

The Channel and Huon estuary are increasingly carrying an unsustainable concentration of environmental and social pressures associated with salmon farming.

Tasmania should begin a planned transition away from intensive salmon farming within the Channel and Huon estuary and towards locations further offshore where:

- Water exchange is greater;
- Dilution capacity is higher;
- Environmental impacts are less concentrated;
- Interactions with local communities are reduced; and
- Conflicts with recreational and commercial users are minimised.

This is not a call to end the salmon industry. It is a call to modernise it. The University of Tasmania are doing research in conjunction with Blue Economy Cooperative Research Centre, into new technology that can move farms further out to sea: Experimental Platform for Aquaculture Production | BE CRC.

Many Tasmanians recognise the industry's economic importance while simultaneously questioning whether the most sensitive inshore waterways should continue to bear the greatest burden of production.

A long-term transition strategy would provide certainty for industry while addressing growing community concerns regarding environmental impacts, nutrient loading, fish health challenges, marine debris and antibiotic use.

The future of salmon farming should not be determined solely by what has been acceptable in the past. It should be guided by where the best available science indicates the industry can operate most sustainably into the future.

Conclusion

The Salmon Industry Study provides a rare opportunity to examine not only the current operation of Tasmania's salmon industry, but also its future direction. The Committee should therefore recommend:

1. Mandatory antimicrobial resistance monitoring as a permit condition for using florfenicol.
2. Mandatory antimicrobial resistance monitoring as a licence condition for the lease of pens.
3. Long-term surveillance of antimicrobial resistance genes and resistant organisms in marine and freshwater environments.
4. Long-term surveillance of antimicrobial resistance in salmon intended for human consumption.
5. Real-time public reporting of antibiotic use and monitoring results.
6. Industry-funded monitoring and cost recovery arrangements.
7. Develop a Derwent Estuary styled Program for the Channel and Huon Estuaries to provide a holistic approach to the pressures contributing the risk of eco system collapse.
8. Development of a long-term transition plan to move intensive salmon farming out of the Channel and Huon estuary and into more appropriate offshore locations.

The question before the Study is not whether Tasmania should have a salmon industry. The question is whether Tasmania can build a salmon industry that retains public confidence, protects environmental health, safeguards public health, and operates in a way that future generations will regard as responsible.

Thank you for your consideration, and please feel free to reach out to discuss this submission on clare.glade-wright@parliament.tas.gov.au

Yours sincerely,

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Clare Glade-Wright MLC

clare.gladewright@parliament.tas.gov.au
03 6212 2130
Parliament of Tasmania, Hobart, TAS 7000
www.claregladewright.com.au

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