Submission on Fin-fish Farming in Tasmania to the Legislative Council Committee

Hon Kerry Finch MLC
Hon Ruth Forrest MLC
Hon Mike Gaffney MLC
Hon Rob Valentine MLC
Hon Meg Webb MLC

Thank you for providing the opportunity for a public voice on the expansion proposals for fin-fish farming in Tasmania.

The document “Sustainable Industry Growth Plan for the Salmon Industry” suggests controls to ensure sustainability in the Industry but does not insist on research and consultation to determine the impact of salmon farming operations on the local ecosystem and local communities before farms are established. Thus the Industry has been encouraged to expand with no real care taken to preserve the biosecurity of the State.

The planned expansion of salmon aquaculture in Storm Bay at 40,000 to 80,000 tonnes a year will more than double production for the entire state (currently at about 55,000 tonnes). Christine Coughanowr (BSc, MSc) is an independent scientist with 35 years’ experience in water quality science and management and she has stated that “This comes with a very large nutrient load, estimated at 2300 to 4600 tonnes a year of bioavailable nitrogen. This is six to 12 times the current nutrient load from all sewage treatment plants in the city of Hobart.

Experience in Tasmania and overseas has shown that too many nutrients cause problems like excessive algal blooms as well as damage to seagrass communities. Reductions in oxygen levels lead to fish deaths and rotting algae on beaches.

Proper measures have not been taken to ensure protection of the Storm Bay ecosystem. Storm Bay has a wealth and diversity of natural systems that support recreational and commercial fishing, tourism, and a number of protected and endangered species. The shallow, sheltered bays, fringing reefs and seagrass meadows of Norfolk and Frederick Henry bays are particularly vulnerable to nutrient damage.

Valuable habitats and sensitive areas around these bays have not been clearly identified or mapped. Baseline monitoring, particularly for reefs and seagrass meadows, has not been completed. A comprehensive whole-of-Storm Bay monitoring program has not yet been funded or commenced so how can we ascertain that fish farms are a safe addition to those ecosystems Tasmania's Environment Protection Authority has recommended 30,000 tonnes a year would be a safer starting point than the proposed 40,000 tonnes but there is no evidence as to the effect of even the reduced tonnage.

The best Tasmanian environmental evidence for delaying expansion comes from Macquarie Harbour. In a report [State Political Reporter Rhiana Whitson Fri 23 Mar 2018] on ABC Hobart, *the head of the EPA, Wes Ford, said the stock reduction in Macquarie Harbour was necessary to allow the harbour, which has seen a series of mass fish deaths and stock reductions over the past two years, to recover.*

"I'm still concerned that the level of the pressure that has been on the harbour in the past few years has resulted in a level of degradation of the sediments that just couldn't be sustained in the long run," he said.

"The harbour has just not performed in the way anyone thought it would and hence has been more degraded and hence the biomass has had to be put down."

He agreed the scientific modelling, which saw the cap for Macquarie Harbour hugely expanded in 2012 and then rise to 21,500 tonnes in April 2016, was "flat wrong."

"That's right and now we are needing to wind back effectively to a level pre the expansion."

Mr Ford said the original modelling had determined the harbour was equipped to cope with 28,000 tonnes of fish stock. "Quite clearly the harbour has not been able to live up to the modelled expected outcomes of the way this harbour would perform," he said.

In July a Listeria outbreak on the mainland was traced to Tasmanian farmed salmon. If careful monitoring has been undertaken around this sort of disease problem the data has not been made readily available and if it has not then the data certainly should be recorded in detail.

A further example of a biosystem problem was in the annual report of Huon Aquaculture which reported a “jellyfish event” which “killed Huon salmon in the Huon River and D'Entrecasteaux Channel in late 2018. Some fish later died from gill necrosis caused by the jellyfish stings, and the growth of others was affected.” The Company is to be commended for making the information public.

However this is an important indicator of a biosystem that is under threat and a reason to slow expansion until more information is available. A world authority on jelly fish Dr Lisa Ann Gershwin commented on the event. "Overall, we are changing the oceans to be favourable to jellyfish. Nutrients are up, predators are down, and jellyfish are breeding like rabbits - they are a visible indicator that the oceans are out of balance"

Fishfarms are attractants for our local protected marine wild life. Seals will go to them for an easy meal. As the pressure and expansion grows incidents with seals are going to increase. The Industry has not provided an eco sensitive solution.

Why do we expect guesswork and estimates to provide biosecurity in Storm Bay. There is little understanding of the Storm Bay system at this stage and we have no idea of what the carrying capacity of the system may be. Work on predictive ‘carrying capacity’ models is just beginning and will take several years. The Industry expansion should not take place until such work can make confident predictions.

Adaptive management is not a substitute for careful planning. Adaptive management requires good understanding of the system with comprehensive baseline surveys. The baseline cannot be set after the expansion is already underway. This should be aligned with predictive models that have been validated, and which can be used to estimate the system’s carrying capacity.

It is vital that this waterway be protected. I support these proposals from the Tasmanian Conservation Trust for the environmental protection of Tasmania’s waterways .

1. Complete independent water quality and environmental studies, before any environmental licences are issued (not an “adaptive management” approach).
2. Environmental licences must set a hard cap on biomass and dissolved nitrogen and other pollutants emitted into our waterways from pens, hatcheries and other infrastructure.

3. Require all licences and licence amendments (marine and land based) to be referred to the EPA board so that the community can have a say.
4. Commission an independent review of the Marine Farming Planning Review Panel, focusing on its membership, governance and ties to industry.
5. Improve transparency and enforcement by prosecuting fish escapes, fish kills, marine debris and seal and cetacean interactions.
6. Mandate public reporting for disease outbreaks and other bio-security incidents.
7. Amend the Marine Farming Planning Act to require valuation and protection of social, recreational and visual amenity; and consideration of noise impacts on surrounding residents.

Another major concern around these farms is floating debris. Marine and Safety Tasmania received 128 reports of marine debris in three years and the salmon industry says it regularly cleans up marine debris.

Information provided by Primary Industries Minister Guy Barnett this year revealed there had been seven fines issued by that time, to a total of $4075. Information released under Right to Information laws earlier this year revealed Marine and Safety Tasmania (MAST) has separately issued three infringement notices to finfish farming companies since June 2017, totalling $1956.

These fines are insignificant for large companies and do little to encourage proper supervision of their property. Floating debris is a major threat particularly for small boats which frequent the area.

<u>What should we be doing.</u>

1. There should an immediate moratorium on any further expansion of fish farming leases and the reopening of existing leases in Tasmanian Coastal Waters until the impacts on the existing wild fisheries are known.
2. All marine farming should be considered under the Land Use and Approvals Act 1993 (LUPAA) – Regional Coastal Marine plans to be developed in consultation with all stakeholders. The plans should identify appropriate zones for marine farming, set limits on the intensity of development and standards that must be achieved.
3. The Marine Farming review Panel to include a community representative and an independent marine scientist. All future lease applications must be reviewed by this panel in public hearings.
4. There be an establishment of Fish Farming compliance officer/s to oversee the salmonoid industry's activities – currently managed by 4 separate departments.
5. Marine Debris – enforcement of penalties for the equipment, fish and materials lost from lease areas into open waters.

It is time for a moratorium and a rethink on fishfarms. It is time they considered moving to land as has happened overseas. The future is shore based and if America is doing it why not here. Overseas experience offers ideas for the future industry.

Research and development in Norway's aquaculture sector increased by 30 percent to 2.3 billion kroner, or $275 million, between 2013 and 2015, according to official data quoted by Hatch, as startups and research institutes raced to develop disruptive new technologies.

At Norway's biggest oil refinery, a startup called CO2Bio is harnessing greenhouse gases to culture algae that can then be harvested as a sustainable source of fish feed. At the Institute of Marine Research in Bergen, the Aquafly project is investigating whether black soldier flies fed on waste

products from the food industry or the seaweed growing off Norway's coast could be another viable feed ingredient.

"The insects are also part of this whole circular economy, where instead of throwing away things you would reuse and recycle and upcycle," said Nina Liland, one of the Aquafly researchers. "Potentially you could use food waste from households to produce insects that could be used for fish feeds: That would be an optimal scenario."

Various companies are working on projects to recycle more of the vast amounts of waste dumped into the sea by Norway's aquaculture industry into products such as biogas or fertilizer. Tasmania could be leading the way with new ideas.

I would also query whether any work has been done to address the concerns raised by the Scallop Fishermen's Association in their submission to a previous salmon farming inquiry.
"The Tasmanian commercial scallop industry is an iconic fishery that employs many fishermen and processors with considerable flow on economic benefits across the whole state right through to tourism.

We are very happy to strongly support the Tasmanian east coast as a "no grow zone" as this has historically been the main harvesting grounds of the Tasmanian scallop fishery.

However our concerns are that the proposed areas currently under exploration and shown as potential for further release include scallop harvesting areas which if developed into salmon "grow areas" will exclude historic scallop harvesting to the detriment of our fishery.

In recent years we have harvested scallops inside the proposed salmon boundary west from Stanley to Three Hummock Island yet apparently that historic activity has been ignored despite it being of great significance to our fishery both for larvae settlement and for growing scallops. It has also been the only regular harvest area in the state not impacted by harmful algal blooms including paralytic shellfish toxins (PST) making this area important to our fish"

This is a major industry supporting a lot of local small businesses and therefore of great import to our state. Their concern will be to protect their environment because they have nowhere else to go. History shows that big companies are happy to exploit an area and move elsewhere. Tassal's unwillingness to provide for its own water needs at Okehampton Bay at the expense of the local community is an example of this attitude.

I hope this Committee will recommend a precautionary approach on this Industry rather than the development at all costs approach that seems to have been the rule so far. It is in the interests of this State to protect the environment that is the basis of our life.

Margaret Taylor
[redacted]