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29<sup>th</sup> November 2019

Dear Mr Wright,

***RE: Legislative Council Sessional Committee Government Administration A Sub Committee: Finfish Farming in Tasmania Inquiry 2019***

I am writing on behalf of the Tasmanian Abalone Council Ltd (TACL) in reference to the above Legislative Council Inquiry.

I note the following terms of Reference to the Inquiry:

*“To inquire into and report on the planning, assessment, operation and regulation of finfish farming in Tasmanian, with particular reference to:*

- 1) *The implementation of the*
  - a) *data collection and publication;*
  - b) *progress in the development of an industry wide biosecurity plan;*
- 2) *Application of the Marine Farming Planning Act 1995 relating to:*
  - a) *preparation and approval process for marine farming development plans, including modifications and amendments to marine farming development plans;*
  - b) *allocation of leases, applications for and granting of leases;*
  - c) *management of finfish farming operations with respect to the prevention of environmental harm;*
- 3) *Any other matter incidental thereto.”*

**Background: The Tasmanian Abalone industry**

The Tasmanian abalone industry has grown from very humble beginnings in the mid-sixties to an industry that now generates approximately \$100 million of export revenue and an additional \$200 million of associated economic activity annually for the Tasmanian economy. The industry has an estimated capitalised value of around \$1 billion (processing factories, vessels, quota licenses etc) – and it has achieved

this with no subsidies from the Tasmanian Government. Indeed, the abalone industry is a net provider of revenue to the Tasmanian Government and has paid in excess of \$160 million in licence fees and royalties over the last 34 years.

The Tasmanian abalone fishery depends on complex environmental factors to replenish and maintain healthy stock levels. Many of these environmental factors are not well understood and are beyond the control of managers, fishers and researchers.

Anthropogenic inputs and influences on coastal ecosystems are increasing (e.g. urban runoff, effluent from sewerage systems, organic and inorganic inputs from intensive agriculture and aquaculture, sediments from forestry “run off”) and have the potential to reduce the productivity of wild abalone populations.

The burgeoning Tasmanian salmon aquaculture industry has long been identified by the Tasmanian abalone industry as posing a potential risk to the health of delicate inshore reef systems.

There is a commonly held view amongst many commercial abalone divers who harvested abalone in the D’Entrecasteaux Channel during the seventies, eighties and nineties that the benthic community in some sections of the lower Channel has altered in a way that is less supportive to habitation by abalone and other benthic reef dwellers that were once abundant in this area.

For over two decades, abalone divers have regularly reported a fine layer of “milky dust” covering parts of the inshore benthic community – they also report a change in the type and form of algae that grows in some of the bays and around the shoreline of the lower D’Entrecasteaux Channel.

Rightly or wrongly, divers attribute the burgeoning salmon aquaculture industry as a significant source of pollutants (nutrient and sediment) into the lower D’Entrecasteaux Channel.

It is a widely acknowledged fact that salmon aquaculture has a detrimental effect on water quality and substrate characteristics in close proximity to farming operations - events in Macquarie Harbour in 2016/2017 have confirmed this statement beyond any doubt. The degree to which these impacts occur depends on the intensity of the farming (i.e. stocking density and fish feed inputs) and the capacity of the receiving marine environment to buffer or assimilate these impacts.

An understanding of the environmental sensitivities of abalone during its life cycle and the complex interactions within reef ecosystems are required for assessing the potential impacts of pollutants from anthropogenic activities such as open-cage salmon farming.

Salmon farm inputs potentially detrimental to abalone habitat include the *principal* inputs of artificial fish feed and fish excreta plus *incidental* inputs such as bio-fouling from net cleaning practises, anti-foulants, heavy metals (principally copper and zinc), fuel & oil spills, rotting and/or dead fish, fish escapees, recoverable and non-recoverable farm debris and cleaning chemicals. Other detrimental impacts may occur as a result of the restriction of wave action and water flow around and through cage systems to neighbouring marine habitats. This list is by no means exhaustive.

In summary however, there are two key environmental inputs from open-cage salmon farming systems that may have a detrimental impact on wild abalone populations. These are:

- Sustained nutrient loads and
- Sustained sediment loads

The primary risk for wild abalone reef habitat adjacent to salmon farming operations is the broader-scale medium to long-term environmental degradation caused in part or wholly by sustained nutrient and sediment inputs from open-cage farming systems.

Excess nutrient and sediment load may detrimentally affect abalone larval growth, larval settlement and the early grow-out stages of the lifecycle. In addition, sustained nutrient and sediment loads may also change the balance of micro and macro algal species within delicate reef ecosystems – creating less than optimal environmental conditions and availability of preferred food for abalone during some or all lifecycle stages.

Tasmanian inshore reef ecosystems are complex interactive systems within which it is hard to define or predict the potential impacts from changes in environmental or anthropogenic inputs, since there are many oceanic and reef scale feedback mechanisms that may compensate for one change or multiply/amplify another. As there is currently a lack of specific scientific research dealing with the impact of salmon farm derived pollutants on wild abalone reef systems it makes absolute sense to be cautious when siting salmon cage systems in close proximity to productive abalone reef habitat.

#### **A substantial “Body of Work” for the Legislative Council Inquiry Committee to review:**

Notwithstanding that finfish farming is by now a mature and well-established industry in Tasmanian waters, the TACL has ongoing concerns regarding the regulation of the salmonid sector.

The TACL has expressed these concerns to the Tasmanian Government regarding the expansion of the salmonid industry since 2014. There is a substantial “body of work” relating to the salmonid sector which has been publicly available on the TACL website <https://www.tasabalone.com.au/news/> since 2014.

This “body of work” consists of multiple reports and submissions in response to the Government’s Sustainable Salmon Growth Plan and assorted Marine Farm Planning Amendments.

The below hyperlinks provide access to the key documents, the contents of which should all be reviewed as part of the *Legislative Council Inquiry into Finfish Farming in Tasmania*.

1. TACL Submission (October 2014) to the Tasmanian Government regarding the risks posed to the abalone fishery from the expansion of the salmonid sector. This is the first publicly available document which seeks to comprehensively review the potential impact of the rapidly expanding salmonid industry on inshore reef systems (which are home to commercially valuable species including abalone and rock lobster):

<https://tasabalone.com.au/wp-content/uploads/2016/11/Risks-to-the-Tasmanian-Abalone-Fishery-from-further-expansion-of-the-Salmonid-Industry-October-2014.pdf>

2. TACL Submission (September 2017) to the Sustainable Salmon Growth Plan. This is the TACL’s formal response to the Government’s 2017 plan to expand the salmonid sector:

<https://tasabalone.com.au/wp-content/uploads/2016/11/20171010-Tasmanian-abalone-industry-submission-to-the-Sustainable-Salmon-Growth-Plan-September-2017.pdf>

3. TACL Submission (February 2018) to the Draft Storm Bay North Marine Farming Development Plan November 2017:

<https://tasabalone.com.au/wp-content/uploads/2018/09/20180213-Tasmanian-Abalone-Council-Ltd-Submission-to-the-Draft-Storm-Bay-North-MFDP-Nov-2017-Feb-2018.pdf>

4. TACL Submission (January 2018) regarding amendment#5 to the Tasman Peninsula and Norfolk Bay Marine Farming Development Plan November 2005:

<https://tasabalone.com.au/wp-content/uploads/2018/09/20180130-Abalone-Council-submission-re-draft-amendments-to-the-Tasman-Peninsula-and-Norfolk-Bay-MFDP-January-2018.pdf>

5. TACL Submission (June 2018) to the Environmental Management and Pollution Control (Environmental Licences) Regulations 2018.

<https://tasabalone.com.au/wp-content/uploads/2016/11/Tasmanian-Abalone-Council-Submission-re-draft-EMPCEL-regs-2018.pdf>

6. Proposed Plan (December 2017) for the Environmental Monitoring of abalone reef systems within the Lower D'Entrecasteaux Channel and Actaeons Reef Systems. This draft EMP was developed with input from IMAS and discussions (with IMAS) are ongoing regarding the formal establishment of the EMP:

<https://tasabalone.com.au/wp-content/uploads/2016/11/20180621-Development-of-an-Environmental-Monitoring-Program-December-2017-TACL-Board-Final-draft.pdf>

The above TACL documents provide a comprehensive description of the nature of the risks imposed on abalone reef systems by industrial scale salmonid farming practices. They also outline key recommendations which focus on reasonable steps to mitigate these identified risks.

***More importantly, they collectively (and comprehensively) address the Inquiry Terms of Reference.***

On behalf of the Tasmanian Abalone industry, I encourage the Inquiry Committee Members Hon Kerry Finch MLC, Hon Ruth Forrest MLC, Hon Mike Gaffney MLC, Hon Rob Valentine MLC and Hon Meg Webb MLC (Inquiry Chair) to read and review the above key documents as part of their Inquiry into Finfish Farming in Tasmania.

Yours sincerely,

 Chief Executive

