

## **TISC Review of *DRAFT Environmental Standard for Marine Finfish Farming in Tasmania* - *Position Paper (20 June 2022)***

The Tasmanian Independent Science Council (TISC) appreciates opportunity to comment on this position paper on draft standards, noting that there will be another opportunity to comment on the draft standards themselves at a later time.

As the primary author of this submission, I have previously reviewed and submitted detailed feedback and recommendations regarding Tasmania's current regulatory standards and practices, much of which is also relevant to this review, specifically:

- A detailed review of the EPA's Review of International Salmon Standards– submitted at the request of the Legislative Council during their inquiry into the Tasmanian Salmon Industry.
- Reviews of three Broadscale Environmental Monitoring Programs (BEMPs) for the Channel/Huon, Macquarie Harbour and Storm Bay regions at the invitation of the Scottish Association for Marine Science (SAMS) who have been contracted by the EPA to undertake this independent review.

These four documents are attached and should be considered as part of this submission.

Additional comments are provided below on three aspects: process, scope and focus areas.

### **Process**

We are concerned that the responsibility for developing the environmental standards been taken from EPA and now sits with NRE, with the EPA now delegated to a compliance role. This seems unnecessary and counterproductive, given that the EPA had been working on these standards for several years now. It is essential that the EPA be closely involved in the development of the standards if they are to be rigorous and fit for purpose. Compliance will not necessarily result in environmental protection if the criteria are wrong.

There have been multiple recent independent reviews into the regulation of salmon farming in Tasmania, commissioned by the Government, including an independent review of the EPA document *Review of International Regulations* by the NZ Cawthron Institute, and reviews of the BEMPs for the Channel/Huon, Macquarie Harbour and Storm Bay by the Scottish Association for Marine Sciences. Unfortunately, only one of these four reviews has been publicly released to date (Channel/Huon BEMP), and I have been informed that the Cawthron review will not be made public. This is disappointing and limits our ability to provide well-informed feedback.

I was surprised to learn that the EPA is responsible for managing Environmental Impact Assessments for new leases, as this was previously the role for the MFRDP. Is this correct? Will, for example, the Petuna lease off Betsey Island undergo a full EIA process prior to issuing an EL, including an opportunity for public input?

Finally, we are concerned about the proposed approach being taken for the regulation of aquaculture operations in Commonwealth waters. The proposed 'experimental leases' will not be subject to the same level of regulation and scrutiny as those in state waters, and much is left to the discretion of the Minister, with the EPA Director in an advisory role. There is no requirement for public reporting and no opportunity for public scrutiny or appeal. This is particularly concerning given that no limits have been set on the scale of production or the period over which this can occur, and that a commercially significant tonnage of fish could be produced for private profit.

### **Scope**

As currently structured, it appears that the regulation of salmon aquaculture will be achieved through a patchwork of regulations and standards, and that some aspects of the industry will continue to operate without regulation, monitoring or reporting. Given the interconnected nature of aquaculture operations, we believe that an integrated system is needed to manage the full range of operations. Key elements that are missing from this environmental standard include the following:

- Smolt production/inland fish farms

- Freshwater use
- Desalination plant operations and discharges
- Wellboat operations and discharges
- Animal interactions
- Management of biofouling

### Policy

All existing Marine Farm Development Plans, as well as individual leases, should be regularly reviewed for suitability and impact, with license conditions and monitoring programs adjusted to take into account new information. Baseline surveys should be regularly repeated, as should carrying capacity modelling, and the location and allowable uses of lease areas should be revised accordingly. Some leases in poorly flushed coastal waterways are likely to need to be removed.

This should take place within the context of a broader marine spatial planning framework, and must include an opportunity for community and other user input to ensure that their issues and concerns are being addressed. This will become increasingly important in a rapidly changing climate.

Operational aspects of individual lease areas **must** be included in both regulation, monitoring and reporting. This is essential both as a public right to know as well as to enable interpretation of monitoring results. We strongly challenge the view that polluting activities in shared waterways should be able to withhold biomass and other information for 'commercial in confidence' reasons. If all operators are required to provide the same information this would ensure a level playing field.

### Focus areas

We note that nearly all of the proposed standards in the document reflect the existing license conditions and criteria as required for the more recently approved leases in Storm Bay and Okehampton Bay. While these are clearly an improvement on some of the older leases, there are many further improvements needed to bring current practices up to 'world's best practice' standards. Detailed recommendations are provided in the attached document, with some key points summarised below:

- Further clarification is needed as to what constitutes a comprehensive and adequate baseline survey. Over what period should these be done to capture the natural variability of the system, and how often should they be repeated to assess impacts after leases have been occupied? We would suggest the New Zealand requirement of 5-yearly repeat surveys.
- Most countries set Maximum Allowable Biomass limits for salmon farms, and Tasmania should take a similar approach by setting caps on maximum biomass, feed inputs and/or dissolved nitrogen for both regions **and individual leases**. This should be initially based on rigorous modelling of carrying capacity that takes into account sensitive areas and habitats, and fine-tuned following performance monitoring. We do not support the practice of setting caps based on previous practices or 'adaptive management'.
- Carrying capacity models should be required for both existing and future operations. These should include DEPOMOD, dispersion and biogeochemical/nutrient response models. Ideally these would predict both benthic and nutrient enrichment footprints, as well as impacts from both individual and cumulative operations. Models and carrying capacity reviews should also be repeated at 5-yearly intervals to ensure they are accurate and regularly updated.
- Tasmania's current regulations are heavily focussed on visual benthic criteria both within the lease area and at a 35m compliance limit from the lease boundary. The rationale for this 35m compliance limit requires further review and justification, as does the definition of what constitutes a 'significant' impact. Regional and site-specific differences need to be considered in defining an Acceptable Zone of Effect (AZE). Impacts beyond the AZE should also include non-benthic criteria, particularly nuisance macro-algae and other indicators of nutrient stress.

- Site-specific modelling (e.g. DEPOMOD) is needed to establish the benthic footprint at each lease. This should then be used as a basis for an optimised benthic monitoring design. Monitoring transects aligned with current direction/speed should also be integrated in the monitoring design.
- BEMPS need to be re-designed to better reflect both intermediate and broad-scale impacts. In particular, monitoring of the dissolved nutrient 'footprint' is not well designed, both with respect to the indicators used and the location of the water and sediment sampling locations. Most BEMPs do not include water quality monitoring in sheltered areas (where nutrient impacts may be most pronounced) or biological monitoring of vulnerable habitats (e.g. reefs, seagrasses). Furthermore, the growth of nuisance algae and other indicators of nutrient enrichment is not included on most BEMPS, other than Storm Bay. While some work has been done on impacts on reef and intertidal communities, this is not always directly related to the dissolved nutrient footprint of nearby leases. Most BEMP monitoring sites appear to be too far from leases to discern impacts and rely on indicators such as ammonium nitrogen that is highly transitory and unlikely to be measured. The Macquarie Harbour BEMP is particularly poorly designed. See attached BEMP reviews for further details.
- Requirements for fallowing times are vague, and clearer criteria are needed as to what constitutes 'recovery'.
- Tiered management responses based on monitoring results should be clearly stated, including what constitutes a breach of license conditions and what follow-up actions will be required (e.g. more intensive monitoring, move pens, reduce feed input, early harvest, extended fallow, reduce biomass/nitrogen caps, fines & penalties, close lease). At present, this seems to be done in an ad hoc manner.
- Reporting must be provided in a regular, timely and transparent manner, including biomass levels, feed inputs and/or nutrient loads associated with specific regions **and** leases. Reporting should also include monitoring results and visual footage at the 35m compliance boundary, fish escapes and mortalities, use of antibiotics, etc. 'Commercial in confidence' is not an acceptable reason to withhold information when pollutants are discharged to public waterways and is not standard practice elsewhere. An example of required monthly reporting for individual leases by the Scottish EPA, can be accessed here: [http://aquaculture.scotland.gov.uk/data/fish\\_farms\\_monthly\\_biomass\\_and\\_treatment\\_reports.aspx](http://aquaculture.scotland.gov.uk/data/fish_farms_monthly_biomass_and_treatment_reports.aspx)

We hope this feedback is useful and will be incorporated within the draft Salmon Environmental Standard. Please contact me if I can provide further advice.

Finally, can you please confirm that all submission on this matter will be made publicly available?

On behalf of the Tasmanian Independent Science Council

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#### **About the Tasmanian Independent Science Council**

The Tasmanian Independent Science Council is dedicated to science-based policy reform to ensure the long-term health of Tasmania's environment. The Council includes scientists and professionals who provide independent, non-government advice, focusing on policy reforms of significant State interest. We seek to inform public debate and influence legislative reform to improve outcomes for terrestrial, freshwater and marine ecosystems.

Enclosures:

- Review of EPA Document (Review of International Regulations)
- BEMP Review: Channel/Huon
- BEMP Review: Macquarie Harbour
- BEMP Review: Storm Bay