



# EDO Recommendations for the Draft Environmental Standards for Marine Finfish Farming 2023 lutruwita/Tasmania

21 March 2023



Environmental  
Defenders Office

# About EDO

EDO is a community legal centre specialising in public interest environmental law. We help people who want to protect the environment through law. Our reputation is built on:

**Successful environmental outcomes using the law.** With over 30 years' experience in environmental law, EDO has a proven track record in achieving positive environmental outcomes for the community.

**Broad environmental expertise.** EDO is the acknowledged expert when it comes to the law and how it applies to the environment. We help the community to solve environmental issues by providing legal and scientific advice, community legal education and proposals for better laws.

**Independent and accessible services.** As a non-government and not-for-profit legal centre, our services are provided without fear or favour. Anyone can contact us to get free initial legal advice about an environmental problem, with many of our services targeted at rural and regional communities.

Environmental Defenders Office is a legal centre dedicated to protecting the environment.

[www.edo.org.au](http://www.edo.org.au)

## Acknowledgement of Country

EDO recognises First Nations peoples as the Custodians of the land, seas and rivers of Australia. We pay our respects to Aboriginal and Torres Strait Islander Elders past, present and emerging, and aspire to learn from traditional knowledge and customs so that, together, we can protect our environment and cultural heritage through law.

In providing these submissions, we pay our respects to First Nations across Australia and recognise that their Countries were never ceded and express our remorse for the deep suffering that has been endured by the First Nations of this country since colonisation.

# Executive Summary

The *Environmental Standards for Tasmanian Marine Finfish Farming* (**Environmental Standards**) will be one of the key regulatory tools to manage the environmental impacts of marine finfish farms into the future and for this reason, they must be clear, scientifically based, and provide the environmental regulatory improvements that are so desperately required to restore the flagging community confidence in the environmental management of this industry.<sup>i</sup>

**The Draft Standards are not clear, do not reflect international best practice and do not appear to be based on the best available science. The Draft Standards largely represent a weaker set of environmental rules than currently apply to marine finfish farms** and are a diminished version of what was proposed in the *Introducing an Environmental Standard for Marine Finfish Farming Position Paper* (**Position Paper**) circulated last year. **This is unacceptable.**

Given the detailed submissions and recommendations by EDO, Tasmanian Independent Science Council and other members of the broader community to the Position Paper were largely ignored in the Draft Standards, real questions must be asked about whether the Draft Standards are just a “consolidation of existing monitoring/controls” as called for by Tassal and the Tasmanian Salmonid Growers Association in their submissions in response to the Position Paper.<sup>ii</sup>

**As they presently stand, the Draft Standards are at odds with the world-leading regulatory ambitions the Government had for the Standards,<sup>iii</sup> advice from the Government’s own experts,<sup>iv</sup> and community expectations. For these reasons, EDO strongly urges the Government to pause the development of the Environmental Standards and go back to the drawing board, including by properly and fulsomely engaging not just with industry but all the lutruwita/Tasmanian community.**

If the Government decides to press ahead with the Draft Standards, in the following submission EDO has provided several recommendations which should, at a minimum, be addressed before the Environmental Standards are finalised.

A **summary** of EDO's recommendations is provided below.

We further **repeat EDO's previous recommendations in our submissions to the Position Paper, the Draft Salmon Industry Plan, and the Discussion Paper on the 10 Year Salmon Plan** and urge these to be taken into account in the preparation of the Environmental Standards.<sup>v</sup>

**Recommendation 1:** The Draft Standards be amended to ensure that the same rules will apply to all finfish farms – new, existing, and expanding – and any discretion by the EPA Director and/or Board is guided by transparent and science-based criteria set to protect the environment.

**Recommendation 2:** The Draft Standards be amended to reflect that the EPA Director's role is to set Total Permissible Dissolved Nitrogen Output (**TPDNO**) below a cap imposed by the Marine Farming Development Plan (**MFDP**), and provide clear, science-based criteria for the Director's TPDNO limit decisions below the MFDP cap.

**Recommendation 3:** Substantially improve monitoring requirements and environmental protection thresholds in the Draft Standards to align with international best practice, the precautionary approach and remove ambiguity.

**Recommendation 4:** Amend the Draft Standards to impose appropriate standards relating to finfish escapes, biomass limits, light and noise limits to better protect communities and marine life.

**Recommendation 5:** The Draft Standard be amended to provide for the publication of relevant environmental management information, including:

- Dispersal and biogeochemical modelling (including statements about the assumptions on which the modelling is based and any limitations in the environmental data on which they are based) prepared for all finfish farms (existing, expanding or proposed).
- Therapeutant use for all finfish farms, including levels, dates and locations.
- Any finfish escapes for all finfish farms, including numbers, dates and locations.
- Mortality events for all finfish farms, including numbers, dates and locations.
- The applicable Water Quality Objectives set by the EPA Board for all finfish farms.
- Significant environmental management decisions by the EPA Board and Director, such as the setting of TPDNO and biomass limits (per out recommendations on these above), and the reasons for these decisions (including the facts and data on which they are based).

# General comments

The Legislative Council Report recognised the high level of concern in the community about the environmental harm caused by the salmon industry, the proposed expansion of the industry and the adequacy of the current regulatory framework. The Environmental Standards were touted by the Government and the EPA as the key way many of these concerns would be addressed.

The Government also said the new Standards would be based on advice from the Cawthron Institute on what constitutes international best practice.<sup>vi</sup> Both of these statements implied that the new Environmental Standards would be an improvement on current regulatory practices. **However, this is not what we see with the Draft Standards.**

The Draft Standards fall well short of implementing the recommendations by the EPA and the Environmental Standards Working Group, and current environmental regulations.

In particular, the following **recommendations of the Working Group have not been implemented or fully implemented in the Draft Standards:**

- Increasing the number of monitoring stations within the Farm Zone to “provide a better understanding of the environmental condition of the near-field environment within the marine farming lease area in line with international practice.”
- Revised water quality guideline values should be provided for use within the new Environmental Standard for all MFDPs across lutruwita/Tasmania to enable site-/region-specific investigative levels to be established to increase the success of protecting ecosystem health.
- In line with international practice, undertake all environmental monitoring surveys during the period of peak feed input.
- Conducting regular detailed benthic environmental surveys (e.g quantitative physico-chemical and biological parameters) across monitoring stations to benchmark environmental performance.
- Implementing the video scoring index for environmental conditions (established by Macleod and Forbes in 2004) as a means to determine environmental performance.
- Adopting real-time sensor technology to monitor critical water quality parameters at higher temporal resolutions (e.g turbidity, chlorophyll, oxygen) at appropriate spatial scales.

EDO is concerned the dilution of the existing environmental regulations evidenced in the Draft Standards reflects the wishes of the salmon industry, at the expense of the EDO submission on the Draft Environmental Standards for Marine Finfish Farming 2023 (Tas)

suggestions for improved environmental regulation, set out in detailed submissions by EDO, Tasmanian Independent Science Council and others. <sup>vii</sup>

There are **five key concerns** we would like addressed in the Environmental Standards, these are:

1. The Draft Standards lack clarity in how they will be applied and how they interact with Technical Standards and other environmental, operational and biosecurity requirements.
2. The maximum TPDNO limits should not be left to the discretion of the EPA Director.
3. Monitoring requirements and environmental protection thresholds need to be substantially improved to align with best practice and the precautionary approach, and remove ambiguity.
4. The Draft Standards fail to appropriately address issues such as fish escapes, biomass limits and all impacts of light and noise.
5. The Draft Standards do not provide for transparency through publicly accessible data and decisions.

Each of these issues is addressed in more detail below.

### **1. The Draft Standards lack clarity in how they will be applied and how they interact with Technical Standards and other environmental, operational and biosecurity requirements**

The Draft Standards lack clarity on when and how they will be applied by the EPA Board and/or the EPA Director in making decisions in respect of Environmental Licences. For example:

- baseline environmental assessments, depositional and nutrient dispersal and biogeochemical modelling requirements appear to apply only to future operations, and/or at the EPA Director's discretion;
- the EPA Director has discretion about whether to give Environmental Licence holders a notice specifying a Broadscale Environmental Management Program (**BEMP**) that is to apply;
- the EPA Director has the discretion about whether or not to determine a TPDNO for finfish farms within a specified area for a specified period.

In EDO's view, it is unacceptable that existing operations are not subject to the same standards as new leases, or that some farms might be subject to a BEMP or TPDNO cap while others might not be. Such language builds inconsistency into the Draft Standards when the need for consistency was one of the primary justifications for their introduction. Such provisions in the Draft Standards create ambiguity and provide the Board and/or Director with too much discretion.

It is also concerning how much of the details of monitoring and other issues are being left to the Technical Standards. Given that the Technical Standards could take at least another two years to finalise after the Environmental Standards are implemented,<sup>viii</sup> that is a significant period of regulatory uncertainty for both leaseholders and the community. It is also significant that there is no formal opportunity for public input on the formulation of Technical Standards, meaning that important environmental management decisions are being made behind closed doors.

It is also unclear how proposed standards and controls, such as the Biosecurity Standard and Marine Farming Development Controls, will interact with the Environmental Standards and what will happen if there are inconsistencies. Moreover, due to the piecemeal and disjointed way in which these different standards are being developed, it is next to impossible to determine how the jigsaw pieces will ultimately fit together and whether they will work harmoniously, adequately protect other parts of the environment (including issues like the welfare of seals, birds and cetaceans). Or will this piecemeal arrangement create more loopholes and weaken the existing level of environmental regulations?

Given that the level of EPA Director and Board discretion and the ambiguity/lack of clarity were some of the greatest criticisms of the existing salmon regulatory regime raised in submissions to the Legislative Council Inquiry into Finfish Farming, we question how it can be expected the Draft Standards will lead to greater levels of environmental protection and community confidence in the system of regulation.

**Recommendation 1:** The Draft Standards be amended to ensure that the same rules will apply to all finfish farms – new, existing, and expanding – and any discretion by the EPA Director and/or Board is guided by transparent and science-based criteria set to protect the environment.

## **2. The maximum TPDNO limits should not be left to the discretion of the EPA Director**

The level of TPDNO of finfish farms is a key determinant of their environmental impact, as high levels of nitrogen can lead to algal growth which can impact surrounding habitats (including those of threatened species), and deplete oxygen levels. For this EDO submission on the Draft Environmental Standards for Marine Finfish Farming 2023 (Tas)

reason, EDO is disappointed that the Draft Standards continue the status quo by providing the EPA Director with the ultimate discretion to determine the maximum TPDNO limit for a lease area and for all leases with a defined area.

Consistent with the recommendations of the Legislative Council Report,<sup>ix</sup> EDO has long been calling for maximum TPDNO limits for a lease area and for all leases with a defined area within MFDP to be set in the MFDP. This is because a critical element of the MFDP approval process should be determining the overall sustainable assimilative capacity of the area within the MFDP (or broader receiving environment) for the wastes and nutrients of the proposed finfish farms. If through the MFDP application and assessment process only a certain level of TPDNO is modelled as being sustainable for that lease and area, EDO considers it inappropriate for the EPA Director to have the ultimate discretion to determine the maximum TPDNO limits, including by potentially exceeding those TPDNO limits modelled as part of the MFDP approval.

EDO considers **the only appropriate role for the EPA Director in setting TPDNO of finfish farms is setting a TPDNO below the cap provided in the MFDP. The EPA Director's decisions in this respect should respond to monitoring demonstrating the breach of clear, precautionary thresholds set to protect the environment (as determined by reference to baseline environmental assessments and the Water Quality Objectives set under the State Policy of Water Quality Management).** EDO recommends that the Draft Standards be amended to reflect that this is the EPA Director's role and provide clear, science-based criteria for the Director's TPDNO limit decisions below the MFDP cap.

**Recommendation 2:** The Draft Standards be amended to reflect that the EPA Director's role is to set TPDNO below a cap imposed by the MFDP, and provide clear, science-based criteria for the Director's TPDNO limit decisions below the MFDP cap.

### **3. Monitoring requirements and environmental protection thresholds need to be substantially improved to align with best practice and the precautionary approach, and remove ambiguity**

Monitoring program requirements and thresholds in the Environmental Standard should be based on international best practice, the best available science and align with the precautionary approach. Consistent with the recommendations of the Environmental Standards Working Group and the Review of Tasmanian and International Regulatory Requirements, monitoring should go beyond the assessment of major visual impacts (such as the presence of gas bubbling from the sediment – which indicate when the area has already hit an ecological tipping point) to include other quantitative environmental indicators (for example, physico-chemical and

EDO submission on the Draft Environmental Standards for Marine Finfish Farming 2023 (Tas)



biological parameters) measured against known thresholds for the various finfish farming areas. This would ensure finfish farmers are not only monitoring for an environment that is already in terminal decline. The Environmental Standards Working Group recommends that to increase the success of protecting ecosystem health, standards should include clear site-/region-specific water quality investigative levels based on the achievement of Water Quality Objectives derived from revised water quality guideline values for marine areas.<sup>x</sup>

Disappointingly, this is not what has been presented in the Draft Standard. **EDO is seriously concerned that the Draft Standard provides for a substantial reduction in the levels of environmental monitoring and regulation currently provided in MFDPs and Environmental Licences.**

Currently, most MFDPs require there to be no “significant” or “unacceptable” impacts 35m from the lease boundary. Environmental Licences reflect this prohibition and provide a list of visual, physico-chemical or biological impacts that may be regarded as “significant”. The area out to 35m from the lease boundary is referred to as the “Depositional Zone” in the Draft Standard. However, the Draft Standard provides no environmental requirements specific to the Depositional Zone. Instead, under the heading “Dispersal Zone” in Div 4, Part 4, the Draft Standard proposes to regulate “significant impacts on the health of benthic ecosystems” of the “relevant area” which, we assume, relates to the Dispersal Zone area, being 135 m from the lease boundary. **The Draft Standard, therefore, proposes to gift the finfish farmers at least an extra 100 m for greater environmental impacts around their leases.**

Furthermore, **even the benthic standards provided for both the Farm Zone and Dispersal Zone in the Draft Standard appear to be weaker than the standards presently provided in many Environmental Licences.** This is because there are no express physico-chemical or biological infauna standards set out in the Draft Standard.

There is also a lack of clarity as to what will be considered “significant impacts on the health of benthic ecosystems” and about what metrics will be incorporated into the “Median Benthic Condition Index” which is referred to, but undefined in the Draft Standards. Without these details, it is not possible to assess whether the Median Benthic Condition Index is a reliable indicator that the capacity of the seabed environment to process particulate waste, or when any “adaptive management” actions might be triggered. The use of such terms as “significant impacts”<sup>xi</sup> allows wriggle room for both licence holders in terms of what they report to the EPA Director and when the EPA takes action. Such a lack of clarity seems at odds with what was promised in the

Position Paper, where it stated that the Standard would set out seabed scoring criteria relating to benthic observations.<sup>xii</sup>

In any event, requiring action to be taken only where there is a “significant impact” is setting the benchmark too low by allowing substantial and potentially irreversible damage to the environment to occur under the guise of “adaptive management”. **You only need to consider what happened in Macquarie Harbour to realise the “significant impact” approach is inappropriate where there are special environmental values, like the endangered Maugean Skate and World Heritage values, in the impact zone of finfish farms.<sup>xiii</sup> The regulation of finfish farming should be aiming to ensure that not just significant but all adverse environmental impacts arising from finfish farming are avoided, mitigated and/or remediated.** This is what both the community and legislation expect.<sup>xiv</sup>

EDO is further concerned by the lack of clear water quality monitoring requirements and thresholds in the Draft Standard, with these matters presumably left to the details of the BEMPs as determined by the EPA Director and, possibly, Technical Standards. This is inconsistent with both the recommendations of the Environmental Standard Working Group, and the Legislative Council Report.

Finally, the Draft Standards leave too much to the discretion of finfish farmers and the EPA Director when it comes to determining the number and location of monitoring stations on leases. EDO considers that what is proposed for the determination of monitoring station location and numbers in the Draft Standard is not in line with international best practice or with the recommendations of the Government’s own experts. The Review of Tasmanian and International Regulatory Requirements found that at the Farm Zone level, the Tasmanian Government.<sup>xv</sup> The Draft Standards should include requirements about how many monitoring stations should be located at the Farm Zone level based on the international best practice, scaled up or down depending upon the biomass within the lease and its area.

**Recommendation 3:** Substantially improve monitoring requirements and environmental protection thresholds in the Draft Standards to align with international best practice, the precautionary approach and remove ambiguity.

#### **4. The Draft Standards fail to appropriately address issues such as fish escapes, biomass limits and all impacts of light and noise**

##### ***Finfish escapes***

The Position Paper stated that the Draft Standard would include provisions for:

- Any significant fish escapes (more than 500 fish at any one time) are to be reported to the Director within 24 hours of becoming aware of the escape.
- Any suspected or known incidents of mortality affecting more than 0.25 per cent of fish per day for three consecutive days in any individual pen are to be reported to the Director.

However, inexplicably, the Draft Standard does not contain any reference to finfish escapes.

EDO considers that finfish escapes should be included in the Draft Standards. In addition, the Draft Standards should also provide for the management of the environmental impacts of fish escapes, including the imposition of fines where escaped fish are not recovered, and public reporting.

### ***Biomass limits***

Another issue that has not been addressed in the Draft Standards is the setting and amendment of biomass limits.

Like with TPDNO, EDO considers that maximum biomass limits for areas and leases should be fixed in MFDPs, with any variations below the limits by the EPA Director guided by clear criteria and precautionary thresholds.

However, currently under MFDPs, biomass limits are currently generally left to the discretion of the EPA Director to determine “using whatever information the Director... considers appropriate”. While it may be intended that other standards (such as the Marine Farming Management Controls which are presently under development) will deal with the setting of biomass limits, as biomass is inextricably linked to the amount of pollution produced by a farm (including nitrogen), for consistency and good governance, the setting of biomass limits (below the maximum limit set by the MFDP) should be dealt with in the Draft Standards.

### ***Impacts of light and noise emissions***

EDO is concerned that under the Draft Standards, finfish farms will only need to develop a Light Attenuation Plan if their light emissions are declared an environmental nuisance by the EPA Director. Serious concerns regarding lights from finfish farming operations and their impact on community well-being, wildlife and property values were outlined in the Legislative Council Report and there is an increasing amount of research showing the deleterious effects of artificial light at night on marine biota.

Rather than putting in place a reactive model for light attenuation, EDO considers requirements should be first placed on licence holders to develop a Light Attenuation EDO submission on the Draft Environmental Standards for Marine Finfish Farming 2023 (Tas)

Plan in all cases where light emissions (including from temporary sources such as vessels) exceed 1,000 lumens.

As outlined in EDO's submission on the Position Paper, default noise limits as set out in the Draft Standard should be able to be varied if ambient monitoring at a particular location shows a lower limit is warranted. For example, a night-time standard of 32 dB(A) may be far too high for some quiet locations, in which case, the limit might be set by reference to a certain threshold above the background noise level (e.g. +5dB(A) above background with penalties for certain tonality characteristics). We are also concerned that these noise limits have been set at limits that take into account noise impacts on humans only and have no regard for what noise limits would be appropriate to protect against ecosystem impacts (such as disturbance of cetaceans). The impact of noise on marine life is increasingly being recognised as a major impact of industrial activities in marine areas and we consider the Draft Standard should be revised to reflect this research.

**Recommendation 4:** Amend the Draft Standards to impose appropriate standards relating to finfish escapes, biomass limits, light and noise limits to better protect communities and marine life.

#### **5. The Draft Standards do not provide for transparency through publicly accessible data and decisions**

EDO was disappointed by media reports that finfish companies have been using claims of commercial-in-confidence to prevent monitoring data on the use of antibiotics submitted to the EPA from being published.<sup>xvi</sup> Such reports underscore the importance that our regulatory building in transparency around environmental monitoring and data concerning the use of public waterways.

The Position Paper stated that one of the objectives of the Environmental Standard was to "increase transparency of environmental management and industry accountability for environmental health through publicly accessible monitoring reports." EDO questions how this objective is given effect in the Draft Standards, as no provision is made for the public release of monitoring data etc either within real time, or as soon as practicable after compilation. Including a requirement for these data and reports to be made public in the Draft Standards will go a long way to realising a greater level of transparency and accountability in the industry going forward.

Furthermore, requiring certain environmental management decisions by the EPA Board and Director, such as the setting of TPDNO and biomass limits (per out recommendations on these above), to be published together with reasons will go a long

way towards ensuring transparency and accountability for decision making. EDO maintains its position that full transparency and accountability would be provided when these significant decisions are subject to public comment and third party appeals, although we acknowledge that this requires legislative amendment.

**Recommendation 5:** The Draft Standard be amended to provide for the publication of relevant environmental management information, including:

- Dispersal and biogeochemical modelling (including statements about the assumptions on which the modelling is based and any limitations in the environmental data on which they are based) prepared for all finfish farms (existing, expanding or proposed)
- Therapeutant use for all finfish farms, including levels, dates and locations.
- Any finfish escapes for all finfish farms, including numbers, dates and locations.
- Mortality events for all finfish farms, including numbers, dates and locations.
- The applicable Water Quality Objectives set by the EPA Board for all finfish farms.
- Significant environmental management decisions by the EPA Board and Director, such as the setting of TPDNO and biomass limits (per out recommendations on these above), and the reasons for these decisions (including the facts and data on which they are based).

**Appendix 2 – EPA Tasmania (December 2019) Draft Review of Tasmanian and International Regulatory Requirements for Salmonid Aquaculture containing Cawthron Institute comments – released under the Right to Information Act 2009 (Tas) on 14 March 2023.**

---

<sup>i</sup> As outlined in the [Legislative Council Government Administration Sub-Committee “A” Report on Finfish Farming in Tasmania](#) (the **Legislative Council Report**).

<sup>ii</sup> All submissions to the finfish farming environmental standard are available [here](#). Tassal’s submission can be found on pp 63-66 and the Tasmanian Salmonid Growers Association submission can be found on pp 68-72.

<sup>iii</sup> As outlined in the Explanatory Paper - draft Environmental Standards Marine Finfish Farming Feb 2023 (**Explanatory Paper**).

<sup>iv</sup> As set out by the Environmental Standards Working Group in Appendix 2.

<sup>v</sup> See [EDO Submission in response to Draft Aquaculture Standards for Tasmania](#); [EDO submission to Draft Tasmanian Salmon Industry Plan](#); and [EDO Submission in response to 10 Year Salmon Plan](#).

<sup>vi</sup> Above at n 11, page 4.

<sup>vii</sup> Above at n 7.

<sup>viii</sup> See the response to “What are Technical Standards and when will they be developed?” in the [FAQ](#) released with the Draft Standards.

<sup>ix</sup> Refer to recommendation 19 of the Legislative Council Report, above at n 1.

<sup>x</sup> See Appendix 2 from page 9 (pdf page 16)

<sup>xi</sup> Within the, the Purpose of this Division talks about protecting reef communities and seagrass communities from being due to release of dissolved nutrients from finfish farms. While the Draft Standard does attempt a definition for “significant impacts” for the Regional Zone, by using the word “significant” repeatedly in the definition, the key terms remains undefined.

<sup>xii</sup> Above at n 11, page 10.

<sup>xiii</sup> We provide a case summary on Macquarie Harbour at page 10 of [EDO’s submission responding to the Draft Environmental Management and Pollution Control Amendment Bill 2022](#).

<sup>xiv</sup> *Environmental Management and Pollution Control Act 1994*, Schedule 1.

<sup>xv</sup> See Appendix 2 at page 26 (pdf page 53).

<sup>xvi</sup> Burton, B. (2023) [Documents reveal Tassal wanted two reports on antibiotic use at salmon farms kept secret](#), *Tasmanian Inquirer*