

# ***Review of the Living Marine Resources Management Act 1995***

## ***Marine Resources Division, Department of Primary Industries, Parks, Water and Environment***

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### **SUBMISSION**

Created by a LMRMA working group (chaired by Dr L. Gershwin) of the Tasmanian Independent Science Council

Communicated by Prof. Jamie Kirkpatrick, Chair of the Tasmanian Independent Science Council

### ***Terms of Reference***

- The extent to which the objects of the Act are being achieved;
- The extent to which the Act provides a sound foundation and framework for living marine resource management in Tasmania;
- The extent to which the Act aligns with current best practice fisheries and marine resource management principles (compared to other Australian and international jurisdictions);
- The extent to which the Act is flexible and prepares Tasmania for future risks and challenges associated with the marine environment.

### **ABOUT THE TASMANIAN INDEPENDENT SCIENCE COUNCIL**

The Tasmanian Independent Science Council (TISC) is composed of scientists and related professionals who provide independent, impartial advice, focusing on policy reforms of significant State interest. We welcome the opportunity to comment on the *Review of the Living Marine Resources Management Act 1995* (the Act).

### **INTRODUCTION**

We congratulate the Tasmanian Government and Department of Primary Industries for commencing this review of the Act. In the 27 years since *the Act* was legislated, sustainability has not been achieved and community acceptance of marine industries has declined. Marine industries and their associated environmental pressures have increased to the point that the Act is no longer fit-for-purpose. The TISC asserts that current practice has diverged so far away from the Act's purpose of marine sustainability and community confidence that the time has come for a critical re-think of the purpose of the Act. Below, we outline a robust new approach, which is commercially affordable and scientifically defensible, and most importantly, we believe will work.

## ***PART ONE: A critical assessment of the LMRM Act***

Commercial operations in or on public waters are a privilege, not a right, and must be conducted in such a way that does not harm these resources that are owned by all.

The Act's fundamental purposes are to ensure sustainability of the marine environment and support of community needs, yet both are arguably in free-fall. There seems to be a passing of responsibility from this legislation to others specific to aquaculture. But this transfer is misguided. The Act is the lynchpin for sustainability of the habitats that underlie sustainability of our industries. Without healthy habitats, we cannot produce healthy products for our communities. Healthy habitats are too often viewed as unimportant or as a box-ticking exercise, but the Act can (and should) require healthy habitats to be the top priority, not the last.

Community trust in authorities to protect our public assets is eroding due to the demonstrated lack of effort expended in protecting our public assets. Simply watching our habitats degrade is an unacceptable management strategy, and yet it appears to be our current norm. Damage to the marine environment and the public's trust in authorities to manage it will only get worse unless action is taken to reverse these trajectories.

### ***A) The extent to which the objects of the Act are being achieved***

The purpose of this Act is to achieve sustainable development of living marine resources having regard to the need to –

- (a) increase the community's understanding of the integrity of the ecosystem upon which fisheries depend; and
- (b) provide and maintain sustainability of living marine resources; and
- (c) take account of the community's needs in respect of living marine resources; and
- (d) take account of the community's interests in living marine resources.

The Act has failed its primary purpose and objectives. Since the Act was instituted in 1995, all indications are that marine sustainability and community trust have deteriorated.

According to the University of Tasmania's Handfish Conservation Project<sup>1</sup>, there have been no confirmed sightings of a Ziebell's Handfish (*Brachiopsilus ziebelli*) since 2007. The Red Handfish (*Thymichthys politus*) is considered one of the rarest marine fish species in the world, with an adult population estimated in 2019 to be around 100. The Spotted Handfish (*Brachionichthys hirsutus*) is thought to have fewer than 3000 individuals remaining in the wild. All are considered Critically Endangered.

Similarly, the Maugean Skate is on the decline, with concern that habitat stress is leading to deaths as well as negatively impacting on juvenile recruitment<sup>2</sup>. Of course, nobody is looking to harvest Handfish or the Maugean Skate as marine resources, but their decline is a clarion call that something

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<sup>1</sup> [Species Overview | Handfish Conservation Project](#)

<sup>2</sup> [Maugean skate vulnerable to Macquarie Harbour environmental conditions - Communications | University of Tasmania \(utas.edu.au\)](#)

is out of balance. The habitats that support our living marine resources are in trouble. We ignore this signal at our peril.

Kelp forests have vanished<sup>3</sup>, crayfish populations have declined<sup>4</sup>, abalone populations have plummeted<sup>5</sup>, urchin pests are thriving<sup>6</sup>, jellyfish pests have increased<sup>7</sup>, filamentous algae are spreading<sup>8</sup>, native fur seals are being bombed<sup>9</sup>, and dolphins and penguins are fewer and farther between<sup>10</sup>. If you wrote this in a Hollywood screenplay, nobody would believe that this much damage can occur while authorities keep a straight face.

Our use of living marine resources is not sustainable. Even salmon, which commands the lion's share of funding, research effort, and influence, is faltering. In 2018-2019, Huon Aquaculture lost 64% of its profit due in large part to jellyfish blooms and resulting disease outbreaks<sup>11</sup>. And in 2021, a sharp uptick in fish deaths was revealed<sup>12</sup>. Meanwhile, report after report details community concerns about decreasing water quality and increasing algae. Reports like these are discomfiting, but by no means unusual. In fact, the trend over the last 30 years is very clearly much bigger and far more expensive losses<sup>13</sup>.

The effects of these blooms on other industries and non-monitored native species, and effects of other pests like micro- and macro-algae, is likely to be as considerable as the effects on industry. Every indication is that aquacultural enterprises are suffering from products of its short-term success, with the rest of the ecosystem suffering collateral damage. For example, salmon farming companies are permitted to deploy underwater bombs to deter seals<sup>14</sup>, but overseas research suggests that these are likely having a profound effect on the salmon themselves, as well as dolphins, penguins, and other native species<sup>15</sup>. If independent research were to be conducted on the collateral effects of these bombs, it may well be shown that they are affecting other marine harvest industries as well.

By default, there is a strong focus on the effects of – and impacts on – salmon farming, because it is arguably the sector causing the biggest share of ecosystem damage, the sector creating the most community discontent, and the sector with the greatest capacity for positive change.

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<sup>3</sup> [Tasmania's kelp forests feel the impact of industry of climate change - Science - ABC News](#)

<sup>4</sup> ['A collapse in every sense': call to halt rock lobster fishing to deal with Tasmania's sea urchin crisis | The Mercury](#)

<sup>5</sup> [Abalone industry headed for oblivion if further cuts aren't made, warns one of the industry's biggest quota holders - Mornings - ABC Radio](#)

<sup>6</sup> [As IPCC shows grim climate reality, diver says Tasmania's sea urchin barrens show present impact | The Examiner | Launceston, TAS](#)

<sup>7</sup> [Legislative Council Sessional Committee Government Administration A \(parliament.tas.gov.au\)](#) [submission #40]

<sup>8</sup> [Salmon, Science and Adaptive Management — Tasmanian Conservation Trust \(tasconservation.org.au\)](#)

<sup>9</sup> [Seal response at Tasmanian aquaculture sites 'out of proportion', advocates say - ABC News](#)

<sup>10</sup> [Population decreases in Little Penguins Eudyptula minor in southeastern Tasmania, Australia, over the past 45 years \(researchgate.net\)](#)

<sup>11</sup> [Jellyfish sting Huon Aquaculture's profit - 9Finance \(nine.com.au\)](#)

<sup>12</sup> [Tasmanian salmon companies report 68 instances of elevated fish deaths in 15 months - ABC News](#)

<sup>13</sup> [Legislative Council Sessional Committee Government Administration A \(parliament.tas.gov.au\)](#) [submission #40]

<sup>14</sup> [Seal Management Framework | Department of Natural Resources and Environment Tasmania \(nre.tas.gov.au\)](#)

<sup>15</sup> [Sonic Torture and Salmon Farming - salmonreform.org](#)

***B) The extent to which the Act provides a sound foundation and framework for living marine resource management in Tasmania***

The foundation and framework do not appear to be the primary problem with this Act. A backbone and teeth seem to be more the issue, or, specifically, the lack thereof. The Act clearly holds sustainability to be important in its wording, and yet there is a mismatch with its application. And the Act clearly indicates the needs of the community to be important, but yet again, this importance is not seen in practice. This Act, we assert with a heavy heart, is sustainable in wording only. The TISC asserts that the single most important change that must come from this review is one that brings about greater accountability.

Coastal marine industries and associated communities can co-exist and thrive under common, overarching environmental legislation and regulations. In fact, such a legislative framework may be the only context in which these competing interests can co-exist and thrive.

The core weakness with the formulated statutory principles relating to sustainable development, in section 7 and Schedule 1(1) of the Act, is that the legislation does not stipulate the **relative** significance of the principles. When the law lists half a dozen principles, some potentially conflicting, it makes it difficult to hold the government accountable because a failure to fulfill one principle (e.g., 7(1)(b) to "...maintain sustainability of living resources...") might be excused with the rejoinder that the government had to fulfil, for instance, the stipulation to "take account of the community's needs" (s. 7(1)(c)), which of course can be cover for "economic needs" (i.e., more fishing). We see this tension even more so in Schedule 1(1), such as with the stated objective to "facilitate economic development ..."

Currently, aquaculture-specific legislation requires a LMR permit, such that the principles of this Act should be required to be met as a condition of these permits. So why are LMR permits continuing to be signed off when sustainability principles are being disregarded? It is these sorts of actions that lead the public to refer to this Act and DPIPW as a 'toothless tiger'. The Department needs to lift its game.

One cannot really blame industry for doing what it can get away with. But one should blame the Department for failing to uphold the Act's primary principles of sustainability and safeguarding our marine resources for future generations. Compromising sustainable practices is not a favour to industry: an industry that requires a healthy habitat cannot survive without a healthy habitat.

The TISC recommends amending the relevant legislative sections in order to delineate the **relative** importance of the principles, and specifically to provide that section 7(1)(b) must be the priority principle, prevailing over any conflict that may arise with the implementation of the other principles. Such a change in the law will promote greater transparency, clarity and accountability in governance of marine living resources. For example,

- a) In all cases, section 7(1)(b) must be the priority principle, prevailing over any conflict that may arise with the implementation of any other principle(s).

***Recommendation 1.*** *The Act be amended to clarify that sustainability of living marine resources is the priority principle.*

**C) *The extent to which the Act aligns with current best practice fisheries and marine resource management principles (compared to other Australian and international jurisdictions)***

The TISC asserts that a full analysis of this very question should be undertaken by an independent body, and the report made publicly available.

In our view, the results should be considered a roadmap and should be interrogated in two complementary ways. Firstly, what lessons and strategies can be learned from the practices of other jurisdictions and integrated into our own? And secondly, if Tasmania is currently the model of best practice, then how can we remain there, and if Tasmania is not currently the exemplar of best practice, then why not?

Comparing our own Act to others can be problematic, however, and must be exercised with caution. We must not use such a comparison to rest on our laurels. The Act must strive to achieve its own aims of doing its utmost to serve our citizens and industries, independent of how our practices stack up in comparison. Whether ours aligns with others, or is better than or worse than others, is irrelevant if we are not sustainable in our own Tasmanian context. Instead of ‘keeping up with the Joneses’, our aim should be to plain and simply do what is required to be sustainable. It is of no comfort to say, “we collapsed at the same rate that they did”... or even “we collapsed more slowly than they did”.

The Act is our primary legislative instrument for sustainability: it is time to stop pussyfooting around and actually attain sustainability. This Act should be the lynchpin against which other Acts must comply. This is the single most relevant Act whose purpose is to protect our coastal legacy for the long-term benefit of all Tasmanians, not the short-term profits of a small handful of businesses.

***Recommendation 2.*** *An assessment be independently undertaken to evaluate the sustainability management practices of other Australian and international jurisdictions, and this resulting report is made publicly available.*

***Recommendation 3.*** *Two lessons be learned from this analysis regardless of where we rank comparatively: what can be gleaned, and how can we improve?*

**D) *The extent to which the Act is flexible and prepares Tasmania for future risks and challenges associated with the marine environment***

With Tasmania’s waters warming four times faster than the global average<sup>16</sup>, it is inevitable that risks and challenges will arise in the marine environment. Such risks include: newly introduced species becoming established, native species that turn into pests, algal and jellyfish blooms expanding their reach, low-oxygen benthic environments and warmer water effects lowering the oxygen, to name just a few challenges that seem inevitable. All these impact on the sustainability of our living marine

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<sup>16</sup> [These waters off Tasmania's east coast are warming up to four times faster than global average - ABC News](#)

resources, and too often cause synergistic effects in which the product of two threats at once is greater than the sum of the two threats in separate contexts.

The TISC supports the existence of sustainable profitable industries and businesses. However, harming people's health, harming ecosystems, or negatively impacting communities in the pursuit of profit is not sustainable. If a business can only make money by harming what is not theirs to harm, then it is not sustainable.

In TISC's view, the role of the Act is to be the gatekeeper on behalf of habitats and communities to determine what is sustainable and to enforce compliance to that standard. This role must be independent of politics, political parties, or profit margins, all of which are short-term, compared to the long-term implications of poor governance of our living marine resource assets.

It seems clear from history and experience that some of Tasmania's larger industries will not voluntarily lighten their footprint on Tasmania's coastal marine ecosystems. The TISC therefore considers that requiring industries to be more sustainable may involve tightening the regulations and increasing fines. It is arguably up to the Tasmanian Government to set the requirements, and up to Industry to meet those requirements. These requirements must be demonstrably sustainable.

More than any other, the Precautionary Principle underpins sustainability. Adaptive Management as currently practiced in Tasmania is too often the antithesis of sustainability, because an issue has to be so far advanced as to become problematic in order to trigger action. The Act has a real chance here to make a positive difference to the sustainability of habitats that support our living marine resources, by enshrining and enforcing a precautionary approach. For example, the Act could require industries seeking permits to demonstrate that their business model embraces the Precautionary Principle, in both name and action. Further, the Act could insert a clause that suspends a permit for failure to follow the Precautionary Principle, keeping it inactive until the Precautionary Principle is demonstrated to be followed.

Sustainability must come first and the privilege of commercial operations on public property must be recognised as conditional. The TISC recommends that a clause be written into the Act reflecting this hierarchical relationship and the paramount requirement for sustainability. For example,

- a) If a *breach of the Act* is suspected to have occurred by any company, an automatic halt to relevant operations is triggered until it is satisfactorily demonstrated that continuing operations would be performed sustainably and in such a way that it would reverse any potential effects of the breach.
- b) If an action by any company that is *compliant* with the Act as written, *but nonetheless unsustainable in the spirit of the Act*, is suspected to have occurred, an automatic halt to relevant operations is triggered until it is satisfactorily demonstrated that continuing operations would be performed sustainably and in such a way that it would reverse any potential effects of the unsustainable action.

The TISC also considers that agility to respond to changing conditions should be written into the legislation as a condition of licenses (e.g., S 66 conditions of marine farming licenses), such that rapid response to currently unforeseeable issues is part of the business model. Moreover, the burden for funding these responses should be apportioned between the public and commercial interests, in a manner that reflects responsibility and/or benefit. For example,

As a condition of new permits and permit renewals:

- a) For foreseen risks to habitats and other marine industries,

- a. research must be completed on the extent of potential damage,
  - b. a management plan must be approved by an independent sustainability body,
  - c. trigger points for mitigative action must be clearly identified, and
  - d. a funding model for remediation must be lodged with the permit-granting agency.
- b) For unforeseen risks to habitats and other marine industries,
    - a. a management plan must be approved by an independent sustainability body which demonstrates surveillance and early identification of potential damage,
    - b. trigger points must be clearly identified by which an unforeseen risk becomes an identified risk, thus activating section (a) above.
  - c) In order to facilitate rapid response, the cost of such research is to be initially borne equally by relevant commercial interests and the government, to be adjusted proportionately according to fault and/or benefit.

***Recommendation 4.*** *The Precautionary Principle should be the primary guiding light of the Act.*

***Recommendation 5.*** *The Act is amended to clarify the hierarchical relationship between the property that is owned by citizens and that its use by commercial enterprises is a privilege, not a right, and may be revoked if unsustainable.*

***Recommendation 6.*** *The Act is amended to mandate clear management plans for foreseen and unforeseen risks to habitats and other marine industries.*

## ***PART TWO: A new approach to Tasmanian Marine Sustainability***

The TISC asserts that Tasmania's whole approach to marine sustainability requires a rethink to integrate all the moving parts, in order to future-proof us moving forward. However, this obviously requires a great deal of time and political will. A less comprehensive option – which in the TISC's view may be marginally less effective but very much quicker, cheaper, and easier to implement – is to create a sustainability strategy, oversee it with a citizens' committee, fund it with an industry levy, and staff it with dedicated personnel.

The TISC envisages this quicker option as an interim measure until an overarching legislative framework is developed, wherein fisheries legislation would sit beneath and alongside other legislation for conservation, shipping, aquaculture, pollution, etc.

### ***Establishment of a formal Tasmanian Marine Sustainability Strategy (the Strategy)***

Thirty years is a long time to let a legislative instrument sit unreviewed, particularly one that should be agile enough to respond to emerging issues that threaten sustainability. In this time, extractive and polluting industries have substantially altered our coastal ecosystems. It is not a good track

record for the DPIPWE or the Tasmanian Government to have let things get this bad, but there is a real opportunity here to actually make things sustainable.

A critically important part of establishing a robust formal Sustainability Strategy, is that it is proactive, precautionary, and periodically reviewed for agility. The TISC recommends the following: shorter permit times or more frequent reporting periods, thus normalising compliance monitoring, with automatic triggers for rapid response in instances of default or breach, built into the legislation.

Another critically important part of sustainability is the 'manpower' and institutional commitment to make it happen. The TISC recommends establishment of a Sustainability Committee or Taskforce (e.g., in accordance with Section 27), along with a Sustainability Research Fund, as described below. Implementation of the Sustainability Strategy should be monitored and reported annually by the Committee to the public. Moreover, the TISC recommends that an independent review of the Sustainability Strategy be undertaken three years after implementation begins, with the findings to be publicly released and used to inform the next iteration of the strategy. The Act itself should be reviewed at least cursorily every five years, and comprehensively every ten years. Review intervals should be indicated in the Act as obligatory.

### ***Establishment of a Tasmanian Marine Sustainability Committee (the Committee)***

The Act contains a provision whereby the Minister can establish advisory committees (S 27 advisory committees).

The TISC envisages an advisory committee that is fully independent, that is, explicitly does not have industry members or members who could benefit from research expenditure. The committee should be comprised of members of the public who are tasked and funded to acquire information from industry and researchers, in order to independently assess whether applications and extensions meet the aims of the Act on behalf of the community. In the TISC's view, commercial enterprises must follow the legislation, not contribute to defining it.

In addition to the Committee itself, the TISC recommends creation of at least one full-time position or team within the DPIPWE as a Tasmanian Marine Sustainability Coordinator, whose job it is to be the legs and arms of the Committee, that is, carrying out the day-to-day business, organising permit application evaluations, and organising the research fund, as directed by the Committee.

In TISC's view, some activities the Committee may wish to explore could include:

- Identifying actions to drive better integration between federal, state, local, and community inputs and uses, as they relate to sustainability of Tasmania's living marine resources;
- Identify actions to drive better integration between the different Acts, to reduce some of the tension created by competing requirements;
- Identify actions to increase community understanding of sustainability; this could include, for example, consideration of a public education campaign that helps improve sustainability across a range of settings;
- Identify actions to promote awareness of, and access to, quality, evidence-based information about sustainability of Tasmania's living marine resources; this could include, for example, online resources made widely available to help communities understand how they can actively support and include sustainability in their operations;
- Develop guidelines on sustainability in order to help industries and the public meet the needs of Tasmania's living marine resources; and

- Include measures to allow for monitoring and reporting relating to sustainability of Tasmania’s living marine resources.

### ***Establishment of a Tasmanian Marine Sustainability Research Fund (the Fund)***

Commercial operations, particularly finfish operations, have enjoyed low-cost access to marine resources for decades, and in some cases have received substantial government subsidies. This has come at the expense of sustainability of coastal habitats and native species. The TISC believes that the time has come for profitable businesses to pull their own weight and cease benefitting from these publicly-funded subsidies.

The TISC envisages a research fund to be established and administered by the DPIPW, explicitly for the purpose of capacity building in monitoring and improving the sustainability of Tasmania’s living marine resources and their habitats. The money for this research fund should come as a levy based on industry’s use of public waterways, and its distribution should be explicitly independent of influence by the industries funding it. For example, a levy based on a percent of the value of harvest model (easier to monitor) or on a ‘number of fish’ model scaled to the amount of impact (e.g., one cent per fish born in hatcheries and one dollar per fish harvested in sea cages<sup>17</sup>), with the proceeds spent as follows:

- Create and maintain the Tasmanian Marine Sustainability Committee;
- Fund the Tasmanian Marine Sustainability Coordinator(s); and
- Research grants will be evaluated and shortlisted by a Research Working Group of the Committee, and approved or rejected by the Committee, on an annual or biannual basis.

Levies not disbursed will be held in a response fund for emerging issues. Matching dollar for dollar contributions to emerging issues will be billed to relevant companies on a case by case basis, and must be paid as a condition of their permits. Companies can appeal these decisions and apply to recover some or all of this matching funding, subject to their demonstrating satisfactorily to the Committee that they hold neither fault in, nor benefit from, the issue in question. The burden of proof is on the company, not on the Department. The Department may direct the relevant company(ies) to pay a greater portion of the matching funding, as indicated by emerging evidence of fault in, or benefit from, the issue in question, as a condition of their permit.

Some may argue that Aquaculture industries should not have to pay a levy, but other marine industries have already done so for years – such as the abalone industry that pays a 7% royalty on the value of their harvest<sup>18</sup>. Similarly, some may argue that companies should not be required to pay for their role in environmental damage. In TISC’s view, it is not reasonable that profitable industries continue to receive goods and services for free from publicly owned property, while citizens receive no compensation for degradation of these properties. As envisaged, this research fund would not be disbursed directly back to citizens as compensation, per se, but would support fully independent sustainability research that is not tied to commercial aims of industry. This is not without precedent: IMAS used to have a committee and associated funding specifically intended to support non-industry related research.

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<sup>17</sup> The TISC recommends not imposing a levy on fish produced in non-polluting *fully-recirculating* land-based facilities, as an incentive toward improved sustainability.

<sup>18</sup> Charged by DPIPW on annual invoices.

**Recommendation 7.** *Permit periods are shortened, or reporting periods are more frequent, in order to normalise the monitoring of compliance with sustainability expectations.*

**Recommendation 8.** *Automatic triggers for rapid response in instances of default or breach are built into the legislation.*

**Recommendation 9.** *A fully independent Sustainability Committee (or Taskforce) is established.*

**Recommendation 10.** *A fully independent industry levy-funded Sustainability Research Fund is established.*

**Recommendation 11.** *A minimum of one full-time position be created for a Sustainability Coordinator (but more likely a team).*

**Recommendation 12.** *An independent review of the Sustainability Strategy and the Act be undertaken at regular intervals, and that these intervals are clearly indicated in the Act.*