

Macquarie Harbour aquaculture industry -Ministerial review

Australian Workers' Union submission

February 2024

Summary of recommendations

1: The Minister's reconsideration of decision *EPBC 2021/6406* should afford regard to all environmental, economic and social considerations relevant to aquaculture in Macquarie Harbour.

2: The Minister should confirm decision EPBC 2012/6406.

3: In the alternative to Recommendation 2, the Minister should determine that aquaculture in Macquarie Harbour is not a controlled action subject to new conditions that industry can reasonably meet without interrupting operations.

4: The aquaculture industry and Commonwealth should expedite the trial of oxygenation technologies in Macquarie Harbour. Provided these are shown to be effective, their rollout at scale should also be accelerated.

5: The Tasmanian hydroelectricity industry should urgently lead development of a program to regulate river flows into Macquarie Harbour.

6: The Tasmanian Government should bring forward the planned phase-out of recreational gillnet fishing in Macquarie Harbour.

Summary of findings

1: Studies referenced in advocacy preceding the review suggest division over the predominance of aquaculture as a driver of the Maugean skate's decline.

2: Studies referenced in advocacy preceding the review reflect issues familiar to the aquaculture industry and its regulators, and consistent with the existing approach to managing Macquarie Harbour.

3: The aquaculture industry, government and other stakeholders have delivered a suite of actions in response to recent evidence regarding the Maugean skate population and dissolved oxygen levels in Macquarie Harbour.

4: Cessation of aquaculture in Macquarie Harbour would result in significant and adverse employment, economic and social outcomes across Tasmania - especially in the West Coast region.

5: Cessation of aquaculture in Macquarie Harbour would cause a waste management crisis related to disposal of biological and other waste.

6: Cessation of aquaculture in Macquarie Harbour would cause significant pressure on already-strained stocks of wild finfish.

7: Cessation of aquaculture in Macquarie Harbour would increase emissions associated with animal protein consumption, possibly by a significant margin.

1. Introduction

The Australian Workers' Union (AWU) is one of Australia' largest and most diverse unions. We represent around 72,000 workers across the country, including nearly 600 in Tasmania's aquaculture industry. A substantial number of this cohort work on Macquarie Harbour or in roles closely connected to the waterway.

The AWU therefore takes a strong interest in Macquarie Harbour and the future of Tasmanian aquaculture: A triumph of endeavour and ingenuity that Australians should rightly be proud of. We are pleased to respond to the consultation arising from the Minister for the Environment and Water's reconsideration of decision *EPBC 2012/6406* ('the 2012 decision') under the *Environment Protection and Biodiversity Conservation Act 1999*, that aquaculture in the harbour is not a controlled action provided it is undertaken in the manner specified.

The community expects Tasmanian salmon farming to drive positive environmental outcomes,¹ and the industry and its workforce deliver. In particular, the industry fully understands the importance of retaining its social licence through adaptive management and continuous improvement in relation to sustainability. Tasmanian salmon is world-leading in its environmental monitoring and compliance, with issues raised in its earliest years firmly relegated to the past.

Salmon farming is also a cornerstone employer in Tasmania – responsible for hundreds of jobs in the West Coast region and thousands more throughout the state. Overwhelmingly, these are full-time permanent positions. The industry employs workers with a range of skills: from boat and forklift operators to tradequalified workers and processing, logistics and administrative staff. It also contributes to local skills development through partnerships with vocational education and training providers.

Given the industry's importance to Tasmania and high environmental standards, the AWU is deeply concerned by ongoing attempts by three activist groups to end salmon farming in Macquarie Harbour. These organisations have long employed misinformation, falsehoods and other nefarious means to undermine the industry. AWU members and their families that depend on Tasmanian aquaculture are among the many victims of their campaign.

In the latest salvo in this wrongheaded crusade, these groups have commandeered recent studies concerning the harbour's Maugean skate population, together with processes intended to support orderly assessment of activities under the EPBC Act. The activists submit that 'substantial new information and/or 'a substantial change in circumstances' have arisen,² requiring a new decision that aquaculture in the harbour is a controlled action, and ultimately forcing the industry's closure.

The AWU respects the expertise of the Institute for Marine and Antarctic Studies (IMAS) and Fisheries Research and Development Corporation (FRDC), whose works the activist groups reference. We are also mindful of the conservation advice for the Maugean skate published by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) in September 2023. Credible evidence of decline in the skate's population and its causes ought to be taken seriously.

But it is the salmon industry, together with government, experts and other stakeholders, that are firmly committed to delivering the strong, adaptive environmental management thar Macquarie Harbour requires. Recent efforts show clear potential to yield a solution that meets the environmental, economic and social imperatives that the situation in the harbour calls for.

In sharp contrast, the activist groups hope to subvert this process to force a unilateral outcome that manifestly would not. Ending salmon farming on Macquarie Harbour would wreck economic and social havoc, trigger an environmental crisis and increase emissions. The AWU also has concerns around the manner in which some evidence has been presented by the activist groups prior to this consultation.

We remain confident of the potential for a bright future for the industry in Macquarie Harbour. Rather than giving in to unreasonable and unrepresentative demands, we call for government and industry to respond proportionally. The AWU supports continued salmon farming in the harbour as well as the retention and eventual recovery of the Maguean skate population. The key to achieving this balanced outcome is a decision that aquaculture in Macquarie Harbour is not a controlled action – ideally via confirmation of the 2012 decision. The AWU also supports further measures, beyond the scope of review of the 2012 decision, to support the skate's welfare.

We are pleased to provide the following, exploring the issues under consideration and the AWU's position in detail. The union looks forward to ongoing engagement as the review progresses.

2. Framework of review

Given the framework for review of the 2012 decision prescribed by the EPBC Act, this consultation should afford close scrutiny to all relevant environmental, economic and social considerations. The Act's overarching objectives include the promotion of 'ecologically sustainable development' – the principles for which include decision-making that integrates environmental, economic and social considerations in both the short and the long term.³

Indeed, the review process affords the Minister several means to make a decision that would support the industry's continuation in Macquarie Harbour via the imposition of conditions that balance these diverging considerations. Most directly, it is open to the Minister to confirm the 2012 decision. The Minister may also determine that salmon farming on the harbour is not a controlled action subject to amended conditions that would support operations to continue without interruption.⁴

Recommendation 1: The Minister's reconsideration of decision *EPBC 2021/6406* should afford regard to all environmental, economic and social considerations relevant to aquaculture in Macquarie Harbour.

3. The Maugean skate: Threat and response

The AWU acknowledges the subject matter expertise possessed by IMAS, FDRC and relevant DCCEEW officials. We accept that research broadly reflects ongoing concern for the Maugean skate population in Macquarie Harbour. This trend is attributed to "cumulative anthropogenic impacts" including aquaculture, hydroelectric damming of the harbour's major tributaries, other industrial and non-industrial uses of the waterway, and climate change.⁵ Low readings of dissolved oxygen (DO) in the harbour's deep waters are associated with this decline.

However, we suggest that the portrayal of these studies, and particularly the absolute manner in which key conclusions are characterised by the activist groups, provide some cause for concern. Most particularly, the studies evince a level of division regarding the predominance of aquaculture as a driver of low DO levels and the skate's decline – both in the industry's own right and relative to other anthropogenic effects. Some studies relied upon do not posit a causal link between salmon farming and a decline in the Maugean skate population at all. Indeed, the skate has likely disappeared from nearby Bathurst Harbour, which hosts no fish farming or industrial activities, and is considered to be in "relatively pristine condition".⁶ Moreover, two major skate mortality events occurring in 2019 are correlated with extreme weather⁷ rather than aquaculture activities.

In addition, the overarching issues canvassed in the studies are long familiar to industry and other stakeholders - suggesting that they do not represent the substantial new information or change in circumstances required to substitute the 2012 decision. In fact, the health of the waterway and welfare of the Maugean skate is a matter of enduring concern to industry - with local aquaculture subject to stringent regulation requiring practices consistent with the evolving body of evidence on local sustainability.

This approach is reflected in the 15 conditions prescribed in the 2012 decision. These mandate careful, adaptive management of the waterway to safeguard against significant impacts on the Maugean skate and Tasmanian Wilderness World Heritage Area. EPA Tasmania takes a similar approach to licensing the industry's activities in the harbour.

As both formal obligations under these regimes and community expectations have grown more stringent since 2012, the industry has increased its commitment to the task through new investment, evolved practices and enhanced monitoring. For instance, the maximum volume of farmed fish permitted in the harbour has progressively decreased over several years.

Finding 1: Studies referenced in advocacy preceding the review suggest division over the predominance of aquaculture as a driver of the Maugean skate's decline.

Finding 2: Studies referenced in advocacy preceding the review reflect issues familiar to the aquaculture industry and its regulators, and consistent with the existing approach to managing Macquarie Harbour.

Consistent with the longstanding approach to managing the harbour, recent studies documenting a decline in the skate population have correlated with further and stronger action. To this end, the salmon industry has come together with the Commonwealth and Tasmanian Government and a range of experts and other stakeholders. This response has been timely, evidence driven and multifaceted, and strongly reflects the actions supported in DCCEEW's September 2023 conservation advice. To briefly summarise:

- September 2022 nitrogen limits: The Environment Protection Authority Tasmania replaces the cap on biomass applied to marine farming in Macquarie Harbour with a limit on total permissible dissolved nitrogen output. This is designed to better manage DO levels by regulating both biomass and fish feed volumes.⁸
- July 2023 multipartisan recovery team: The National Recovery Team for the Maugean Skate is formed to guide strategies supporting the skate's recovery. The team includes industry peak Salmon Tasmania together with a broad and representative mix of other stakeholders - from other industries, all levels of government, science and the local community. It operates on a cooperative and democratic basis.⁹
- August 2023 multipartisan recovery plan: The National Recovery Team's work gives rise to the *Maugean Skate Conservation Recovery Plan*¹⁰ committing to major new actions to support the species' recovery:
 - Macquarie Harbour Oxygenation Project: A two-year, \$7 million partnership between Salmon Tasmania, IMAS and FDRC to trial engineering solutions to increase DO levels in the harbour, particularly deep-water areas. These technologies are utilised effectively in other marine environments, such as Perth's Swan River.¹¹
 - Captive breeding program: A \$2.1 million initiative, led by the Commonwealth in partnership with industry and the Tasmanian government, to create a secondary insurance population for the skate.¹²
- October 2023 enhanced industry-wide standards: EPA Tasmania prescribes new environmental management standards to further enhance sustainability in all Tasmanian finfish farming.¹³
- November 2023 enhanced water quality actions: In renewing the industry's licence to operate in Macquarie Harbour, EPA Tasmania prescribes more stringent DO and water quality monitoring and mitigation actions.¹⁴
- January 2024 State action plan: The Department of Natural Resources and Environment Tasmania releases its *Conservation Action Plan for the Maugean Skate* - broadly supporting actions consistent with those in the DCCEEW conversation advice.¹⁵
- Farming innovation: Tasmanian aquaculture continues to develop and implement advanced feeding systems supporting precision delivery of food - thereby minimising environmental impacts associated with feeding.¹⁶

While DO readings in Macquarie Harbour remain below the long-term trend, a 2022 report noted an improvement in mid and bottom-water readings.¹⁷ More recent data published in February 2023 provides strikingly different readings for different parts of the harbour - findings attributed in notable part to reduced freshwater flows and tidal incursion of seawater.¹⁸ Moreover, neither dataset accounts for actions taken over the last year. The picture provided by the data is thus incomplete and uncertain. But the spate of recent investments, regulatory interventions and process improvements provides much cause for confidence in future readings.

Finding 3: The aquaculture industry, government and other stakeholders have delivered a suite of actions in response to recent evidence regarding the Maugean skate population and dissolved oxygen levels in Macquarie Harbour.

That these actions were mostly devised with reference to a broad and representative array of stakeholders contrasts strongly with the approach of the three activist groups. As industry, government and others have combined to give account to all interests and insights, the activists have worked outside these processes and alone. Their isolation gives the lie to their claims to act in the best interests of the community.

4. Implications of closure

Given closure of Macquarie Harbour's salmon industry is the explicit objective of the groups that pushed for this review, the many concerning implications of such an outcome warrant close scrutiny. The consequences of the end of marine farming on the harbour include profound economic and social damage – for the industry's workers, their families, the local community and Tasmania. They also encompass a range of adverse outcomes for local and national sustainability.

4.1 Local communities

Aquaculture is one of the most important employers in the region around Macquarie Harbour, responsible for around 17% of all employment in the West Coast local government area.¹⁹ It is by far the largest-employing industry in postcode 7116, covering areas to the south and west of the harbour.²⁰ It is also the third-largest employer in postcode 7468, which takes in the area to its north.²¹ Salmon farming also provides quality work: Jobs in the local industry are overwhelmingly full-time roles, and the industry pays up to 73.9% more than the average in Tasmania's salmon farming regions.²²

But the effects of an economic shock such as industry closure are never solely economic. They could not be counted only in the financial impacts to workers. Rather, shutting down a key local industry would threaten the social fabric of the areas around Macquarie Harbour. On the northern shores of the harbour, around one in ten residents of the town of Strahan work in the industry. Over half of all students at its local school also come from families that work in salmon farming.²³



Above: AWU members in Tasmania's salmon industry on the water, and processing Tasmanian salmon for market

At a statewide level, salmon farming in Macquarie Harbour is estimated to support a further 280 jobs in processing, administration, manufacturing and across the supply chain.²⁴ The harbour is a critical part of a bedrock industry for the state – one that 10% of Tasmanians work in or supply,²⁵ and whose output is equivalent to around 3.5% of Gross State Product.²⁶

Finding 4: Cessation of aquaculture in Macquarie Harbour would result in significant and adverse employment, economic and social outcomes across Tasmania - especially in the West Coast region.

4.2 The natural environment

In seeking the immediate cessation of salmon farming in Macquarie Harbour, ostensibly due to environmental concerns, the industry's opponents neglect to consider the serious ecological consequences of such an outcome. Of particular concern are the severe and likely unmanageable waste management issues that would arise from this course of action. These were spelled out recently by EPA Tasmania. In the statement of reasons accompanying a decision to renew farming licences to operate on the harbour, the authority stated plainly:

"Cessation of fish farming...would result in the production of a significant amount of biological and physical waste, that would not only pose a health and biosecurity risk, but it would also pose a risk to the environment. EPA's recent experience has demonstrated that Tasmania does not currently have the capacity to adequately manage the volume of Controlled Waste (such as dead fish) that such an action would produce"²⁷

Most concerning would be biological waste. Euthanasia of the thousands of tonnes of fish residing in the harbour and land-based facilities supplying the waterway at any one time would represent a truly disproportionate burden on Tasmania's waste management system. This gives rise to real questions around the basic viability of closure (other issues notwithstanding). That government would knowingly saddle the state with an environmental issue that it does not have the capacity to adequately manage appears inconceivable.

Finding 5: Cessation of aquaculture in Macquarie Harbour would cause a waste management crisis related to disposal of biological and other waste.

Of further cause for concern is the strain on wild fish stocks that the end of fish farming in the harbour would cause. The industry produces around 9,500 tonnes of fish in Macquarie Harbour each year.²⁸ Substituting this volume with wild-caught Australian finfish would increase the country's wild finfish take by over 15%.²⁹ The consequences of any such increase appear grave, given many Australian finfish populations are already classed as depleted, depleting or recovering.³⁰

The challenges of bringing them to market aside, direct substitution with wildcaught Atlantic salmon would result in further pressure still. Many important populations of the species are classed as strained or even collapsed.³¹

Finding 6: Cessation of aquaculture in Macquarie Harbour would cause significant pressure on already-strained stocks of wild finfish.

4.3 Emissions

Farmed salmon is a low emissions protein. Australian salmon produces under 2.9 kilograms of CO2-equivalent emissions per kilo of edible output. This affords it an emissions profile lower than wild caught finfish and much lower than most land-based proteins.³² Thus, assuming consumption of Macquarie Harbour salmon was substituted with either wild finfish or land animals, an end to aquaculture in the harbour would increase emissions. Given the dramatically higher emissions profile of some popular meats - beef, for instance, is over ten times more emissions-intensive than farmed salmon – this increase would potentially be substantial.

Finding 7: Cessation of aquaculture in Macquarie Harbour would increase emissions associated with animal protein consumption, possibly by a significant margin.

5. The way forward

As this submission explores, the longstanding approach to managing Macquarie Harbour provides for strong and adaptive action by industry in conjunction with government and others. This approach supports both the protection of the Maugean skate and the future of salmon farming in the area. It is reflected in the suite of measures devised in response to recent evidence of strain in the skate population. Over the last 18 months, stakeholders have come together to deliver a wide range of technical, regulatory and other actions.

As regards reconsideration of the 2012 decision, the existing approach is suggestive of the optimal path forward: One that speaks to environmental, economic and social considerations, and avoids the serious consequences of industry's closure for all three. This should be achieved by a decision supporting continued aquaculture in the harbour.

We note also that any decision requiring a 'pause' in farming is highly likely to precipitate the same outcomes as closure. Workers forced off work for what would almost certainly be an extended period would face layoffs en masse. Those working further down a supply chain stripped of supply would be at similar risk. Likewise, both a pause and permanent closure would trigger the same waste issues associated with thousands of tonnes of dead fish and the removal of harbour infrastructure.

The AWU also recognises the merit in further measures outside the confines of the Minister's decision under the EPBC Act. We therefore call for key actors to take further steps, building on existing commitments and consistent with then conservation advice, to further safeguard the welfare of the Maugean skate.

5.1 EPBC Decision

In light of the many ongoing actions to protect the Maugean skate – per the 2012 decision, the evolving requirements of EPA Tasmania and undertaken voluntarily – the Minister should resolve that aquaculture on Macquarie Harbour requires neither a cessation nor a pause. The most straightforward means of achieving this outcome would be a decision confirming the 2012 decision. In the alternative, the Minister should reaffirm that aquaculture is not a controlled action, attaching modified conditions that the industry can reasonably meet without an interruption to operations.

Recommendation 2: The Minister should confirm decision EPBC 2012/6406.

Recommendation 3: In the alternative to Recommendation 2, the Minister should determine that aquaculture in Macquarie Harbour is not a controlled action subject to new conditions that industry can reasonably meet without interrupting operations.

5.2Additional investment

The AWU strongly supports the Macquarie Harbour Oxygenation Project. We welcome its seriousness of intent and unity of action, and are encouraged by the success of similar solutions elsewhere.

We note that the project in its current form provides for a trial of the technology over this summer and the next. Accordingly, a full rollout in the harbour is not contemplated before mid-2025 at the earliest. While we understand the need to ascertain that the solution is suitable for Macquarie Harbour – both in addressing low DO levels and avoiding unintended consequences – an expedited timeframe could help shore up the Maugean skate's short-term wellbeing. Provided the technology can be shown to be effective before mid-2025, the AWU supports its deployment at scale as soon as possible.³³

The AWU accepts that an accelerated trial and rollout would necessitate additional investment from industry and the Commonwealth. While the current outlay of \$7 million for the program measures up well against other actions to preserve the skate, the capacity of both parties to increase their commitment is clear. The companies that make up Tasmania's salmon industry boast an enviable financial position. Farmed salmon is by far the most valuable of Australia's seafood industries,³⁴ attracting cumulative income of around \$1.4 billion each

year.³⁵ Farm gate prices for the product are also expected to remain at historically high levels over the short to medium-term.³⁶

Likewise, a more ambitious rollout of oxygenation systems would fall well within the capacity of the Commonwealth, particularly given its headline commitment to improve support for threatened species.³⁷ Indeed, the Minister for the Environment and Water has committed \$500 million to actions boosting outcomes for threatened animals and plants, in addition to leading major regulatory reform in this space.³⁸

Recommendation 4: The aquaculture industry and Commonwealth should expedite

the trial of oxygenation technologies in Macquarie Harbour. Provided these are

shown to be effective, their rollout at scale should also be accelerated.

5.3 Hydroelectric flows

The Gordon and King rivers – Macquarie Harbour's principal tributaries - are both subject to hydroelectric damming. The regulated river flows that result from these activities have the potential to either minimise or exacerbate mortality events experienced downstream by the Maugean skate.³⁹ In particular, critical 'renewal events' of DO levels in the harbour's deep waters, which the Maugean skate relies on, are "highly correlated" with low freshwater inflows to the harbour. Local hydroelectricity operations have the capacity to either facilitate or stifle such flows.⁴⁰

DCCEEW's September 2023 conservation advice ranks the local hydroelectric industry's activities as equally consequential to the skate as those of aquaculture. It calls for immediate action to manage regulated river flows into the harbour to facilitate marine conditions conducive to its survival and replenishment.⁴¹

Put simply, the AWU concurs. Hydroelectricity must take on its share of responsibility and catch up to the aquaculture industry in this space. A program of regulated river flows to better support deep harbour oxygen replenishment and the welfare of the skate is urgently required. Such a scheme should be designed and implemented as a matter of priority.

Recommendation 5: The Tasmanian hydroelectricity industry should urgently lead

development of a program to regulate river flows into Macquarie Harbour.

5.4 Other human activities

While its consequences are less severe than unregulated industry, fishing also appears to have a significant impact on the Maugean skate. Nearly one in ten skates caught in recreational gillnets are estimated to perish as a result.⁴²

Particularly given the Tasmanian Government has already pledged to phase out recreational gillnetting,⁴³ bringing forward this commitment would assist conservation efforts without impacting the principal economic and social issues under consideration. The current deadline of 2030 provides an abundance of lead time to all parties affected by the decision. At least in relation to fishing on Macquarie Harbour, there appears to be substantial merit in bringing this commitment forward.

Recommendation 6: The Tasmanian Government should bring forward the planned phase-out of recreational gillnet fishing in Macquarie Harbour.

6. More information

Supporting productive and sustainable salmon farming in Macquarie Harbour and throughout Tasmania is first order business for the Australian Workers' Union. We would welcome any further opportunities to contribute to the review of the 2012 decision as well as any queries regarding this submission.

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³ Environment Protection and Biodiversity Conservation Act 1999 (Cth), ss3, 3A

⁴ Environment Protection and Biodiversity Conservation Act 1999 (Cth), ss67, 75(1), 77A, 78A

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