AUSTRALIAN CONSERVATION FOUNDATION

29 JANUARY 2024

Save the Maugean Skate

ACF submission in support of the requests for reconsideration of Referral Decision: Marine Farming Expansion, Macquarie Harbour, Tasmania (EPBC 2012/6406)

About ACF

ACF is Australia's national environmental organisation. We represent a community of more than half a million people who are committed to achieving a healthy environment for all Australians. For more than 50 years, ACF has been a strong advocate for Australia's forests, rivers, people and wildlife. ACF is proudly independent, non-partisan and funded by donations from our community.

Introduction

ACF welcomes the opportunity to make this submission in relation to the 2012 referral decision governing marine farming in Macquarie Harbour under the Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act) (EPBC 2012/6406).

ACF notes that this reconsideration of the 2012 decision takes place against the backdrop of several commitments made by the Australian Government in relation to the extinction of threatened species. In particular, the Australian Government's Threatened Species Action Plan 2022-2032 contains the following commitment: *'New extinctions are prevented'* (Objective 3).

In addition, in December 2022, Australia signed on to the Convention on Biological Diversity Kunming-Montreal Global Biodiversity Framework, which recognises the need for greater effort by the global community to prevent human-induced extinction. The declaration includes the following commitments:

Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native and wild species is increased to healthy and resilient levels. [Goal A]

The genetic diversity within populations of wild and domesticated species is maintained, safeguarding their adaptive potential. [Goal A]

Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and

restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimise human-wildlife conflict for coexistence. [Target 4]

Public comment responses

In light of the above commitments made by the Australian Government, ACF provides the following public comment responses to the reconsideration of the 2012 decision (EPBC Number 2012/6406): Marine Farming Expansion, Macquarie Harbour, TAS.

Do you consider there is substantial new information available about the impacts the action has, will have or is likely to have on a matter protected under Part 3* of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)?

There is substantial new information about the impacts that the action has, will have, or is likely to have, on matters protected by a provision in Part 3 of the EPBC Act.

This substantial new information indicates it is highly likely that Macquarie Harbour is the only remaining site of the Maugean skate population, that the population has declined by 47% in seven years, and that there is a high degree of certainty that salmon farming and aquaculture in Macquarie Harbour is impacting and threatening the survival of the Maugean skate population there.[1]

1. **Macquarie Harbour is now the only known location of the Maugean skate:** At the time of the 2012 Controlled Action Decision, a viable Maugean skate population was thought to live at Bathurst Harbour, in addition to Macquarie Harbour. However, a 2022 *Institute of Marine and Antarctic Studies* report[2] (the 2022 IMAS report) found extremely low levels of Maugean skate DNA traces in Bathurst Harbour, indicating that a

[1] David Moreno, Jawahar Patil, Bruce Deagle & Jayson Semmens (2022) *Application of environmental DNA to survey Bathurst Harbour (Tasmania) for the Endangered Maugean Skate (Zearaja maugeana)*. IMAS. https://www.imas.utas.edu.au/__data/assets/pdf_file/0009/1615788/Project-1.33-Final-Report.pdf; David Moreno and Jayson Semmens (2023*) Interim report - Macquarie Harbour Maugean Skate population status and monitoring*. IMAS. https://imas.utas.edu.au/__data/assets/pdf_file/0007/1655611/Maugean-skate-2021-interim-report-FINAL.pdf (accessed 20 December 2023).

[2] David Moreno, Jawahar Patil, Bruce Deagle & Jayson Semmens (2022) *Application of environmental DNA to survey Bathurst Harbour (Tasmania) for the Endangered Maugean Skate (Zearaja maugeana)*. IMAS. https://www.imas.utas.edu.au/__data/assets/pdf_file/0009/1615788/Project-1.33-Final-Report.pdf (accessed 20 December 2023).

viable population at Bathurst Harbour is unlikely. Additionally, the report found it is uncertain that there has ever been an established population there.

The 2022 IMAS report amounts to substantial new information as it demonstrates the importance of protecting the Macquarie Harbour Maugean skate population, the only known remaining location of the species.

2. **The Maugean skate population in Macquarie Harbour has declined by 47% in seven years**: A separate report from the Institute of Marine and Antarctic Studies, the *Interim report - Macquarie Harbour Maugean skate population status and monitoring*, 2 May 2023[3] (the 2023 IMAS report) found that there was a 47% decline in Maugean skate numbers in Macquarie Harbour between 2014 and 2021. The report noted[4]:

   "*The scale of the overall decline and the scarcity of new recruits creates significant concern for the conservation of the species and implies the need for immediate action. Furthermore, our results highlight the vulnerability of the species to degraded environmental conditions and the need for further monitoring of the population.*"

   The 2023 IMAS report is substantial new information as it outlines scientific findings not known at the time of the earlier EPBC 2012/6406 decision. It shows that the Maugean skate has declined markedly in a short period of time, at the only site where the species remains. It is particularly concerning that the report found that very few juvenile Maugean skates have survived to sustain the population.

3. **The ongoing survival of the Maugean skate is significantly threatened by aquaculture activities in Macquarie Harbour:** The 2023 IMAS report outlined the extent to which the 'viability' of the Maugean skate as a species is threatened by 'high impact environmental events', further noting that 'anthropogenic inputs', due to the large-scale development of salmonid aquaculture, have caused a decline in dissolved oxygen levels. It states that dissolved oxygen and mixing dynamics are of extreme concern for the persistence of the Maugean skate.[5] The report concluded that the risk of the Maugean skate's extinction is 'intrinsically linked to the health of their restricted habitat'.[6] This all amounts to substantial new information.

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[3] David Moreno and Jayson Semmens (2023*) Interim report - Macquarie Harbour Maugean Skate population status and monitoring*. IMAS. https://imas.utas.edu.au/__data/assets/pdf_file/0007/1655611/Maugean-skate-2021-interim-report-FINAL.pdf (accessed 20 December 2023).
[4] David Moreno and Jayson Semmens (2023*) Interim report - Macquarie Harbour Maugean Skate population status and monitoring*. IMAS. https://imas.utas.edu.au/__data/assets/pdf_file/0007/1655611/Maugean-skate-2021-interim-report-FINAL.pdf, p.1.
[5] David Moreno and Jayson Semmens (2023), p.9.
[6] David Moreno and Jayson Semmens (2023), p.9.

The concerns outlined by the 2023 IMAS report are further reflected in a 2020 report by Wild-Allen et al.[7] (the Wild-Allen report), which assessed the extent to which finfish farms contribute to reduced dissolved oxygen levels within Macquarie Harbour. The Wild-Allen report found that in a simulated scenario with finfish farming omitted, oxygen drawdown and dissolved and particulate waste showed a '50 per cent reduction in hypoxic water and a 40 per cent reduction in hypoxic sediment area'.[8] Importantly, where the simulated scenario was extended for a further two years, 'hypoxia was further reduced; healthy water volume increased from 46% in 2017-18 to 56% and healthy sediment area increased from 32% in 2017-18 to 36% of the total harbour area'.[9]

In addition, the Australian Government's Conservation Advice for the Maugean skate (in effect from 6 September 2023) clearly reflects the above findings, identifying salmonid aquaculture in Macquarie Harbour as the main impact on the Maugean skate. It notes, "Substantial recent evidence indicates a high risk of extinction for the species in the near future."[10] The Advice identifies an "urgent priority" conservation action before summer 2023/24 is to: "Eliminate or significantly reduce the impacts of salmonid aquaculture on dissolved oxygen concentrations. The fastest and simplest way to achieve this is by significantly reducing fish biomass and feeding rates."[11] In light of this new information, Australia's Threatened Species Scientific Committee has recommended uplisting the Maugean skate from endangered to critically endangered.

The 2023 IMAS report and the Wild-Allen report - combined with the 6 September 2023 Australian Government Conservation Advice for the Maugean skate - all represent substantial new information. They provide clear scientific evidence of the impact of finfish farming and its direct contribution to the reduced dissolved oxygen levels in Macquarie Harbour. The 2023 IMAS report, the Wild-Allen report and the updated Conservation Advice were not available to the Minister for consideration when the original referral decision was made.

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[7] Karen Wild-Allen, John Andrewartha, Mark Baird, Lev Bodrossy, Elizabeth Brewer, Ruth Eriksen, Jenny Skerratt, Andrew Revill, Kendall Sherrin, Dan Wild. (2020), *Macquarie Harbour Oxygen Process model (FRDC 2016-067)* : CSIRO Final Report. CSIRO Oceans & Atmosphere https://www.frdc.com.au/sites/default/files/products/FRDC_MH_Final_Rep_June_2020.pdf (accessed 20 December 2023).

[8] Wild-Allen (2020), p. 62.

[9] Wild-Allen (2020), p. 62.

[10] Australian Government Department of Climate Change, Energy, the Environment and Water, *'Conservation Advice for Zearaja maugeana (Maugean skate) https://www.environment.gov.au/biodiversity/threatened/species/pubs/83504-conservation-advice-06092023.pdf*, p.2 (accessed 28 December 2023).

[11] Australian Government Department of Climate Change, Energy, the Environment and Water, *'Conservation Advice for Zearaja maugeana (Maugean skate) https://www.environment.gov.au/biodiversity/threatened/species/pubs/83504-conservation-advice-06092023.pdf*, p.29 (accessed 20 December 2023).

AUSTRALIAN CONSERVATION FOUNDATION

Do you consider there has been a substantial change in circumstances that was not foreseen at the time of the first referral decision and that relates to the impacts the action has, or will have or is likely to have on a matter protected under Part 3* of the EPBC Act?

There has been a substantial change in circumstances that was not foreseen at the time of the first referral decision. The new data from the 2023 IMAS report and the Wild-Allen report, as well as the updated 2023 Maugean skate Conservation Advice, all demonstrate that salmonid aquaculture is having a direct impact on the survival of the Maugean skate. This data did not exist at the time of the first referral decision.

The 2023 IMAS report, which was prepared in the decade after the first referral decision, notes a significant decline in deep water (>10m) dissolved oxygen conditions in Macquarie Harbour in that time.[12] It notes 'mounting evidence that these low dissolved oxygen conditions are impacting the Maugean skate population, including inducing mortality events' (Moreno et al., 2020).[13] Additionally, the 2023 IMAS report found a 47% decline in Maugean skate numbers in Macquarie Harbour from 2014 to 2021. This is a substantial change in circumstances that was not foreseen at the time of the first referral decision.

Further, at the time of the first referral decision, it was explicitly stated that salmonid aquaculture expansion in Macquarie Harbour may not impact the Maugean skate. The new data did not exist to prove that it had affected the Maugean skate population. As a result, when making the first decision, the minister was unable to consider these potential significant impacts on the Maugean skate.

ACF submits that if the scientific information that is available now were known at the time of the Controlled Action Decision in 2012, there would have been a finding that the Action would have a significant impact on matters protected under Part 3 of the EPBC Act, specifically, an endangered species, the Maugean skate, as well as the World Heritage values and the National Heritage values of the Tasmanian Wilderness World Heritage Area.

If applicable, provide any other comments on whether you consider there are reasons to revoke the first referral decision and substitute a new decision. This may include any other comments on whether a matter referred to in any of paragraphs 78(1)(a) to (ca) of the EPBC Act applies in relation to the action.

ACF submits that there are clear reasons to revoke the first referral decision and substitute a new decision. In particular, as noted previously, paragraphs 78(1)(a) 'Substantial new information' and 78(1)(aa) 'Substantial unforeseen change in circumstances' of the EPBC Act apply in relation to this action. There is substantial new information that indicates it is highly likely that Macquarie Harbour is the only remaining site of the Maugean Skate population, that the population has declined by 47% in seven years, and that there is a high degree of

[12] David Moreno and Jayson Semmens (2023), p.2.
[13] David Moreno and Jayson Semmens (2023), p.2.

certainty that salmon farming and aquaculture in Macquarie Harbour is impacting and threatening the survival of the Maugean skate population there.[14]

Based on all of the scientific information now available, ACF urges the Minister to revoke the Controlled Action Decision under section 78 of the EPBC Act. Upon reconsideration of the Controlled Action Decision, we urge the Minister to find that the Action will have (or has had) significant impacts on matters protected under Part 3 of the EPBC Act and, therefore, that it should be comprehensively assessed under Part 8 of the EPBC Act. We expect that following such an assessment the Minister would refuse to grant an approval to the Action.

[14] David Moreno, Jawahar Patil, Bruce Deagle & Jayson Semmens (2022) *Application of environmental DNA to survey Bathurst Harbour (Tasmania) for the Endangered Maugean Skate (Zearaja maugeana)*. IMAS. https://www.imas.utas.edu.au/__data/assets/pdf_file/0009/1615788/Project-1.33-Final-Report.pdf; David Moreno and Jayson Semmens (2023*) Interim report - Macquarie Harbour Maugean Skate population status and monitoring*. IMAS. https://imas.utas.edu.au/__data/assets/pdf_file/0007/1655611/Maugean-skate-2021-interim-report-FINAL.pdf (accessed 20 December 2023).