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Australian Greens Senator for Tasmania

23 July 2018

Threatened Species Scientific Committee
c/- Species Information and Policy Section
Department of the Environment and Energy
GPO Box 787
Canberra ACT 2601

Via email: tsscsecretariat@environment.gov.au

Dear Threatened Species Scientific Committee

We are writing to you to ask that you formally review the EPNC listing status of the Maugean skate (*Zearaja maugeana*) and advise the Minister as to whether a recovery plan needs to be put in place.

The conservation status of the Maugean skate has not been reviewed since its listing as Endangered on 4 March 2004. At that time, the conservation advice noted in that listing that, "the priority recovery and threat abatement actions required for this species are:

- protect species' habitat in the two estuaries where it is found from direct physical disturbance; and
- monitor and manage the impacts of incidental fishing.

And that, "Longer term issues that should be considered in broader landscape, regional and or recovery planning include the reduction and ongoing monitoring of pollution levels in Macquarie Harbour, the control of introduced marine species, and an investigation of the suitability of designating habitat areas as Marine Protected Areas."

The Listing (<http://www.environment.gov.au/node/16438>) also noted that, "No Recovery Plan is currently in place for the Maugean Skate" but that the "Priority for the development of recovery plan" is "High".

In November 2009, the Maugean Skate was placed on the "Recovery Plan not commenced" list and, as of now, there is no recovery plan in place. Similarly, there are no areas within the skate's known extent that are currently designated as marine protected areas.

We strongly urge you to consider uplisting the species to critically endangered and recommending the development of a recovery plan for two major reasons:

1. The Maugean skate is listed as having two sub-populations (Macquarie Harbour and Bathurst Harbour), however there have been no records in Bathurst Harbour since March 1992 despite exhaustive dedicated surveys for the species. If this sub-population is extinct then it reduces the numbers of sub-populations to one and dramatically reduces the extent of occurrence and the area of occupancy of the species. Recent studies have also indicated that the Maugean Skate population in Macquarie Harbour have a narrow home range with strong site fidelity and thus are unlikely to exit the Harbour and re-establish populations in other areas.
2. When the listing was made in 2004, there was no consideration of the future impact of fish farms. Since the listing, the expansion of fish farming in Macquarie Harbour has sharply impacted on the health of the Harbour and subsequently impacted on the extinction risk for the Maugean Skate.



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The expansion of fish farming has led to the sharp decline in dissolved oxygen levels in the Harbour, particularly at lower depths. This has further limited the available habitat to the Maugean skate to a narrow band of 5 to 15 metres depth. The very low oxygen levels may also impact on the survival of eggs of this species.

Given the new information available about the impacts from fish farming on the Maugean Skate in Macquarie Harbour and regarding the 26 year absence of records from Bathurst Harbour, we urge you to reconsider the conservation status of this species.

We also ask you to provide guidance on what a recovery plan should include with reference to:

- Marine protected areas required within Macquarie Harbour
- A fish-farming biomass cap and harbour-wide fallow periods required to secure the future of the Maugean skate
- The need for re-introductions of the species into Bathurst Harbour.

Senator Whish-Wilson and Jarrod Edwards

Relevant references:

- Bell, J.D., Lyle J.M., Semmens, J.M., Awruch, C., Moreno, D., Currie, S., Morash, A., Ross, J., Barrett, N. 2016. *Movement, habitat utilisation and population status of the endangered Maugean skate and implications for fishing and aquaculture operations in Macquarie Harbour*. Fisheries Research and Development Corporation Project No. 2013/008. Institute for Marine and Antarctic Studies, University of Tasmania, Hobart, 84 pp.
- Kirkpatrick, J.B., Kriwoken, L.K. and Styger, J., 2017. The reverse precautionary principle: science, the environment and the salmon aquaculture industry in Macquarie Harbour, Tasmania, Australia. *Pacific Conservation Biology*.
- Last, P.R. & Gledhill, D.C. 2007. The Maugean Skate, *Zearaja maugeana* sp. nov. (Rajiformes: Rajidae) — a micro-endemic, Gondwanan relict from Tasmanian estuaries. *Zootaxa* 1494: 45-65.
- Last, P.R., Gledhill, D.C. & Sherman, C.S. 2016. *Zearaja maugeana*. The IUCN Red List of Threatened Species 2016: e.T64442A68650404. <http://dx.doi.org/10.2305/IUCN.UK.2016-1.RLTS.T64442A68650404.en>. Downloaded on 23 July 2018.
- Lyle, J.M., Bell, J.D., Chuwen, B.M., Barrett, N., Tracey, S.R. & Buxton, C. 2014. *Assessing the impacts of gillnetting in Tasmania: implications for by-catch and biodiversity*. Final Report for the Fisheries Research and Development Corporation, project 2010/16, FRDC, Canberra.
- Ross, J. and MacLeod, C., 2017. Environmental research in Macquarie Harbour: interim synopsis of benthic and water column conditions.
- Ross, J. and Macleod, C., 2018. Environmental Research in Macquarie Harbour. FRDC 2016/067: Understanding oxygen dynamics and the importance for benthic recovery in Macquarie Harbour. Progress Report.
- Treloar, M., Barrett, N. & Edgar, G. (2013) *Biology and ecology of the endangered Maugean skate (Zearaja maugeana)*. Report to the Winifred Violet Scott Charitable Trust, Institute for Marine and Antarctic Studies, Hobart.