

Submission by Wise Response Society

on the

**Review of the Hector's and Māui
Dolphin Threat Management Plan**

18 August 2019

To:
The Ministry for Primary Industries and Department of
Conservation
Charles Fergusson Building
34-38 Bowen St
Pipitea
Wellington
New Zealand



Introduction

1. Wise Response is a Dunedin-based but New Zealand-wide, non-partisan Society, launched in 2013, with the purpose of persuading the New Zealand Parliament, Government and New Zealand society in general, to confront and respond effectively to any confirmed threats arising from the question:

"As demand for growth exceeds earth's physical limits causing unprecedented risks, what knowledge and changes do we need to secure New Zealand's future wellbeing?"

2. A fuller explanation of the Society's purpose and work are provided in Appendix A.

3. We ask to be considered a stakeholder for the further engagement proposed for preparation of the draft decision document.

Main Recommendations

- Following the precautionary principle, we recommend allowing only dolphin-safe fishing methods to be used throughout Māui and Hector's dolphin habitat in waters less than 100m deep
- Fishermen should be assisted to transition to selective, sustainable, dolphin-safe fishing methods

Key Issues

4. Thank you for the opportunity to comment on the Hector's and Maui Dolphin Threat Management Plan (TMP).

Measurable goals and scientific basis

5. Given the lack of specific, measurable goals in the TMP, and the scientific problems with the research underpinning the TMP, we believe it's important to go back to basics and implement the International Union of Conservation of Nature (IUCN) recommendation.

6. Resolution 142 of the IUCN urges New Zealand to ban gillnet and trawl fishing throughout Hector's and Maui dolphin habitat, in all waters less than 100 metres deep¹. This would come close to achieving the goal in the Marine Mammals Protection Act and Fisheries Act of achieving recovery to non-threatened status within 20 years.

7. The protection options presented in the TMP are inadequate due to problems with the scientific research they are based on. We understand an Expert Panel of three scientists (from the USA, Canada and UK) were invited by Ministry for Primary Industries (MPI) and Department of Conservation (DOC) spent a week in Wellington in 2018 to review the MPI work. They made 37 recommendations for improving the

¹ https://portals.iucn.org/library/sites/library/files/resrecfiles/WCC_2012_REC_142_EN.pdf





analysis². Only two of these have been addressed. MPI has so far failed to report on the Expert Panel recommendations and any action taken to improve the analysis.

8. We recommend a review of the issues raised by the expert panel, and implementation of the recommendations to ensure the data on which this plan is based is sound. A public response to this peer review is needed.

Observer programmes

9. Observer programmes have an observer coverage so low (1-3%) that the resulting estimates of dolphin mortality are not scientifically robust. Many areas have little or no observer coverage, and even in those that do, observer coverage is low and often from many years ago². Such low levels of observer coverage are known to cause negatively biased estimates of bycatch.

Population trends and fragmentation

10. The Maui dolphin population has declined from 135 in the mid 1980s to 111 in 2004 and to 57 currently³. Improved protection for Maui dolphins and off Banks Peninsula have shown an improvement in dolphin survival, with a change from rapid population decline to slower decline⁴. This indicates that further protection from fisheries mortality is the best way to turn the situation around and allow population recovery.

11. The TMP proposes to reduce bycatch to levels MPI believes are 'sustainable' by increasing protection in those areas where the largest number of dolphins is currently caught. The problem with this approach is that it ignores small dolphin populations, such as the Hector's dolphin populations of 42 Hector's dolphins off Otago and 45 in Porpoise Bay in the Catlins. Any redistribution of fishing effort from protected areas to unprotected areas will hit these populations hard and will increase population fragmentation – increasing risk for the whole species.

12. The goals of the TMP refer to 95% and 90% of the carrying capacity of the environment for Māui and Hector's dolphins. However, when MPI were asked what is their estimate of 95% of the Māui dolphin population and 90% of the Hector's dolphin population that the environment can support at several recent public meetings and eNGO consultations, the answer was that MPI is unable to estimate these population levels and have not estimated how long it would take to achieve recovery to these hypothetical population levels. This makes it impossible to determine if the proposed management options would succeed or fail.

² Taylor B, Lonergan M, Reeves R. 2018. Panel comments and recommendations. Report to New Zealand Ministry for Primary Industries and Department of Conservation.
<https://www.doc.govt.nz/globalassets/documents/conservation/native-animals/marine-mammals/maui-tmp/hectors-risk-assessment-workshop-panel-recommendations-appendix-1.pdf>

³ Cooke JG, Constantine R, Hamner RM, Steel D, Baker CS. 2019. Population dynamic modeling of the Maui dolphin based on genotype capture-recapture with projections involving bycatch and disease risk. Report to Ministry for Primary Industries. Presented to the IWC Scientific Committee as paper SC/68A/For Info.

⁴ Gormley AM, Slooten E, Dawson SM, Barker RJ, Rayment W, du Fresne S, Bräger S. 2012. First evidence that marine protected areas can work for marine mammals. *Journal of Applied Ecology* 49:474-480.





13. In areas with small dolphin populations, the probability of detecting bycatch is very low. Yet the risk of extirpation is very high. It is therefore important to calculate risks and bycatch limits over small areas². By contrast, the MPI approach is focused on large, regional populations rather than small, local populations.

Toxoplasmosis

14. Emerging threats to Māui and Hector's dolphins, including the disease toxoplasmosis, require more research. However, the largest demonstrated threat to these dolphins is mortality in fishing nets. Emerging, uncertain threats require we act with more urgency to manage all avoidable threats as quickly and efficiently as possible. The Expert Panel strongly advised MPI not to compare their estimate of the number of dolphins dying from toxoplasmosis with the bycatch estimate: "There is no reason to believe that beachcast carcasses (and particularly such a small sample of these) are representative of deaths of all kinds throughout the dolphin population."².

15. The Expert Panel stated "we are concerned that the results from the model could be seriously misleading. For this reason, we recommend that you 'back off' from forcing the model to produce conclusions which are supportable only when a series of questionable assumptions are made and which even then, are highly uncertain." and concluded that, if the effects of disease are as large as the MPI estimates, Hector's and Maui dolphin would be "in rapid free-fall towards extinction"².

16. One of the areas where toxoplasma has been identified is Banks Peninsula. This area has partial protection from fisheries mortality, with gillnetting banned to 4 nautical miles offshore and trawling banned to 2 nautical miles, since 1988. The survival rate of Hector's dolphins in this area increased by 5.4% after these protection measures were implemented⁴. The population had been declining at 6% per year, before protection from fisheries mortality. It is now almost stable⁴. This does not support the idea that toxoplasmosis is an important source of mortality. Fisheries regulations resulted in a large increase in survival rate, but nothing was done to reduce disease.

Cost of dolphin protection

17. The estimates of the economic 'cost' of dolphin protection in the TMP are not credible. There is no consideration of fishers continuing to fish in dolphin habitat using dolphin-safe fishing methods, nor of fishing effort shifting outside dolphin habitat. The considerable economic benefits of the dolphins are not considered. The benefits of banning inshore gillnets and trawling to other protected species and to fish stocks is not considered. A management plan that allows one dolphin kill a week would damage New Zealand's credibility with local and overseas consumers, who may opt for removing fish from their diet.

Time for real action

18. This is the fifth time protection for Hector's and Maui dolphins is being considered and publicly consulted on. In 1988, Helen Clark (then Minister of Conservation) created the first, small protected area at Banks Peninsula. In 2003, Pete Hodgson (then Minister of Fisheries) created a protected area for Maui dolphins off the west coast of the North Island. In 2008, Jim Anderton (then Minister of Fisheries) implemented much more comprehensive protection measures, with some protection in most areas where Hector's and Maui dolphins are found. There were a



couple of small extensions to the Maui dolphin protection measures in 2013, implemented by Nick Smith (then Minister of Conservation) and Nathan Guy (then Minister of Fisheries). Each time, follow-up research has shown that protection is still not effective. This is our chance to get it right, the fifth time.

19. The use of fishing nets (gillnets and trawling) has driven Māui dolphins to the brink of extinction. Hector's Dolphins are also threatened by the use of these fishing methods, and we need to take action now to make sure distinct populations are protected, and they maintain and build connectivity among populations, to allow them to recover.

20. The only practical, effective solution is to protect the dolphins where they are found. Integrating the information from all dolphin surveys to date shows clearly that Hector's and Maui dolphins range throughout waters less than 100 metres deep. This is the area that needs to be protected.

Sir Alan Mark,

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Appendix A: Background to the Wise Response Society Inc

Purpose of Society

21. Wise Response is a Dunedin-based but New Zealand-wide, non-partisan Society, launched in 2013, with the purpose of persuading the New Zealand Parliament, Government and New Zealand society in general, to confront and respond effectively to any confirmed threats arising from the question: "As demand for growth exceeds earth's physical limits causing unprecedented risks, what knowledge and changes do we need to secure New Zealand's future wellbeing?"

22. Our Chairperson Sir Alan Mark conducted a nation-wide tour that year with 11 public meetings from Auckland to Invercargill to explain the Society's purpose and strategy, and gain support. The Society has no formal membership beyond the 15 persons who formed the Society. But its strength is in the wide range supporters who participate in online discussions around the "limits" theme, many being experts in their professional fields are able to provide multidisciplinary input into our initiatives. Our Patron, is Sir Geoffrey Palmer QC.

23. In April 2014, we presented our 5,000 signature petition to Parliament, that recommended they undertake a Risk Assessment of New Zealand, in five subjects as follows:

- i. **Financial security:** the risk of a sudden, deepening, or prolonged global financial crisis.
- ii. **Energy and climate security:** the risk of continuing our heavy dependence on fossil fuels.
- iii. **Business continuity:** the risk exposure of all New Zealand business, including farming, to a lower carbon economy.
- iv. **Ecological/Environmental security:** the risks associated with failing to genuinely protect both land-based and marine ecosystems and their natural processes.
- v. **Genuine well-being:** the risk of persisting with a subsidised, debt-based economy, preoccupied with maximising consumption and GDP and increasing inequality.

24. The Appeal sought a commitment to a quantitative, cross-party risk assessment of how and exactly where New Zealand is exposed, as a rational, integrated basis for planning a more secure future. The petition was referred to the Finance and Expenditure Select Committee, with a hearing on July 1, 2015. The majority response was negative, claiming Government was adequately addressing the issues of concern, but the three minority parties (Labour, NZ First, Greens) offered strong endorsement.





Typical activities

25. In October 2014, members Sir Alan Mark and Prof Peter Barrett presented a resolution to the Royal Society Fellows AGM, which resulted in the Society producing and publishing two commissioned reports in 2016, on the Implications and the Mitigation of Climate Change in New Zealand.
26. Another significant initiative was to hold two meetings in Wellington with about 25 NGOs, to facilitate development of a Position Statement and Action Plan on climate change, under the name Climate Consensus Coalition Aotearoa (CCCA). Given the political vacuum at the time, this was to propose a goal and process by which to develop a New Zealand Plan to give effect to the spirit and intent of the Paris Accord of Dec. 2015. The total of individuals and the membership of organisations which formally endorsed the CCCA numbered approximately 330,000 from about 100 organisations.
27. In August, 2017 we made presentations of the CCCA Action Plan to MPs at Parliament, through GLOBE-NZ members (arranged and chaired by Dr Kennedy Graham) and an invited audience of all MPs in the Beehive Theatre.
28. Our Society also makes regular submission on a range of policy change issues. Examples include the Emissions Trading Scheme, the Resource Legislation Amendment Bill, Regional Policy Statement of the Otago Regional Council (and mediation with Dr Royden Somerville QC and Will Anglin as Counsel which has since been appealed to the Environment and High Courts), New Zealand Energy Efficiency and Conservation Strategy, the Productivity Commission, the Child Poverty Reduction Bill and the Tax Review Group, and most recently, the Zero Carbon Bill and the Action on Agricultural emissions in the ETS both with particular focus on methane.
29. The Society also aims to raise climate change/environmental awareness through public meetings. In November 2017 we arranged a seminar on Integrated Landscape Management. In Jan. 2018, the Society held "Climate Change issues: from Bonn COP23 and Beyond", with Central and Local Government responses, addressed by the Hon James Shaw, Minister of Climate Change, Mr Dave Cull, President of Local Government New Zealand and Hon Clare Curran, MP for Dunedin South, with some 400 attendees. This has been followed by public meetings on "Tackling our Climate Emergency Head-On: Carbon Accounting" and "Impacts of the Mining/Minerals Industry", timed to coincide with the national Minerals Forum in Dunedin in May 2019.
30. In 2018 we participated in the National Science Challenge to report on "Transformation of land-based industries" and in Sept - Oct ran a 6 week course for U3A on the "Finding a Sustainable Transition Path to Zero Net Carbon Emissions for New Zealand".
31. We also host interns from the Otago University to undertake projects concerned with sustainability. Further information is available at our website: www.wiserresponse.org.nz

