

GREENPEACE AOTEAROA NEW ZEALAND SUBMISSION IN RESPONSE TO THE MĀUI AND HECTOR'S DOLPHIN THREAT MANAGEMENT PLAN 2019 DRAFT.

INTRODUCTION

On behalf of Greenpeace Aotearoa New Zealand and our supporters, I am writing to urge this government to afford Māui and Hector's dolphins the strongest possible protections in the updated Threat Management Plan, 2019 (TMP).

Our native dolphins can flourish in our waters once again. We have an opportunity to turn the tide on the global biodiversity crisis and show what true guardianship and protection of our natural world looks like. We want Māui and Hector's dolphins not just to survive, but to thrive.

The commercial fishing industry have driven Māui dolphins to the brink of extinction, with 95% of all human-induced deaths caused by fishing nets being used in their habitats¹. Subsequent governments have failed to take sufficient action to regulate this industry.

Hector's Dolphins are threatened by the use of the same fishing techniques, and we need to take action now to ensure distinct subpopulations are protected, and resilience and connectivity are built, to allow them to prosper into the future.

Oil and gas exploration and seabed mining degrade habitats for Māui and Hector's dolphins. When combined with low breeding populations and other threats the additional pressure severely restricts the ability of these dolphins to recover population numbers. Again, subsequent governments have chosen to prioritise extractive industry profits over the cumulative negative impacts on Māui and Hector's dolphins.

There are emerging threats to Māui and Hector's dolphins, including the disease toxoplasmosis, which require more research and understanding. But by far the largest threat to our dolphins is fishing. Emerging, uncertain threats require we act with more urgency to eliminate all controllable threats as fast as possible.

Thank-you for the opportunity to submit in response to the draft Threat Management Plan. We wish to speak to this submission.

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¹ Currey RJC, Boren LJ, Sharp BR, Peterson D (2012). A risk assessment of threats to Maui's dolphins. Ministry for Primary Industries and Department of Conservation, <https://www.mpi.govt.nz/dmsdocument/7677-a-risk-assessment-of-threats-to-maui-dolphins>

SUMMARY OF RECOMMENDATIONS AND RESPONSES TO PLAN

SCIENTIFIC BASIS OF THE PLAN

1. Model of dolphin distribution that underpins the the plan is problematic.
2. International experts and organisation's advice on the data and model has been ignored.

GUIDING VISION AND OBJECTIVES

1. While we agree with the visions and the objectives stated (in large) the plan that follows will not deliver on these objectives:
 - a. To achieve the goal of seeing our native dolphins "resilient and thriving throughout their natural range", we must protect their natural range. This plan falls well short of doing so.
 - b. The objective that "subpopulations are thriving or increasing" is undermined by a population model that drives threats into the areas of smaller subpopulations.
2. The goals outlined need critical review to ensure we can measure the success of the threat management plan, and population outcome goals should be aligned with time-bound best practise measurement.

FISHING THREAT MANAGEMENT

1. Fishing threat management measures proposed are not sufficient to see our native dolphins thriving in their full natural range.
2. With population numbers so low a single catastrophic bycatch event would have severe consequences for species and subpopulation survival. The only acceptable option with this level of risk is a precautionary approach which allows for only dolphin safe fishing methods inside their full habitats out to the 100m depth contour.
3. To ensure compliance with the measures implemented, and counter known underreporting of bycatch, electronic vessel monitoring systems (VMS) and cameras must be rolled out to all commercial fishing vessels with urgency.
4. We support a plan and package to transition fishers to dolphin safe fishing methods, or new jobs intra or extra industry.
5. The "socio-economic" analysis that accompanies this section fails to:
 - a. account for benefits of protecting our native dolphins - both economic and social,
 - b. account for transition or a package to support Fishers, and the impacts on the overall costs if transition happened,
 - c. account for industry risks, such as loss of social license or US trade ban

However, only limited comment has been made on the "socio-economic" analysis because, despite repeated requests from various eNGOs, no background information the "socio-economic" analysis has been provided by MPI.

TOXOPLASMOSIS

1. We support more research to establish certainty around the risks and required response.
2. This creates even more urgency to reduce all known threats that can be controlled, as dramatically and swiftly as possible.

3. We support using a simple narrative approach to describe this threat, as recommended by the International Expert Panel, rather than pushing the problematic statistical model.

MARINE MAMMAL SANCTUARY AND NON-FISHING THREATS

1. We support the expansion of the Marine Mammal Sanctuaries.
2. Sea-bed mining, seismic surveying and oil and gas exploration and drilling all interfere with and degrade Māui and Hector's dolphin habitats, putting unnecessary cumulative stresses on creatures already on the brink.
3. We support the outright banning of these activities in their habitats, including for existing permit holders. The threat to our native dolphins is no less from activities already permitted than from new permits.

SCIENTIFIC BASIS OF THE PLAN

The TMP is underpinned by a model to determine dolphin distribution - the highest density of dolphins was then over-layed with threats, to determine areas which should be prioritised for threat management. The plan can only be as good as the assumptions and models on which it is based. We believe this model is not fit for purpose and there are on-going questions around the data and approached used.

Significant concerns about the model include:

- The MPI population survey to assess dolphin abundance and distribution struggled to gather enough sightings data outside of high density areas, with limited detectability of dolphins where the populations are very low. Supplementary data was also insufficient with low observer coverage over the past decades, (only 7 of an expected 1000 Hector's dolphins bycatch deaths have been observed in the last 20 years - less than 1% coverage) and the low accuracy of the fishing industry self-reporting fishing effort.
- Limited data from its population survey left MPI trying to fill in the gaps with a model using water turbidity and fish prey distribution as a proxy for habitat. This model relies on assumptions, such as:
 - A correlation between water turbidity and dolphins. In reality this correlation is low, with water depth being a stronger indicator.
 - No seasonal changes to fish density.
 - Dolphin density not being influenced by current and past fishing activity.

When accounting for where dolphins "should be". Verified sightings and bycatch evidence prove dolphins are distributed over a much wider area than proposed for protection.

- The prioritisation of areas for protection by overlapping the highest dolphin density with threat efforts fails to protect small and subpopulations - such as those between Timaru and Te Waewae Bay; in the Marlborough Sounds; on the North Island East Coast. And fails to avoid bycatch in large populations where there is currently thought to be low overlap with fishing, such as the South Island West Coast - leaving those populations at lethal risk, as well as further lowering resilience and driving fragmentation of the population.

As well as concerns about the distribution model, we are concerned that there was essentially no response to the concerns raised about the plan's scientific basis, from the International Expert Panel. A three-person International Expert Panel was invited

by DOC and MPI to review MPI's research at a meeting in Wellington on 9-13 July 2018. Some of the key concerns raised by the panel about the scientific basis for this plan include²:

In relation to the population survey and dolphin distribution:

- *“Further validation of inputs (e.g. ground-truth monitoring to identify when the model isn't predicting well) is needed. One example would be seeing how well the model fits when back-casting from current population size data and fisheries observer data to past population estimates (at least for some areas and with coverage in all areas constrained to be the same). This is standard practice in fisheries science, but is missing from the dolphin risk assessment.”*
- *“Ministers may request advice on how to manage risks to small, vulnerable populations of Hector's dolphins and thereby maintain genetic diversity, but the modelling (as presented) would not provide a basis for such advice.”* The report goes on to say, *“The management of risks to small, vulnerable populations of Hector's dolphins and thereby maintain genetic diversity, need much more attention. The MPI modelling fails to address the risk to small populations, instead using a Maximum Sustainable Yield approach that reduces the total number of dolphins caught. This will result in more protection for the largest populations, where the largest number of dolphins are caught. This approach ignores small populations which would be depleted even at relatively low levels of bycatch such as one dolphin caught per year.”*
 - NB: Separating the model output for the South Island into 4 'populations' is an improvement over the draft, but it falls short of what was recommended.

In relation to the certainty and relevance of the toxoplasmosis threat:

- *Assuming that beach-cast carcasses are representative (or even a rough approximation) of the actual proportions of causes of death is problematic.*
 - NB: MPI have ignored this advice and continued to provide their estimated of the number of dolphins dying from disease compared directly to bycatch.
- *It will be important to give greater attention to degrees of certainty, e.g. explaining strengths and weaknesses of the conclusions, showing where results are based on extrapolation rather than empirical data.*

MPI ignored almost all of the recommendations and concerns outlined by the International Expert Panel, and failed to respond to the report. It is problematic to then be able to sensibly review the options presented, if the foundations on which they are built are in question.

We recommend:

- A review and public response to all the issues raised by the expert panel, and implementation of the best practise recommendations to ensure the data on which this plan is based is sound.

² Taylor B, Lonergan M, Reeves R. (2018). Panel comments and recommendations. Report to New Zealand Ministry for Primary Industries and Department of Conservation. Pg2
<https://www.doc.govt.nz/globalassets/documents/conservation/native-animals/marine-mammals/Māui-tmp/hectors-risk-assessment-workshop-panel-recommendations-appendix-1.pdf>

GUIDING VISION AND OBJECTIVES

Expecting dolphins to thrive in their natural range - but failing to protect it.

We submit that the guiding vision and objectives identified are contradictory to the plan that follows. That is, the guiding principles sound good, but this plan won't deliver them.

For example, the vision statement proposes "long-term viability and recovery throughout their (the dolphin's) natural range" and the objectives to "allow subpopulations to thrive and recover" - however the areas proposed for threat management do not extend to the full natural range of the dolphins. The TMP argues that the South Taranaki area is only a 'transition zone', and dismisses the importance of the East Coast North Island population altogether. As well as failing to provide protections out to the 100m depth contour, which is the range of the animals.

Some of the low population habitats were once abundant, as evidenced by historic sightings, beachcast and bycatch records. Set net and trawl fishing is why dolphin numbers are now low in those areas. This TMP falls into a 'diminishing baseline' fallacy - where the low numbers of dolphins are used to justify fewer protections for dolphins in these areas.

We will not see native dolphins abundant in our waters if we fail to protect historical, verified habitats and write-off areas where sightings are few, due to low population, as naturally occurring.

The Department of Conservation made this argument aptly in the 2010 Distribution of Māui's dolphin report: "*Sightings of dolphins outside this area could mean one of two things; these areas are beyond the core range of Māui dolphins but are visited occasionally...; or there are animals resident in these more southern areas but surveys miss them because they're present in such low numbers*". The report says "*whichever of these interpretations are correct, the management response should be no different: Māui dolphins are critically endangered and should be protected throughout their range.*"³

As discussed above, prioritisation of areas for protection by overlapping the highest dolphin density with threat efforts fails to protect small and subpopulations, leaving those populations at lethal risk, as well as further lowering resilience and driving fragmentation of the populations. Furthermore, the proposed TMP will actually displace fishing effort out of high dolphin density areas into areas of lower density therefore further threatening the smaller, vulnerable populations and connectivity.

What is not measured is not managed.

The population objectives are not clearly measurable nor time bound making it difficult to track progress against the plan.

The goal set forth for population management refers to 95% and 90% of the carrying capacity of the environment for Māui and Hector's respectively, but, 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 consults, the answer provided 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 these outcomes impossible to measure in a direct manner.

³ Du Fresne S, (2010) Distribution of Māui's dolphin p21

Queries to MPI to establish how success of the plan will be measured indicated that they would consider it a success if reduction to threats saw a population increase year on year, until such time as the carrying capacity was reached, again, with no data around the carrying capacity.

We recommend:

- Ensuring that vision statements are used to guide the plan i.e. the plan that follows will actually deliver on them.
- Move away from the population model which prioritises only high density areas to ensure we are protecting smaller, vulnerable populations and connectivity by protecting the dolphin's full habitats.
- Establishing clear, measurable, time-bound population goals, based on international standards.

FISHING THREAT MANAGEMENT

Māui dolphins have been driven to the brink of extinction by the fishing industry using set-net and trawls in their habitats. 95% of all human induced Māui deaths have been caused by these fishing techniques⁴. Hector's dolphins are similarly at risk of being caught up and drowned.

At this stage a single bycatch event involving multiple dolphins - such as we saw occur this past February with a single trawl killing five Hector's dolphins⁵ - could have catastrophic impacts on the survival likelihood on Māui dolphins as a species, and on important subpopulations and connectivity for Hector's dolphins.

While the draft plan repeatedly states there is a high likelihood of underreporting and underestimating the number of dolphins being caught as bycatch, no meaningful measures are proposed to rectify this. With limited numbers of observers and lack of cameras on boats the system for managing bycatch relies on self-reporting by the industry. We know that low levels of monitoring bias bycatch estimates low⁶. Partly because low observer coverage means fishers can change their fishing plans on days they have observers on board (to avoid areas where they are likely to catch dolphins).

The very high risk, the devastating impact of possible bycatch events, and the acknowledged underreporting and underestimation of bycatch all mean the precautionary principle must be applied.

Therefore we support a ban on set net and trawl fishing, out to the 100m depth contour, in the full habitat range for Māui and Hector's dolphins. Any measures that fall short of this will simply be a small delay to an inevitable slide into extinction.

None of the options proposed in the TMP draft reach this level, therefore none are sufficient.

⁴ Currey RJC, Boren LJ, Sharp BR, Peterson D (2012). A risk assessment of threats to Maui's dolphins. Ministry for Primary Industries and Department of Conservation,

<https://www.mpi.govt.nz/dmsdocument/7677-a-risk-assessment-of-threats-to-mauis-dolphins>

⁵ <https://www.stuff.co.nz/environment/112533375/last-gasp-of-a-dying-dolphin-are-we-too-late-to-save-mui>

⁶ GAMMS 2016. Guidelines for preparing marine mammal stock assessment reports pursuant to section 117 of the Marine Mammal Protection Act. National Marine Fisheries Service, National Oceanic and Atmospheric Administration of the USA <https://www.nmfs.noaa.gov/op/pds/index.html>

Overcoming implementation concerns

To successfully monitor and enforce the 100m depth contour limit we suggest establishing a 100m depth contour map (such as those presented in the plan) annotated with nautical miles from shore. GPS locations of the 100m depth contour (or NM from shore that the contour falls at for various GPS locations) would allow monitoring via aircraft. Even better, electronic monitoring on all commercial vessels (VMS) will be able to identify this limit.

We reject the notion that we lack either the technology or the smarts to measure such a restriction.

Bycatch monitoring is needed

For decades, concerns have been acknowledged about the underreporting of bycatch by fishers, but little has been done to rectify this. For the sake of both compliance and to ensure we are able to accurately quantify fishing risk (not just continue to state that it is underreported) this plan should absolutely include the roll out of cameras on *all* commercial vessels. Monitoring of all camera footage must be undertaken by an independent party and avoid conflicts with the commercial fishing industry, camera and monitoring companies and Fisheries New Zealand.

We cannot continue to allow this industry to monitor itself. This is fundamentally inadequate where bycatch levels are historically high, reporting is low and species survival is at risk.

Economic impacts of fishing threat management.

We have concerns around addressing this area of the plan, because the focus on economic impacts implies that native dolphins are only worth saving, if it doesn't cost too much to do so.

The below responses come with the caveat that any TMP for "critically endangered" and "naturally threatened" native species, especially when they have been driven to this status through human activity, should be focussed on preserving and restoring our native biodiversity because there is intrinsic, extrinsic and existential value in doing so. Economic considerations become part of managing and operationalising the plan which will best achieve this.

The 'Socio-Economic' Analysis presented in the TMP plan failed to account for:

- Benefits to cultural values and wellbeing, with an abundant native dolphin population
- Economic benefits to tourism
- Long-term economic benefits from changing to selective, sustainable fishing methods
- Short-term economic benefit for fishers continuing to fish inside dolphin habitat using dolphin-safe fishing methods
- Benefits to other marine life from the protection measures
- Social license of the fishing industry - or risk of this industry losing social license
- New Zealand's international brand perception - and the risk to this of watching Māui dolphins go extinct.
- A US trade ban for failure to implement proper protections.
- Any transition costs or benefits for the industry.

Research by Market Economics, commissioned by World Animal Protection, shows that the TMP's costs of full habitat protection have been overstated by up to four

times, and the benefits have been understated by up to ten times.⁷ This has created an inaccurate and unnecessarily alarmist picture of the costs of the presented options, making them appear artificially less “feasible”.

Unfortunately we are unable to provide further feedback on the economic analysis, as despite repeated requests to MPI for the background and analysis of the economic information presented in the plan, we did not receive this information, and are therefore unable to provide comment inside the consultation time period.

We request the opportunity to provide further input following the release of this information and query why it has been impossible to provide it in a timely manner.

No jobs on a dead planet

We believe that it is possible for everyone in New Zealand to have good jobs, that don't risk the planet or our endemic species. An inability to do this is indicative a much larger failing. Assertions that job loss is a reason not protect our biodiversity ultimately unravel if we collapse our natural systems (as the IPBES Global Assessment Report on Biodiversity and Ecosystem Services report indicates we are on the brink of doing), and hold less weight when we consider the fishing industry is frequently willing to tolerate job losses, in pursuit of higher profits⁸.

That said, in order to ensure New Zealanders can have good jobs that work within the bounds of nature, a key part of this plan should be to support the transition of affected fishers to dolphin safe methods, fishing in other areas, or other jobs in the fishing industry or beyond.

Doing so would reassure and galvanize the industry that most needs to change, and provide a more accurate reflection of the economic cost of the plan.

We recommend:

- The precautionary principle is applied to only allow dolphin safe fishing methods in the full habitat range of Māui and Hector's dolphins out to the 100m depth contour.
- Implementation of electronic VMS on all commercial vessels and cameras on boats, immediately.
- A complete socio-economic analysis to fill in the gaps in the current analysis, and a biodiversity-first rather than lowest-cost selection of TMP.
- The opportunity to provide further input on current “socio-economic” analysis, following the release of background information and analysis from MPI.
- Development of a plan to support the transition of affected fishers to dolphin safe methods, fishing in other areas, or other jobs in the fishing industry or beyond.

TOXOPLASMOSIS

We support further research to establish credible data around the risk and a management plan for toxoplasmosis.

⁷ Yeoman R, Rodriguez A, Fairgray D. (2019). Māui and Hector's Dolphin Protection Options Assessment. https://d31j74p4jpxrfrp.cloudfront.net/sites/default/files/nz_files/Māui_and_hectors_dolphin_protection_assessment_2018.pdf

⁸ <https://www.rnz.co.nz/news/national/392642/sanford-fish-plant-workers-will-fight-job-losses>

Emerging risks, like toxoplasmosis, create even greater urgency that we swiftly and to the highest level, reduce all known human-induced threats, that can be controlled, such as fishing risks.

We have been deeply concerned about the presentation of the toxoplasmosis threat throughout the draft plan and the surrounding communications.

The International Expert Panel stated in their report “*Defining how and to what extent this sample of deaths could be biased is a nearly intractable problem*” and “*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.*”⁹

Despite the toxoplasmosis threat being called into question by the scientific community, and international experts, their concerns have been ignored. Deliberate decisions, such as presenting data about deaths of widely variant levels certainty alongside each other as though comparable, (despite the advice from the International Expert Panel not to do so) make it extremely difficult for the general public to review the plan and weigh the different types of threats accurately.

If the modelling predicting 334 Hector’s dolphins dying of toxoplasmosis annually is accurate reductions of human impacts would be yielding limited results. This has not been the case. For example, Banks Peninsula is one of the areas where toxoplasma has been found. This area also has some protection from fisheries, with set net restrictions. The survival rate of Hector’s dolphins in this area increased by 5.4% after those measures were implemented and it is now considered stable¹⁰. This is inconsistent with the theory that toxoplasmosis is a main source of mortality for NZ dolphins. Fisheries regulations resulted in a large increase in survival rate, though nothing has been done to reduce disease.

Pushing the toxoplasmosis prediction model has opened the door for vested fishing interests to abdicate responsibility for action to protect our Māui and Hector’s dolphins, and has left the public understanding of the threats muddled.

We recommend:

- Further research into establishing credible science around the risks of toxoplasmosis and an action plan, that does not detract from;
- The swift implementation of all other aspects of the plan, to buy time to manage this emerging threats
- Follow the international expert panel's recommendation of adopting a simple narrative approach to communicate about the toxoplasmosis risk in a way that is accurate and accessible for the general public.

NON-FISHING THREATS: OIL & GAS EXPLORATION, SEABED MINING

Seabed mining, seismic surveys and oil and gas exploration and drilling all interfere with and degrade Māui and Hector’s dolphin habitats. This creates unnecessary

⁹ Taylor B, Lonergan M, Reeves R. (2018). Panel comments and recommendations. Report to New Zealand Ministry for Primary Industries and Department of Conservation. Pg12 <https://www.doc.govt.nz/globalassets/documents/conservation/native-animals/marine-mammals/Māui-tmp/hectors-risk-assessment-workshop-panel-recommendations-appendix-1.pdf>

¹⁰ Gormley AM, et. al. (2012). First evidence that marine protected areas can work for marine mammals. J. Appl. Ecol. 49:474-480.

stress on feeding, breeding, and natural behaviours. For Māui dolphin, and the smallest Hector's dolphin populations on the brink of extinction, these stressors can be the difference between recovery and extinction.

We support the extension of the Marine Mammal Sanctuaries, but out to the 100m depth contour, with the outright prohibition of these activities, including for existing permit holders.

The threat to our native dolphins is no less from activities already permitted, than it will be from new permits! While the threat is not disputed, the response in the draft TMP is insufficient, prioritising the interests of extractive industries over our endemic biodiversity.

For seismic testing and seabed mining we also support a buffer zone beyond the Sanctuary limits to ensure noise interference and pollution (e.g. sedimentation, spills) are not at a level that will threaten Hector's and Māui dolphin population recovery.

SUMMARY OF RECOMMENDATIONS

1. A review and public response to all the issues raised by the International Expert Panel, and implementation of the best practise recommendations to ensure the data on which this plan is based is sound.
2. Ensuring that vision statements are used to guide the plan i.e. the plan that follows will actually deliver on them.
3. Establishing clear, measurable, time-bound population goals, based on international standards.
4. The precautionary principle be applied to only allow dolphin safe fishing methods in the full habitat range of Māui and Hector's dolphins, out to the 100m depth contour.
5. Implementation of electronic VMS on all commercial vessels and cameras on boats, immediately.
6. A complete socio-economic analysis to fill in the gaps in the current analysis, and a biodiversity-first rather than lowest-cost selection of TMP.
7. Development of a plan to support the transition of affected fishers to dolphin safe methods, fishing in other areas, or other jobs in the fishing industry or beyond.
8. The opportunity to provide further input on current "socio-economic" analysis, following the release of background information and analysis from MPI.
9. Further research into establishing credible science around the risks of toxoplasmosis and an action plan, that does not detract from;
10. The swift implementation of all other aspects of the TMP, to buy time to manage any emerging threats
11. Following the International Expert Panel's recommendation of adopting a simple narrative approach to communicate about the toxoplasmosis risk in a way that is accurate and accessible for the general public.
12. Extending the Marine Mammal Sanctuaries where proposed, but out to the 100m depth contour, with the prohibition of seabed mining, seismic surveys and oil and gas exploration and drilling - including for existing permit holders.

ENDS