



18 October 2019

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Hector's and Māui Dolphin Threat Management Plan: Advice on options and next steps

Purpose:

This briefing provides advice on options to manage the effects of fishing-related mortality on Hector's and Māui dolphins as part of a revised Hector's and Māui Dolphin Threat Management Plan (TMP).

Minister	Action Required:	Minister's Deadline
Minister of Fisheries	Agree the fisheries measures you want to put in place.	By 4 November to facilitate Cabinet consideration of proposed regulatory changes in December.
	Indicate to officials whether you want further work undertaken on transitional assistance.	By 21 October so that this work can be included in the December Cabinet paper

Comments:

Free and frank expression of opinions

In addition, some iwi have noted that they consider there may be fisheries settlement implications if measures are implemented that would impose significant restrictions on their commercial and customary fishing activity.

To address the non-fishing threats to dolphins, the Minister of Conservation will receive advice from the Department of Conservation. Following decisions by Ministers, a final TMP will be developed containing all of the fishing- and non-fishing-related management frameworks and measures, monitoring, review, and ongoing engagement processes.

Contact for telephone discussion (if required)

	Name	Position	Work	Mobile
Responsible Manager	Privacy	Manager – Dolphin Threat Management Plan	Privacy	Privacy
Principal Authors	Privacy	Senior Fisheries Analyst – Inshore Fisheries	-	-
	Privacy	Principal Advisor, Fisheries and Aquaculture Policy	-	-

Key Messages

1. In 2018 you agreed to review the Hector's and Māui Dolphin Threat Management Plan (TMP).
2. Under the Fisheries Act 1996 (the Act) you have considerable discretion and are required to put in place measures to avoid, remedy, or mitigate the effect of fishing-related mortality on any protected species only where you consider it necessary to do so.
3. Consultation on options for a revised draft TMP occurred between June and August 2019. Submitters were divided on the need, nature and extent of any further regulatory measures to protect Hector's and Māui dolphins from fishing threats.
4. Fisheries New Zealand considers that a precautionary approach is required to deliver the TMP's proposed outcomes, goals and objectives. The approach we have developed provides effective protection for the dolphins where this is required, but also minimises impact on utilisation of fisheries resources to the extent possible.
5. Our preferred package of measures reflects that set-net fishing poses a greater risk of fishing-related mortality than trawl, and the consequence of fishing-related mortality is greater for Māui dolphins compared to Hector's dolphins.
6. We recommend additional closures to set-net fisheries across the Māui habitat zone (location of current resident population) and the southern habitat zone of the North Island, and along the east, south and north coasts of the South Island to protect Hector's dolphins (refer to Map 1 in Appendix One).
7. For the west coast North Island, the proposed set-net closures significantly reduce the remaining risk of fishing-related mortality to Māui dolphins. However, we consider that a small increase to the current trawl closures in the area of highest risk of a trawl-related mortality is also warranted to further reduce the risk to Māui dolphins.
8. For trawl fisheries in the South Island we are recommending a new approach. Fishers would only be allowed to operate in defined high-risk areas using modified fishing, and with an on-board camera or observer to verify reporting. Graduated responses to fishing-related dolphin mortalities at an individual fisher and population level are proposed, up to the level of annual allowable deaths to achieve the population objectives, at which point trawl fishing would cease for the remainder of the fishing year.
9. You could consider implementing the proposed trawl measures via a Memorandum of Understanding with industry. We have held initial discussions with industry representatives around the approach. They have indicated support in principle, subject to discussion with their members. If no agreement is possible then we propose implementation via circular or *Gazette* notice as the most responsive approach.

10. Given the measures proposed, the socioeconomic consequences are significant. Total economic impact (for one year) for fishers affected, if all of these measures are implemented, is estimated at about \$15 million. The impacts will be felt most by the small independent operators off the west coast North Island and portions of the South Island. We expect the larger companies to be able to adapt more easily, given their broader portfolio and capacity to fish in deeper waters and target alternative species.
11. To alleviate potential impacts on small operators and local licensed fish receivers we seek your views on whether you want us to develop a proposal for transition assistance. This approach is not required under the Act, but it could provide a mechanism to support those affected to adapt and either leave the fishery, or transition to alternative fishing methods. Initial scoping work has been carried out and is summarised in this brief. The estimated cost of a transition package is likely to be somewhere between Under active consideration for fishers significantly impacted by measures proposed for the west coast North Island. We seek early guidance from you as to whether we should undertake further work on such assistance so that it can be included in the Cabinet process for approving decisions on new fisheries management measures.
12. You are required to consult with the Minister of Conservation. A letter to her is attached for your signature (refer to Appendix Two).
13. The timeline to complete Cabinet approvals and announce a decision this year is extremely tight. We seek your decision on proposed fisheries measures by 4 November in order to facilitate preparation of a draft Cabinet paper and regulatory impact analysis by mid-November. We propose that you seek Cabinet Committee policy approval on 4 or 11 December, followed by Cabinet on 9 or 16 December. Public announcements would need to immediately follow this.
14. We will prepare communications material to support an announcement of decisions following Cabinet approval. We propose to implement measures in the first half of 2020.

Recommendations

15. Fisheries New Zealand recommends that you:

- a) **Agree** to a new vision statement for the Threat Management Plan, which is:

New Zealand's Hector's and Māui dolphin populations are resilient and thriving throughout their natural range.

Agreed / Not Agreed

- b) **Agree** to a new long-term goal for the Threat Management Plan, which is:

Hector's and Māui subpopulations are thriving or increasing, supported by an enduring, cohesive and effective threat management programme across New Zealand

Agreed / Not Agreed

- c) **Agree** to the medium-term goals for the Threat Management Plan, which are:

- i. *Ensure known human-caused threats are managed within levels that allow subpopulations to thrive and recover.*
- ii. *Engage all New Zealanders in Hector's and Māui dolphin conservation.*
- iii. *Understand how tangata whenua wish to exercise kaitiakitanga of Hector's and Māui dolphins.*
- iv. *Improve knowledge of poorly understood threats to support development of long- and medium-term goals, which are measurable, and time-bound.*

Agreed / Not Agreed

- d) **Agree** to setting a population outcome for Māui dolphins of:

Human impacts are managed to allow the population to increase to a level at or above 95 percent of the maximum number of dolphins the environment can support.

Agreed / Not Agreed

- e) **Agree** to setting a population outcome for Hector's dolphins of:

Human impacts are managed to allow the population to increase to a level at or above 90 percent of the maximum number of dolphins the environment can support.

Agreed / Not Agreed

- f) **Agree** to setting fisheries population objectives to:
- i. *Reduce fisheries risks to very low levels, sufficient (with 95 percent certainty) to allow the Māui dolphin population to recover to and remain at or above 95 percent of un-impacted status.*
 - ii. *Reduce fisheries risks to very low levels, sufficient (with 95 percent certainty) to allow the overall Hector's dolphin population to recover to and remain at or above 90 percent of un-impacted status.*
 - iii. *Reduce fisheries risks to very low levels, sufficient (with 95 percent certainty) to allow localised Hector's dolphin populations to recover to and remain at or above 80 percent of un-impacted status.*

Agreed / Not Agreed

- g) **Agree** to ensure that dolphin deaths arising from fisheries threats do not:
- i. *exceed population sustainability thresholds set to achieve the applicable subpopulation objective with 95 percent certainty,*
 - ii. *cause localised depletion, and*
 - iii. *create substantial barriers to dispersal or connectivity between subpopulations.*

Agreed / Not Agreed

- h) **Agree** to the options set out in Package 2 for Hector's dolphins and Māui dolphins (Figures 1-6 in Appendix Three)

Agreed / Not Agreed

- i) **Other fisheries measures**

Ring netting - West coast North Island harbours

Agree to amend the regulation to allow commercial ring netting (to be defined within the fisheries regulations) within west coast North Island harbours where current commercial set-net prohibitions apply.

Agreed / Not Agreed

Driftnetting - All New Zealand waters

Agree to amend the regulation to prohibit commercial and recreational driftnet (of any size) for fishing within New Zealand waters.

Agreed / Not Agreed

Agree to align the definition of driftnet within the commercial and recreational fisheries regulations to that of the Driftnet Prohibition Act 1991 to include that a driftnet does not have attached to it sufficient means of anchoring it to any point of the land or the sea bed (irrespective of whether the net has attached to it any means of being attached to any vessel).

Agreed / Not Agreed

j) **Transitional assistance**

Note that under the Fisheries Act 1996 the Crown is under no obligation to compensate quota holders, commercial fishing permit holders or licensed fish receivers for implementing a sustainability measure such as the ones proposed in the recommendations above.

Noted

Agree that officials develop more detailed options on transitional assistance for further consideration, and that this may include targeted engagement with industry representatives.

Agreed / Not Agreed

Implementing proposed measures for South Island trawl fisheries

Note that Fisheries New Zealand considers you have an option to implement either regulated or voluntary measures for inshore trawl fisheries in Hector's dolphin habitat areas.

Noted

Agree to officials discussing in confidence with industry representatives options around a possible Memorandum of Understanding for implementing voluntary Hector's dolphins trawl measures, should you support this option.

Agreed / Not Agreed

Consulting with the Minister of Conservation

- k) **Agree** to sign and send the attached letter, and a copy of this briefing, to the Minister of Conservation.

Agreed / Not Agreed

Stuart Anderson
Acting Deputy Director-General
Fisheries New Zealand

Hon Stuart Nash
Minister of Fisheries

/ / 2019

Introduction

16. You are responsible for deciding on measures to manage the effects of fishing related mortality under the Act. You are required to consult with the Minister of Conservation before making a decision on whether any measures are necessary (letter attached).
17. This briefing paper outlines recommendations on the vision, goals and objectives for the revised TMP that have been jointly developed with the Department of Conservation.
18. The remainder of the paper outlines recommendations for fisheries measures which have been developed by Fisheries New Zealand in discussion with the Department of Conservation. Their views on the fisheries proposals will be provided separately to you.
19. The Department of Conservation will be briefing their Minister separately on non-fishing related measures (toxoplasmosis, mining and seismic testing). While the Minister of Conservation is not legally required to consult you on these matters, we expect you will be interested in her thinking on toxoplasmosis in particular. Accordingly, we have included a request in the attached letter to see the advice and discuss the toxoplasmosis approach with you before she makes a decision.
20. As part of developing this advice we have met with Te Ohu Kaimoana twice to outline the proposed options and approach. We will continue to work with them during the decision-making process and implementation.

Briefing and Technical Advice paper

21. Attached to this briefing is a Technical Advice paper (refer to Appendix Four) that provides you with more detailed information on a range of matters relevant to your decision. Within this briefing we refer you to sections of the Technical Advice paper as appropriate.

Current TMP measures

22. Historically, fishing using set-nets and trawl nets has been regarded as the greatest human-induced threat of death of Māui and Hector's dolphins. In recognition of the threat from these fishing methods, area-based restrictions have been put in place. The total area covered by restrictions has increased over time, reflecting improved information on the nature and extent of the risks. Currently 8000 square kilometres of coastline has restrictions on trawling and 15,000 square kilometres is closed to set-netting (refer to Maps 2, 3 and 4 in Appendix One illustrating current measures). In addition, there are voluntary protocols in place in the trawl fishery off the east coast of the South Island, designed to reduce the risk of dolphin deaths in that fishery.

Review of the TMP

23. In 2018, you and the Minister of Conservation agreed to review the Hector's and Māui Dolphin Threat Management Plan (TMP). The purpose of the review is to:
 - i. continue engagement with iwi in shaping the successful management of this taonga species;
 - ii. ensure the TMP goals remain relevant and effective;
 - iii. assess new information and the performance of existing protection and monitoring measures to ensure the measures are effective;
 - iv. provide direction on future research and monitoring needs to improve future assessments on performance; and
 - v. explore new opportunities to progress the recovery of the species.
24. Between June and August 2019 Fisheries New Zealand and the Department of Conservation consulted on proposals for a revised TMP. Over 15,200 submissions and 76,000 petition signatures were received.
25. In September 2019, we provided you and the Minister of Conservation with an overview of the key themes from submissions received from the public consultation (B19-0477 refers). Since that time, the two agencies have completed a more thorough analysis of the submissions. A summary of submissions is available in Appendix One of the Technical Advice paper. Detailed responses to submissions on issues raised are provided throughout the attached Technical Advice paper where applicable.
26. Central to the revised approach to the TMP is the development of a set of bold overarching statements that set out the vision, goals and objectives for management of human-induced mortality, including fishing. Those statements then drive the need for action, and consequently our recommendation that further measures are required.

Vision, goals and objectives

27. The recommended vision for the TMP is:

New Zealand's Hector's and Māui dolphin populations are resilient and thriving throughout their natural range.

28. To achieve this vision the proposed long-term goal and medium-term goals were:



29. The vision and goals received some comment from submitters. Some environmental NGOs (eNGOs), iwi representatives, Te Korowai, and general public that commented were concerned that the vision and goals were not measurable and time bound. As such, agencies propose to revise the fourth goal to “Improve knowledge of poorly understood threats to support development of long- and medium-term goals, which are measurable, and time-bound”.
30. We note that it is not possible to define the time it will take for the vision and goal to be achieved. However, the proposed objectives are designed to ensure that the effect of fishing-related mortality does not prevent them from being achieved, provided other human-induced threats are managed effectively.
31. Te Ohu Kaimoana, Ngāi Tahu and Ngāti Ruanui also submitted on the importance of goal three, and some suggested it should better reflect working in a Treaty partnership. Agencies have agreed to work with tangata whenua to update this goal to better reflect those views as part of next steps in finalising the TMP.

Population outcomes and objectives

32. Specific population outcomes and fishery management objectives were also consulted on.
33. The proposed population outcome for Māui dolphins is:
Human impacts are managed to allow the population to increase to a level at or above 95 percent of the maximum number of dolphins the environment can support.
34. And for Hector's dolphins:
Human impacts are managed to allow the population to increase to a level at or above 90 percent of the maximum number of dolphins the environment can support.
35. No changes to the vision, and outcomes are proposed following consultation. Proposed amendments to two of the goals (as noted above), and the research objectives are discussed further in Part A of the Technical Advice paper.

Fisheries objectives

36. The population outcomes set out requirements for management of all human-induced threats. Fishing is a significant threat to Māui and Hector's dolphins and needs to be managed.
37. To ensure that fisheries risk does not limit the ability for the population outcomes to be achieved, we recommend that each dolphin subpopulation is able to recover to and/or maintain a level that is no more than 5 percent (Māui dolphin) or 10 percent (Hector's dolphin) lower than it would be in the absence of any fishing-related mortality.
38. A specific population objective for local Hector's dolphin populations on the east coast of the South Island is recommended to ensure that no local populations will be overly depleted by fishing. This is to reduce fisheries risks to allow local Hector's dolphin populations to recover to and remain at or above 80 percent of the maximum number of dolphins the environment can support, with 95 percent certainty.
39. Supporting these objectives, we want to ensure that dolphin deaths arising from fishing do not:
- i. exceed population sustainability thresholds¹ set to achieve the applicable population outcome with 95 percent certainty;
 - ii. cause localised depletion; or
 - iii. create substantial barriers to dispersal or connectivity between subpopulations.

¹ The population sustainability threshold is the maximum number of dolphin deaths per year that can occur while still allowing the population objective to be achieved.

The proposed population outcomes are within your broad discretion

40. Stakeholders, particularly the fishing industry, iwi and Te Ohu Kaimoana, expressed concern about the precautionary nature of the population outcomes and fisheries objectives consulted on. They are primarily concerned about the impact on use of fisheries resources that flow from those outcomes and objectives. They consider that the objectives may be outside the discretion afforded to you under the Fisheries Act.
41. You have a wide range of discretion under the Act in terms of:
 - i. whether to set population outcomes, and supporting fisheries objectives; and
 - ii. what those desired outcomes and objectives might be.
42. Agencies consider it important to set outcomes and objectives that reflect what we consider to be an appropriate balance between use of fisheries resources and the effects of fishing-related mortality on this important protected species.
43. The proposed outcomes and objectives combined would ensure a very high level of protection for the dolphins from impacts of fishing.
44. We have sought specific legal advice on the extent of your discretion. That advice confirms that the range of measures that were consulted on, including those proposed in this advice, are within the bounds of your discretion under the Act.
45. The Technical Advice paper contains more information in Part B1 on your statutory considerations, including determining population outcomes and objectives.

Māui dolphin population outcomes

46. In the case of Māui dolphins, the population outcome, fisheries objective, and level of certainty (if supported) combine to require you to reduce the allowable level of fishing-related mortality effectively to zero. This will provide the Māui dolphin population with the greatest chance to recover to no more than 5 percent lower than what it would be in the absence of fishing.
47. Agencies consider the proposed population outcome for Māui dolphins is appropriate given:
 - i. The very small number of Māui dolphins that remain and the high likelihood of extinction should the population decline;
 - ii. The desire to be cautious where information on impacts, population size, distribution, and trends of protected species remains uncertain;
 - iii. The obligation to maintain biodiversity, including within and between-species genetic diversity; and
 - iv. The general Government approach of minimising human-induced mortality on protected species (for example, National Plan of Action for Seabirds and the New Zealand Sea Lion Threat Management Plan).

Hector's dolphin population outcomes

48. The Hector's dolphin population is able to sustain a higher level of human-induced mortality while ensuring the population outcome can be achieved. However, maintaining biodiversity, preventing subpopulation fragmentation, and eliminating potential barriers to connectivity between subpopulations remain important considerations for Hector's dolphins. For these reasons, agencies consulted on and propose you agree to a population outcome of 90 percent of the maximum number of dolphins the environment can support.

Need for further action to manage fishing-related mortalities

49. The Māui dolphin population (found off the west coast of the North Island), is estimated at around 63 individuals above 1 year of age, and is ranked as nationally critical.
50. Scientific models estimate that the Māui dolphin population has declined in the past 20 to 30 years. The decline can be explained by a combination of commercial and recreational fishing impacts, and other non-fishery threats such as disease. Current population trends are uncertain, but it remains vulnerable to any human-induced deaths. There is a risk of extinction if the decline continues.
51. The Hector's dolphin population (found mainly around the South Island) is estimated to consist of around 15,700 individual dolphins and is ranked as nationally vulnerable and population trends are uncertain.
52. Genetic evidence supports the presence of distinct subpopulations of Hector's dolphins. The largest subpopulations are along the east and west coasts, with a relatively small subpopulation along the south coast. Hector's dolphins on the north coast may comprise a fourth subpopulation, but this is uncertain (refer to Map 1 in Appendix One).
53. Fisheries New Zealand considers that the measures for Māui dolphins and the east, north and south coast subpopulations of Hector's dolphins are not sufficient to meet the recommended population outcomes and fisheries objectives.
54. We are proposing an overall population outcome and specific fisheries objectives to help support decision making. You are authorised under the Fisheries Act to implement measures you consider necessary to manage the effects of fishing-related mortality on protected species. The fisheries objectives are designed to support decision-making on whether measures are necessary to manage the effects of fishing-related mortality to support the population outcome being achieved.

55. The need to manage the adverse effect of fishing-related mortality is independent of any other adverse effect on the population. We note that the overall population outcome for Hector's and Maui dolphins will not be achieved unless all human-induced threats, particularly from toxoplasmosis, are managed appropriately. If these other risks are not managed then they will undermine, in part, or completely, the benefits stemming from controls and associated cost placed on the fishing industry.

Maui dolphins

56. We consider that the risk of fishing-related mortality for Maui dolphins exceeds the level necessary to ensure that the fisheries objectives, and therefore population outcomes, are met.

Stakeholder views

57. Te Ohu Kaimoana, the majority of fishing industry submitters and some recreational fishers, do not consider there is a need for further measures off the west coast North Island because they believe:
- i. there is no information that warrants an extension of coastal set-net prohibition areas;
 - ii. the dolphins are not in the areas they fish (or within the currently closed areas in some cases);
 - iii. the methods they use to fish are being inaccurately assessed as posing a risk to the dolphins (such as, differences in catchability of coastal set-nets, harbour set-nets and various trawl configurations);
 - iv. around Taranaki or south to Wellington, in the event a dolphin were to be found there, it would likely be a Hector's dolphin (not a Maui dolphin);
 - v. the lack of any sightings or observed interactions (despite high levels of coverage) in recent years shows there are no interactions or need for further measures; and
 - vi. any extension of the existing closures would cause undue socioeconomic hardship to fishers, their families and communities.
58. The majority of non-fishing interests (eNGOs, academia, and the general public) consider that there is a need for additional measures. Their rationale is that:
- i. the Maui dolphin population is so small that any residual risk from fishing is untenable;
 - ii. set-nets pose the greatest threat to Maui dolphins;
 - iii. the 2018 and 2019 trawl captures of Hector's dolphins in the South Island shows there is a need to act to remove trawl risk;
 - iv. the lack of protection measures between the South Island and Maui dolphin population prevents the dolphins from recovering and expanding into their natural historical range; and
 - v. given the small population size of Maui dolphins, the only way to help ensure their future survival is to put in place much greater protection measures.

Fisheries New Zealand response

59. The TMP review considers two “zones” off the west coast North Island:
- i. the current resident Māui dolphin population (“Māui habitat zone”), generally residing north of Cape Egmont, Taranaki; and
 - ii. the future recovery and natural range of the Māui and/or Hector’s dolphins, which includes the “southern habitat zone”, south of Cape Egmont to Wellington.
60. In the Māui habitat zone (north of Cape Egmont – refer to Map 1 in Appendix One) the current set-net and trawl deaths (combined) are estimated to exceed the level of mortality that would allow the population objective to be achieved. To achieve the fisheries population objective would require less than 1 dolphin death every 7 years. The upper estimate of current impact is 1 death every 5 to 6 years.
61. The gap between the estimate of fishing impact and the population sustainability threshold is small. However, given there are only about 63 individual Māui dolphins remaining, it is very significant to the recovery of the population.
62. A key concern of submitters who do not consider further measures are necessary for Māui dolphins is the very low likelihood of a fishing-related mortality occurring (supported by a lack of recent deaths and sightings of dolphins) within areas where additional measures are proposed.
63. We acknowledge the very low likelihood of a mortality occurring. However, the consequence of a fishing-related mortality, if one did occur, is high given the very low number of Māui dolphins remaining.
64. Existing measures have reduced the risk of fishing-related mortality significantly. Key areas where the dolphins are most commonly found have already been closed to methods that posed such a risk. Measures required to reduce the low levels of risk remaining are costly (in terms of impact on use) in return for relatively small reductions in risk. Nonetheless, we consider that further measures are necessary to reduce the risk of fishing-related mortality to ensure the fisheries objective can be met.
65. In the southern habitat zone (south of Cape Egmont), there is not believed to be a resident population at this time. However, the dolphins that may be present and/or transit through the area are exposed to a high level of fisheries risk. The current set-net and trawl deaths (combined) are estimated to exceed the level of risk that would meet the population objective. The gap between the estimate of fisheries risk and the population sustainability threshold is significant, and is driven by the fact there are only set-net restrictions in place as far south as Hawera.

66. A key concern of submissions from industry is that this assessment of the southern habitat zone falsely suggests there are dolphins present, and consequently unnecessarily (and excessively) over-estimates risk from fishing. We recognise the southern habitat zone as outside the “core” Māui dolphin range, but we disagree that the risk assessment overestimates risk. A very low level of dolphin density is supported by qualitative information including sightings, and dolphins that have died and washed up on the shore.
67. Refer to Part B3 of the Technical Advice paper for further information on the assessment of fishing-related risk to Māui and Hector’s dolphins off the west coast of the North Island.

Hector’s dolphin

68. We consider that the risk of fishing-related mortality for the Hector’s dolphin population exceeds the level necessary to ensure that the fisheries objectives were met.

Stakeholder views

69. Te Ohu Kaimoana, the majority of fishing industry submitters, and some recreational fishers do not consider there is a need for further measures because:
- i. the closures proposed in consultation have effects far in excess of the mortality limit needed to achieve the TMP objectives;
 - ii. the combined impact of the South Island proposals would see Kaikōura and Timaru cease to have a coastal fishing sector and put 15 set-net vessels and their crews out of business on the east coast South Island. However, Te Korowai (Kaikōura) proposed an option for its local area that did involve extensions to existing closures;
 - iii. trawlers often operate at a slow speed and using a low headline height that poses little risk to dolphins; and
 - iv. there needs to be an approach to verify the impacts of risk using on-board cameras and/or observers and working with fishers to mitigate risk using a broader range of measures.
70. The majority of non-fishing interests (eNGOs, academia, and the general public) consider that there is a need for additional measures. Their rationale is that the the populations are declining and further subpopulation fragmentation pose a risk to the Hector’s dolphin population as a whole.

Fisheries New Zealand response

71. Across the whole population of Hector’s dolphins in the South Island, the upper estimate of the current annual commercial fishing-related mortality of Hector’s dolphins is 108 individuals.

72. For the east coast of the South Island subpopulation, the current level of estimated fishing-related mortality exceeds the level required to achieve the subpopulation objective. The upper estimate of current fishing-related mortality for Hector's dolphins on the south coast of the South Island also exceeds the level required to achieve the subpopulation objective. We consider that additional measures to reduce the level of fishing-related mortality are required on both coasts.
73. The modelling suggests the risk of fishing-related deaths needs to be reduced on the north coast South Island². Fisheries New Zealand notes that available information suggests that this population is small, and that there is overlap between this population and set-net activity in Golden/Tasman Bay. Given the level of risk and uncertainty in the size and distribution of this population, we consider measures are necessary to reduce the risk of fishing-related mortality.
74. The current level of estimated fishing-related mortality for Hector's dolphins on the west coast of the South Island is below the level required to achieve the subpopulation objective. The risk assessment shows very little overlap (and therefore risk) between where dolphins occur and both set-net and trawl fishing. Due to the very low risk of interaction, no further management is proposed for this subpopulation.
75. Refer to Part B4 of the attached Technical Advice paper for further information on the assessment of fishing-related risk to Hector's dolphins around the South Island.
76. Overall, for Hector's dolphins, we consider that additional measures to reduce the level of fishing-related mortality are required. However, we note that the Hector's dolphin population is larger than the Māui dolphin population and therefore the level of urgency is lower. This difference in consequence provides an opportunity to apply different measures to reduce fishing-related mortality that could have a lower impact on fisheries use.

Fisheries management measures proposed

Package proposals

77. Fisheries New Zealand consulted on a broad range of options, including status quo.
78. Submitters were largely divided between those who fished, and the eNGOs, academics, and general public. Commercial fishers did not see a justification for moving beyond the status quo, while eNGOs and the general public supported the most restrictive options, and often argued for going further.

² Allowable mortality levels are highly uncertain for the north coast South Island because the information on population size is highly uncertain. However, risk can still be estimated.

79. A joint submission by World Wildlife Fund – New Zealand (WWF), Sanford, and Moana Fisheries (entitled “Option 5”) focused on the Māui population off the west coast of the North Island proposed some fisheries closures, greater monitoring of fishing activity, and an obligation to “move-on” when fishers encountered dolphins. More detail on their option and our assessment of it is in Appendix 3B of the Technical Advice).
80. Officials met with WWF, Sanford and Moana to discuss the content of their submission. Our assessment is that a number of the closures they propose are included in the preferred package. The drone technology (Maui63/Auckland University) is not yet at a stage where it could be considered for management purposes. However, it shows considerable promise for future research programmes at the very least. We will keep close watch on its development and continue to liaise with them as the programme develops.
81. Considering submissions and feedback received during consultation, we have developed a revised set of options for the west coast North Island (Māui dolphin subpopulation and southern habitat zone), and three of the South Island Hector’s subpopulations (east, south and north coasts) (refer to Maps 1 to 4 in Appendix Three). These options are method specific (set-net and trawl), independent of one another, and can be combined into packages, reflecting a different weight between use and sustainability.
82. From the full range of options available to you, we have produced three different packages. Package 1 is weighted more towards providing for use of fisheries resources, relative to reducing fisheries risk to the dolphins. Conversely, Package 3 is more weighted towards significant reductions in fisheries risk that come at a high impact on use of fisheries resources (refer to Figures 1 to 6 and Table 1, in Appendix Three).
83. Our preferred option in all subpopulations is Package 2, which is described below. However, you have discretion to amend or tailor these packages as you see fit based on your assessment of the information that has been presented.
84. Further information to support decision-making on package proposals is provided in Parts B3 and B4 of the Technical Advice paper.

Preferred package of options (Package 2)

85. Package 2 includes a broad set of closures to set-net fisheries across the Māui habitat zone and the southern habitat zone off the west coast of the North Island, and the east, south and north coasts of the South Island.
86. For trawl fisheries in the South Island, where the risk is lower, we recommend a more innovative approach to deal with the effects of fishing-related mortality to the South Island Hector’s dolphin subpopulations, designed to encourage individual fisher responsibility and drive innovation.

87. For the west coast North Island, we consider there is less opportunity to be innovative given the small number of Māui dolphins left; nonetheless we consider extensive trawl closures are not required to achieve the population objectives. Targeted closures in the area of highest risk of a trawl-related death should provide a sufficiently precautionary approach provided the highest fisheries risk (from set-net) is removed.

West Coast North Island – Māui dolphins

88. Under Package 2, the population objectives are achieved with 95 percent certainty for the Māui dolphin population and dolphins within the southern habitat zone. Risks of localised depletion, and barriers to dispersal and connectivity, to dolphins present in the southern zone are also reduced.
89. The west coast North Island preferred package focuses on:
- i. moderate additions to offshore closures (set-net and trawl) in the core Māui dolphin area, and in the estimated alongshore distribution area outside of the core area (set-net);
 - ii. improving monitoring and information on Māui dolphins in key peripheral areas; and
 - iii. removing the highest level of recreational set-net risk to any of the subpopulation areas in the southern habitat zone.
90. The proposed expansion to the set-net closed areas will encapsulate almost all Māui and/or Hector's sightings in the offshore and alongshore areas, and the trawl measures would remove the highest level of trawl risk identified in the risk assessment.
91. Following submissions from fishers, we propose a butterfish exemption to allow commercial and recreational butterfish set-netting in the southern zone. Butterfish set-netting is considered to pose a much lower risk to Māui and Hector's dolphins than other types of set-netting because it operates in near-shore rocky habitat that is not preferred by dolphins.
92. Despite the low risk from butterfish set-net to the dolphins, there was a reported capture of a Hector's dolphin in a recreational butterfish set-net off the east coast of the South Island (in a butterfish exemption area) in February 2015. However, we consider allowing butterfish set-netting will not jeopardise achieving the fisheries population objective.
93. The risk assessment identified harbours as areas of high fisheries risk from set-net. Submissions from fishers said that continuously high human presence in these harbours would make it impossible for dolphins to escape detection. They note the areas where dolphins have been sighted are already closed to set-netting, and consider the upper reaches of the harbour are blocked by sand bars or mudflats, which are exposed at high tide and would not be preferred habitats for Hector's or Māui dolphins.

94. Based on these submissions, we do not recommend proceeding with the extensive harbour closures that were consulted on. We instead recommend that priority be given to a comprehensive research project (likely using acoustic technology) to detect whether or not, or to what degree, dolphins may use the harbours.

Socioeconomic impact of preferred package

93. Commercial sensitivity [REDACTED]
94. The estimated annual revenue loss under this package is \$3.39 million, which would be largely felt by those fishers and licensed fish receivers based in Commercial sensitivity [REDACTED].
95. Affected fishers' ability to adapt to the proposed closures and fish further offshore is significantly constrained by the gear they currently use, distance from shore limitations on their skipper's licence, and available annual catch entitlement (ACE) for snapper 8 (SNA 8).
96. Commercial sensitivity [REDACTED]
97. We estimate that this package would likely result in the Commercial sensitivity [REDACTED], and annual revenue of up to \$1.80 million to the local community being lost. This may result in the complete loss of Commercial sensitivity [REDACTED] as a coastal fishing port.
98. For the Commercial sensitivity [REDACTED] coastal set-net fishers their fishing grounds will be removed and their ability to find new grounds limited given the offshore distance of the closures. While some vessels also use methods such as bottom longlining, the fishers are constrained by available SNA 8 ACE and would incur significant costs. Commercial sensitivity [REDACTED]
99. If you are concerned about these potential impacts then alternative options are available to you (for example, status quo and Package 1 or a tailored package with amended restricted areas), but they result in a smaller reduction in current risk of fishing-related mortalities.

100. Te Kahui o Taranaki Trust note that since 2009 Taranaki iwi have operated pātaka systems with the support of the local licensed fish receivers and fishers. These pātaka provide them with fish for hui and tangi. The proposed set-net closures would mean commercial fishers would be unable to fish commercially in the closed areas and may cease their operations entirely, or may consider it uneconomical to travel to those areas to solely harvest for customary purposes. This would, in their view, negatively impact on customary interests.

South Island – Hector's dolphins

101. For Hector's dolphins, we propose new or extended area closures to set-netting in the east, south, and north coasts.
102. For trawl fisheries we recommend a new approach. Fishers would only be allowed to operate in defined high-risk areas using modified gear and an on-board camera or observer to verify reporting. Graduated responses to dolphin deaths at individual fisher and subpopulation level are proposed up to the level of annual allowable deaths to achieve the population objectives, at which point trawl fishing would cease for the remainder of the fishing year. No new (or extensions to existing) trawl closures are proposed.
103. As part of this approach we propose "trigger" and reporting mechanisms to manage fisheries impacts throughout the fishing year, such that the deaths from fishing do not exceed a certain threshold (refer to Part B4 of the Technical Advice paper for further detail). In this way, we can be sure the subpopulation objectives are met.
104. The proposed package also responds to local community and fishing industry submissions regarding the potential mitigating effect of low headline height for trawl, and set-netting in deeper water near Kaikōura Canyon.
105. The package would integrate widespread monitoring and research to test effectiveness of trawl gear modification in all three subpopulations, and deepwater set-netting in avoiding dolphin interactions off Kaikōura, as well as improving risk estimates. Reporting and response and the use of triggers (including oversight by a proposed Hector's Stakeholder Technical Advisory Group) would support management and provide a stepwise approach to ensuring fisheries deaths do not exceed the population sustainability thresholds for each subpopulation (for further detail refer to Part B9 of the Technical Advice paper).

Socioeconomic impact of preferred package

106. Under the preferred package of options we expect Commercial sensitivity to be impacted with over Commercial sensitivity percent of their current catch landings affected. This would result in lost annual revenue of \$1.24 and \$0.28 million respectively. The total economic impact to these regions over five years is estimated from \$6.51 to \$15.65 million for Commercial sensitivity and from \$1.48 to \$3.55 million for the Commercial sensitivity.

107. For the east coast trawl fishery, the fishers' ability to modify trawl gear as proposed under Package 2 cannot be estimated.
108. The estimated economic impact of the south coast would be for set-net operators in this area but we estimate that there would only be a 1 percent or less reduction in catch landings. This would result in lost annual revenue of \$90,000. The total economic impact to the region over five years is estimated from \$0.46 to \$1.10 million over five years.

Other fisheries management measures

109. Fisheries New Zealand proposed to allow use of ring-nets in areas currently prohibited to set-setting. We consider the method does not pose a risk to dolphins. We also proposed a prohibition on the use of driftnets less than one kilometer long. The ability to use this method if the net is less than a kilometer long is an historic oversight. Although not used currently, the method poses a significant risk to dolphins.
110. Submitters were fairly evenly split on the ring net proposal. Some saw the method as an example of a dolphin-friendly, low risk alternative. Others considered all nets should be banned. Submissions were strongly in support of a full ban on the use of driftnets.
111. We consider ring netting provides an alternative fishing method that is capable of avoiding the effects of fishing-related mortality on Māui dolphins. However, we consider the method should only be allowed for commercial fishers in set-net closure areas within harbours as opposed to along the coast as a precautionary measure.
112. We recommend drift netting be prohibited as a method as it poses a significant risk to Māui and Hector's dolphins.

Transition assistance

113. Submissions from commercial fishers (and their representatives) commented extensively on the issue of transitional assistance. Of the affected parties that submitted, all noted that if the proposed fishing restrictions were implemented their commercial fishing operations would become economically unviable. While some submitters requested government assistance to transition to other fishing methods, the majority indicated that they would likely be unable to continue operating profitably and requested compensation for loss of assets and income if they exited the industry.
114. The Crown is under no obligation to compensate permit holders for implementing a sustainability measure. Section 308 of the Act says that nothing effected or authorised by any provision in the Act that provides for measures to ensure sustainability shall be regarded as making the Crown liable to pay compensation.

115. If you determine that some form of financial assistance is warranted to support a transition, we recommend that the focus of such support should be on fishers that rely on ACE and licensed fish receivers that are significantly, and directly, affected by the proposed sustainability measures and who are unable to shift their activities. This support could be achieved via some form of *ex gratia* payment or other transitional help.³ International obligations
- They should also be designed in such a way as not to undermine New Zealand's long standing opposition to fisheries subsidies.
116. We are not proposing any transitional assistance for quota holders, as we are not changing Total Allowable Catches (TACs) or Total Allowable Commercial Catches (TACCs), or proposing a rebalancing of quota. There are opportunities to catch quota in other areas or with other methods.
117. We consider an approach could involve a one-off unencumbered *ex gratia* payment to displaced fishers and significantly affected licensed fish receivers that provides them with the freedom to choose how they might make best use of the funds as this would provide recipients with the greatest flexibility. International obligations
118. *Ex gratia* payments to specifically reconfigure and refit vessels to fish using methods that do not endanger dolphins could also be considered. Commercial sensitivity
- If you wish to pursue this approach it would require further analysis and risk assessment.
119. Fisheries New Zealand considers that any *ex gratia* payment made should be a one-off payment that reflects the unique nature of the proposals, with no recourse for additional payments for any other related sustainability measure that may be implemented in the same area in the future.⁴
120. The amount of any *ex gratia* payment considered would need to reflect the unique circumstances of an impacted party as determined by the assessor of the claim. This would include consideration of the adverse impacts on the impacted party. Each claim would be assessed on its individual merit.
121. Any form of *ex gratia* payment should be carefully considered to ensure it:
- targets those significantly and adversely impacted by the sustainability measure(s) and prevents gaming;
 - considers, where possible, the need to be fair and reasonable given the impact on the parties involved;
 - considers the ability of Government to pay (such as, it must be affordable and this is likely to vary at different times);
 - clearly avoids setting precedents or expectations about *ex gratia* payments in the future; and

³An *ex gratia* payment is granted on the basis of a favour and not from legal obligation.

⁴ It is possible that an impacted party may decide not to accept an offer of *ex gratia* payment on this basis.

- International obligations

122. Initial analysis suggests that the most significantly affected parties in the Māui dolphin habitat off the west coast of the North Island, if they were to exit the industry completely, could incur costs of up to an estimated Under active consideration. This covers one-off costs such as retirement of vessels, gear (including nets), plant (processing and freezer facilities), etc. It also includes an estimated loss of income for one year to support fishers to transition to other fishing methods or activities. The fishing industry is likely to argue that applying a one-year figure in the analysis is inappropriate, and that the loss of income should be covered for multiple years (industry submissions typically focus on costs over a five-year period).
123. If a five-year loss of income is used, the estimated costs increase to Under active consideration. The adjustment period for each fisher is likely to vary (between one to five years) therefore the estimated cost of a transition package is likely to be somewhere between Under active consideration.
124. While analysis has focused primarily on Māui dolphin habitat, we consider that if progressed, the approach could be extended to encompass affected parties in the Hector's dolphin habitat (refer to Part B7 of the Technical Advice paper for more detail on transitional assistance).

Next steps

125. We seek early guidance from you as to whether we should undertake further work on transitional assistance so that we can come back with advice in early November on what to take into the December Cabinet paper. Our preference is to get Cabinet agreement and specific financial approval for a between budget contingency, as the estimated cost cannot be met from MPI baseline.

SNA 8 Fishery and 28N rights

126. While not directly relevant to your statutory considerations, SNA 8 and the associated historical preferential access rights (28N rights) are cited extensively in industry submissions as an issue that will have downstream implications if you progress additional spatial closures off the west coast of the North Island.
127. It is likely that encouraging fishers to shift their effort, or change methods, will affect fishers' catch profiles and lead to fishers facing greater pressures to avoid catching "choke" stocks, such as SNA 8. The commercial allowance for the SNA 8 stock is largely fully caught each year. It is also an important shared fishery with recreational fishers.

128. The stock is currently scheduled for an updated stock assessment in 2019/20, and a review of the stock is expected in the October 2020 sustainability round. If the 2020 review showed that an increase in the TAC and TACC was warranted, then 28N rights would be triggered by any increase in the TACC. However, even if the catch limit were to be increased many of the small impacted fishers are reliant on Annual Catch Entitlement being available from quota owners at a reasonable price.
129. Te Ohu Kaimoana considers the reduction in the proportion of quota shares iwi received through the Treaty of Waitangi Fisheries Claims Settlement Act 1992 via the operation of 28N rights is inconsistent with the settlement. Free and frank
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130. A working group that includes Fisheries New Zealand and representatives of iwi and others is also considering the 28N rights issue. It is due to report back to the head of Fisheries New Zealand in November 2019.

Engagement

131. A key criticism from stakeholders of the current TMP has been the lack of transparency and/or involvement in how performance is monitored. Agencies propose to set up a North and South Island advisory group. These groups would be managed by the Department of Conservation with support from Fisheries New Zealand, and comprised of stakeholder representatives and Treaty partners. Their responsibility would be to monitor the performance of the TMP and produce an annual report to Ministers.

Implementation

132. You have a choice about how you implement any measure you consider necessary to avoid, remedy or mitigate the effect of fishing-related mortality on the dolphins, either through mandatory regulation or voluntary measures.
133. We consider the proposed method prohibitions are core to achieving the fisheries objectives. We consider these measures should be implemented by regulation to ensure effective monitoring, compliance, and enforcement.
134. Fisheries New Zealand supports an innovative approach to managing the effects of fishing-related mortality on South Island Hector's dolphins that would provide for greater collaboration with industry and other stakeholders (refer to Table 1 in Appendix Three). Such an approach is also consistent with the ability to be more flexible around managing risk from trawl fisheries in the South Island, particularly if option two set-net measures are implemented.

135. Under active consideration

136. We believe that there is merit in considering a voluntary Memorandum of Understanding (MOU) led approach with industry. This approach would be consistent with the concept of fish plans and greater collaboration with the sector on resolving management issues.
137. We consider that Fisheries Inshore New Zealand (FINZ), as the main inshore fishing industry representative body, could lead the industry's participation in the MOU. We note that they have been successful in getting fishers to adopt such plans in other trawl and set-net fisheries.
138. Extensive observer or camera monitoring is also proposed. As with the management approach, monitoring can be implemented via regulation or following a voluntary model (as proposed for tarakihi). The ability to monitor for verification is critical to the success of the proposed package. We believe a voluntary model could be effective, subject to agreement on such detail as footage review, and that this approach is more likely to result in timely implementation of the monitoring programme.
139. Fisheries New Zealand requests that you indicate a preference for implementation approach (mandatory or voluntary) for monitoring and managing the effects of fishing on Hector's dolphins.
140. If you are interested in exploring a voluntary approach in more detail, we will discuss in confidence with industry representatives. We propose that you ask industry to confirm, in writing, in-principle support by their stakeholders for the proposed approach by 4 November 2019. If the industry is not willing, or able, to reach agreement by 4 November then we recommend that you implement the measures by regulation. If an MOU is not finalised to your satisfaction by May 2020, when we report back to you the final set of measures, then we will also recommend that you regulate the measures.

South-East Marine Protection Forum proposals

141. A number of marine protected areas (MPAs) have been proposed by the South-East Marine Protection Forum (SEMPF). Consultation on these proposals is planned to begin within a month. The proposals will impact particularly on fishers operating out of Timaru. Depending on options chosen there could be a significant cumulative impact on some fishers.

Proposed process

142. Most of the proposed measures require amendments to an existing *Gazette* notice or regulation. Prior to making a decision to propose fisheries measures, you are required to formally consult with the Minister of Conservation. A letter to the Minister is attached to this briefing for your signature.
143. The following timeline summarises key dates proposed to enable you to announce your decisions on the revised TMP before Christmas, with implementation (including regulatory promulgation) to occur in 2020.

Action	Timing	Comments
Ministers' Decisions	21 October	Indicate to officials whether you want further work undertaken on transitional assistance.
	4 November	Decisions on proposed measures required to support drafting of subsequent Cabinet papers if regulatory changes are to be made.
Cabinet papers to Minister's Office	13 November	Ministers are required to seek Cabinet committee approval on any decisions involving regulatory change.
Cabinet papers lodged	5 December	
DEV Committee Meeting	11 December	Cabinet committee to approve new and/or amended regulations.
Cabinet Meeting	16 December	Cabinet to confirm any regulatory decisions.
Ministers announce decisions	Week of 16 December	