

In Confidence

Office of the Minister of Fisheries
Office of the Minister of Conservation

Chair, Cabinet Environment, Energy and Climate Committee

HECTOR'S AND MĀUI DOLPHIN THREAT MANAGEMENT PLAN REVIEW Proposal

1. This paper seeks your agreement for public consultation on a proposal to revise the Hector's and Māui Dolphin Threat Management Plan (Threat Management Plan).
2. Options for change in the attached discussion document *Protecting our Hector's and Māui Dolphins: Proposals for an updated Threat Management Plan and Consultation on Proposed Measures Under the Fisheries Act 1996* to address lethal threats from fishing and the disease toxoplasmosis, and sub-lethal threats from seismic surveying and seabed mining activities.

Executive Summary

3. Hector's and Māui dolphins are found only in New Zealand, and are together considered to be one of the world's rarest dolphin species. Both subspecies are considered taonga and are an important part of New Zealand's marine biodiversity and natural capital stock.
4. Human activities have had a major impact on these dolphins. The Māui dolphins are classified as Nationally Critical and face a real threat of extinction. There are only approximately 63 Māui dolphins. The Hector's dolphins are classified as Nationally Vulnerable and there are approximately 15,000 in New Zealand's coast lines.
5. Threats to the dolphins are managed under the Hector's and Māui Dolphin Threat Management Plan, which provides the framework for the identification and effective management of threats by the Department of Conservation (DOC) and Fisheries New Zealand.
6. The initial Threat Management Plan was developed in 2007 and the Māui dolphin section of the Threat Management Plan was reviewed in 2012.
7. In February 2018 we jointly confirmed the requirement for a review of the whole Threat Management Plan. In so doing, we agreed that the primary goal of the Threat Management Plan is to achieve subpopulations of the dolphins that are thriving or increasing, supported by an enduring and effective threat management programme. This emphasis on subpopulation as well as subspecies impacts recognises the genetic diversity between and within the species, and the way in which each local subpopulation contributes to the population as a whole.

8. The non-government organisation Sea Shepherd has presented a petition to the US National Oceanic and Atmospheric Administration (NOAA) to ban the import of fish products sourced from New Zealand, which it considers threaten the Māui dolphin. Confidentiality [REDACTED]
9. The risk assessment undertaken for the current review of the Hector's and Māui Dolphin Threat Management Plan identified potential threats to the dolphins from fishing, the disease toxoplasmosis, seismic surveying, seabed mining, tourism, vessel traffic, oil spill risk, coastal development, pollution, sedimentation and climate change.
10. The risk assessment showed that while fishing-related risks to dolphins have been significantly reduced in many areas where restrictions on fishing activity have been put in place between 2003 and 2012, fishing still poses a risk to Hector's and Māui dolphins in some areas.
11. We propose to manage fishing-related threats through the Fisheries Act 1996. Decisions about the objectives, and management actions to achieve them under that Act, will essentially determine the balance between minimising fishing-related mortality and providing for use of the fisheries, which will have cost impacts on users of the resource, and are likely to be controversial.
12. We propose to consult on options for management of fishing-related threats that reflect a conservative and precautionary approach for the Hector's dolphins, and an even more conservative approach for the Māui dolphins because of their critically endangered status. The main fishing-related threats are from set net fishing and trawling.
13. Four options are proposed for consultation to manage fishing-related threats to Māui dolphins. These range from increased monitoring of the existing closures, to extending closures all the way along the North Island west coast, and out to a 100 metre depth contour in the core area of the Māui dolphin distribution.
14. Three options are proposed for consultation to manage fishing-related threats to Hector's dolphins. These also start with increased monitoring of current restrictions, to increasingly cautious measures with further area restrictions.
15. The risk assessment indicates that dolphins probably range beyond the current boundaries of the Marine Mammal Sanctuaries (sanctuaries). We consider that the boundaries of the current sanctuaries need to be amended to cover a larger portion of the dolphins' habitat. We are seeking Cabinet agreement to consult on extension options.
16. We also consider that the existing marine management framework does not appropriately manage threats from seismic surveying or seabed mining and that

regulatory response is required. We are seeking Cabinet agreement to publicly consult on options for progressing these regulatory changes. These include:

- 16.1. requiring compliance with the Code of Conduct for seismic surveying within sanctuaries;
 - 16.2. requiring a permit under the Marine Mammals Protection Act 1978 for seismic surveying within marine mammal sanctuaries;
 - 16.3. prohibition of seismic surveying within sanctuaries; and
 - 16.4. prohibition of seabed mining out to between two and twelve nautical miles offshore.
17. The proposals involving prohibitions would not apply to existing Crown Minerals Act permit holders, as well as any subsequent permits granted with respect to those existing permits.
 18. Toxoplasmosis is likely to have a significant human-induced impact on the dolphins, particularly the Māui dolphins. The Minister of Conservation has directed officials to begin developing an action plan to address the threat from toxoplasmosis on the dolphins. We are seeking Cabinet agreement to publicly consult on the proposed objectives and options for measuring success.
 19. We consider that the threats from tourism, oil spills, vessel traffic, coastal development, pollution, sedimentation and climate change are already appropriately managed through the existing regimes. We do not therefore propose to consult the public on any additional options to address these threats.
 20. We intend to conduct a six-week public consultation process from late June. Officials will also continue to engage with iwi alongside the public consultation process, to ensure the Government meets its Treaty obligations.
 21. We intend to seek final Cabinet decisions on the Threat Management Plan in late October/early November 2019.

Background

22. Hector's and Māui dolphins are found only in New Zealand, and are together considered to be one of the world's rarest dolphin species. Both subspecies are considered taonga and are an important part of New Zealand's marine biodiversity and natural capital stock. Human activities have had a major impact on these dolphins.
23. Hector's dolphins are currently classified as Nationally Vulnerable under the New Zealand Threat Classification System. The population of approximately 15,000 is located primarily around the South Island, including 9,000 on the east coast, 5,600 on the west coast and 317 on the south coast. While there is evidence of historical decline for the well-studied population near Banks Peninsula, there is also evidence that this may have stabilized in the past two decades. However, some other local east coast populations may still be declining. There is no trend data on the west and south coast populations.

24. Māui dolphins are a subspecies currently classified as Nationally Critical. They face a real threat of extinction. The population of approximately 63 Māui dolphins aged one year or more is found only off the west coast of the North Island. Evidence from aerial and boat-based surveys over the past few decades indicate that the population of Māui dolphins is very likely to have declined but the rate of decline may have reduced in recent years. A repeat census that is scheduled for 2020 will be critical to informing our understanding of what is really happening.
25. The risk assessment undertaken for the current review of the Hector's and Māui Dolphin Threat Management Plan identified potential lethal threats to the dolphins from fishing and the disease toxoplasmosis.
26. Other threats identified by the risk assessment were seismic surveying, seabed mining, tourism, vessel traffic, oil spill risk, coastal development, pollution, sedimentation and climate change. These threats are not likely to result directly in mortality. However, they have the potential to pose a threat by disrupting behaviour, reducing habitat quality, displacing the dolphins to sub-optimal habitat and/or acting as cumulative stressors. Over time this can reduce the dolphins' resilience and result in population-level effects.
27. Key responsibilities for identification and management of the risk of human-induced mortality to Hector's and Māui dolphins and other marine mammals rest with the Department of Conservation (DOC) and Fisheries New Zealand.
28. The first version of the Hector's and Māui Dolphin Threat Management Plan (Threat Management Plan) was developed in 2007. It provides an overarching framework for the identification and effective management of threats by DOC and Fisheries New Zealand to the dolphins. To date, the plan has driven the:
 - 28.1. establishment of a series of marine mammal sanctuaries, where mining, seismic surveying and some fisheries restrictions apply; and
 - 28.2. introduction of new fishing rules, including a mix of bans and other restrictions on set netting, trawling and drift netting in areas where the dolphins are found.
29. The Māui dolphin section of the Threat Management Plan was reviewed in 2012 following the reported capture of a Māui or Hector's dolphin off Cape Egmont and a new population estimate. Key outcomes of this review were:
 - 29.1. restrictions on set netting within the existing sanctuary near New Plymouth under the Marine Mammals Protection Act 1978 (MMPA) and around Cape Egmont under the Fisheries Act 1996; and
 - 29.2. increased monitoring of commercial fishing activity on the North Island west coast, through a targeted observer programme.

Ministerial decision-making roles

30. The Minister of Conservation has specific powers under the MMPA for the purpose of protecting, conserving and managing marine mammals in New

Zealand. He or she has the power to “define and declare a marine mammal sanctuary” (sanctuary).

31. When defining and declaring a sanctuary, the Minister of Conservation may specify activities that may or may not be engaged in within the sanctuary, with the consent of any other Minister of the Crown who has the control of any Crown-owned land, foreshore, seabed, or waters of the sea which is declared to be a marine mammal sanctuary.
32. The Minister of Fisheries also has a role in ensuring fishing related-mortality of marine mammals or other wildlife is managed and may, “after consultation with the Minister of Conservation, take such measures he or she considers necessary to avoid, remedy or mitigate the effect of fishing-related mortality on any protected species”. This can include setting a limit on fishing-related mortality and prohibiting all or any fishing or fishing methods in an area.
33. In February 2018 we jointly confirmed the requirement for a review of the Threat Management Plan to:
 - 33.1. continue engagement with iwi in shaping the successful management of this taonga species;
 - 33.2. ensure the Threat Management Plan goals remain relevant and effective;
 - 33.3. assess new information and the performance of existing protection and monitoring measures to ensure the measures are effective;
 - 33.4. provide direction on future research and monitoring needs to improve future assessments on performance; and
 - 33.5. explore new opportunities to progress the recovery of the species.
34. We also jointly agreed that the primary goal of the Threat Management Plan is to achieve subpopulations that are thriving or increasing, supported by an enduring and effective threat management programme.

New information to support the review

35. The new information that has been compiled to support the Threat Management Plan review includes:
 - 35.1. revised population and sub-population estimates;
 - 35.2. new sightings information;
 - 35.3. updated information from fisheries observers;
 - 35.4. information from DOC’s necropsy programme; and
 - 35.5. a spatial risk assessment of threats to Hector’s and Māui dolphins (the risk assessment).
36. The risk assessment for this Threat Management Plan review is a substantive advance on risk assessments that have been undertaken previously. It enables more refined estimates of spatial overlap of dolphin distribution with fishing activity and some non-fishing threats. It brings a new level of precision to identifying local-level risks to certain subpopulations, including some on the

South Island east and north coasts and the Māui dolphins on the North Island west coast.

37. The risk assessment has been subject to multiple rounds of peer review, including by an international panel of experts. Assumptions and uncertainties within the risk assessment remain, particularly on effects from non-fishing activities, including disease, seismic exploration and potential effects of seabed mining. However, the risk assessment indicates that:
 - 37.1. fishing-related risks to dolphins have been significantly reduced in many areas where restrictions on fishing activity were put in place between 2003 and 2012;
 - 37.2. fishing still poses a risk to Hector's and Māui dolphins in some areas;
 - 37.3. toxoplasmosis has emerged as a significant risk to Māui dolphins and some Hector's dolphin subpopulations in areas where high water runoff from land results in contamination in the marine environment; and
 - 37.4. risks from noise pollution and other industrial activities, and subsequently the cumulative impact on Hector's and Māui dolphins, are less well understood.
38. Given the threatened status of the dolphins, we consider that it is important to protect them by addressing as many of the threats to their survival as possible.
39. Estimates of annual numbers of deaths from set net fishing, trawling and toxoplasmosis are provided in table one below. This indicates that:
 - 39.1. approximately one Māui dolphin dies every ten years from set net fishing and one every twenty years from trawling, compared with approximately two every year from toxoplasmosis; and
 - 39.2. approximately 44 Hector's dolphins die every year from set net fishing and 14 from trawling, compared with approximately 334 from toxoplasmosis.

Table One - Estimated annual deaths by subspecies and threat

Subspecies	Cause of death		
	Set Net	Inshore Trawl	Toxoplasmosis
Māui	0.10 (range 0 – 0.25)	0.02 (range 0 – 0.05)	1.9 (range 1.1 – 3.0)
Hector's	44 (range 21 – 80)	14 (range 1 – 43)	334 (range 132 – 625)

It is important to note that commercial fisheries mortalities (set net and inshore trawl) are based on fisheries observer data and have been estimated with high certainty. Toxoplasmosis deaths have been estimated from necropsy results, which relies on the relative detectability of dolphin carcasses that have died from various causes, resulting in uncertainty that may not be reflected in the ranges above.

Proposal to update the Threat Management Plan

40. A discussion document, *Protecting Our Hector's and Māui Dolphins – Proposals for Updated Threat Management Plan and Associated Management Measures*, is provided as Appendix One.

41. It includes specific statements setting out what the Government aims to achieve from management of human-induced threats to the dolphins. This is a substantive improvement on previous iterations of the plan, which only included qualitative targets.
42. The proposed vision and goals have been developed with input from two Threat Management Plan stakeholder forums and iwi.
43. The vision and goals apply to both Hector's and Māui dolphins. The proposed vision statement is that "New Zealand's Hector's and Māui dolphins are resilient and thriving throughout their natural range".
44. The proposed primary goal is "Hector's and Māui dolphins are thriving or increasing, supported by an enduring, cohesive and effective threat management programme across New Zealand".
45. Beneath the primary goal, three key themes have been identified:
 - 45.1. ensure known human-caused threats are managed within levels that allow subpopulations to thrive and recover;
 - 45.2. engage all New Zealanders in Hector's and Māui dolphin conservation; and
 - 45.3. increase understanding of poorly understood threats to the dolphins.

Fisheries objectives

46. We propose to address the risk from fishing through the Fisheries Act.
47. Decisions made about the objectives, and management actions to achieve them under the Fisheries Act 1996, will essentially determine the balance between minimising human-induced mortality and providing for use of fisheries.
48. The fisheries-related objectives include quantitative targets for the first time. This is a substantive advance on previous iterations of the threat management plan, which included qualitative targets only.
49. Objectives will define a population target for each subspecies, and each local sub-population of Hector's dolphins. They will specify thresholds that fishing-related impacts must remain below.
50. This focus on subspecies and sub-population impacts recognises the obligations under the Fisheries Act to maintain biodiversity that includes genetic diversity between and within species, and contribution of each subpopulation to the species as a whole.
51. The thresholds proposed for Hector's and Māui dolphins have been calculated in relation to impact on the population's recovery to carrying capacity. Carrying capacity is the maximum population that can be sustained in a given environment.

52. Management measures are designed to ensure fishing impacts stay within the threshold. Lower allowable impacts on the population require greater restrictions on fishing activity. This will have consequential cost impacts on fishers, some of which will be significant. However, in assessing these options, we are also considering the potential for wider reputational benefits for the fishing sector and New Zealand from cautious management of threats, particularly for Māui dolphins.
53. Some of these options will have major impacts on many commercial and recreational fishers, effectively shifting them out of the fishery. This will be controversial.
54. There is case law that supports considerable discretion on how the balance between minimising human-induced mortality of a protected species and providing for use of fisheries can be determined by decision makers. The balance between minimising human-induced mortality of a protected species and providing for use of fisheries is not the same as it is for a fish stock that is harvested under New Zealand's quota management system, which means there is more scope for a precautionary approach¹. This relatively precautionary approach has characterised all previous fishing restrictions that have been implemented to protect the dolphins. These decisions were informed by the evidence that was available at the time but they were also informed by the view of the Minister of Fisheries about the appropriate level of protection.
55. Based on preliminary input from stakeholder forums held by DOC and Fisheries New Zealand in late 2018, and scientific analysis completed subsequently, we propose to consult on the following population recovery objectives:
 - 55.1. Māui dolphins: Threats from humans are managed so that the Māui dolphin population increases to 95 percent of the maximum number of dolphins the environment can support, with 95 percent certainty.
 - 55.2. Hector's dolphins: Threats from humans are managed so that the Hector's dolphin population increases to 90 percent of the maximum number of dolphins the environment can support with 95 percent certainty.
 - 55.3. Each local subpopulation: Threats from humans are managed so that it is increased to, or is maintained at, 80 percent of dolphins the environment can support with 95 percent certainty. This is to support the overall population outcome for the Hector's dolphins.
56. Given the critically endangered status of the Māui dolphin sub-species, we propose a more conservative fisheries threshold which limits the impact on recovery to carrying capacity to no more than five percent, and to provide options for meeting this with varying degrees of high certainty.

¹ For fish stocks that are harvested under the Quota Management System, the default population objective is 40 percent of the maximum number that can be sustained in a given Quota Management Area, with 50 percent certainty.

Fisheries management options

Māui dolphins – North Island West Coast

57. The discussion document provides four broad options for managing fishing-related threats to the Māui dolphins located on the North Island west coast. Each option provides measures for both set net (commercial and recreational) and trawl fishing.
58. Various combinations of set net and trawl restrictions between Option 1 and Option 4 could be chosen. The distance offshore that would be covered by proposed method closures varies in different areas of the coastline, with the greatest restrictions proposed in the core range (Maunganui Bluff to New Plymouth).
59. Under current levels of fishing effort Option 1 is consistent with achieving the population recovery target, which would require less than one Māui dolphin death every seven years, but not within the bounds of 95 percent certainty, as has been proposed by the fisheries objectives. The set net restrictions outlined under Option 2 are estimated to reduce risk, consistent with achieving the population recovery objective with 95 percent certainty. The set net restrictions in options 3 and 4 are all estimated to further reduce fishing-related risk in an increasingly conservative and precautionary manner.
60. The specific options decided upon can be further adjusted following feedback through consultation, drawing on a more detailed analysis of socio-economic impacts and feedback on population recovery objectives. The options are summarised generally as:

60.1. Option 1:

- Increased monitoring of fishing activity in areas adjacent to existing closures. The existing closures include a set net prohibition to seven nautical miles offshore in the core distribution area of the Māui dolphins, a trawl prohibition that varies between two and four nautical miles within this area, and restrictions within the Taranaki area to Hawera.
- The existing spatial closures for set netting correspond well with the areas of highest dolphin density. Trawling is permitted in part of the area that is currently closed to set net fishing, but it has been subject to a targeted observer programme that was strengthened in 2017/18. No dolphins have been observed interacting with fishing vessels or fishing gear by the observer programme in any area of the coast that has been observed as part of the programme, including the closed area.
- This option is unlikely to reduce the current risk, which is estimated to be one dolphin death every ten years from set net fishing and one death every 55 years from trawling, but it would provide additional evidence about the effectiveness of the current measures.

60.2. Option 2:

- Includes option 1 and extends the set net closure to ten nautical miles in the core area, seven nautical miles in the Taranaki area, and four nautical miles for the remainder of the North Island west coast (Maunganui Bluff North to Cape Reinga and Hawera south to Wellington). The trawl closure is also extended to four nautical miles throughout the core range.
- This option is estimated to reduce the fishing-related threat from the current one death every ten years to one death every 18 years from set net fishing, and the current one death every 55 years to one death every 110 years from trawling.

60.3. Option 3:

- Includes options 1 and 2 and extends the existing set net closures in the core area to twelve nautical miles offshore and ten nautical miles offshore for trawl, as well as extensions into the Kaipara, Manukau and Raglan harbours to include almost all areas where verified sightings of Māui dolphins have been reported.
- This option is estimated to reduce the fishing related threat from the current one death every ten years to one death every twenty years from set net fishing, and the current one death every 55 years to one death every 500 years from trawling.

60.4. Option 4:

- Includes option 3 and extends coverage to all Harbours on the North Island west coast and prohibits both set net fishing and trawling out to 100 metre depth in the core area.
- This option is estimated to reduce the fishing-related threat from the current one death every ten years to one death every 100 years from set net fishing, and the current one death every 55 years to one death every 1000 years from trawling.

Hector's dolphins – South Island North, East, South and West Coasts

61. The discussion document provides three options for managing fishing-related threats to the Hector's dolphins located in the South Island north, east and south coasts.

62. Under current levels of fishing effort Option 1 falls slightly short of meeting the subpopulation recovery objectives in the east and south coast of the South Island, and also within the north coast when assessing with 95 percent certainty, as has been proposed by the fisheries objectives. Options 2 and 3 meet the population recovery objectives in relation to subpopulations in high risk areas and the overall population of Hector's dolphins, but they achieve this in an increasingly conservative and precautionary manner.

63. The options are:

63.1. Option 1:

- status quo restrictions and increased monitoring of fishing. The status quo restrictions are:

- prohibitions on set net fishing out to four nautical miles on the South Island east and south coasts, and a seasonal set net restriction on part of the South Island west coast,
- prohibitions on trawling out to two nautical miles on the South Island east and south coasts (with exemptions for vessels using a low headline height to reduce the vertical spread of the net).
- This option is unlikely to reduce the current risk, which is estimated to be 58 fishing-related dolphin deaths per year, but it would provide additional evidence about the effectiveness of the current measures.

63.2. Option 2:

- extends: existing set net restrictions to cover key areas of risk in Pegasus Bay, Kaikoura, Timaru, Golden Bay/ Tasman Bay and the South Island south coast; and extends trawl restrictions in Pegasus Bay, Timaru and Te Waewae Bay.

63.3. Option 3:

- extends set net restrictions beyond those proposed in option 2 in Kaikoura and the South Island south coast, and extends the trawl restrictions between Banks Peninsula and Timaru and includes a new trawl restriction in Golden Bay/Tasman Bay.

64. Increased monitoring of fishing activity in areas adjacent to fisheries closures is a key component of all options proposed for consultation. Currently, fishery-independent monitoring is delivered primarily by Fisheries New Zealand observers. However, Government has recently announced a requirement for the use of on-board cameras for commercial fishing vessels using high-risk fishing methods in areas that potentially overlap with Māui dolphins. This requirement comes into effect from 1 November 2019.
65. While implementation of increased monitoring of fishing activity will take time because of logistical and resource constraints, it will be possible to prioritise increased monitoring for implementation of the revised Threat Management Plan. This will be covered in final advice on the Plan.

Managing the threat from Toxoplasmosis

66. Another lethal threat to the dolphins besides fishing is the disease *Toxoplasmosis gondii* (toxoplasmosis). Toxoplasmosis has been recorded as the cause of death for a number of mature females, which is a concern for the ability of the species to continue to reproduce.
67. While toxoplasmosis is likely to be a threat to some subpopulations of Hector's dolphins, it is a matter of the utmost urgency for the Māui dolphins, which face a real threat of extinction even if the very small residual risk from fishing is eliminated entirely.
68. Toxoplasmosis completes its life cycle in cats and is shed into the environment via cat faeces. The oocysts (eggs) shed by the cats are robust and survive in the environment for up to a year and are washed into the sea via runoff from land. The risk assessment indicated there may be seasonal effects and that

there are hot-spot areas with high levels of stormwater runoff from land. For example, the mouth of the Waikato River near the area of the Māui dolphin habitat and some glacial rivers on the west coast of the South Island can introduce high levels of cat faeces contamination to coastal waters. This means that at certain times of year, and in these locations, there is a potential increase in the risk of toxoplasmosis being spread to the dolphins.

69. Mitigating the threat of toxoplasmosis will require a coordinated response across terrestrial, freshwater, marine, agriculture and human health domains. A range of central and local government agencies and key stakeholders will need to be involved. It will be important for the response to build on work that is already underway across government including the Essential Freshwater work programme and the Three Waters Review.
70. The Minister of Conservation has directed DOC to begin work on a toxoplasmosis action plan to respond to the threat this disease poses to the dolphins. This action plan will form one part of a wider government response to addressing the spread of toxoplasmosis.
71. We propose that the objectives of the Toxoplasmosis Action Plan will be to:
 - 71.1. Reduce the number of dolphin deaths attributable to toxoplasmosis (determined through examination of carcasses) to near zero.
 - 71.2. Improve knowledge of toxoplasmosis to increase the ability to take action to reduce this threat.
72. In assessing options to address the threat of toxoplasmosis on the dolphins, the Department of Conservation will consider:
 - 72.1. knowledge that can be built on from overseas;
 - 72.2. information gaps that are critical for effective action;
 - 72.3. actions that could be taken now;
 - 72.4. actions that could be taken in future but require more work;
 - 72.5. how to ensure public compliance with specific actions;
 - 72.6. how to monitor and measure success.
73. We intend to consult the public on these objectives and options assessment criteria and seek feedback on possible approaches people would like to see the Government take in response to this threat.
74. The Minister of Conservation will present a package of options for responding to the threat of toxoplasmosis on the dolphins for Cabinet to consider as part of final decisions on the Threat Management Plan.
75. In addition to the threat of toxoplasmosis, there is a range of other non-fishing threats to Hector's and Māui dolphins. Options to address these threats are proposed in the discussion document.

Extending the boundaries of existing marine mammal sanctuaries

76. Marine mammal sanctuaries are in place to protect both Hector's and Māui dolphins. The West Coast North Island Marine Mammal Sanctuary extends from Maunganui Bluff in Northland to Oakura Beach, Taranaki, in the south. The sanctuary's offshore boundary extends from mean high water springs to the 12 nautical mile limit, encompassing approximately 1,200,086 ha and 2,164 km of coastline.
77. There are restrictions on acoustic seismic surveying throughout the sanctuary. Seabed mining is prohibited out to two nautical miles along the full length of the sanctuary, and out to four nautical miles from south of Raglan Harbour to north of Manukau Harbour. Commercial and recreational set net fishing is prohibited in a portion of the sanctuary between 2 and 7 nautical miles offshore between Pariokariwa Point and the Waiwhakaiho River. This complements other restrictions implemented along this coast under the Fisheries Act.
78. The Banks Peninsula Marine Mammal Sanctuary extends from the mouth of the Rakaia River to the mouth of the Waipara River and to 12 nautical miles offshore. There are restrictions on acoustic seismic surveying throughout the sanctuary.
79. The Threat Management Plan risk assessment process identified dolphin distributions for Māui dolphins off the West Coast of the North Island and Hector's dolphins off the South Island east coast that indicate dolphins are likely to range beyond the current boundaries of Sanctuaries in these areas.
80. We consider that the existing sanctuaries need to be extended to the area identified as frequented by the dolphins within the Risk Assessment. We propose to consult on the following two sanctuary extensions.
 - 80.1. The West Coast North Island Marine Mammal Sanctuary south to Wellington. While outside the core area of Māui dolphin habitat, this extension would allow for a corridor of protection for any animals transiting along the coast between the South Island and the North Island. It also reflects the known historical distribution of Māui dolphins.
 - 80.2. The Banks Peninsula Marine Mammal Sanctuary north to the southern boundary of the Te Rohe o Te Whānau Puha /Kaikōura Whale Sanctuary, south to Timaru, and offshore to 20 nautical miles throughout. These extensions would protect Hector's dolphins across a greater portion of their distribution as identified by the risk assessment.

Managing the threat from seismic surveying

81. In addition to the sanctuary extensions set out above, we consider that the dolphins need greater protection from the threat that seismic surveying activities pose to their health.
82. Seismic surveys are used by the oil, gas and mining industry to prospect for mineral deposits and by scientific researchers to survey fault lines and other seabed features.

83. The acoustic noise disturbance generated from air guns used during marine seismic surveying has the potential to disturb important behaviours of dolphins including breeding, feeding and resting.
84. Seismic surveying and the effects of seismic surveying on marine biodiversity is currently managed through a regime of both regulatory and non-regulatory processes, namely the:
 - 84.1. Crown Minerals Act 1991 (CMA);
 - 84.2. Exclusive Economic Zone and Continental Shelf (Environmental Effects Act 2012 (EEZ Act) and the Exclusive Economic and Continental Shelf (Environmental Effects—Permitted Activities) Regulations 2013 (the permitted activity regulations);
 - 84.3. 2013 Code of Conduct for Minimising Acoustic Disturbance to Marine Mammals from Seismic Surveying Operations (the Code);
 - 84.4. Restrictions in Marine Mammal Sanctuaries and the Te Rohe o Te Whānau Puha / Kaikōura Whale Sanctuary ;
 - 84.5. Prohibitions in marine reserves under the Marine Reserves Act 1971; and
 - 84.6. Coastal plans created under the Resource Management Act 1991 (RMA).
85. There is some tension with New Zealand's current marine effects management regime between protecting and conserving biodiversity (which can include avoiding effects or mitigating risks), managing the environmental effects of activities, and allowing for sustainable use of resources. Broader reform of New Zealand's marine management regime may be needed to address these integration issues over the longer term.
86. One key tool in the current regime is the Department of Conservation's 2013 Code of Conduct for Minimising Acoustic Disturbance to Marine Mammals from Seismic Surveying Operations (the Code). It was developed via stakeholder consultation, as a voluntary measure to apply throughout New Zealand continental waters.
87. The Code aims to minimise disturbance to marine mammals from seismic surveys and provides practical mitigation measures to manage the most significant effects of seismic surveying on marine mammals.
88. The Code was incorporated into the Exclusive Economic Zone and Continental Shelf (Environmental Effects - Permitted Activities) Regulations 2013. As a result, seismic surveying became a permitted activity in the Exclusive Economic Zone provided that it complied with the Code.
89. Most existing Marine Mammal Sanctuaries have restrictions on seismic surveying which are different to the requirements of the Code. In most cases, the restrictions in Sanctuaries provide less protection than the requirements of the Code. In existing sanctuaries, pre-survey consultation and assessment of potential impacts are not required, on-water monitoring and mitigation requirements are less rigorous, and reporting requirements are less robust.

Additional monitoring and mitigation requirements cannot be added to reduce risks, if required.

90. These circumstances mean that a perverse situation has been created whereby greater protection from the effects of seismic surveying is offered to Hector's and Māui dolphins outside sanctuaries than inside them.
91. Seismic surveys carried out within sanctuaries are generally apply the Code on a voluntary basis. However, this is not universal and there is currently no ability to legally enforce compliance.
92. Coastal Plans developed under the RMA could be used to partly address some of these concerns, but this would require multiple regional councils amending their plans over time. A risk from such a process is that regional councils may take different views at different times, leaving the dolphins exposed to varying levels of threat. Additionally, the scope and purpose of the RMA relates to the sustainable management of resources generally and is much broader than protecting a particular marine mammal, as enabled under the Marine Mammals Protection Act.
93. Therefore, options are presented below to allow the Government to control potential effects of seismic surveys on Hector's and Māui dolphins in sanctuaries in a timely and consistent manner that will alleviate uncertainties for the relevant industry groups.
94. All options would apply equally to seismic surveying undertaken for commercial (petroleum and mining) purposes, as well as non-commercial (academic or other research) purposes. Surveys undertaken to fulfil requirements of existing permits issued under the Crown Minerals Act would be captured by requirements detailed in Options 1 and 2, but not Option 3.

Option 1: Require compliance with the Code in Sanctuaries

95. Under this option, restrictions in Sanctuaries would be revised to require compliance with the Code. The Department of Conservation would continue to be responsible for compliance and enforcement of the Sanctuary restrictions.
96. The Director-General of Conservation would be able to request additional conditions on any surveys being undertaken in Sanctuaries, but not impose those conditions as specified in section 3.6 of the Code. Requiring compliance with the Code would also not empower the Director-General to prevent a seismic survey in a Sanctuary, or in a specific area within a Sanctuary, if risks could not be mitigated to an appropriate level.
97. Revising the Sanctuary restrictions to require compliance with the Code would result in a consistent regime with requirements in the exclusive economic zone, allowing surveys which cross between the two to operate under a single set of rules. It would not resolve the uncertainty inherent in the current regime in situations where proponents do not agree to additional conditions requested by the Director-General.

98. Costs associated with this change would be expected to be minimal, as the Department of Conservation already administers the Code and is already responsible for enforcement of restrictions in Sanctuaries, and industry already complies with the Code as a regulatory requirement in the exclusive economic zone.

Option 2: Require a permit under the Marine Mammals Protection Act from the Minister of Conservation or Director-General of Conservation

99. Under Option 2 seismic surveying would be prohibited within sanctuaries unless authorised by a permit. The permitting regime would be established by regulations following standard processes for developing regulations, including consultation with iwi, the public and industry. The permit regime is likely to include:
 - 99.1. a process for applying for a permit and for assessing the application;
 - 99.2. power to grant or decline a permit for seismic surveying;
 - 99.3. power to impose conditions;
 - 99.4. an ability for members of the public to provide written submissions to the decision-maker (as provided for in the current permitting process for commercial marine mammal watching activities); and
 - 99.5. criteria for granting a permit.

Permitting regime principles

100. The new regime would rely on the basic provisions of the Code as a foundation for management, with additional conditions applied if deemed appropriate.
101. It would have greater application than the Code because it would also apply to what the Code defines as “Level 3” surveys (those with the smallest acoustic source), in order to remain consistent with current protections in Sanctuaries.
102. Applicants would need to submit the same type of information as required under the Code and then permits would be granted (with conditions) or declined depending on the specific circumstances.

Proposed process for applying for a seismic surveying permit

103. Under the new regime, a written application to the Minister of Conservation or Director-General of Conservation (accompanied by the prescribed fee) would be required from every person who desires to obtain a permit to conduct a seismic survey in a Sanctuary.
104. The requirements of documents to be attached to the application will be set out in the regulations. They are likely to include items similar to the marine mammal impact assessment and mitigation plans currently required by the Code.

Information and criteria to assess whether to grant or decline a permit

105. The following matters are likely to be considered to assess whether or not to grant or decline a permit:
 - 105.1. the information submitted with the application (referred to above, to be set out in the regulations);
 - 105.2. any additional information as to the potential effects on marine mammals notwithstanding the implementation of the monitoring and mitigation measures planned for the survey;
 - 105.3. DOC's assessment of potential risks associated with the application, taking into account geographic area, duration, intensity of noise produced, and so forth;
 - 105.4. any submissions received in relation to the application; and
 - 105.5. any views submitted by iwi, hapū, and groups with customary marine title under the Marine and Coastal Area (Takutai Moana) Act 2011.
106. The criteria for granting a permit is likely to include the need to conserve or protect any marine mammal.
107. Revising the restrictions within current sanctuaries to require a permit would address the problems identified within the current regime by:
 - 107.1. providing a process whereby a decision-maker can take into account any additional information as to the effects on marine mammals notwithstanding the implementation of the monitoring and mitigation measures planned for the survey. A legal basis would also be established to impose additional conditions or prohibit seismic surveying within sanctuaries, or parts thereof, if supported by the evidence in order to conserve or protect any marine mammal;
 - 107.2. using the Code as the basis for management in the sanctuary, will alleviate the geographic inconsistency with requirements in the exclusive economic zone; and
 - 107.3. confirming that a permit for seismic surveying is required in sanctuaries will remove the current uncertainty that exists around this.
108. The Department of Conservation would incur some additional costs to implement this option. These would depend upon the exact process for processing a permit application, including whether a public consultation is undertaken or not. We anticipate that costs would be similar to those for processing other permit applications under the MMPA.
109. Industry and researchers would incur costs in preparing an application that are expected to be similar to what is required at present in the EEZ under the Code. If a permit application was declined, the lost opportunity costs could be potentially significant.

Option 3: Prohibition of seismic surveying in Sanctuaries

110. Under this option, seismic surveying would be prohibited in sanctuaries to eliminate risk to Hector's and Māui dolphins from this activity. Exceptions to this prohibition would be included for urgent hazard assessments in Sanctuaries as provided for in the Te Rohe o Te Whānau Puha / Kaikōura Whale Sanctuary. In any such instance officials would engage and advise the relevant agency or group to ensure mitigation of impacts on the dolphins was undertaken in planning.
111. Exceptions to the prohibition would also apply to existing Crown Minerals Act permit holders, as well as any subsequent permits granted with respect to those existing permits. Residual risks to dolphins from activities undertaken pursuant to existing Crown Minerals Act permits would remain, but can be reduced by applying Option 1 (compliance with the Code) or Option 2 (a permit under the MMPA). This would enable a transition to a new management regime for mining activities while providing greater protection for Hector's and Māui dolphins than exists under the status quo.
112. Revising the sanctuary restrictions to prohibit seismic surveying would address the problems identified with the current regime by:
 - 112.1. minimising the potential for surveys to be undertaken which could not be managed to an appropriate level of risk to the dolphins; and
 - 112.2. ensuring that any surveys still undertaken are appropriately managed to protect the dolphins by applying Option 1 or 2 as above, and at a minimum are subject to the same requirements as in the exclusive economic zone.

Managing the threat from seabed mining

113. Alongside the sanctuary extensions and seismic surveying threat management options, we consider that the dolphins need greater protection from the threat of seabed mining. We propose to consult on options to manage this.
114. Seabed mining (for minerals other than oil and gas) typically involves large processing ships using mechanical/suction dredges to extract and pump sediment and associated minerals from the seafloor to the surface for processing. Unwanted sediments are discharged back into the sea either at the surface or at depth.
115. The three main components of seabed mining that have the potential to affect dolphins are underwater noise, direct seabed disturbance and the discharge of sediments. Noise and sediment plume effects may extend kilometres from the source.
116. Hector's and Māui dolphins rely on sound for communication, sensing their environment and hunting prey. Noise from mining operations has the potential to limit the dolphins' ability to communicate, sense predators, and find prey.
117. Prey may also alter their distribution in response to noise, sediment plumes, or alteration of seabed habitat. This has the potential to affect the ability of the

dolphins to find food, with follow-on effects on the health of individual dolphins or dolphin populations in the area.

118. Collectively these effects, if sufficiently large, may result in the affected area becoming sub-optimal as Hector's or Māui dolphin habitat or in extreme cases lead to partial or full displacement.
119. The severity of these impacts, however, will be context and scale dependent and will vary depending on a range of interrelated factors including:
 - 119.1. location;
 - 119.2. spatial and temporal scale of the operation;
 - 119.3. the technology being used and methods for mitigating adverse effects;
 - 119.4. other activities occurring in the territory, for example shipping and commercial fishing;
 - 119.5. the physical and biological characteristics of the environment, for example depth/bathymetry, hydrodynamics, benthic habitats;
 - 119.6. the specific characteristics of the effects, for example frequency-dependent noise levels, noise attenuation, sediment plume footprint;
 - 119.7. the area affected at any given point in time (noting the total operational area will be much larger than the area being mined on any day);
 - 119.8. which subspecies (Hector's or Māui dolphin) is present; and
 - 119.9. the importance of the affected area for Hector's or Māui dolphins, for example whether or not the area core dolphin habitat or on the fringes of their distribution.

Current management of seabed mining

120. Seabed mining is currently managed through three principal statutes – the CMA for the allocation of rights to extract Crown-owned minerals; and the RMA for mining applications in the territorial sea (some regional councils may have objectives, policies and methods included in their regional coastal plans relating to seabed mining), and the EEZ Act for applications in the EEZ to manage environmental effects.
121. The exception to this approach is in the West Coast North Island Marine Mammal Sanctuary where seabed mining is prohibited out to two nautical miles along the full length of the sanctuary, and out to four nautical miles from south of Raglan Harbour to north of Manukau Harbour pursuant to the restrictions established under the MMPA.
122. The current regulatory approach means in terms of environmental effects of seabed mining, each mining operation is assessed on a case by case basis under either the RMA or EEZ Act. Under both processes the impacts on Māui and Hector's dolphins are considered alongside economic matters in terms of managing the use, development, and protection of natural resources. Applications can be contentious, litigious and costly, and there is no certainty as to outcome.

123. Providing for additional controls to specifically protect Hector's and Māui dolphins (as opposed to managing adverse effects on the environment generally) is appropriate under the MMPA given its purpose of protecting, conserving and managing marine mammals.
124. Two large offshore seabed mining applications have been processed under the EEZ Act; Trans-Tasman Resources for iron sand in the South Taranaki Bight and Chatham Rock Phosphate for phosphate nodules and minerals on the Chatham Rise.
125. Two minerals exploration permits have been issued under the Crown Minerals Act off the West Coast of the North Island. One permit (Ironsands Offshore Mining Limited) is within the existing Māui dolphin Sanctuary. A second permit (Trans-Tasman Resources Limited) is outside the existing Sanctuary but within the range of the Māui dolphin.

Rationale for change to current regime

126. The Nationally Critical status of the Māui dolphin population justifies managing the effects of seabed mining to protect the dolphins, as even small potential effects will need to be managed to achieve the goals of the Threat Management Plan.

Māui dolphins

127. The current prohibition on seabed mining within the West Coast North Island Marine Mammal Sanctuary extends out to two and four nautical miles but does not include the full range of Māui dolphins offshore or along-shore. Residual risks to Māui dolphins from the effects of seabed mining therefore remain in these unprotected waters.
128. Data on the offshore distribution of Māui dolphins shows they are found out to at least eight nautical miles from shore off the Manukau coast. Thus, extending the seabed mining prohibition within the West Coast North Island Marine Mammal Sanctuary out to eight nautical miles would avoid any direct overlap between mining and this known distribution. A greater distance (e.g. to 12 nautical miles) would add a greater degree of protection by creating a buffer for effects such as noise and sedimentation which may spread well beyond the mining operation. It would also account for any Māui dolphins venturing further offshore than the observed eight nautical mile range noted above.
129. South of the existing West Coast North Island Marine Mammal Sanctuary, there is the risk of seabed mining acting as a barrier to Māui or Hector's dolphin movements up and down the coast, including connections with dolphins closer to Cook Strait. Having a protected near-shore corridor (e.g. two nautical miles from shore) along these southern shores would help reduce a risk to the dolphins, including reducing a risk that could impede their movement.

Hector's dolphins

130. Although the current regulatory approach may be sufficient for managing the effects of seabed mining on Hector's dolphins through much of their range, increased management in the four existing South Island Marine Mammal sanctuaries (Clifford and Cloudy Bay, Banks Peninsula, Catlins Coast, and Te Waewae Bay) would better protect the high densities of dolphins in these core areas.
131. In this regard, ensuring there is a near-shore corridor with no significant impediments to movements of dolphins up and down the coast would be beneficial for retaining connectivity between areas and reducing the risk of fragmentation of subpopulations. Prohibiting seabed mining within two nautical miles of the coast in the existing South Island Sanctuaries would help provide for such a corridor in these core dolphin areas.
132. This proposal, coupled with the proposed changes to the Banks Peninsula Marine Mammal Sanctuary outlined earlier, would result in seabed mining being prohibited within two nautical miles of the coast from Timaru to the southern boundary of the Te Rohe o Te Whānau Puha /Kaikōura Whale Sanctuary, just north of Gore Bay (noting the Kaikōura Whale Sanctuary does not have any restrictions on seabed mining).

Management options

133. The options for managing the threat of seabed mining on the dolphins can be implemented individually or as a package. As for seismic surveying, it is intended that exceptions to prohibitions would apply to existing Crown Minerals Act permit holders, as well as any subsequent permits granted with respect to those existing permits.

Option 1 (Māui and Hector's dolphin)

134. The status quo, including maintaining the current prohibition on mining (and maintaining the current exceptions for mining for petroleum and minimum impact activities) within the West Coast North Island Marine Mammal Sanctuary out to two and four nautical miles (see Appendix D).

Option 2 (Māui dolphin)

135. Reducing the risk to Māui dolphins from seabed mining by extending the existing prohibitions (and exceptions) on seabed mining within the existing West Coast North Island Marine Mammal Sanctuary out to:
 - eight nautical miles; or
 - twelve nautical miles.
136. Existing permits under the CMA would be exempted from the prohibition.

Option 3 (Māui and Hector's dolphin)

137. Reducing the risk to dolphins moving between South Island and North Island populations by prohibiting seabed mining out to 2 nautical miles within an extended West Coast North Island Marine Mammal Sanctuary south to Wellington Harbour.
138. Existing permits under the CMA would be exempted from the prohibition.

Option 4 (Hector's dolphin)

139. Reducing risk to Hector's dolphins by prohibiting seabed mining within two nautical miles of the coast within the four South Island marine mammal sanctuaries (Clifford and Cloudy Bay, Catlins Coast, Te Waewae Bay, and Banks Peninsula including the proposed extensions noted earlier).
140. Existing permits under the CMA would be exempted from the prohibition.

Economic implications of options to manage seabed mining threat

141. There may be significant economic consequences for options 2, and to a lesser extent 3, given the known interest in offshore iron sand mining along the west coast of the North Island. These effects relate to potential future economic development rather than effects on existing permitted activities. The economic consequences of Option 4 should be comparatively low considering their inshore locations along the South Island's eastern and southern coasts where mineral prospectivity is likely to be limited.

Managing the threat from tourist activities

142. Hectors and Māui dolphins are susceptible to disturbance from commercial tourism activities associated with viewing and swimming with the dolphins. The peak in the tourism industry over the summer months also coincides with their known calving period. The disturbance affects the dolphins' natural activities which may have flow-on effects for the welfare of individuals and local populations.
143. Dolphin watching is managed principally under the Marine Mammals Protection Regulations 1992 (MMPR). These regulations require all tourism operators to have a permit issued by DOC and for all commercial and recreational vessels to adhere to operating rules in relation to speed limits, direction of approach, and the numbers of vessels. Commercial permits carry additional requirements including species, area of operation, vessel type, type of interaction, numbers, length of trips, and duration of contact with the dolphins. Additionally, the MMPR allow for moratoria on issuing new permits.
144. No permits have been issued for viewing Māui dolphins commercially. The Department of Conservation discourages applications to interact with Māui dolphins on the basis of risk to the dolphins and actively promotes safe boating

behaviours near the dolphins. We consider that the Māui dolphin population is too small to support any level of commercial marine mammal tourism. Therefore, the discussion document contains a proposal to issue a moratorium on marine mammal tourism permits.

145. A moratorium on new commercial permits being issued at Akaroa (where there is an established Hector's dolphin tourism industry) is in place until 2026. Further research on the impacts of dolphin watching at Akaroa is planned, with a view to this supporting longer term decisions on commercial permits in the area.
146. The ability within the current regulatory regime to put a moratorium in place for issuing new permits gives the Department of Conservation a strong basis for managing the adverse effects of marine mammal watching on Māui and Hector's dolphins. We consider that this is sufficient to ensure the goals of the Threat Management Plan are achieved.

Managing the threat from vessel traffic

147. The noise from, and potential for collisions with, vessel traffic can pose a small threat to dolphins.
148. Part 3 of the MMPR sets out rules for behaviour of all vessels around marine mammals. Among other things, the MMPR include limits on how fast a vessel can approach, the angle of approach, the maximum number of vessels permitted in the proximity of dolphins at a single time. These rules are intended to reduce the likelihood of both collisions and disturbance by vessels.
149. We consider that the MMPR are sufficient to manage the risk posed by vessel traffic. The Minister of Conservation has directed DOC to continue its current advocacy and outreach programmes in areas of high dolphins and vessel overlap. This will help to ensure that vessel operators are aware of, and comply with, the Regulations.

Managing the threat from oil spills

150. Maritime New Zealand has estimated that 99 percent of the oil spill risk originates from oil tankers, passenger and cargo vessels. There is only a very small overlap between the range of the dolphins and the passage of oil tankers, passenger and cargo vessels, therefore the risk of an oil spill impacting on the dolphins is low.
151. Drilling and extraction activities pose only a small a risk of generating oil spills in New Zealand, though a large spill could have catastrophic consequences if it occurred in the range of the dolphins.
152. New Zealand has a national framework for marine oil spill prevention, preparedness and response activities. This national framework includes the Maritime Transport Act 1994, the Resource Management Act 1991, the Health and Safety at Work Act (HSWA) 2015, the Hazardous Substances and New

Organisms Act 1996, and the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012. We consider that this existing national framework appropriately manages the threat from oil spills on the dolphins. We are therefore not proposing to consult on any changes to this regime.

Managing the threats from coastal development, pollution and sedimentation

153. Hector's and Māui dolphins live close to the coast so they are more vulnerable to threats from coastal development, pollution and sedimentation than dolphins that live further offshore.
154. These threats are currently managed under the Resource Management Act 1991 (RMA) through regional coastal plans and resource consents. The activities that could impact on the dolphins and their associated effects are highly variable depending on their type, location, intensity and spatial and temporal scale. We consider that the effects are, therefore, best addressed on a case-by-case basis.
155. The Department of Conservation has a statutory function to advocate for the conservation of natural resources and it actively engages in RMA processes when proposals could negatively impact on the dolphins. The Minister of Conservation has directed the Department of Conservation to continue to engage in these RMA processes to ensure effects on Māui/Hector's dolphins are appropriately avoided, remedied or mitigated. We consider that this will appropriately manage the threats that coastal development, sedimentation and pollution pose to the dolphins and we therefore do not intend to consult on any further response measures.

Managing the threat from climate change

156. Hector's and Māui dolphins, like many marine species, will be affected by the effects of climate change, particularly ocean acidification and rising sea temperatures. These effects are likely to cause widespread changes in ecosystems and food webs.
157. The Government already has a comprehensive climate change work programme, which the Department of Conservation is involved. The Minister of Conservation has directed her officials to continue to engage in this work programme and we consider this to be the most appropriate response to addressing this threat to the dolphins. No additional response measures are therefore proposed for public consultation.

Public consultation proposal

158. A six-week public consultation is planned. If Cabinet agrees, this will take place from early late June to mid-August 2019. This will include:
 - 158.1. ongoing engagement with tangata whenua, for example via Iwi Fisheries Forums that represent the commercial, customary and recreational interests of some iwi, and Te Ohu Kaimoana, which works to advance the broad interests of Māori in the marine environment;

- 158.2. meetings with representatives of commercial and recreational fishers;
- 158.3. public drop-in sessions in five locations in the North Island and six locations in the South Island;
- 158.4. a meeting with five Environmental Non-Government Organisations; and
- 158.5. meetings with relevant Regional Councils, specifically in relation to the proposals to address toxoplasmosis.

Consultation and next steps

159. The following agencies have been consulted on this proposal: Treasury, Te Puni Kōkiri, Maritime New Zealand, Ministry of Transport, Ministry for the Environment, the Environmental Protection Authority, Te Arawhiti, Ministry of Health and the Ministry of Foreign Affairs and Trade.
160. The Department of the Prime Minister and Cabinet has been informed about this proposal.
161. In the short time provided, the Ministry of Business, Innovation and Employment (MBIE) has only provided initial input into this Cabinet paper and the discussion document. Officials will continue to work with MBIE, the Ministry for the Environment, the Environmental Protection Authority and other relevant agencies on options for managing sub-lethal threats, and a detailed assessment of benefits, costs and risks, to provide Ministers with the best available information for decision making.
162. Officials have engaged with some tangata whenua through Iwi Fisheries Forums on the Threat Management Plan review.
163. Fisheries New Zealand and DOC will continue face-to-face discussions and regular updates with tangata whenua and will engage further with the North Island and South Island Threat Management Plan forums. See discussion below on Treaty Obligations in relation to the Department of Conservation's engagement with iwi, hapū and whānau under the Conservation Act, the Marine and Coastal Area (Takutai Moana) Act and Treaty settlements.
164. Public consultation is required before any changes can be made under the relevant legislation.

Financial Implications

165. There are no fiscal implications associated with the proposed public consultation process as this will be funded from within agencies' existing baselines.
166. There are additional no fiscal impacts from the proposal to increase monitoring of fishing activity in the Māui dolphin habitat on the North Island west coast, as this will be provided under the first stage of the on-board camera programme [DEV-19-MIN-0109 refers].

167. Any fiscal implications associated with implementing options in the toxoplasmosis action plan and our preferred response to managing the threats from seismic surveying and seabed mining will be presented to Cabinet as part of final policy decisions following public consultation.
168. Fiscal impacts, that could arise if the more precautionary options for managing fishing impacts are adopted, for example from reduced tax revenue, will be estimated for inclusion in the final advice on the Threat Management Plan.
169. Since the total value of potential offshore mineral reserves off the coast of Taranaki and Banks Peninsula are unknown, it is not possible to provide figures for the potential future foregone fiscal revenue to the Crown from the proposed changes to seismic surveying and seabed mining operations.

Economic impact of options for addressing fishing-related threats

170. Hector's and Māui dolphins are taonga for all New Zealanders. Māui dolphins are Nationally Critical and face a real threat of extinction. Both subspecies are an important part of New Zealand's marine biodiversity and natural capital stock. It is important to consider the intrinsic value of this species alongside any economic and fiscal costs that may be associated with taking action to ensure p their long-term survival.
171. The direct economic implications of the options to address fishing-related threats arise primarily from the loss of earnings from commercial fishing that is restricted. They also arise from restrictions on recreational fishing. Indirect economic impacts arise for third parties that are involved in harvesting and processing and in the broader economy, for example from reduced consumption by those in directly affected sectors.
172. These impacts are difficult to estimate because, for example, some operators may be able to transition to other fishing methods or locations. However, the more precautionary options are likely to result in some fishers exiting the industry.
173. Fisheries New Zealand has developed estimates of the impacts of the various options to address fishing-related threats, which are included in the discussion document. See below.

Table 2: Impacts on commercial fishing activity and economic value for options for managing fishing-related threats to Māui dolphins

		Set net			Trawl		
		Option 2	Option 3	Option 4	Option 2	Option 3	Option 4
Additional area closed		6700km ²	8400km ²	14,600km ²	1400km ²	8100km ²	14,500km ²
No. of fishing permit holders with:	>10% landings affected	78	112	160	8	15	18
	≥70% landings affected	28	30	96	0 (2>50%)	3	6
Landings of Quota Management Stocks currently taken in proposed closed area (highest impacts listed only)		Approx 40% SPO8 (rig) and WAR8 (blue warehou)	43% SPO8 (rig), 40% WAR8, 32% WAR1 (blue warehou)	41% SPO1, 38% FLA1 (flatfish), 69% WAR8, 50% WAR1 (blue warehou)	8% TRE7 (trevally), GUR1 (gurnard), SNA8 (snapper)	60% TRE7 (trevally) & SNA8 (snapper), 45% GUR8 (gurnard),	60% TRE7 (trevally) & SNA8 (snapper), 50% GUR8 (gurnard),
Estimate of total annual revenue		↓\$1.8mil	↓\$2.5mil	↓\$5.6 mil	↓\$1.8 mil	↓\$8 mil	↓\$12.5 mil
Total Economic Value Year 1		↓\$5.2 mil	↓\$7 mil	↓\$15.8 mil	↓\$5.1mil	↓\$24.8 mil	↓\$35.2 mil
Total Economic Value 3 years		↓\$13.7 mil	↓\$18.5mil	↓\$41.5 mil	↓\$13.5.5mil	↓\$65.1mil	↓\$92.5. mil
Total Economic Value 5 years		↓\$21.2mil	↓\$28.7mil	↓\$64.4 mil	↓\$20.9mil	↓\$101mil	↓\$143.5mil

Table 3: Impacts on commercial fishing activity and economic value for options for managing fishing-related threats to Hector's dolphins

		Set-net		Trawl	
		Option-2	Option-3	Option-2	Option-3
Additional-area-closed		6000km ²	3600km ²	6500km ²	6300km ²
No. of fishing permit holders with:	>10% landings affected	28	29	45	77
	≥70% landings affected	5	7	9	13
Landings of Quota Management Stocks currently taken in proposed closed area (highest impacts listed only)		Approx. 30%-MOK3-(moki), 20%-SCH3-(school-shark), 18%-SPO3-(ng), HPB3-(hapuku-bass)-15%-SPO7	Approx. 44%MOK3-(moki), 25%HPB3-(hapuku-bass), 24%-SCH3-(school-shark), 20%-SPO3,15%-SPO7-(ng)	Approx. 28%-ELE3-(elephantfish), 20%-RSK3-(rough-skate), 18%-GUR3-(gurnard), FLA3-(flatfish), 9%-RCO3-(red-cod)	Approx. 42%-ELE3-(elephantfish), 29%-RSK3-(rough-skate), 25%-GUR3-(gurnard), FLA3-(flatfish), 16%-RCO3, RCO7-(red-cod), 13%-SNA7-(snapper), SPO3-(rig)
Estimate of total annual revenue		\$2.7mil	\$3.5mil	\$5.8mil	\$8.7mil
Total Economic Value Year 1		\$7.5mil	\$9.8mil	\$16.3mil	\$24.48mil
Total Economic Value 3 years		\$19.8mil	\$25.7mil	\$19.8mil	\$64.mil
Total Economic Value 5 years		\$30.7mil	\$39.9mil	\$30.7mil	\$99.3mil

174. It is also important to note that the economic impacts will vary depending on local conditions. For example, restrictions imposed in locations that affect a high proportion of small operators could have more significant social impacts. The options that increase restrictions on set net fishing will also will have impacts on recreational fishing.

175. A detailed socio-economic impact assessment will be developed to support final decision making.

Economic impacts of options for addressing threats from seismic surveying and seabed mining

176. There is a significant mineral resource of iron sands, as well as co-occurring vanadium, off the West Coast of the North Island. The resource is at least in the millions of dollars, potentially being significantly more. This is the value of the resource in situ, not taking into account the costs of extraction, nor the uncertainty of actually achieving extraction consents. The greater the area that is not available for extraction, the greater the associated economic costs will be. Additionally, the economic implications of any changes to the regulatory regime will be affected by the degree of industry certainty (or uncertainty) they provide. Greater industry certainty can help to mitigate the extent of future economic cost trade-offs by providing certainty around future investment options.

177. MBIE have advised that the economic information for the value of these resources is not complete enough to provide accurate dollar values.

178. There are maps in the discussion document that show how the proposed sanctuary boundary extension and seabed mining restriction options interact with existing mineral exploration and mining permits. It is important to note that existing permit holders will be exempt from the proposed changes to manage the impacts of seabed mining and will still be able to conduct seismic surveys, subject to additional requirements to better protect the dolphins.

Legislative Implications

179. This proposal for public consultation has no legislative implications.

180. Restrictions on commercial or recreational fishing that are agreed as part of the Threat Management Plan could involve regulatory change, which will be implemented under the Fisheries Act.

181. The proposed changes to seabed mining and seismic surveying activities will result in regulatory changes under the MMPA.

Impact Analysis

182. The discussion document substitutes for a Regulatory Impact Assessment. The Ministry of Primary Industries has reviewed the components of the discussion document that address fishing-related threats and has confirmed that it is likely to lead to effective consultation and support the delivery of Regulatory Impact Analysis to support subsequent decisions.

183. DOC has drafted the sections of the discussion document that relate to non-fishing threats to meet the requirements of a Regulatory Impact Assessment, taking into account the relevant guidance.

184. There are no regulatory implications arising from the work programme to develop a Toxoplasmosis Action Plan.

Alignment with review of set netting

185. Other than option one (status quo area restrictions with enhanced monitoring), the options proposed for reducing fishing-related impacts include significant additional restrictions on set netting (North Island West Coast, Golden Bay/Tasman Bay, Kaikoura, Banks Peninsula, Timaru and South Island South Coast). If implemented, these would further reduce the extent of this fishing method around New Zealand.

186. Once decisions on measures under the Threat Management Plan are made, it will be possible to assess the remaining risks posed to other protected species from this fishing method not covered by the dolphin measures, and the options for further action.

187. The work to analyse broader set netting issues and impacts on other species outside of these dolphin measures will continue in the coming months as the Threat Management Plan work progresses. Subject to this, we may return to Cabinet with proposals for broader set net fishing restrictions.

Treaty of Waitangi Obligations

188. The Department of Conservation has important obligations in terms of:

188.1. Section 4 of the Conservation Act 1987.

188.2. The Marine and Coastal Area (Takutai Moana) Act 2011.

188.3. Treaty settlements.

189. These obligations require early and ongoing engagement with iwi, and their involvement in the decision-making process for those parts of the TMP the Department is leading on. This engagement began in the early stages of the TMP review including:

189.1. Direct involvement by some iwi representatives in the development of the risk assessment and vision and goals. This process involved several workshops and related communication spanning from November 2017 to March 2019.

189.2. Hui with iwi and hāpu from Northland to Taranaki, and representing the South Island, between May and November 2018.

190. Given the large number iwi, hāpu and whānau with a potential interest in relation to Hector's and Māui dolphins, including under the Marine and Coastal Area (Takutai Moana) Act 2011, as well as the importance of addressing threats to Hector's and Māui dolphins in a timely manner, the specific proposals outlined in this paper have not been discussed directly with iwi, hāpu and whānau. DOC will continue its ongoing engagement with iwi, hāpu and whānau alongside the wider public consultation process for the TMP and this will be reflected in recommendations to support final decision making.

191. When implementing sustainability measures, including to manage impacts on marine mammals or other wildlife under the Fisheries Act 1996, the Minister of Fisheries is also required to:
 - 191.1. consult with such persons or organisations as the Minister considers are representative of those classes of persons having an interest in the stock or the effects of fishing on the aquatic environment in the area concerned, including Māori, environmental, commercial, and recreational interests; and
 - 191.2. provide for the input and participation of tangata whenua having:
 - (i) a non-commercial interest in the stock concerned; or
 - (ii) an interest in the effects of fishing on the aquatic environment in the area concerned
 - 191.3. have particular regard to kaitiakitanga.
192. Furthermore, various Treaty of Waitangi settlements are underpinned by legally binding Treaty Settlement Protocols that provide for input and participation in fisheries management decisions by specific iwi with rights and interests in the marine environment.
193. Requirements to provide for input and participation by iwi will be met in the approach to continue working with them alongside the public consultation process.

Risks and risk mitigation

Ongoing debates in the scientific community

194. The scientific community is not in total agreement on the true population status of these dolphin species or the data that informs this.
195. To manage the risk that out-of-date information will drive public opinion or policy, Fisheries New Zealand and DOC will work together to ensure that new information is emphasised and communicated clearly throughout the consultation process.

Sea Shepherd petition

196. The non-government organisation Sea Shepherd has presented a petition to the US National Oceanic and Atmospheric Administration (NOAA) to ban the import of fish products sourced from New Zealand, which it considers threaten the Māui dolphin.
197. New Zealand officials and officials of the US NOAA have held regular teleconferences to discuss actions in response to the petition.

198 Confidentiality



199 Confidentiality



Risk of legal challenge from commercial fishing interests

200. Confidentiality



201. Options for managing this risk include an evidence-based approach and effective communication.

Public Sensitivity



Human Rights

205. This proposal has no implications in terms of the New Zealand Bill of Rights Act 1990 and the Human Rights Act 1993.

Gender Implications

206. This proposal has no gender implications.

Disability Perspective

207. This proposal has no disability implications.

Publicity

208. A communications plan is being developed to launch and support the public consultation process.

Proactive Release

209. We intend to proactively release this Cabinet paper at the same time as the consultation process is launched and the discussion document is published.

Recommendations

The Minister of Fisheries and the Minister of Conservation recommend that the Committee:

1. **Note** that Hector's and Māui dolphins are taonga for all New Zealanders. Māui dolphins are Nationally Critical and face a real threat of extinction. Both subspecies are an important part of New Zealand's marine biodiversity and natural capital stock.
2. **Note** that the 2018 Hector's and Māui dolphin Threat Management Plan review identified potential threats to the dolphins from fishing, toxoplasmosis, seismic surveying, seabed mining, tourism, vessel traffic, oil spill risk, coastal development, pollution, sedimentation and climate change.
3. **Note** that in 2018 the Minister of Conservation and Minister of Fisheries jointly agreed that the primary goal of the Hector's and Māui dolphins Threat Management Plan is to achieve subpopulations that are thriving or increasing, supported by an enduring and effective threat management programme.
4. **Note** that the Nationally Critical status of the Māui dolphin population justifies managing all potential lethal threats, which include a small residual risk from fishing and an urgent threat from toxoplasmosis, as even small potential effects will impact upon the likelihood of sustaining the subspecies.
5. **Agree** that Hector's dolphins are less threatened, but management of potential effects are still required to achieve the goals of the Threat Management Plan.
6. **Agree** that the threats from fishing will be addressed through the Fisheries Act 1996.
7. **Note** that decisions about the objectives, and management actions to achieve them under the Fisheries Act 1996, will essentially determine the balance between minimising fishing-related mortality and providing for use of the fisheries, which will have cost impacts on users of the resource and are likely to be controversial.
8. **Agree** that the options proposed to manage threats from fishing reflect varying degrees of a conservative and precautionary approach for the Hector's dolphins and an especially conservative and precautionary approach for the Māui dolphins because of their critically endangered status.

9. **Agree** to consultation on four options to manage fishing-related threats to Māui dolphins, ranging from increased monitoring of the existing closures to closures that extend all the way along the North Island West Coast to a 100 metre depth contour.
10. **Agree** to consultation on three options to manage fishing-related threats to Hector's dolphins ranging from increased monitoring of current restrictions to different combinations of set net and trawl closures to eliminate fishing risk in areas where this is highest.
11. **Agree** to consultation on an option to declare a moratorium on issuing marine mammal tourism permits targeting Māui dolphins.
12. **Note** that the Minister of Conservation has directed officials from the Department of Conservation to develop an action plan to address the threats from toxoplasmosis on Hector's and Māui dolphins. This will be informed by comments received through engagement with iwi and the public consultation process.
13. **Agree** that the existing marine management framework does not appropriately manage threats from seismic surveying or seabed mining, and that a regulatory response is required.
14. **Agree** to consultation on options to amend the boundaries of existing marine mammal sanctuaries to cover a larger portion of the dolphins' habitat.
15. **Note** that options for progressing these regulatory changes include requiring compliance with the Code of Conduct for seismic surveying within sanctuaries, requiring a permit under the Marine Mammals Protection Act 1978, prohibiting seismic surveying within sanctuaries and prohibiting seabed mining to different distances offshore.
16. **Note** that options to prohibit seismic surveying and seabed mining include exemptions for current Crown Minerals Act permit holders.
17. **Agree** that options for pursuing the regulatory changes outlined in recommendations 12-14 will be consulted on with the public and iwi.
18. **Agree** that existing management regimes for oil spills, vessel traffic, coastal development, pollution, sedimentation and climate change are appropriate to manage the potential threats to the dolphins and no further action is proposed in respect of these.
19. **Agree** to the release of the Hectors and Maui dolphins Threat Management Plan public consultation document no later than 17 June 2019.

20. **Authorise** the Ministers of Fisheries and Conservation to make minor changes to the consultation document if necessary.
21. **Note** that officials will engage with iwi alongside the public consultation process.
22. **Agree** to the proactive public release of this Cabinet paper.

Authorised for lodgement

Hon Stuart Nash
Minister of Fisheries

Hon Eugenie Sage
Minister of Conservation