

Regulatory Impact Statement:

Maui's Dolphin Proposed Variation to the West Coast North Island Marine Mammal Sanctuary

Agency Disclosure Statement

This Regulatory Impact Statement has been prepared by the Department of Conservation.

It provides an analysis of options to reduce risks to Maui's dolphins from commercial and recreational set net fishing in a part of the Taranaki region that is at the margins of the current Maui's dolphin range and where set net fishing is currently permitted (with an observer on board). Maui's dolphins are critically endangered and at risk of extinction.

The proposal resulted from new and improved information coming to hand after an earlier consultation process on wider protective measures was completed (Threat Management Plan Review). Any decisions made will be implemented alongside these wider measures as an integrated package.

A key factor in developing options has been to identify where Maui's dolphin range and set net fishing overlap, as this is the key human-induced threat to the dolphins. The options considered cover a range of spatial restrictions to commercial and recreational set net fishing. Submissions were not sought on the full range of options however sufficient information has been submitted to assess the three key options effectively.

The analysis is based on assessment of sightings and distribution data, scientific risk assessment of the impacts of human induced threats to Maui's dolphins, economic impact assessments from the Ministry for Primary Industries, and matters raised in submissions received following the variation proposal being notified.

The extremely low numbers of Maui's dolphins makes data difficult to obtain. This is a significant constraint and has implications for understanding the range of Maui's dolphin. A further constraint is that there are significant gaps in knowledge about the effectiveness of the existing permanent, interim or proposed measures. This is because of low levels of monitoring, and the inability of monitoring to detect all mortality and other effects. Measures are being proposed through the wider Threat Management Plan review package to address some of these constraints.

The benefits associated with the proposals relate to the management and protection of an endemic subspecies of a New Zealand marine mammal that is critically endangered and has attracted a high degree of international interest, including in the formal contexts of the International Whaling Commission and International Union for the Conservation of Nature. Should further restrictions be imposed, some adverse economic and social impacts would result for the set net fishing industry.

Felicity Lawrence, Deputy Director-General Science and Capability



Date: 6/11/18

Executive summary

1. Maui's dolphin is the world's smallest and rarest dolphin. Only 55 adults remain on the west coast of the North Island. Set net fishing is the main human-induced threat. Preventing extinction of Maui's dolphin has become an issue of national and international significance.
2. Due to concerns about the future viability of the critically endangered Maui's dolphin population, the Minister of Conservation notified his intention on 6 September 2013 to vary the existing West Coast North Island (WCNI) Marine Mammal Sanctuary (MMS) to prohibit commercial and recreational set net fishing between two and seven nautical miles offshore between Pariokariwa Point and the Waiwhakaiho River, Taranaki (See map in Appendix 1).
3. The purpose of the proposed variation is to provide greater protection to Maui's dolphins from the risks resulting from set net fishing (commercial and recreational) given:
 - a. the critical situation of the Maui's dolphin population (estimated that only 55 adult individuals remaining);
 - b. the presence of four validated sightings of Maui's or Hector's dolphins (three groups and one individual) in the defined area between 2006 and 2013;
 - c. the susceptibility of Maui's dolphins to entanglement and mortality from set net fishing; and
 - d. the overlap between set net fishing activity and Maui's/Hector's dolphin sightings in the defined area.
4. The current proposal is made under Section 22 of the Marine Mammals Protection Act 1978 (MMPA). The proposal is over and above the Maui's dolphin Threat Management Plan (TMP) review (separate Cabinet process C 13-C-196 refers). 45,950 submissions were received on the proposal. 45,933 were in support and 17 were opposed.
5. The options considered in this process were not considered during the TMP review but were developed to address residual risk. New and improved information has become available (primarily one new sighting and three earlier sightings being validated by Cawthron Institute) that indicates a residual risk of human-induced mortalities remains for Maui's dolphins as their marginal range still overlaps with set net fishing.
6. The Department recommends varying the Marine Mammal Sanctuary notice to prohibit set net fishing in the area of overlap - between Pariokariwa Point to Waiwhakaiho River, Taranaki, between two and seven nautical miles offshore. The total cost to the fishing industry of the proposed further set net restrictions is estimated to be \$567,144. At an industry-wide level the economic impact is modest, but would significantly impact on a small number of fishers at a local level.
7. A smaller area could be considered, which would have less impact on the fishing industry. It would, however, be less likely to reduce the risk to Maui's dolphins and is not the preferred option.
8. Any variation would be subject to the consent of the Minister of Energy and Resource, Minister for Primary Industries and Minister of Transport.

Status quo and problem definition

Dolphin conservation status

9. Maui's dolphins are considered to be one of the world's rarest dolphins. They are only found along the west coast of New Zealand's North Island.
10. It is estimated that only 55 individual Maui's dolphins remain¹ and recent research indicates that numbers are declining by 3% per annum². Moreover, Maui's have a low rate of natural increase in the absence of human-induced mortality (only 1.8% per annum). It appears that Maui's dolphin may be on the brink of extinction unless current threats are managed.
11. Maui's dolphin is listed as Nationally Critical under the New Zealand Threat Classification System, and listed as Critically Endangered on the International Union for the Conservation of Nature Red List. The IWC Scientific Committee has expressed its "extreme concern" about the long-term survival of Maui's dolphins and recommended the adoption of a precautionary approach and immediate action to address ongoing threats.
12. Maui's dolphins face a range of human-induced threats that include fishing, boat strike, seabed mining, acoustic disturbance (e.g. from seismic surveying), pollution, construction and coastal development activities, marine farming, and marine tourism. They also face a range of non-human-related threats including disease.
13. The main human-induced threat to Maui's dolphins is set net fishing – dolphins get caught in the nets and drown. Experts have concluded that, as the population is so small, even one human-induced dolphin death every 10 to 23 years will prevent the population from recovering i.e. will contribute to extinction.³
14. Two Maui's dolphins were killed in set nets in 2002 – which equates to 20 to 40 years of the maximum sustainable human-induced mortality. In 2012, a dolphin was captured in a set net of the Taranaki coast, but its remains were returned to the sea without DNA analysis being undertaken to determine whether it was a Hector's or Maui's dolphin. (The two species cannot be distinguished visually and rely on DNA analysis to confirm whether the dolphin is a Hector or Maui. However they are readily distinguished from other dolphin species primarily by their rounded fin and small size).
15. There are high levels of national and international concern regarding Maui's dolphin. Both the International Whaling Commission and the IUCN have issued statements regarding Maui and recommended urgent action. There were 45,955 submissions on the gazette notice regarding the variation proposed, and of these only 17 were opposed to the variation.

Confirming the Natural Range of Maui Dolphins

¹ 55 individuals aged one-year or greater, 95% CI 48-69, Hamner et al 2012

² Wade et al Appendix 1 in Currey et al 2012, (3% decline p.a. with a probability of 75%)

³ Wade et al Appendix 1 in Currey et al 2012.

16. Maui's dolphins utilise areas from south of the Hokianga Harbour to Whanganui and as far offshore as the 100m depth contour, but are most commonly found closer to shore.⁴ Determining the exact range of Maui's dolphin relies on DNA verification via tissue sample and reliable sightings. However, the low abundance of Maui's dolphins, and the fact that they cannot be visually distinguished from Hector's dolphins, means that data is difficult to obtain and to verify.
17. Significant efforts were undertaken in 2012-13 to conduct boat and aerial surveys in the Taranaki area along with observer data from the commercial fleet. No additional sightings were made.
18. There have been four or five recent public sightings of Maui's or Hector's dolphins in the area not subject to existing set net restrictions. The reliability of sightings data is a key issue. A strict protocol for validating public sightings has been developed with interviews and assessment being conducted by an independent expert scientist (Cawthron Institute). DNA samples from Hector's and Maui's dolphins between Hokianga and Hawera has identified 95% as Maui dolphins. Tissue samples from dolphin mortalities on the north Taranaki Coast have confirmed that five of the six mortalities were Maui's and indicates that any Hector's or Maui's dolphins sighted in the area are likely to be Maui's dolphin (although the most recent of the biopsied Maui mortalities was in 1989).
19. Taking all the available data (including DNA-confirmed records, sightings data and other research) into account, the Department considers that Maui's or Hector's dolphins are present or transit through the proposed variation area, and that there is a reasonable likelihood that some of those dolphins are Maui's dolphins.

Problem Definition

20. All parties agree that the Maui's dolphin is in a critical state. The core problem is defining how to effectively eliminate human-induced threats whilst allowing activities that do not place Maui's dolphins at risk.
21. Given that set netting is a key risk to the dolphins, it is important to restrict this in places where Maui dolphins are likely to be present. This (with other measures) will allow Maui dolphins to begin recovery, halting the risk of rapid extinction, and (in the longer term) to rebuild their natural range and population. Those restrictions should not, however, affect fishing that does not impact dolphin recovery.
22. Given the high risk that set nets pose to the remaining Maui's dolphins, the Minister of Conservation wishes to extend protection to the area where there have been reliable sightings.

Objectives

23. Set netting is the key human-induced risk to the continued survival of Maui's dolphins. However, the loss of set netting as a fishing method can place significant costs on the fishing industry. Three objectives were used in the analysis:

⁴ Currey et al 2012.

- a. The government's Vision Statement (which is consistent with Conservation General Policy) for the management of Hector's and Maui's dolphins includes: *"Hector's and Maui's dolphins should be managed for their long-term viability and recovery throughout their natural range."*
- b. The need to improve the effectiveness of dolphin conservation and management; and
- c. The need to minimise and appropriately distribute the costs of achieving those improvements.

Options and impact analysis

24. This process only addresses set net fishing and only addresses the area in which sightings have been validated after the completion of the TMP review consultation. Set net fishing is the primary human-induced threat and warranted a separate process. Other threats and other areas are addressed through the wider TMP review process. The objective is to reduce risks in areas where an overlap between Maui's dolphins and set net fishing occurs. After considering submissions and reviewing sightings and distribution data, three options, each with different spatial boundaries, require further consideration – the status quo (Option 1), the proposed variation area (Option 2) or a smaller area (Option 3).

Option 1: Status quo

25. Set net restrictions, established under the Fisheries Act, are in place in the areas that Maui's dolphins most commonly use. Set netting is currently prohibited along 370 km of the coastline of the west coast of the North Island from Maunganui Bluff (30 km northwest of Dargaville) to Pariokariwa Point (50 km northeast of New Plymouth), the restriction extending from the shore out to 7 nautical miles offshore. (See map in Appendix 3)
26. Set netting is also prohibited along 130 km of coastline from Pariokariwa Point to Hawera, the restriction extending from the shore out to 2 nautical miles offshore as an interim protection measure. Making these interim protection measures permanent is among the range of measures being considered through the TMP review.
27. Set netting between 2 and 7 nautical miles in the area of the proposed variation is currently permitted if an observer is on board. These measures were developed prior to a new sighting and three previous sightings in the area being validated as reliable.
28. The option of status quo would:
 - a. Do nothing to address the risk posed by set nets in an area where it is likely that Maui's dolphins are present or transit through.
 - b. Prevent a significant reduction in the current rate of decline and hence signal the extinction of the species.
 - c. Have no impact on fishing activities and no financial impact on commercial fishers.

29. Most agree that the status quo is insufficient to prevent extinction and restore Maui's dolphin to a sustainable population in its natural range and is therefore inconsistent with the Government's vision statement.
30. The new and improved data suggests there is an overlap between Maui's dolphins and set net fishing in this area and therefore a degree of risk. That risk is capable of management by restricting set net fishing. Given the critical status of the Maui's dolphin, the Department does not consider that not managing the risk is acceptable.

Option 2: Extension of offshore set net ban 43 km to Waiwhakaiho' (preferred)

31. This option is the option that was notified as the preferred option, and submissions focussed very closely on the pros and cons of it. This proposed boundary is, based on the new and improved sightings data, considered to be at the margins of Maui's dolphin range.
32. Extending the 2–7 nautical mile set net prohibition 43 km to the southwest to the mouth of the Waiwhakaiho River would:
 - a. Eliminate the risk to dolphins from set netting in an area where there have been four recent validated Maui's dolphin sightings.
 - b. Reduce by 43 km the length of coastline available to recreational and commercial set netters working between 2 and 7 km offshore.
 - c. Create a one-off cost to the commercial fishing industry of an estimated \$567,144.
33. MPI provided advice suggesting that approximately five fishers were operating six to eight commercial set net vessels in the last four years. In the last year, since the interim measures were introduced four vessels have been operating in the proposed area and would be adversely affected by this proposal. The ability of commercial fishers to shift their fishing effort, especially offshore, will also depend on the operational limits for the particular boats concerned. MPI officials estimated the economic impact was a loss of approximately \$81,024 in annual revenue, \$136,121 in annual value add and \$431,024 in capitalised future value, equating to an estimated total cost to the industry of \$567,144. At an industry-wide level the economic impact is modest, but would significantly impact on a small number of fishers at a local level.
34. This option would have the greatest economic impact, however that impact is considered proportionate to the degree of risk and the critically endangered status of the species. It would contribute towards the objectives of protecting Maui's dolphins to recover within their natural range by supporting recovery at the margins of their current range.
35. Prohibiting set net fishing in this area would address the risk caused by the overlap between set net fishing in the area, and sightings of Maui's or Hector's dolphins in the waters between two and seven nautical miles and is the preferred option.

Option 3: Extension of offshore set net ban 32 km to Waitara

36. The option of extending the 2–7 nautical mile set net prohibition by 32 km to the mouth of the Waitara River would:

- a. Eliminate the risk to dolphins from set netting in an area where there have been three recent reliable Maui's dolphin sightings.
 - b. Reduce by 32 km the length of coastline available to recreational and commercial set netters working between 2 and 7 km offshore
 - c. Create a one-off cost to the commercial fishing industry of an estimated \$93,288
37. This option would not cover an area to the south where there has been a recent sighting of a Maui's or Hector's dolphin.
 38. Decreasing the size of the proposed area would decrease the effect of the proposed variation on commercial fishing. The extent of this effect depends on the level of fishing activity and where it occurs, but this option would also decrease the effectiveness of the variation in terms of Maui's dolphin protection.
 39. Set net fishing effort is concentrated closest to New Plymouth at the south-western end of the area (of the 118 fishing events recorded in the area, 104 (88%) were south-west of a line extending directly off the Waiongana Stream immediately south of Waitara). Shifting the south-western boundary of the proposed area north-eastwards would significantly reduce the effect of the variation on commercial fishing because most of the fishing effort appears to be concentrated near the New Plymouth end.
 40. Reducing the size of the proposed variation area would need to be evidence based. As above, the Department is satisfied that all four sightings within the proposed area are reliable but accepts that none are certain. If the variation area was reduced to north of Waitara as some submitters have suggested, it would remove the proposed protections from the area where the 2013 sighting occurred.
 41. This option removes some risk to the dolphins in the Waitara region and provides increased protections for the area where three of the four validated sightings of dolphins occurred. This option would have the significantly less financial impact on the industry than option 2. This option arrives at a different balance of the potential risk to Maui's dolphins with the impact to the industry; however, given that the 2013 sighting is considered to be reliable, the option would not address the full area of overlap identified between dolphin range and set net fishing. An increased degree of risk to Maui's dolphins would result when compared to option 2.

Other options considered

42. Options involving the extension of the 2–7 nautical mile set net prohibition up to 60 km to the south (where it would reach the southern end of the Marine Mammal Sanctuary at Oakura) were not considered as there have been no recorded sightings of Maui's dolphins in these offshore areas south of the Waiwhakaiho river mouth. In addition, a set net ban in this area would result in a one-off cost to commercial fishing industry of up to \$2 million. This was considered a high industry cost for possibly no benefit to the dolphins.
43. Options involving extending the outer boundary of the set net prohibition from 7 nautical miles out to 9 or 12 nautical miles were not considered as these areas have a lower frequency of use by the dolphins than the areas covered by the options considered and set net bans in these areas would result in a one-off cost to commercial fishing industry of up to \$1.2 million. Again, this was considered a high industry cost for possibly no benefit to the dolphins.

Additional regulatory and non-regulatory options

44. The TMP review has identified a range of regulatory and non-regulatory measures to address set net fishing in other areas and other impacts, which would complement the options outlined above. Enhancing the research and monitoring to enable clearer delineation of the natural and current range of Maui's dolphins would further clarify the effectiveness of the set net prohibitions.

Consultation

45. At a meeting in New Plymouth on 6 September 2013, the Minister of Conservation publically announced his intention to consider the proposed variation to the MMS. This meeting was attended by various people from the Taranaki commercial fishing sector as well as several representatives from iwi of Taranaki including Ngati Tama, Taranaki, Te Atiawa and Ngati Mutunga.
46. DOC released a consultation document which was published on the DOC external website, and stakeholder letters were sent to persons and organisation known to have an interest and/or be affected by the proposals contained in the document. DOC officials also attended a meeting with commercial fishing interests (set netters and fish processors) in New Plymouth on 26 November 2013.
47. On 12 September 2013 a notice of the Minister's intention was published in the Gazette. Following statutory guidelines the consultation period was to close on 10 October 2013, but was extended until midday 11 October 2013.
48. In addition, DOC used its regional networks in the Taranaki region to notify whānau, hapū and iwi partners and community stakeholders of the consultation process. It was indicated that DOC officials would be available to meet with interested parties if required, to clarify any issues that may arise from the consultation process. As a result DOC met with commercial fishing interests on 26 September 2013.
49. In response to the proposed variation to the West Coast North Island Marine Mammal Sanctuary, DOC received a total of 45,950 submissions, of which 496 contained original content
50. Submissions were broadly grouped as follows:
 - a) Iwi, hapu, whanau: 4
 - b) On-line petitions or campaigns: 45,684:
 - o 14,265 Greenpeace; 23,545 NABU (International Foundation for Nature), and 787 from assorted other organisations.
 - o Approximately 255 of these included original statements.
 - c) DOC on-line form: 118
 - d) Commercial fishing interests: 12 (including submissions from 2 iwi fishing organisations)
 - e) Environmental organisations: 16
 - f) Others: 120

51. In addition to the two submissions from organisations representing iwi commercial fishing interests, 10 submissions were lodged by other parties with a direct stake in the commercial fishing sector. These included submissions from commercial set net fishers, quota holders, fish processors, and commercial fishing organisations. Commercial fishing interests oppose the proposed variation as does the Taranaki Chamber of Commerce.
52. In addition to the electronic petitions referred to above, 16 submissions were lodged by environmental organisations or groups. These submissions support the proposed variation but consider the area should be enlarged (north, south, and offshore) and the scope of the variation extended to include restrictions on other activities including trawling, mining and oil exploration. The same position was taken by the sole marine mammal researcher who submitted.
53. One submission was lodged by a recreational fisher opposing the proposed variation; and one submission was lodged by a recreational fisher supporting the proposed variation.
54. Two territorial authority submissions (both Auckland based) were lodged in support.

Agency consultation

55. This Regulatory Impact Statement was circulated to the following agencies for comment and their feedback has been incorporated: Ministry for Business, Innovation and Employment, Ministry of Transport, Maritime New Zealand, Te Puni Kōkiri, and Ministry of Foreign Affairs and Trade.

Conclusions and recommendations

56. Prohibiting commercial and recreational set net fishing within the entire area (Option 2 - preferred) achieves the greatest reduction of risk but also has the most significant economic impact. The Department is satisfied that the available data shows that Hector's/Maui's dolphins are present or transit through the variation area and that there is a reasonable likelihood that some of those dolphins are Maui's dolphins. The Department considers that, given the susceptibility of Maui's dolphins to set nets and the potential overlap with set netting, the risk to Maui's dolphins can be reduced by prohibiting set net fishing from the area of the proposed Option 2 variation.
57. Neither the status quo nor Option 3 achieve a reduction in risk to Maui's dolphins that would achieve the objectives.
58. The reduction in risk should be weighed against the cost to others in imposing further restrictions (indicative annual value and capitalised future value losses totalling \$567,144 based on MPI data and calculations). In my view, the reduction in risk that can be achieved through the proposed measures outweighs the economic impact that may result.
59. The decision made on the WCNI MMS Proposal will also be relevant to inform New Zealand's response to international calls for action, including in the contexts of the IWC and IUCN.

Implementation plan

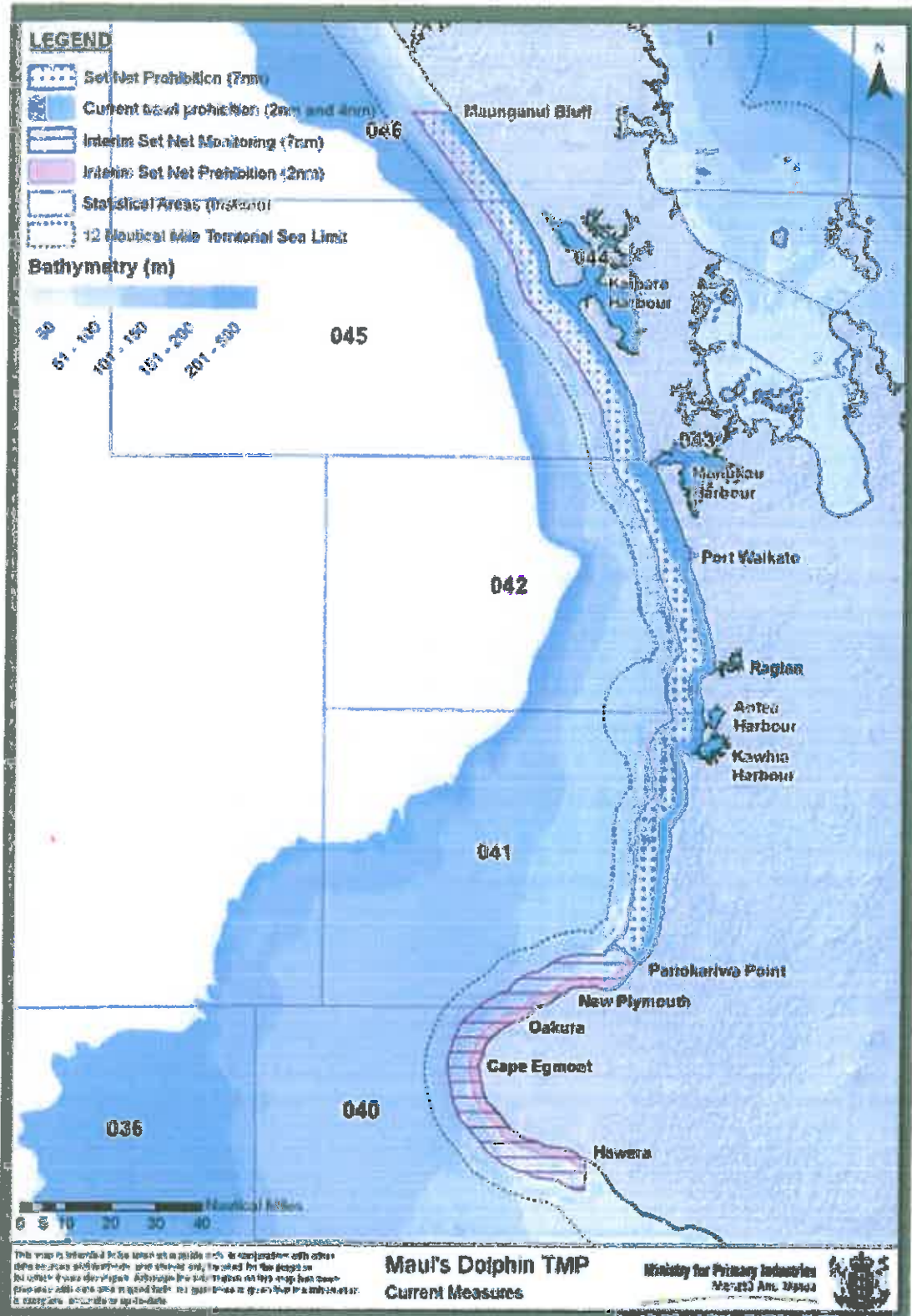
60. The Minister of Conservation intends to include the announcement of his decision on this matter alongside decisions regarding the entire Maui's dolphin TMP review package and to implement any measures decided upon as an integrated package.
61. The variation of the sanctuary is subject to the consent of the Minister of Energy and Resources, Minister for Primary Industries and Minister of Transport. If consent is granted, a Gazette notice would be issued. The variation would come into effect 28 days after publication in the Gazette.

Monitoring, evaluation and review

62. Monitoring the effectiveness of protection measures implemented for Maui's dolphins is difficult due to the small population size. The population has the potential to increase at a rate of 1.8% per annum, in the absence of human-induced mortality. This equates to one dolphin per year at their current population size. Therefore when dealing with small populations such as Maui's dolphins, it could take several years to detect population change.
63. Plans for monitoring the effectiveness of this measure would be included within the monitoring plans for the wider TMP package, and would therefore be covered by the proposed;
 - d. Maui's dolphin research, monitoring and advisory group,
 - e. Observer coverage in the wider Taranaki area, and
 - f. Having procedures in place for addressing a Maui's dolphin mortality promptly, including consideration of emergency measures.
64. For more detail on these see the Regulatory Impact Statement – Maui's dolphin Threat Management Plan.

[Ends]

Appendix 3: Map of current fishing restrictions



Consultation on Cabinet and Cabinet Committee Submissions

Certification by Department:

Guidance on consultation requirements for Cabinet/Cabinet committee papers is provided in the CabGuide (see Procedures: Consultation): <http://www.cabguide.cabinetoffice.govt.nz/procedures/consultation>

Departments/agencies consulted: The attached submission has implications for the following departments/agencies whose views have been sought and are accurately reflected in the submission:
Ministry for Primary Industries, Ministry of Business, Innovation and Employment, Ministry of Foreign Affairs and Trade, Ministry of Transport, and Maritime New Zealand, Te Puni Kokiri

Departments/agencies informed: In addition to those listed above, the following departments/agencies have an interest in the submission and have been informed:
Treasury, Department of Prime Minister and Cabinet

Others consulted: Other interested groups have been consulted as follows:
Over 45,000 submissions were received from a range of stakeholders, treaty partners, environmental organisations and members of the public. In addition a meeting was held with commercial fishing interests in Taranaki

Name, Title, Department: Felicity Lawrence, DDG Science and Capability, Department of Conservation

Date: 6/11/2013

Signature

All this form covers two papers ensure that both certification sections are completed and attached at the back of the Cabinet/Committee submission.

Certification by Minister:

Ministers should be prepared to update and amplify the advice below when the submission is discussed at Cabinet/Cabinet committee.

The attached proposal:

<i>Consultation at Ministerial level</i>	<input type="checkbox"/> has been consulted with the Minister of Finance <i>[required for all submissions seeking new funding]</i> <input checked="" type="checkbox"/> has been consulted with the following portfolio Ministers: <i>M. of P.E.</i> <input type="checkbox"/> did not need consultation with other Ministers	
<i>Discussion with National caucus</i>	<input type="checkbox"/> has been or <input type="checkbox"/> will be discussed with the government caucus <input checked="" type="checkbox"/> does not need discussion with the government caucus	
<i>Discussion with other parties</i>	<input type="checkbox"/> has been discussed with the following other parties represented in Parliament: <input type="checkbox"/> Act Party <input type="checkbox"/> Maori Party <input type="checkbox"/> United Future Party <input type="checkbox"/> Other [specify] <input type="checkbox"/> will be discussed with the following other parties represented in Parliament: <input type="checkbox"/> Act Party <input type="checkbox"/> Maori Party <input type="checkbox"/> United Future Party <input type="checkbox"/> Other [specify] <input checked="" type="checkbox"/> does not need discussion with other parties represented in Parliament	
Portfolio <i>Conservation</i>	Date <i>7 / 11 / 13</i>	Signature 