

Chair  
Cabinet Economic Growth and Infrastructure Committee

Intention to vary the existing West Coast North Island Marine Mammal Sanctuary Notice to restrict commercial set net fishing in Taranaki for the protection of Maui's dolphins

### Proposal

1. This paper informs Cabinet of my intention to reduce risk to Maui's dolphin from commercial set netting by publicly notifying my intention to vary the existing restrictions within the West Coast North Island Marine Mammal Sanctuary. I propose to ban commercial set net fishing between Pariokariwa Point and the Waiwhakaiho River, Taranaki, and between 2 nautical miles and 7 nautical miles offshore. The proposed area is approximately 35,240 hectares.

### Executive Summary

2. Maui's dolphins are endemic to New Zealand. They are critically endangered with a small population size (around 55 individuals of age one year or greater) and can only sustain one human-induced mortality every 10 to 23 years.
3. Maui's dolphin distribution is estimated to extend at least to 7 nautical miles offshore and there is evidence to support this through research and public sightings, and expert assessment.
4. Net fishing methods, primarily set net fishing, are the greatest threat to Maui's dolphins in areas where fishing effort and the dolphins overlap. In the Department of Conservation incident database there are two known entanglements of Maui's dolphins in set nets in 2002, and further probable set net entanglements. Based on the findings of a 2012 expert panel risk assessment, the greatest area of residual risk remaining to the dolphins from set net fishing is in Taranaki out to 7 nautical miles.
5. During development of the Hector's and Maui's dolphin Threat Management Plan (TMP) 2007, the then respective Ministers of Conservation and of Fisheries agreed to manage fishing-related impacts to dolphins primarily through the Fisheries Act 1996 (the Fisheries Act). This agreement took account of several factors including enforcement and compliance responsibilities, as well as infringement penalties. Based on this agreement, since 2008 a number of fishing-related restrictions, relevant to the Maui's dolphin and Hector's dolphin, have been established under the Fisheries Act 1996.
6. In 2012, based on increased concerns for the Maui's dolphins, the previous Minister for Primary Industries implemented interim protection measures from set net fishing in the Taranaki region. At the same time the TMP was reviewed through a public consultation.
7. The Minister for Primary Industries and I have been considering advice provided through this consultation process. However, new information has since become available. This includes;
  - New public sightings and validations,

- Results of Department of Conservation (DOC) surveys, and
  - Results of Fisheries Observer effort.
8. In considering all information now available I am concerned that the fishing-related measures consulted upon in 2012 do not adequately account for the recent sightings information that suggest Maui's dolphins are likely to be beyond 2 and 4 nautical miles, north of Waiwhakaiho River. My view is that additional commercial set net restrictions in this area require consideration and consultation.
  9. Given the critical situation the Maui's dolphin population is in, the evidence of sightings of Maui's dolphins in the area, and the potential for fisheries effort in the same area, I propose to take a precautionary approach and use conservation legislation, more specifically my powers under section 22 of the Marine Mammals Protection Act 1978, to consult upon a variation to the existing West Coast North Island Marine Mammal Sanctuary.
  10. I propose to notify and consult upon a ban to commercial set net fishing between 2 and 7 nautical miles offshore from Pariokariwa Point to the Waiwhakaiho River, Taranaki, within the West Coast North Island Marine Mammal Sanctuary. The process to undertake this variation is publication of a notice in the Gazette followed by a 28-day public submission period. I will then consider all submissions. It may be necessary, as a result of information arising out of the submissions, to consult further or to obtain further information.
  11. Any variation of the sanctuary would be subject to the consent of the Minister of Energy and Resource, Minister for Primary Industries and Minister of Transport. Consent will be sought prior to publication of any Gazette notice. My decision following the submission process would be notified to Cabinet following the consultation period.
  12. My decision on the variation will be incorporated into the wider package of protection measures which I have been considering with my colleague, the Hon. Minister for Primary Industries, as part of the TMP review. This will ensure coherence and integration of any measures.

#### Comment

13. The endemic Maui's dolphins are critically endangered. Best available information indicates there are approximately 55 individuals over the age of one year. Based on the new abundance estimate, the Maui's dolphin population can only sustain one human-induced mortality every 10 to 23 years.
14. The Department of Conservation maintains a Hector's and Maui's dolphin incident database. There are two known entanglements of Maui's dolphins in 2002. There are further probable and possible entanglements of Maui's or Hector's dolphins along the west coast of the North Island. These include the recent bycatch in January 2012 off Cape Egmont.
15. In January 2012 a Maui's or Hector's dolphin was caught in a commercial set-net off Cape Egmont. While identification of sub-species was not confirmed, 95% of tissue samples taken from live or beachcast dolphins in the area north of Hawera have been found to be the Maui's dolphin sub-species (Appendix 1a). Based on increased concerns for the Maui's dolphin, the previous Minister of Conservation and the previous Minister for Primary Industries directed DOC and the Ministry for Primary Industries (MPI) to investigate an interim package of protection measures to provide immediate protection while a review of the Maui's dolphin portion of the Hector's and Maui's dolphin TMP was undertaken by end of 2012.

16. As part of the review of the Maui's dolphin TMP, a Maui's dolphin risk assessment workshop was convened in June 2012 using an expert panel of domestic and international experts in marine mammal science and ecological risk assessment, as well as representatives from a range of stakeholders.
17. After assessing all information available, the panel concluded that net fishing (set, trawl and drift) accounted for 95% of the risk of human-induced mortality for Maui's dolphins. Of these fishing methods, commercial set net was considered the highest risk with an 89% likelihood of exceeding the potential biological removal estimate.
18. The panel considered the residual risk to Maui's dolphins from set net fisheries was greatest off the northern Taranaki coastline out to 7 nautical miles.
19. The core distribution of Maui's dolphins agreed by the expert panel is currently between Raglan and Kaipara harbours, with a full range from Maunganui Bluff in the north to Whanganui in the south, and out to 7 nautical miles offshore.
20. There is considerable evidence to support the offshore distribution of extending at least to 7 nautical miles, including:
  - Reliable research sightings from a variety of platforms have confirmed Maui's and/or Hector's dolphins sighted out to 7 nautical miles from shore;
  - Reliable public sightings of Maui's and/or Hector's dolphins exist out to 7 nautical miles from shore;
  - The offshore extent of the distribution agreed by the expert risk assessment panel.
21. Further support for the offshore distance being set at 7 nautical miles is to provide consistency with current set net restrictions from Maunganui Bluff to Pariokariwa Point which are in place out to 7 nautical miles. These were subject to a legal challenge and the former Minister of Fisheries was required to reconsider his decision to extend the set net ban from 4 nautical miles to 7 nautical miles offshore between Maunganui Bluff and Pariokariwa Point, following further analysis of sighting information. After reconsideration, the Minister decided to maintain the extension out to 7 nautical miles.
22. MPI and DOC jointly developed options for the review of the Maui's dolphin TMP. These underwent public consultation in September - November 2012<sup>1</sup>.
23. In December 2012, officials provided the then Ministers with advice and a summary of submissions. Officials also provided my colleague and me with advice about the Maui's TMP review, a summary of submissions, and further briefings for our consideration.
24. Since the consultation process in late 2012, further sighting-related information has become available. This includes a) a summer season of public sightings, and validation of existing and new sightings, b) DOC-led survey results, and c) Fisheries Observer results. This information is summarised in **Appendix 2**.

### **Legislation options**

25. In 2008, in response to the public concern over the effect of human-induced mortality on Hector's and Maui's dolphins, the government approved a comprehensive TMP. The TMP was developed jointly by the (then) Ministry of Fisheries (now MPI, which is responsible for managing fishing-related threats to protected species under the Fisheries Act) and DOC (which is responsible for managing fishing and non-fishing

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<sup>1</sup> Drafting of the consultation document took place in July and August, and public consultation occurred between 24 September and 12 November 2012. The sightings data used for the drafting of the consultation document were extracted and current to 29 August 2012.

threats to dolphins under the Marine Mammals Protection Act 1978). For the purposes of the TMP, it was agreed by Ministers at the time that fishing restrictions would be considered under the Fisheries Act, due to stronger penalties and more capability for enforcement.

26. I am mindful that in some instances the Fisheries Act may not be the most appropriate legislative tool for mitigating fishing-related threats to marine protected species. The Minister for Primary Industries, in making any decision under the Fisheries Act must bear in mind and conform to the purposes of the Act. The purpose of the Act, as set out in section 8, is to provide for the use of fisheries resources while ensuring sustainability. This means that the Minister for Primary Industries must balance resource use with sustainability.
27. The purpose of the Marine Mammals Protection Act 1978 is for managing marine mammal protection and recovery. Specifically, the Marine Mammals Protection Act sets out tools (including population management plans and marine mammal sanctuaries) which the Minister of Conservation might apply to manage the protection of marine mammals.
28. I note that with the Dean's Bill currently under consideration, penalties under the Marine Mammals Protection Act are likely to be increased, bringing them into line with penalties under the Fisheries Act. Moreover, Fisheries Officers are warranted Marine Mammal Officers under the Marine Mammals Protection Act. This means that enforcement ability is the same as under the Fisheries Act. With more consistent penalties and enforcement abilities between the two Acts, there is less reason to defer to using the Fisheries Act to protect the Maui's dolphin.
29. I am aware my colleague is currently considering fisheries restrictions under the Fisheries Act, however, the Threat Management Plan consultation on fisheries restrictions was to 4 nautical miles. This means that extending the restrictions out to 7 nautical miles, to encompass an area where new information indicates dolphins may occur could not be implemented under the Fisheries Act without further consultation.
30. Given the critical situation the Maui's dolphin population is in, the evidence of sightings of Maui's dolphins in the area, and the potential for fisheries effort in the same area, I consider a precautionary approach is necessary.
31. Having considered all information available in this instance, I consider the use of section 22 under the Marine Mammals Protection Act a valid, additional, conservation measure to bring to bear to manage risk to the Maui's dolphin. Therefore, my intent is to publicly consult on the need for additional measures by notifying a variation to the existing West Coast North Island Marine Mammal Sanctuary.
32. I propose to ban set net fishing between Pariokariwa Point and the Waiwhakaiho River and between 2 and 7 nautical miles offshore (**Appendix 1b**). This area encompasses the five sightings of Maui's dolphins that have occurred further than 2 nautical miles offshore in the Taranaki region.
33. The Minister for Primary Industries and I have been considering a wider package of protection for Maui's dolphins. We propose to include my decision on this small targeted consultation in the final package and we will consult further with relevant Ministers in due course on the package as a whole before notifying Cabinet of our decision. Following the Cabinet procedures we will announce the complete package publicly. We are advised this process would be complete in October.

## Consultation

34. The Ministry for Primary Industries has provided input on a draft version of the noting paper and also provided information on the impact to fishers in the area.
35. In addition, a draft of this noting paper has been sent to the following agencies for comment or for information: The Ministry for Primary Industries, the Ministry of Transport, the Ministry of Business and Innovation and Employment, Te Puni Kōkiri, and the Department of the Prime Minister and Cabinet.
36. Consultation under section 22 of the Marine Mammals Protection Act 1978 will commence for 28 days following publication in the Gazette of my intention to vary the existing Marine Mammal Sanctuary.

#### **Financial Implications**

37. There are no direct financial implications arising from this paper. However, should I choose to implement the proposed variation to the Marine Mammal Sanctuary following the 28 day submission period, it would have an associated economic impact on the fishing industry in the area. Approximately five fishers operating six to eight commercial set net vessels would be adversely affected by this proposal.
38. MPI officials have estimated the economic impact would be less than \$240,000 in annual revenue, \$400,000 in annual value and \$1.3 million in capitalised future value. At an industry-wide level the economic impact is modest, but would significantly impact on a small number of fishers (Appendix 3).

#### **Human Rights**

39. The proposals in this paper do not raise any issues in relation to the New Zealand Bill of Rights Act 1990 or the Human Rights Act 1993.

#### **Legislative Implications**

40. No Legislative implications arise directly from this paper. After considering submissions a final decision on whether to make a declaration by Gazette notice to vary restrictions within the existing marine mammal sanctuary will again be submitted to Cabinet for noting.

#### **Regulatory Impact Analysis**

41. This is a noting paper, indicating an intention to consult. As there are no legislative implications that are a direct result of this paper there is no requirement for a Regulatory Impact Analysis at this time.

#### **Publicity**

42. This issue is likely to receive considerable local and international media attention. There is substantial international interest in New Zealand's management of protected species, particularly interactions with the fishing industry, including from the International Union for the Conservation of Nature (IUCN), the International Whaling Commission, and environmental conservation organisations.
43. DOC officials in consultation with MPI will develop media strategies for the consultation process and proactively address any concerns which are raised about management of Maui's dolphins.
44. Officials will notify key stakeholders and will post the consultation document and associated maps on the DOC website.

## Recommendations

45. The Minister of Conservation recommends that Cabinet:

1. **note** that Maui's dolphins are a critically endangered endemic sub-species with a very small population estimate (55 animals over the age of one) and an estimated potential biological removal limit of one dolphin every 10 to 23 years;
2. **note** that best available information, including the advice from an expert risk assessment panel, is that set net fishing is the greatest human induced threat to Maui's dolphins and should be reduced or removed in areas where the dolphins exist in order to give the sub-species the best chance of recovering;
3. **note** that there is evidence that suggests that Maui's dolphins occasionally use the Taranaki region, and it is accepted that their offshore range can extend at least to 7 nautical miles offshore;
4. **note** that a joint package of protection measures for Maui's dolphins was consulted on in late 2012 by DOC and MPI and the Minister of Conservation and the Minister for Primary Industries have since been considering advice on this package;
5. **note** that new information has become available since the consultation process which the Ministers have also been considering and the current proposed package does not adequately take into account this new information;
6. **note** that the Minister of Conservation is proposing to use his powers under section 22 of the Marine Mammals Protection Act 1978 to restrict an activity from adversely affecting a protected species;
7. **note** that the Minister of Conservation proposes to notify his intention to vary the existing West Coast North Island Marine Mammal Sanctuary to restrict commercial set net fishing within a specified area of Taranaki (Appendix 1b);
8. **note** that following receipt of submissions the Minister of Conservation will make a decision on the proposed variation and will announce this alongside the wider package of protection measures decided upon by the Minister of Conservation and the Minister for Primary Industries as part of the 2012 Threat Management Plan review process.



Hon. Nick Smith  
Minister of Conservation

2018/2013

# **APPENDIX 1a**

Included in the consultation document as Appendix 5

# DNA Confirmed Samples of Maui's and Hector's Dolphins

- Sampled Dolphins**  
 DNA Confirmed Maui's  
 Maui's  
 Hector's
- Sampled Groups of Dolphins**  
 DNA Confirmed Sightings  
 Maui's (Unknown # of samples)  
 Hector's  
 Both Maui's and Hector's
- Fishing Restrictions (2008)**  
 Commercial and Recreational Set and Trawl Fisheries (7km)  
 Commercial Trawl Fishing Restrictions (2km and 4km)  
 Interim Set Net Restrictions  
 Commercial and Recreational Restrictions (7km)  
 Commercial Restrictions (2km-7km) - Unless Mini Observer onboard

West Coast North Island  
 Marine Mammal Sanctuary  
 12 Nautical Miles Territorial Sea Limit  
 100m Depth Contour

Bathymetry (m)

0-50  
 50-100  
 100-150  
 150-200  
 200-250

Table of the number of individual Hector's and Maui's dolphins sampled in or around along the west coast of the North Island. This removes duplicate samples where an individual may have been sampled more than once.

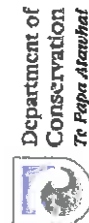
	Maui's dolphin Individuals	Hector's dolphin Individuals
Sampled live 2001-2012	74	2
Sampled dead pre-2001	10	0
Sampled dead post-2001	13	2
Totals	97	4

**Source Sighting and Marking Data:**  
 • Maui's Dolphins Sighting Database (1970-2010) Extract 24/07/2013  
 • Hector's and Maui's Dolphins Incident Database (1974-2013) Extract 06/07/2013

**DNA Samples:**  
 DNA information from multiple sources. Each sighting point feature represents a group from which one or more individuals had DNA samples taken. Some individuals have duplicate entries in the database as they have been sampled more than one occasion.

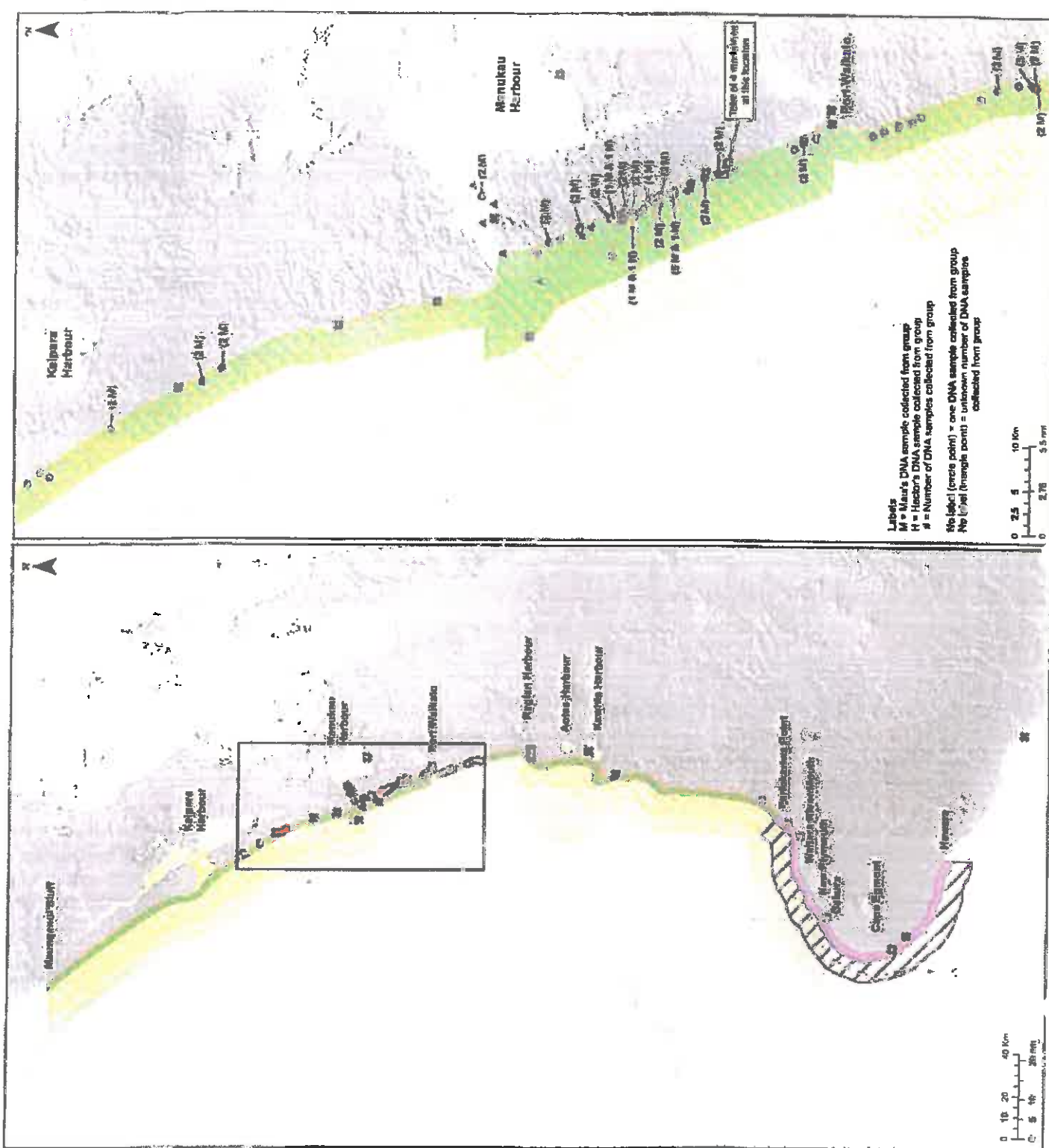
Date created: 25/07/2013

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Te Papa Atahuri

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**Labels**  
 M = Maui's DNA sample collected from group  
 H = Hector's DNA sample collected from group  
 # = Number of DNA samples collected from group  
 M# (circle) = one DNA sample collected from group  
 H# (circle) = one DNA sample collected from group  
 M# (triangle) = unknown number of DNA samples collected from group





## **APPENDIX 1b**

Included in the consultation document as Appendix 1

**NOTE** the coordinates of the point 2 nm offshore of Pariokariwa Point changed from 174° 28.26' E, 38° 52.24' S to 174° 28.27' E, 38° 52.23' S in the Final Gazette Notice to ensure the boundary lined up with existing fisheries measures boundaries.

**LEGEND**

**Proposed Extension**

- Proposed Extension Co-ordinates
- ▭ Proposed Commercial Set Net Restriction Extension (2nm - 7nm)
- - - Line from Waikahika River mouth

**Interim Set Net Restrictions**

- ▨ Commercial and Recreational Restrictions (2nm)

- ▨ Commercial Restrictions (2nm - 7nm) - Unless MPI Observer onboard

**Fishing Restrictions (2008)**

- ▨ Commercial and Recreational Set Net Restrictions (7nm)
- ▨ Commercial Trawl Fishing Restrictions (2nm)

West Coast North Island Marine Mammal Sanctuary

12 Nautical Mile Territorial Sea Limit

Bathymetry (m)

0 - 50  
51 - 100  
101 - 150  
151 - 200  
201 - 300  
301 - 500

Approx Area 35,240 Ha

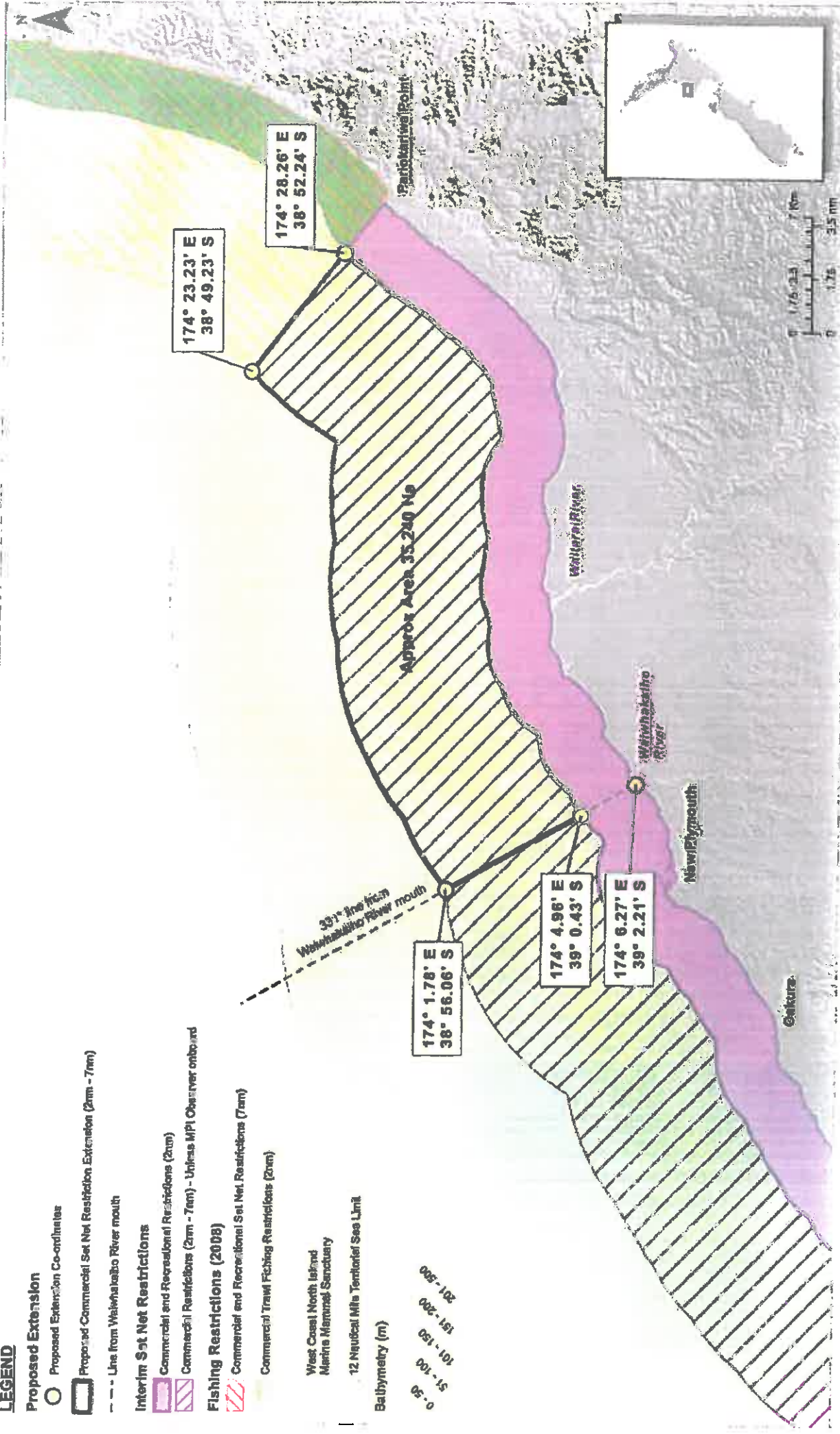
174° 23.23' E  
38° 49.23' S

174° 28.26' E  
38° 52.24' S

174° 1.78' E  
38° 56.06' S

174° 4.96' E  
39° 0.43' S

174° 6.27' E  
39° 2.21' S



**Proposed Commercial Set Net Restriction Extension (2nm to 7nm)  
Under the Marine Mammals Protection Act 1978**

**Taranaki**

**Confidential - draft**

Co-ordinate system: NZTM 2000  
Date: 14/08/2013

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## **APPENDIX 1c**

A variation of this map is included in the consultation document as Appendix 6

**LEGEND**

**Sighting Type and Validation Value**

Validation scale: 1= highest confidence, 5 = lowest confidence, Null = not validated

- DOCAMP - 1
- Research - 1
- Public - 1
- Public - 2
- Public - 3
- Public - 4
- Public - 5
- Public - Null

**Proposed Extension**

Proposed Commercial Extension - Set Net Restrictions (2nm - 7nm)

**Interim Set Net Restrictions**

- Commercial and Recreational Restrictions (2nm)
- Commercial Restrictions (2nm - 7nm) - Unless MPI Observer aboard

**Fishing Restrictions (2009)**

- Commercial and Recreational Set Net Restrictions (3nm)
- Commercial Trawl Fishing Restrictions (2nm)

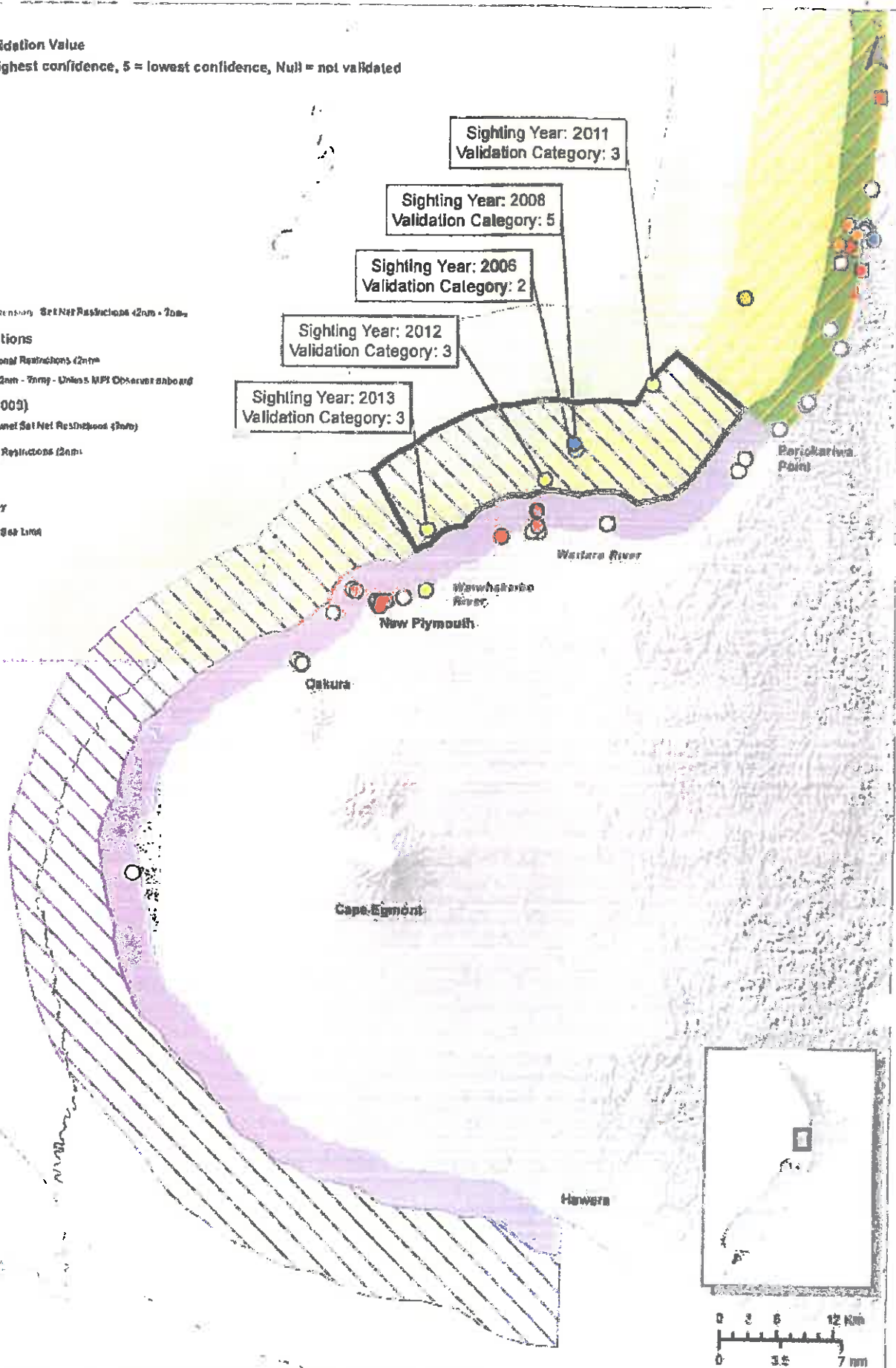
West Coast North Island  
Maui Marine Sanctuary

12 Nautical Mile Territorial Sea Limit

100m Depth Contour

**Bathymetry (m)**

- 0 - 50
- 51 - 100
- 101 - 150
- 151 - 200
- 201 - 500



Source Sighting: Maui's Dolphins Sighting Database (1970-2013) Expiry 24/07/2013  
Public Sightings: A validation process is undertaken to ensure that publicly reported sightings are verified. The map represents all reported sightings of Maui's Dolphins made to DOC and WWF by the general public within the Taranaki region.

This map and its content is not to be used for any other purpose other than that which it's been created for. Contains commercially sensitive data.

Coordinate system: NZTM 2000  
Date created: 20/08/2013

**Maui's and Hector's Dolphins  
All Sightings - Taranaki  
1970 - 2013**

*In- Confidence*



Department of Conservation  
*Te Papa Atawhai*

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## **APPENDIX 1d**

Due to the commercially sensitive nature of the data this is withheld under section 9(2)(a)(ii) of the Official Information Act 1982

## APPENDIX 2

## Appendix 2: Summary of new information since August 2012

### New public sightings information

1. DOC administers a sightings database for Maui's dolphins, which contains data predominantly from 1970 to the present. It is a 'living' database and is updated as sightings are received and as sightings undergo a validation process.
2. In June 2012, to improve the accessibility of sightings data through an overall national database, WWF and DOC initiated a process to merge databases and validation processes. The current validation system is a 5 point scale, with 1-3 considered reliable sightings, and 4 and 5 not reliable.
3. Since consultation on the Threat Management Plan in late 2012, there has been a Summer season of sightings data, and work on merging the databases has taken place. This led to the following changes occurring in the database:
  - a. Sightings from the old WWF validation system have been converted to the current system, so some sightings between 2007 and 2012 which previously had no validation in the database, now have a validation score;
  - b. Recent sightings that had not been validated by August 2012 have since been validated and have been updated accordingly;
  - c. New sightings received since August 2012 have been added to the database, along with validation scores where validation has been assigned.
4. There are five sightings between Pariokariwa Point and Hawera that are further than 2 nautical miles offshore (Appendix 1c). Two of these sightings are unchanged since consultation, two have had a validation score assigned after consultation, and one is a new sighting since August 2012:
  - a. A sighting made by an ex-DOC staff member in 2006, when working on the Pohokura oil rig. The sighting was approximately 4.4 nautical miles offshore. A validation interview was conducted and was scored a 2. Note: this sighting was available on the DOC website during consultation but had not been assigned a validation at that stage.
  - b. A sighting made in 2008 that came in from the WWF database, was also from the Pohokura oil rig, estimating the dolphins to be approximately 4.7 nautical miles offshore. In the process of merging the databases, interview notes were requested for this sighting. While a validation interview was carried out, it was with the supervisor of the person who sighted the dolphin, who was unable to provide enough information to adequately validate the sighting. It was scored a 5. Note: this sighting was available on the DOC website during consultation but had not been assigned a validation at that stage.
  - c. A sighting approximately 6.9 nautical miles off Mimi Urenui Bay in 2011. This sighting was scored a 3 and was available at the time of consultation.
  - d. A sighting approximately 2.5 nautical miles off the Waitara River from April 2012. This sighting was scored a 3 and was available at the time of consultation.
  - e. A sighting approximately 2.6 nautical miles off Bell Block, just north of New Plymouth in January 2013. This sighting was scored a 3. Note: this sighting was received in the summer season following the consultation process.

5. While one of the sightings is of low reliability, this is because it was second hand so did not have enough information to be verified. It was from the same location as another sighting with a high reliability so it is reasonable to believe that dolphins have been sighted in this area.

#### **DOC surveys**

6. DOC staff conducted summer boat surveys looking for Maui's dolphins in both Auckland and Taranaki regions. Aerial surveys also took place in Taranaki.
7. In the Auckland region, one boat survey was conducted from Manukau to Raglan and back. Nine groups of Maui's dolphins were observed, totalling 30 adults and two calves. There is likely to be double counting as some animals would have been re-sighted on the return leg.
8. In Taranaki, five fixed-wing searches from New Plymouth to Awakino to Hawera and return were conducted and six boat surveys covering New Plymouth to Awakino, Opunake and Hawera. No Maui's dolphins were sighted on these surveys.

#### **Fisheries observer effort**

9. In July 2012 the then Minister for Primary Industries implemented interim fishing restrictions in the Taranaki region. This included mandatory observer coverage for any set net fishing between Pariokariwa Point and Hawera and between 2 and 7 nautical miles offshore.
10. Between July 2012 and May 2013 a total of 419 observer sea days were conducted across 5 set net fishing vessels in this area ([Appendix 1d](#)).
11. Over 10,800 km of distance was covered and 325 fishing events (totally 255,700 m of net) were observed with 7 nautical miles from shore.
12. No dolphins were sighted during these observer sea days.
13. While this data is indicative of recent fishing behaviour is important to note that the data from the fisheries observers is not indicative of fishing behaviour prior to the interim measures coming into effect in July 2012. The spatial shift as a result of the interim measures is likely to result in a reduction in effort and change in fisher behaviour.
14. There is also an observer effect that cannot be quantified as fishing behaviour can change in the presence of observers. For example, some fishers chose to modify the routes taken by their vessels as they transit to and from their fishing grounds to ensure that the observer effort was comprehensive and covered a wide area.



# APPENDIX 3

### Appendix 3 – Estimated economic impact to fishing industry from MPI

1. The economic impact analysis presented here is based on the displacement or loss of catch from set net activity in the Taranaki region between 2 and 7 nautical miles offshore from Pariokariwa Point to New Plymouth.
2. The option DOC proposes to consult on would ban set net activity in a *smaller* area between 2 and 7 nautical miles offshore from Pariokariwa Point to Waiwhakaiho River.
3. Accordingly, MPI notes the economic impact analyses presented here is *larger* than the option put forward by DOC. An updated economic analyses based on the proposed boundaries will be included in the discussion paper for consultation purposes.
4. MPI estimates approximately five fishers operating six to eight commercial vessels may be directly affected by the option put forward by DOC to prohibit set net activity between 2 and 7 nautical miles offshore from Pariokariwa Point to Waiwhakaiho River. The ability for commercial set net fishers to adjust their fishing behaviour by moving further offshore beyond seven nautical miles, or alongshore south of Waiwhakaiho River, may be constrained. The species mix caught outside of this area may not align with their annual catch entitlement packages, which enable them to target and land certain species without financial penalties.
5. Catch effort and landings data have been used to estimate the value of set net landings coming from the area and the potential volume of landings that would be lost or displaced.
6. Direct revenue losses are calculated using estimates of landed prices and estimates of the reduction in landings that would be caused by putting in place the additional set net ban.
7. MPI has developed estimates of lost income using value added estimates from an input-output model of the economy. Value added is the different between the value of output and cost of goods and services purchased from other sectors. Note that value added includes income earned by labour and by capital. While value added in an input-output model varies slightly from other definitions of income, it is an adequate estimate of income for present purposes.
8. *Income loss (Annual Value Add):* MPI estimates lost value added into four categories:
  - a. Value added lost in the harvesting sectors (direct harvesting income)
  - b. Value added lost in the processing sector (direct processing income)
  - c. Value added lost in sectors that supply harvesting and processing (indirect income); and
  - d. Value added lost in the broader economy as the three types of income above are spent and generate income for suppliers of a wide array of goods (induced income)
9. The method described above estimates the first-year impact. The first-year impact presents an incomplete estimate of losses, because some of those losses will recur.
10. *Capitalised Future Value:* For approximating the present value of economic losses, MPI examined each category of loss and used its best judgement on how best to approximate the relation of the of the first-year loss to the present value of all future losses. These impacts are estimated to be:
  - a. Direct income in harvesting: A loss of 5 times the initial displaced annual income is used in calculations.
  - b. Direct income in processing: A loss of 2.5 times the initial annual displace income is used in calculations.
  - c. Indirect income in supply sectors: A loss of 1.5 times the initial displaced income in supply industries is used in calculations.

d. Induced income in broader economy: A loss of one year of induced income is an appropriate estimate of total losses.

11. *Total Cost*: is the sum of the Income loss and capitalised future value.

12. This analysis uses the average percentage of each species caught from Pariokariwa Point to New Plymouth (between two and seven nautical mile offshore) over a four year period (2008/09 and 2011/12) to estimate the potential revenue loss and associated economic impacts (annual value and capitalised future value losses).

<b>Estimated impact (loss)</b>	
Annual revenue	\$233 944
Annual value add	\$393 026
Capitalised future value	\$1 268 670
<b>Total Cost</b>	<b>\$1 661 696</b>

13. These estimates should be treated as indicative only because they:
- cover an area larger than the option DOC proposed to consult on,
  - do not account for any shift in effort beyond 2 nautical miles that has occurred in the last fishing year (2012/13) since the interim measures came into effect, and
  - do not fully account for the ability of fishers to shift their effort outside of the proposed closed area, noting that the remaining set net closures off the west coast of the North Island has already resulted in a large area loss.

## 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 Transport, and Maritime New Zealand

**Departments/agencies informed:** In addition to those listed above, the following departments/agencies have an interest in the submission and have been informed:

Te Puni Kokiri  
Department of Prime Minister and Cabinet

**Others consulted:** Other interested groups have been consulted as follows:

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

Date: 16/08/2013

Signature



### 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:

Consultation at Ministerial level

- has been consulted with the Minister of Finance [required for all submissions seeking new funding]  
 has been consulted with the following portfolio Ministers: *Primary Industries*  
 did not need consultation with other Ministers

Discussion with National caucus

- has been or  will be discussed with the government caucus  
 does not need discussion with the government caucus

Discussion with other parties

- has been discussed with the following other parties represented in Parliament:  
 Act Party     Maori Party     United Future Party  
 Other [specify]  
 will be discussed with the following other parties represented in Parliament:  
 Act Party     Maori Party     United Future Party  
 Other [specify]  
 does not need discussion with other parties represented in Parliament

Portfolio

*Conservation*

Date

*20 / 8 / 13*

Signature



