

Māui dolphin: 2016 update on New Zealand's research and management approach

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ABSTRACT

Māui dolphins (*Cephalorhynchus hectori maui*), a sub-species of New Zealand's endemic Hector's dolphin (*C. hectori*), are critically endangered. Numbering just 55 individuals (95% CI: 48–69) over 1 one year of age, they show evidence of ongoing population decline (2.8–3.2% per year). In 2012, a semi-quantitative risk assessment determined that the sub-species was subject to a level of human impact that significantly exceeded the level of Potential Biological Removal. In response to new information, the New Zealand Government reviewed the Māui dolphin component of the Hector's and Māui dolphin Threat Management Plan (TMP) and expanded the range of protection measures for Māui dolphin. Ahead of the next review of the TMP in 2018, a program of ongoing data collection and research is underway. This paper outlines data collection over the past 12 months and describes the research being undertaken under the new Māui dolphin five year strategy and research plan.

KEYWORDS: conservation biology, fisheries management, Maui's dolphin, risk assessment, threat status.

INTRODUCTION

In 2014 the IWC Scientific Committee made the following request (IWC 2015; p. 58): “The Committee urges the New Zealand Government to commit to specific population increase targets and timelines, and respectfully requests that reports be provided annually on progress towards conservation goals.” In 2015, the New Zealand Government provided information on the current status of Māui dolphins, including abundance, trends, threat status, and risk assessment (SC/66a/SM/3). The following is an update on New Zealand's research and management approach since last year's report.

CURRENT MANAGEMENT

Current Management Measures

A range of protection measures have been put in place for the Māui dolphin since 2003. A summary of the current measures are illustrated in Figure 1. Over 6,200 square kilometres of coastal waters are closed to set net fishing activity and 1,702 square kilometres to trawl fishing activity.

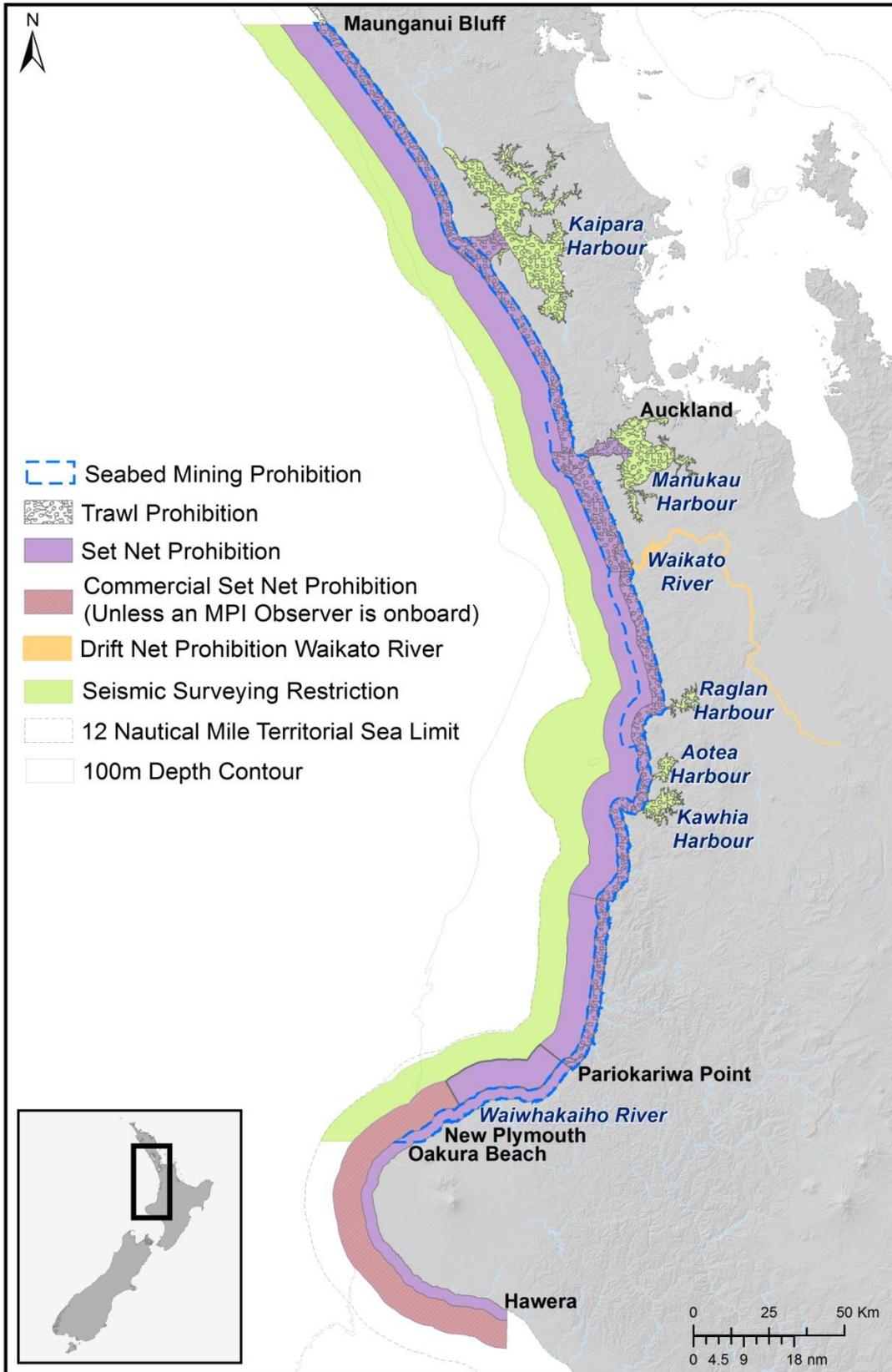


Figure 1: Current spatially-defined protection measures for Māui dolphin.

2015-2016 DATA COLLECTION

Sightings¹

There have been 71 sightings of Māui/Hector's dolphins off the North Island reported to the Department of Conservation (DOC) or WWF in the 12 month reporting period to Jan 31, 2016. No DNA samples were obtained and therefore sub-species identity is not certain for any of these sightings. The majority of sightings were seen between Muriwai Beach and Port Waikato. There were five sightings in the Kapiti Coast/Wellington Region, one in Hawkes Bay, and six in the Bay of Plenty (Figure 2). 58% of the sightings were independently validated as being reliably a Hector's or Māui dolphin (i.e. they received a validation score of 1 or 2²), 17% were validated as consistent with a Hector's or Māui dolphin, but outside the current range of either sub-species (validation score 3), and 24% are pending validation.

Necropsies³

There have been no beachcast Māui or Hector's dolphins on the North Island that required necropsy in the 12 month reporting period to Jan 31, 2016.

Captures

There have been no observer-reported or fisher-reported captures of Māui dolphins in commercial fisheries in the 14 month reporting period to March 31, 2016.

Observer coverage

Mandatory Ministry for Primary Industries (MPI) observer coverage is required on all commercial set net vessels operating around the Taranaki region outside the existing set net closures, within 2-7 nm from shore between the Waiwhakaiho River and Hawera (i.e. target coverage area). The required level of observer coverage in the target coverage area is 100%. In the 14 month period to March 31, 2016, observer coverage in the Taranaki set net fleet was 98%, with 110 of the 112 set net fishing days in the specified zone being observed. The two unobserved days are suspected to be fisher area misreporting and are being investigated by MPI. Outside of this target coverage area an additional 144 set net fishing days were observed.

MPI observer coverage is also focused outside the existing trawl closures West Coast North Island area, within 2-7 nm from shore between Maunganui Bluff and Pariokariwa Point (i.e. the target coverage area). In the 14 month period ending March 31, 2016, observer coverage in the West Coast North Island trawl fleet was 24%, with 134 of the 553 trawl fishing days in the specified zone being observed. Due to additional measures put in place in November 2015 to improve observer coverage in this zone, the average percent coverage between then and March 2016 was 31.6%. Outside of this target coverage area an additional 375 trawl fishing days were observed.

Ship strike

There have been no reported ship strikes of Māui dolphins in the 12 month reporting period to Jan 31, 2016.

¹ Māui dolphin sightings reported to DOC are displayed online quarterly at www.doc.govt.nz/mauisightings.

² The process for validating Māui and Hector's dolphin sightings is described online at <http://www.doc.govt.nz/Documents/conservation/native-animals/marine-mammals/mauis-validation-system.pdf>.

³ Māui and Hector's dolphin incidents reported to DOC are displayed online quarterly at <http://www.doc.govt.nz/dolphinincidents>.

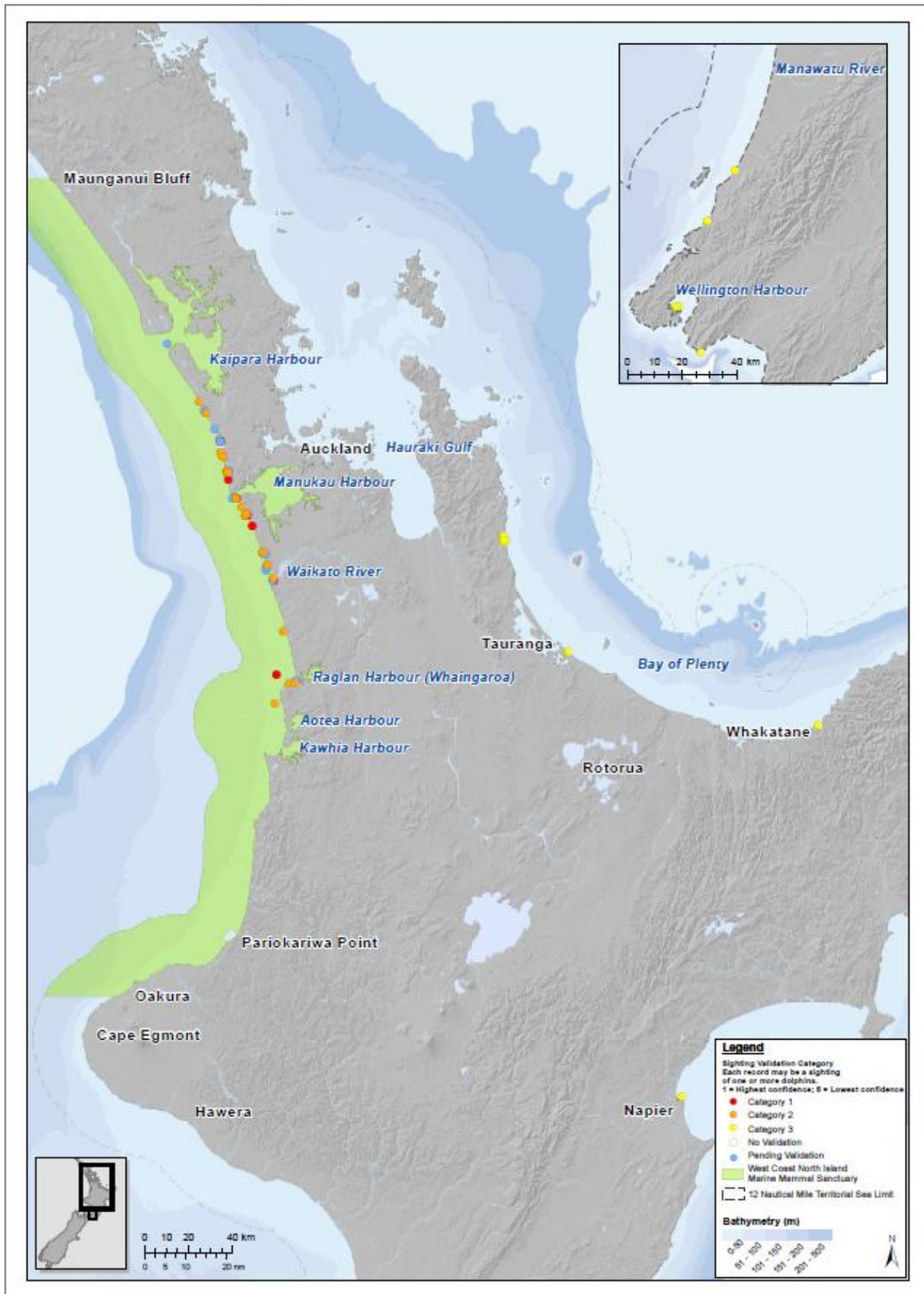


Figure 2: Sightings of Māui/Hector's dolphins off the North Island reported to DOC in the 12 month reporting period to Jan 31, 2016.

CURRENT RESEARCH

Māui dolphin five year strategy and research plan

A Māui dolphin Research Advisory Group⁴ was established by DOC and MPI in 2014. This group focused initially on identifying and prioritising research for Māui dolphins that would help inform management decisions for their recovery and continued conservation. The first output from the group was the Māui dolphin five-year strategy and research plan⁵. Stakeholders provided input on the development of the plan and annually will review progress towards achieving the plan. In November 2015, the stakeholder group met to review preliminary data from the abundance estimate project and to discuss priorities within a wider project on the distribution of Māui dolphins⁶.

Current research projects

At previous meetings convened by DOC and MPI to discuss research on Māui dolphins, it was agreed that surveys of abundance should be conducted at intervals of not more than five years. Based on this agreed benchmark, it was recommended that additional small-boat surveys and biopsy sampling be conducted in 2015 and 2016. Both summer field seasons have been completed for a revised abundance estimate. Preliminary data from the first field season was presented to the Scientific Committee in 2015 (IWC 2015, Annex L, Section 8.3.3.4). The results of the second field season are currently being analysed and will be completed in the latter half of 2016 when they will be made available on the DOC website.

Additionally, in February 2016, DOC conducted a pilot study exploring the use of CPODs as a means to investigate the offshore extent of Māui dolphin distribution as well as daily, seasonal and inter-annual variation in their habitat use. Two PODs were deployed concurrently with the 2016 abundance estimate biopsy sampling. One was positioned in Manukau Harbour (10th – 25th Feb), and the second was moored off Hamilton's Gap (10th Feb – 5th Mar) in an area where Māui dolphins are regularly sighted. Preliminary results are encouraging and full analysis of the data is currently underway. The results of this analysis will feed into planning considerations for a wider study using the CPODs.

DOC undertook monthly aerial surveys from January through April 2016, covering the area from Awakino (north Taranaki) to Hawera (south Taranaki). No Māui dolphins were observed on these surveys.

⁴ The Māui dolphin Research Advisory Group meetings and project updates can be found online at <http://www.doc.govt.nz/our-work/our-work-with-maui-dolphin/maui-dolphin-research-advisory-group/>.

⁵ The 5-year Strategy and Research Plan can be found online at <http://www.doc.govt.nz/Documents/conservation/native-animals/marine-mammals/mauis/maui-dolphin-five-year-strategy-and-research-plan.pdf>.

⁶ The report of this meeting can be found online at <http://www.doc.govt.nz/our-work/our-work-with-maui-dolphin/maui-dolphin-research-advisory-group/meetings-and-project-updates/02-november-2015/>.

REFERENCES

International Whaling Commission. 2015. Report of the Scientific Committee. *J. Cetacean Res. Manage. (Suppl.)* 16:1-96.