

NEW ZEALAND MARINE SCIENCES SOCIETY

TE HUNGA MĀTAI MOANA O AOTEAROA



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Submission: Further consultation on fisheries measures to protect Hector's dolphins in the South Island

This submission is made on behalf of the membership of the New Zealand Marine Sciences Society (NZMSS) - Te Hunga Mātai Moana O Aotearoa. It is made in good faith in my role as President of the NZMSS and in accordance with the Code of Ethics and Rules of the Royal Society of New Zealand.

NZMSS is a professional society affiliated to the Royal Society of New Zealand - Te Apārangi. NZMSS has approximately 470 members. We are a non-profit organisation that provides access to, and within, the marine science community, and we identify emerging issues through annual conferences, annual reviews, a listserv and a website www.nzmss.org.nz. NZMSS membership covers all aspects of scientific interest in the marine environment and extends to the uptake of science in marine policy, resource management, the environment and the marine business sector. We speak for members of the society and we engage with other scientific societies as appropriate.

In general, NZMSS supports additional protection for Hector's dolphins. We have concerns that the additional protection measures proposed are not sufficient to meet Fisheries New Zealand's stated management goals. Our detailed submission is attached.

Please contact me at the email address provided below for any further information regarding this submission.

Kathy Walls

Handwritten signature of Kathy Walls in purple ink.

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NZMSS is of the view that there is a need for further fishing-related measures to protect South Island Hector's dolphins (Question 7). The Consultation Document states that the objective is to "support the dolphins to achieve levels of abundance close to what they would be without human-induced impacts" and mentions "the Government's long-term goal to reduce the mortality of non-target species from marine fisheries to zero." The proposed protection measures are insufficient to achieve either of these goals within a reasonable management timeframe. The Consultation Document does not provide any information on the length of time it would take to meet the population recovery goal or the long-term goal of reducing bycatch to zero, for each of the management options proposed. Our assessment is that the options in the Consultation Document would result in lengthy delays reaching the stated goals, potentially in the order of many decades. This significantly increases the risk of losing the smallest, most vulnerable dolphin populations. Much more effective protection would need to be implemented to avoid population declines and further population fragmentation.

NZMSS supports a comprehensive programme of on-board camera monitoring (Question 8). Our submission on camera monitoring outlines ways of making the proposed camera monitoring programme scientifically robust. However, video cameras are a method for monitoring bycatch, not for avoiding or reducing bycatch. Therefore, monitoring would not achieve the stated objectives of population recovery or reducing bycatch to zero (see above).

NZMSS is of the view that it is unrealistic to rely on self-reporting of dolphin captures by fishers, with occasional spot checks using observers and/or video camera monitoring, as an information tool. Fishers report < 5% of dolphin captures (IWC 2016; Slooten and Dawson 2016) despite a legal requirement to report dolphin deaths under the Marine Mammals Protection Act (MMPA). Further, we consider that the proposed method of discussing these catches with fishers in an attempt to identify common factors that 'cause' bycatch, is not scientifically robust. A scientifically robust approach to determining what 'causes' bycatch would take many years (most likely one or two decades) and would result in a high level of continued bycatch of protected species. Put simply, it will be impossible to determine which fishing gears and fishing behaviours are associated with higher bycatch without obtaining a large sample of each of the different fishing behaviours. This approach would be very costly, in terms of time, resources and dolphin bycatch. In addition, it would be ineffective, and unnecessary.

It is already clear, from decades of data gathered in New Zealand and internationally, that gillnets and trawling cause marine mammal bycatch and that longline fisheries can cause seabird bycatch (MPI, 2020; Read et al., 2006). Several effective mitigation methods exist for seabird bycatch (including tori lines, setting at night, thawing bait, weighted lines, etc). The problem is that the use of these mitigation methods is not effectively regulated and enforced. By contrast, the only effective mitigation for marine mammal bycatch is to switch

to dolphin-safe fishing methods in waters < 100 m deep, as recommended by the IUCN (2012)¹.

The approach used to estimate the mortality limits proposed in the Consultation Document has been strongly criticised by international reviewers, including a panel of three international experts invited by MPI and DOC to participate in a workshop in Wellington (Taylor et al. 2018). In addition, sustainable bycatch levels for such small dolphin populations are very low and would require 100% observer coverage to ensure that bycatch limits are not exceeded. This approach is not scientifically robust, and not effective in reducing bycatch sufficiently to meet the stated management objectives.

There is insufficient scientific evidence to support an exemption to the regulations, by allowing trawl vessels with one metre headline height to fish in Hector's and Maui dolphin habitat (Question 11). The assumption that a lower headline height reduces bycatch is based on conversations with fishers and has not been validated by observer data or results from scientifically designed research. The area proposed for low headline height trawling should instead be a no-trawling area.

We recommend that New Zealand follows the advice of the IUCN (2012), to ban all trawling and gillnetting in coastal waters less than 100m deep (Question 12). This would be an effective solution to achieve Fisheries NZ's stated goals of reducing and avoiding bycatch, while allowing for population recovery (IUCN 2012; Slooten and Dawson 2021).

There is no credible scientific evidence to support an exemption to the regulations, allowing trawl vessels with one metre headline height to fish in Hector's and Maui dolphin habitat (Questions 13 and 14).

NZMSS supports Option 4 as a step in the right direction (Question 18). Fishing effort has clearly been displaced from dolphin-protection areas into areas left unprotected, and option 4 would slightly reduce the displacement of fishing effort.

In the last year, there have been about 100 gillnet sets in the area to be closed under option 4 (Halley, 2021). In previous years, there were on average 2 gillnet sets in this area each year (MPI, 2019). When gillnets are banned in some areas but not others, fishing effort tends to be displaced to other dolphin habitat that has been left unprotected. For example, the time series of gillnet fishing effort over time shows no indication of an overall reduction in fishing effort after the 2008 dolphin protection measures were implemented (MPI, 2019). The available evidence indicates that all of the past fishing effort has been displaced to areas left unprotected, which are still part of Hector's and Maui dolphin habitat.

The current gap in dolphin protection on the south side of Banks Peninsula was the result of the habitat model used in the TMP (Roberts et al., 2019). This model, which has turbidity as a driving factor, predicts that few Hector's dolphins would use this area. However, more than 35 years of research in this area, including replicated aerial surveys (summer & winter,

¹ The IUCN is the international organisation that lists Endangered species, including marine species, and advises governments on how best to protect them.

over three years; Rayment et al., 2010) show that this area is part of Hector's dolphin habitat.

The statement in the consultation video (MPI 2021) that closing this small area off the south side of Banks Peninsula would remove all potential for displacement, is incorrect. Fishing effort will continue to be displaced, north, south and offshore, to other areas of dolphin habitat.

The most effective option for ensuring recovery of Hector's and Māui dolphin populations (Question 20) is to avoid gillnetting and trawling throughout their habitat, switching to dolphin-safe fishing methods (e.g. fish traps, potting, trolling, longlining and other hook and line methods).

The current Hector's dolphin population is highly fragmented (Hamner et al., 2017). Recent surveys show that Hector's dolphins have been extirpated from areas that, according to historical records, once supported abundant populations (McGrath 2020). Protecting all Hector's dolphin habitat is our best chance to facilitate recolonisation of these areas, reduce population fragmentation, and promote recovery.

Other comments (Questions 21 and 22): The Fisheries NZ Consultation Document is based on the analysis presented in the Threat Management Plan (Roberts et al. 2019), which has received substantive criticism from New Zealand and international experts and has not been subject to scientific peer-review (Slooten and Dawson, 2021). The International Whaling Commission has initiated a peer-review of this work, in order to determine if it is suitable as a basis for management decisions. Until this review is completed, it will be essential to take precautionary management decisions such as the protection measures proposed by the IUCN.

MPI's model-based estimates of dolphin distribution, regional population size, and therefore risk are unreliable, and inconsistent with peer-reviewed research published in mainstream scientific journals. The model-based estimates of local population sizes are also inconsistent with Fisheries NZ's own population survey data (MacKenzie and Clement 2016). For example, the model-based estimate of 638 Hector's dolphins in Otago (Table 3, Supporting information document) is inconsistent with published data (e.g. Turek et al. 2013). The MPI model essentially re-distributes about 2000 Hector's dolphins away from Banks Peninsula and into the Otago, Timaru and Kaikoura areas. This results in an overall 35% decrease in the bycatch estimate for the east coast of the South Island.

To conclude, NZMSS generally supports additional protection for Hector's dolphins. However, we have concerns that the additional protection measures proposed are not sufficient to meet Fisheries NZ's stated management goals, nor will they achieve adequate recovery of Hector's dolphins in the near future.

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