

NEW ZEALAND MARINE SCIENCES SOCIETY

TE HUNGA MĀTAI MOANA O AOTEAROA



6 December 2021

Onboardcameras@mpi.govt.nz

Submission: Consultation on wider rollout of on-board cameras

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 and 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 camera monitoring of fishing vessels. We recommend following international best practice in bycatch monitoring. Please see our attached submission.

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 Submission: Consultation on wider rollout of on-board cameras

NZMSS recommends placing cameras on a random, representative sample of all fishing vessels (Questions 1 and 2). The proposed rollout of cameras on all longline, danish seine and purse seine vessels, but only trawl vessels 32 metres or under and only set net vessels 8 metres or over would not result in statistically valid data. In order to estimate bycatch for these different fishing methods, it is critical to obtain a representative sample.

The geographical area where vessels are fishing is critical. Fishing vessel size is not an accurate indicator of risk. For example, both small gillnet vessels and large trawl vessels cause marine mammal mortalities. Vessels operating in waters < 100 m deep, including harbours, are of greatest risk to Hector's and Māui dolphins. The critical factors are the amount of fishing net in the water, the length of time it is in the water, and the location of fishing effort.

Using a size cut-off for gillnet vessels (> 8m) and trawl vessels (< 32m) substantially reduces the sample size for these fishing methods. For example, the Threat Management Plan (TMP; Fisheries New Zealand, 2019) estimated that 160 gillnetting vessels and 18 trawlers off the North Island west coast would have been impacted if the Minister of Fisheries had chosen the most effective management option. The proposed rollout would place cameras on 58 of the 178 trawl and gillnet vessels operating in Māui dolphin habitat. A sampling design that eliminates vessels on the basis of size would also result in a non-representative sample, potentially leading to biased bycatch estimates.

Placing cameras on a representative sample of vessels, for all fishing methods, avoids having to make arbitrary decisions about which fishing methods and which geographical areas to focus on in the first few years of rollout and which to leave until later years (Questions 3 and 4). In the first instance, the focus should be on regions for which past observer coverage has been very low (e.g. west coast and north coast of the South Island). Around the North Island, the focus should be on protection rather than further monitoring. The most recent population estimate shows no indication that the Māui dolphin population is recovering (Constantine et al. 2021). Time has run out to carry out more research and monitoring on Māui dolphins, as well as the smallest, most vulnerable North Island (east coast) and South Island populations (including Otago and Catlins). The east coast of the North Island has a very small dolphin population. Until genetic work is done in this area, it is not clear if these are Hector's or Maui dolphins. Meanwhile, they need urgent protection from gillnet and trawl fisheries.

To conclude, NZMSS recommends following international best practice in the design of camera and observer monitoring programmes (e.g. Wade and Angliss 1997).

References:

Constantine R, Steel D, Carroll E, Hamner R, Hansen C, Hickman G, Hillock K, Ogle M, Tukua P, Baker CS. 2021. Estimating the abundance and effective population size of Maui dolphins in 2020-2021. Report to DOC.

Fisheries New Zealand. 2019. Protection of Hector's and Maui Dolphins. Consultation on proposals for an updated Threat Management Plan. Department of Conservation Fisheries New Zealand. June 2019.

Wade PR, Angliss RP. 1997. Guidelines for assessing marine mammal stocks: Report of GAMMS Workshop, 1996, Seattle, Washington. NOAA Technical Memorandum 1997; NMFS-OPR-12.