



ENVIRONMENT AND CONSERVATION ORGANISATIONS OF NZ INC.

Level 2, 126 Vivian St, Wellington, New Zealand

PO Box 11-057, Wellington

Email: eco@eco.org.nz Website: www.eco.org.nz

Phone/Fax 64-4-385-7545

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Ministry of Fisheries

PO Box 1020

Wellington, 6140

Email: hectors.dolphin@fish.govt.nz

Submission on Review of the Amateur Set Net Ban for a Defined Area of the ECSI to Manage Fishing Related Threats to Hector's Dolphins

1.0 Introduction

The Environment and Conservation Organisations of NZ (ECO) is the national alliance of 62 groups with a concern for the environment. We welcome this opportunity to make a submission on this discussion paper.

This submission has been prepared by members of ECO Executive and is in line with ECO Policy that was developed in consultation with ECO member bodies and endorsed by our AGM.

We note that the legislation requires the recovery of the dolphins within a period of not more than 20 years. This objective should be included in the goals of the plan.

2.0 Key submission

ECO supports retention of the status quo (option 1) and rejects options 2 and 3. Hector's dolphin is an endangered species which is threatened by set nets.

Option 1 is the only option which takes a precautionary approach to the impacts on Hector's dolphin of a known threatening process ie set nets.

Additional benefits to seabirds and other marine mammals (associated and dependent species) from the current prohibition.

3.0 Key Reasons for Support

ECO agrees with MFish that:

"Hector's dolphins are endemic to New Zealand and are some of the world's rarest dolphin species. They are classified as "endangered" and "nationally endangered" by the IUCN¹ and the Department of Conservation (DOC) (Baker et al. 2010) respectively." (Para 8)

¹ <http://www.iucnredlist.org/>

ECO Agrees with MFish in para 34 that:

..reported mortalities only provide an indication of the nature of the threats to dolphins. This is due to:

- a a lack of independent monitoring, including low observer coverage of inshore commercial fisheries;*
- b no formal monitoring of recreational activity;*
- c poor incentives to voluntarily report incidents;*
- d cause of death is only established for 111 of the 275 reported mortalities in the DOC incident database for ECSI; and*
- e anecdotal information that indicates actual fishing-related mortalities are higher than reported (Cawthorn 1998, Dawson 1991, Russell 1999).*

ECO agrees with MFish (para 18) that:

Key biological characteristics of Hector's dolphins make them susceptible to the effects of human-induced mortality, including fishing-related mortality. The dolphins:

- a. are relatively short lived (about 20 years);*
- b. have a low reproduction rate (a female has a single calf every 2-3 years);*
- c. become sexually mature at a relatively late age (about 7-9 years);*
- d. favour shallow waters less than 100 m deep (Dawson 2009, Encyclopedia of Marine Mammals) and have a localised inshore distribution (i.e. an overlap with many human coastal activities);*
- e. have small population sizes which compound the potential impact of human-induced mortalities.*

Agree that information indicates is smaller now than in the past, including (para 24):

- a. A series of modelling work suggests that abundance of the ECSI Hector's dolphin population has declined:
 - i. Martin et al (1999) estimated that abundance in 1970 equalled a carrying capacity at between 4340 and 5045 animals;*
 - ii. Burkhart & Slooten (2003) built on Martien et al (1999) and estimated that 1970s abundance was 4783;*
 - iii. Slooten (2007) built on Burkhart & Slooten (2003) and Martien et al (1999) and estimated that 1970s abundance was over 10,000 animals.**
- b. Pilcher & Baker (2000) and Pilcher (2002) detected a decline in the genetic diversity of the ECSI population that is more consistent with a decline in abundance that with other factors like sex bias or loss of sub populations.*
- c. Pilcher (2002) detected genetically different subgroups in the ECSI population and evidence that some of these subgroups (e.g. Pegasus Bay and Timaru) have experienced greater loss of genetic diversity (which is most likely equivalent to abundance) than other subgroups.*

4.0 Reasons for Supporting Option 1:

ECO firstly notes that:

- a. fishing is the greatest known cause of human induced mortality on Hector's dolphins where cause of death is known*
- b. amateur set netting is known to be responsible for 12 mortalities on the ECSI population between 1948 and 2010*
- c. MAF interviews with amateur fishers in Bank's peninsula found that set netting for moki and butterfish were responsible for 6 Hector's dolphin mortalities between 1984 -1988*
- d. amateur set nets can be poorly constructed and set incorrectly. Some of the mortalities from the Bank's Peninsula interviews were the result of poorly constructed or set nets*

- e. *amateur set nets can be left unattended for lengthy periods of time (sometimes due to weather), which increases the risk of mortality*
 - f. *peak recreational effort co-incides with the peak inshore distribution of dolphins.*
- (para 48).

Further:

- a. The ECSI population is the second largest Hector's dolphin population. There is a number of sources of information to suggest that population size has probably declined from much higher levels of abundance.
- b. Hector's dolphins are known to be susceptible to entanglement in set nets,
- c. There was clear overlap between dolphin distribution and fishing activity,
- d. Dolphins are most prevalent within 4 nm of the shore.

ECO is concerned that:

"As the level of observer coverage was low during the 2009 calendar year (approximately 15.8%), there is a risk that the actual level of mortalities of the ECSI Hector's dolphins may exceed the higher bound of the PBR." MFish 2010.

The level of observer coverage is insufficient to ensure that any mortality can be effectively monitored. A proposal without monitoring does not consider the risk to the dolphins

The entanglement of dolphins in the area exemption area near Kaikoura is further reason for concern. Clearly this exemption should be removed and the area extended to 7 nautical miles offshore.

ECO considers there are adequate reasons set out above (and below) to reject all other options and adopt option 1.

5.0 Additional Reasons

5.1 Additional reasons

Additional Reasons for Supporting Option 1:

The additional reasons for ECO's support are:

1. Hector's dolphin were once more widespread around New Zealand, apart from the Eastern side of the North Island. As populations recover the measures must ensure that the recovery from a threatened state is not-impeded by geographically restricted measures.
2. Hector's dolphin is recognised by IUCN - the World Conservation Union as an endangered population (www.redlist.org).
3. The Minister of Conservation has gazetted Hector's dolphin to be a threatened species under the Marine Mammals Protection Act.
4. Hector's dolphin are endemic to New Zealand;
5. They are the world's rarest and smallest marine dolphin;

6. As stated in the recovery plan: *“Both dolphin species live only about 20 years, have a low reproduction rate (calving every 2-3 years) and have late onset of sexual maturity (7-9 years). These factors result in a low maximum population growth rate, which put Hector’s and Maui’s dolphin at threat from even low levels of human-induced mortality.”*
7. ECO notes that: *“The DOC incident database indicates that 32% of the total reported incidents, and 63% of incidents where the cause of death was able to be assessed, are attributable to set net entanglement; indicating that set netting is the greatest known cause of human-induced Hector’s dolphin mortalities.”*
8. The report notes that: *there have been three known incidents of Hector’s dolphins becoming entangled in a rock lobster pot line.*
9. But the reporting by fishers of by-catch has been historically low. Unless there are dedicated observers on vessels it is unlikely that information on by-catch will be reported.
10. ECO also notes that when the fishing industry undertook a trial of camera based observation in the Canterbury Bight it observed two Hector dolphin captures. One of the captures was seen by the crew, the other was not. This further indicates why relying on the crew will under-estimate dolphin captures.

5.2 Additional benefits:

The current measures (option 1) have additional benefits on other species that are also caught by set nets including other dolphins and a range of penguins (eg yellow-eyed penguins), shags, and other seabirds.

5.3 Economic Considerations

Economic considerations cannot be only focused on the losses to industry. Economic considerations must consider the annual loss in natural capital and other values including option value and bequest value.

The values include **option value, bequest and existence values**. Option value is the value of keeping open options for the future, both for ourselves and for future people. These may be options to conserving resources which is relevant to the definition of utilisation of fisheries resources (section 8).

Option value also includes quasi-option value which is the value of the information gained by not closing off options such as destroying ecosystems and species now.

Bequest value is the value that we put on bequeathing intact the environment (or anything else) to the future, and this may reflect considerations of inter-temporal justice, commonly referred to as intergenerational justice.

Existence value is the value put on the existence and knowledge of that. Thus we value that species, ecosystems and landscapes, biophysical processes and so on exist. We would feel much poorer if we were to lose the species or the ecosystems to mining or exploration. These are real values and motivate many of us to make submissions of this kind.

As above, since these **values are non-rival and are held simulataneously by many, economics requires that such values are summed across the entire valueing population.** These can easily outweigh the private market values that the few will derive from the private uses of fish, even when the multipliers on any market activity are included.

The United Nations commissioned multinational expert report Millenium Ecosystem Assessment (Watson and Zakri 2005) provides a detailed discussion of the services and benefits derived by people and societies from the environment and the contribution to human wellbeing:

6.0 General Principles

ECO also consider that proposals must apply a precautionary approach to considerations and ensure:

1. All the obligations on a decision-maker under sections 5, 8 to 10, and 11 to 14 of the Fisheries Act 1996.
2. This includes consideration of international obligations (section 5) and section 9 obligations, especially marine biodiversity and habitat of particular significance to fisheries management.
3. The Ministry needs to consider the obligations on future generations and the need to avoid, remedy or mitigate the effects of fishing on the marine environment.
4. International agreements and measures have further articulated the precautionary approach. Section 5 of the Fisheries Act requires decision makers to act in a manner consistent with “New Zealand’s international obligations relating to fishing”. These obligations include the UN Fish Stocks Agreement and the South Pacific RFMO text which New Zealand has now ratified.
5. Amongst these obligations is the United Nations Food and Agriculture Organisation (FAO) Code of Conduct on Responsible Fisheries (1995) which states that:

“6.5 States and subregional and regional fisheries management organizations should apply a precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment.”

Article 7.5 of the Code of Conduct further set out what constitutes precautionary management in fisheries.²

² 7.5 Precautionary approach

7.5.1 States should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment. The absence of adequate scientific information should not be used as a reason for postponing or failing to take conservation and management measures.

7.5.2 In implementing the precautionary approach, States should take into account, inter alia, uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality and the impact of fishing activities, including discards, on non-target and associated or dependent species, as well as environmental and socio-economic conditions.

The United Nations Implementing Agreement on High Seas Fisheries and Straddling Stocks³ includes a requirement on “*coastal States and States fishing on the high seas [to] apply the precautionary approach in accordance with article 6.*” Article 6 includes requirements for:

1. *States shall apply the precautionary approach widely to conservation, management and exploitation of straddling fishstocks and highly migratory fishstocks in order to protect the living marine resources and preserve the marine environment.*
2. *States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures.*”

Therefore, where information is uncertain or unknown about the state of a stock or biological information, the decision should favour lower catch limits or more environmentally stringent regulations.

6. A recent review of application of the FAO Code of Practice⁴ indicates that New Zealand needs to do a lot more to implement the code, particularly in the area of stock management, impacts of fishing, and bycatch and habitat effects.

7.0 Conclusions

ECO strongly supports action to recover the Hector’s dolphin from its current endangered threatened status and supports Option 1.

Thank you for the opportunity to make this submission. Please contact Barry Weeber on (021)738-807 if you require further information.

Yours sincerely,

Barry Weeber
Co-Chairperson

7.5.3 States and subregional or regional fisheries management organizations and arrangements should, on the basis of the best scientific evidence available, inter alia, determine:

stock specific target reference points, and, at the same time, the action to be taken if they are exceeded; and stock-specific limit reference points, and, at the same time, the action to be taken if they are exceeded; when a limit reference point is approached, measures should be taken to ensure that it will not be exceeded.

7.5.4 In the case of new or exploratory fisheries, States should adopt as soon as possible cautious conservation and management measures, including, inter alia, catch limits and effort limits. Such measures should remain in force until there are sufficient data to allow assessment of the impact of the fisheries on the long-term sustainability of the stocks, whereupon conservation and management measures based on that assessment should be implemented. The latter measures should, if appropriate, allow for the gradual development of the fisheries.

7.5.5 If a natural phenomenon has a significant adverse impact on the status of living aquatic resources, States should adopt conservation and management measures on an emergency basis to ensure that fishing activity does not exacerbate such adverse impact. States should also adopt such measures on an emergency basis where fishing activity presents a serious threat to the sustainability of such resources. Measures taken on an emergency basis should be temporary and should be based on the best scientific evidence available.

³ The United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (in force as from 11 December 2001).

⁴ Pitcher T, D. Kalikoski, G. Pramod and K.Short (2009) Not honouring the code *Nature* **457**, 658-659 (5 February 2009) | doi:10.1038/457658a; Published online 4 February 2009
and
Pitcher T, D. Kalikoski, G. Pramod and K.Short (2009) Safe Conduct? Twelve years fishing under the UN Code (WWF) Available at: <http://assets.panda.org/downloads/un.code.pdf>

