Ministry of
Fisheries
Te Tautiaki i nga tini a Tangaroa

New Zealand Government

ASB House
101-103 The Terrace
PO Box 1020
Wellington 6140, New Zealand
Tel +64 4 470 2600
Fax +64 4 819 4601

fish.govt.nz

0800 4 POACHER

H0152

20 March 2009

Minister of Fisheries

Summer Observer Programme Results

Purpose

1 The purpose of this briefing is to outline:

i) Preliminary results of the 2009 summer observer programme; and
ii) Future tasks and data analysis.

Executive Summary

2 The summer observer programme on inshore vessels has recently finished. Fisher cooperation with the programme has resulted in the Ministry of Fisheries (MFish) exceeding the target of 900 observed sea days (963 achieved). This is the most coverage ever achieved in one year on inshore vessels.

3 The observers reported that some protected species were accidentally killed during fishing operations including: albatrosses; yellowed-eyed penguins; common dolphins; and shags. MFish is working with fishers and DOC at a national and regional level to address these risks where necessary.

4 No Hector's or Maui's dolphin mortalities were observed. 81% of sightings of Hector's dolphins were inside the existing set net closures and trawl restrictions. This result is expected given that dolphins are found closer inshore during the summer months.

5 MFish is writing to all fishers to thank them for their participation and to provide them with a questionnaire and opportunity to provide feedback to MFish on the programme.

Background

6 Additional funding was provided in budget 2008 for observer coverage. The increase in funding for 2008 was targeted at inshore fisheries. Historically, observer focus has been on offshore fisheries. There has been very low observer coverage of inshore fisheries resulting in very little fishery independent information on bycatch interactions. The inshore

observer coverage for 2008 was targeted at protected species interactions with an emphasis on monitoring any ongoing interaction with Maui's and Hector's dolphins.

7 To deliver substantial observer coverage in a timely fashion, innovative planning was required as it was not possible to simply 'ramp up' the overall year-round observer programme by employing full time observers[1]. Instead, a dedicated project was initiated targeting the use of University students and graduates for a two-month contract in January and February, during the academic summer recess.

8 Observers were placed in four different areas to cover at least some of the distribution of each of the three Hector's dolphin sub populations and the Maui's dolphin sub species. These areas were:

i) WCNI (Raglan, Onehunga);
ii) ECSI (Lyttelton, Timaru, Akaroa, Moeraki, Karitane);
iii) SCSI (Port Chalmers, Careys Bay, Taieri Mouth, Bluff); and
iv) WCSI (Greymouth, Nelson, Westport, Tarakohe).

Objectives of the Summer Observer Programme

9 The key objectives of the summer observer programme were to:

i) Observe interactions, including any fishing-related mortalities, of protected species of seabirds including albatrosses and petrels;
ii) Observe interactions, including any fishing-related mortalities, of other protected species including other marine mammals and sharks;
iii) General observation of fishing practices including location of fishing effort, gear use, and mitigation measures;
iv) Cover 50% of effort in a focused two month period to enable relatively robust estimation of rare bycatch events (such as Hector's and Maui's dolphins);
v) Observe interactions between Hector's dolphins and set net and trawl fisheries, including any fishing-related mortalities; and
vi) Observe behaviour, numbers and location of Hector's dolphins.

10 The summer observer programme had a target of delivering 900 days at sea.

Preliminary Results

11 At this stage we can summarise the number of days and the protected species bycatch accurately. Seabird species identifications have not yet been confirmed by necropsy. Preliminary identification is from observers. The results of protected species interactions and seabird mortalities presented below should be treated with caution.

12 Once the full data set has been compiled a series of detailed analysis of the data can be started. Focus of this additional work will be detailed analysis of behaviour of dolphins around the fishing vessel, whether behaviour of fishers changed as a result of observer coverage (i.e. areas fished) and further work on overall distribution of dolphins. Timing of

[1] Full time positions take considerable time to recruit and there needs to be year-round work for the observers

this further analysis depends on availability of researchers. However, we currently estimate two-three months for data to be fully analysed.

Observer Coverage

13 The summer observer programme has achieved observations for 963 sea days over a two month period on set net and trawl vessels within the inshore area. Each region achieved different levels of observer coverage. This was influenced by the number of observers deployed within each region, weather, and cooperation from fishers with the observer programme. The total number of days achieved for each region is:

i)	WCNI	54 days	(0 set net; 54 trawl);
ii)	ECSI	402 days	(123 set net; 279 trawl);
iii)	SCSI	233 days	(101 set net; 132 trawl); and
iv)	WCSI	274 days	(68 set net; 206 trawl).

14 Information on percentage coverage relative to overall fishing effort is dependent on the entering of fishing returns. Traditionally, entering of returns is completed two months after the fishing activity. Based on this timeframe we would expect to determine the level of effort covered by observers for the January/February period by the end of April.

Maui's Dolphins

15 Two Maui's dolphins were observed during the coverage period. However, observer coverage for the West Coast North Island was low. 54 coverage days were achieved in the trawl fishery due to difficulty in placing observers on active vessels. No coverage days were achieved on set net boats during the January/February period.

Hector's Dolphins

16 No Hector's dolphin mortalities were observed. However, observers did record over 4,800 sightings of dolphins[2] and behavioural observations. Preliminary maps show where sightings were made (see attached).

17 Preliminary analysis of data shows that 81% of sightings were made within the set net closed areas around the South Island. Further detailed analysis of the 19% of sightings made outside the closed areas will tell us if these dolphins were interacting around vessels or if they were seen while the boat was steaming to a fishing ground.

Other Protected Species

18 The following table summarises fishing related mortalities of other protected species. There were 85 protected species mortalities reported by observers in the programme. Note that there were other protected species interactions (i.e. capture in a net and then live release). This data will be analysed shortly.

[2] Each sighting does not equate to a separately identified individual dolphin.

Species	Threat Status (DoC)	Threat Classification (IUCN)	Number of Mortalities	Location	Vessel Type
Shags	Various	Various	32	East Coast South Island	Trawl
Albatrosses	Various	Various	24	West Coast South Island and East Coast South Island	Set net and trawl
Common Dolphins	Not threatened	Lower risk	9	West Coast South Island	Trawl
Sooty shearwaters	Gradual decline	Near threatened	9	East Coast South Island	Trawl
Yellow eyed penguin	Nationally vulnerable	Endangered	5	East Coast and South Coast of South Island	Set net
Fur seals	Not threatened	Lower risk	3	South Island	Trawl
Gulls and terns	Various	Various	2	South Island	Trawl
White pointer shark	Gradual decline	Vulnerable	1	South Coast South Island	Set net

Discussion

19 A preliminary assessment of the management implications of observed bycatch is outlined below. A fuller management assessment will be carried out when data from the programme, particularly levels of observer coverage relative to total effort, has been assessed.

Hector's Dolphins

20 The 2008 decisions made by the previous Minister did not try to reduce risk of fishing mortality to dolphins to zero. Management advice to the Minister noted that some risk would remain to dolphins with the suite of measures implemented. A key objective of the observer programme was to estimate the extent of the ongoing overlap and risk level.

21 Data from the observer programme confirms that overlap remains between fishing activity and range of the dolphins. Data suggests the majority of dolphins were seen within the closed area (e.g. 84% of sightings for the ECSI). This is consistent with information on summer distribution outlined in the Threat Management Plan (previous studies have shown that dolphins have an inshore summer distribution).

22 No dolphin mortalities were observed. A detailed analysis of non-lethal dolphin interactions (i.e. whether the dolphins were interacting with the gear) will provide further information on levels of risk to Hector's dolphins.

23 There are key issues worth noting:

i) Coverage during summer months when dolphins have a strong inshore distribution still shows overlap between fishing/dolphins. The degree of overlap between fishing activity and dolphins will increase in winter when dolphin distribution is known to be more dispersed; and
ii) The ability to statistically extrapolate information from the two month period covered is limited.

Seabirds

24 The fishing-related mortality of seabirds in trawl and set net fisheries is a known issue. However, observer coverage of inshore trawl and set net fisheries has not been significant in the past and this summer observer programme greatly increases our knowledge of seabird-fishery interactions.

25 Yellow eyed penguins, shags and albatrosses are all species, or groups of species, that require an assessment of risk from fishing and may be vulnerable to decline if caught in similar numbers to that observed across other times of year and geographical areas.

26 Currently there are no regulated seabird mitigation measures for inshore trawl and set net fisheries. However, all of these fisheries will be assessed over the next year as part of development of work on the NPOA and seabird standard. This assessment may result in regulated or voluntary mitigation measures being recommended.

27 Alongside development of a national risk assessment and standards setting, further work needs to be undertaken on development of effective mitigation measures for inshore trawl fisheries. MFish is currently working with DOC and fishers on the East Coast South Island to develop and test inshore trawl mitigation.

Common Dolphins

28 Common dolphins are known to be killed in trawl nets from time to time. Although common dolphins are not a threatened species, they are a protected species, and fisheries operations should be managed to reduce mortalities where possible.

29 Deep water/large trawl vessels operate a marine mammal operating procedure to minimise interactions within marine mammals. The procedure contains specific measures to minimise dolphin interactions. It may be possible to utilise some aspects of the procedure in the inshore trawl fishery to minimise dolphin mortality.

30 It is not known whether there are any similarities between common dolphin behaviour and Hector's dolphin behaviour around trawl vessels.

Fur Seals

31 Fur seals are known to be killed in fishing operations on a regular basis, most notably in trawl fisheries. Although fur seals are not a threatened species, they are still a protected species, and fisheries operations should be managed to reduce mortalities where possible.

32 Some populations of fur seals may be declining and further work is currently planned to better understand fur seal abundance and distribution and to assess if any local depletion may be occurring.

Protected Species of Sharks

33 White pointer sharks are occasionally reported as killed in set net fisheries, as well as in trawl fisheries. However, it is not known how common it is for this species of shark to be caught in set net fisheries, due to historically low observer coverage.

34 The status of the white pointer shark population around New Zealand is unknown although catch records indicate little bycatch.

35 Landing of white pointer sharks is prohibited and they are a prohibited species under the Wildlife Act. Fishers are required to report captures using non-fish/protected species forms. It is possible that a better picture will emerge on the extent of this mortality over the next year or so based on non-fish bycatch reporting.

Fishers' Involvement in the Observer Programme

36 MFish has worked closely with fishers who have carried observers. MFish employed regional supervisors within each of the four areas to help with the implementation of the observer programme and to liaise with the fishers who were taking observers.

37 Reaction to the observer programme from fishers has been mixed. Some fishers have been supportive of the observer programme and others have been disinterested in being involved. There are three fishers who have refused to carry observers[3] throughout the duration of the observer programme and have fished in breach of the placement notices issued by MFish. The Compliance Group is investigating non compliance with the placement notices and are assessing if these fishers should be prosecuted.

38 There are other fishers who have cooperated with MFish and have offered to take observers when they were not initially identified to be involved in the programme. MFish has also worked with fishers to come up with workable and manageable solutions when fishers presented problems with placement of observers to maintain goodwill and an effective relationship with fishers.

39 The feedback from skippers so far has been generally good. A survey will be sent out to fishers to gather more feedback on different parts of the observer programme.

40 Initial conclusions are that the summer observer programme was very successful, over-delivering on days and running smoothly, with some notable exceptions described above.

[3] The observers that had been due to be on these vessels were relocated and put on other vessels about half way through the programme.

Future Tasks and Data Analysis

41 As noted above, the analysis contained in this paper is preliminary. A number of different analyses will be completed on the data that has been collected by the observers. That work will include:

i) The percentage coverage that has been achieved across the total number of set net and trawl vessels and the amount of catch that was observed;
ii) A comparison with the number of protected species recorded by observers compared to those reported on the non-fish bycatch forms by fishers; and
iii) An analysis of dolphin abundance, distribution, behaviour and interactions with fishing vessels.

42 A full review will also be completed of the summer observer programme to help inform future programmes and to assess success against objectives. The review is timetabled for completion by the end of April.

Recommendation

43 It is recommended that you:

i) **Note** the contents of this brief;
ii) **Note** that MFish is preparing a press release advising of completion of the observer programme and results; and
iii) **Note** that MFish is undertaking a review of the observer programme which is due to be completed by the end of April 2009.

Steve Halley
Manager National Environment Team
Ministry of Fisheries

NOTED/AS AMENDED

Hon Phil Heatley
Minister of Fisheries

23/03/2009