MINISTRY OF FISHERIES
Te Tautiaki i nga tini a Tangaroa

ASB Bank House, 101 - 103 The Terrace
PO Box 1020, Wellington, New Zealand
Phone (04) 470-2600, Fax (04) 819-4601

M/Fish 90

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Minister of Fisheries

SEABIRD BYCATCH TAKEN BY A SWORDFISH VESSEL

Purpose

1 The purpose of this paper is to seek your views on a course of action to address a recent incident where a significant amount of seabird bycatch was taken by a vessel targeting swordfish and tuna in the Kermadec Fisheries Management Area. As indicated in an earlier brief (S7717) management action is required to respond to the risk of further seabird bycatch, particularly of albatross species, in this fishery.

Background

2 Earlier advice on this issue related to a vessel that had been fishing in the Kermadec Fisheries Management Area (Kermadec FMA), specifically targeting swordfish and bigeye tuna, but also catching a variety of other tuna species. During a single trip, the vessel caught 58 seabirds including 7 petrels and 51 albatross[1]. Identification of all of the dead albatrosses caught is not possible because the crew did not bring them on board.

3 Photographs taken by the observer show the released birds are the endemic Antipodean albatross (*Diomedea antipodensis*)[2] including juvenile and adult birds from the Auckland Islands population and the Antipodes Islands population. This species is listed by the IUCN as vulnerable.

[1] The previous report of a mollymork capture has been subsequently revised to an additional albatross capture.
[2] There is scientific debate as to whether Antipodean albatross (*Diomedea antipodensis*) is actually a single species with two populations (the international and IUCN perspective), or two species (the Department of Conservation perspective): Antipodean albatross (*Diomedea antipodensis*) restricted to the Antipodes Islands and Gibson's albatross (*Diomedea gibsoni*) restricted to the Auckland Islands.

The Auckland Islands and Antipodes Islands populations contain nearly all of the global population of this species.

4 The number of Antipodean albatross that were taken in a single fishing trip is of considerable concern and there is a risk that this incident and any further incidents could impact adversely on the future of the population. For example, Antipodean albatross only breed every two years and the population is particularly vulnerable to even small increases in mortality. It would take many years for this population to recover from one such 'event'. Repeated similar events are likely to cause further population decline for a species that is already listed as vulnerable (the IUCN notes that any rapid decline is likely to result in this species being classified as either Endangered or Critically Endangered).

5 It is clear that the nature of the target fishing method and the absence of mitigation measures contributed to this bycatch. Surface longlines were set during the day (albatross are day time feeders) unlike most tuna longlines which are set at night. Furthermore, the lines were set at very shallow depths allowing some birds to remain on the surface while attached to the hook. This latter feature could contribute to lower sinking rates of baits (before they descend below the diving depth of albatross) or making them vulnerable to deeper diving species (such as petrels) that bring the bait to the surface where they are then vulnerable to albatross strikes. More importantly, the shallowness of the line and baits suggests that even the mandatory mitigation measure of tori line use may not be fully effective in this fishery because it only protects baits during the line setting process.

6 Swordfish spend much of their time during the day at depth and rise to the surface at dusk and stay in shallow waters until dawn when they descend again. Daytime setting of shallow-set surface longlines maximises the times that baits are available to swordfish. Conversely setting at night reduces that time, however, swordfish are still taken as a bycatch of deeper set longlines set to maximise catches of tuna.

7 It is likely that the risk of repeated incidents is high as this new fishing technique is not only expected to continue, but effort is likely to expand as new vessels are brought in to New Zealand to target swordfish. MFish considers, therefore, that the types of interactions involved in this incident are likely to continue or increase, risking further adverse environmental impact.

8 This type of fishing technique is new to New Zealand waters[3]. Traditionally the New Zealand tuna longline fleet set their lines at night and in much deeper water. These measures effectively reduce the risks of seabird interactions, particularly albatross interactions.

9 It is of note that the observer report from a previous trip to the Kermadec FMA undertaken by this vessel indicates no incidents of seabird captures. The vessel fished in a different area on this trip so an area effect is possible (see Annex One). MFish has limited information to

[3] Swordfish was introduced to the QMS on 1 October 2004 along with four other large tuna species associated with the pelagic longline fishery. However the allocation of swordfish was based on catch history years 1990-92 a period prior to the peak development of domestic tuna longline fishery. A significant quantity of quota was unallocated and therefore reverted to the Crown. For the first two years the Crown held the quota pending completion of quota appeals and made the ACE available annually at market rates. ACE prices were very low during this period and during that time some fishers took advantage of this to target swordfish on a small scale. The Crown divested its swordfish quota holdings early in 2006 and one entity acquired a significant amount of quota through the tender process. This seemed to provide the incentive to bring in an Australian vessel designed for swordfish fishing which commenced operations under charter in August 2006 in conjunction with two New Zealand owned and registered fishing vessels fishing to the same company. Another vessel purchased by a New Zealand fishers from Australia also operated in the Kermadec FMA in the latter part of the 2005-06 fishing year.

specifically define areas of higher or lower risk other than proximity to the island chain in the Kermadec FMA, or to define any temporal effects at this stage. A schematic of the known distribution of the Antipodean albatross is provided at Annex Two.

10 As previously noted, seabird bycatch of this magnitude requires urgent action, particularly given that the species involved were Antipodean albatross, a vulnerable seabird that cannot sustain this level of mortality. The options available to you to prevent the risk of further large-scale mortalities of vulnerable seabirds in this fishery are provided in this brief.

11 Investigations into possible illegal activities by the operators of the fishing vessel *Seawin Emerald* are ongoing but are not relevant to the current advice and recommendations.

Options for short term action

12 Under s8 of the Fisheries Act 1996 (the Act), you are required to avoid, remedy or mitigate the adverse effects of fishing on the aquatic environment. When determining whether an impact is adverse, amongst other things you consider reasonable, you can take into account best available information on the following:

- past, present future effects of fishing
- biological impact of the fishing activity on the species and/or the ecosystem
- societal values associated with the species being impacted

13 You do not need to rely solely on information outlining the extent of current or historical impact, you can also consider the likelihood and risk associated with future impacts from fishing. Also, you do not need to rely solely on biological information when determining whether an effect is adverse. You can also consider the value society places on the species being impacted when determining the point at which an impact becomes adverse and when considering the type, and impact on users of the resource, of measures to avoid remedy or mitigate those effects.

14 The status of the species of albatross caught by this vessel means that there has been an adverse effect on the population from the fishing activity referred to above. It is clear that future effects of fishing, particularly from vessels in the swordfish fishery using the same method described above, will exacerbate the impact on the population.

15 Should you consider that this situation constitutes an emergency (in this case a significant adverse change in the aquatic environment), you are able to use emergency provisions provided for in s16 of the Act to implement measures in the short term and commence a process to implement longer term management arrangements for the fishery.

16 The benefits of this option are that it will immediately reduce the risks associated with the fishing technique thereby mitigating the risk of further high numbers of seabird captures. The option will also enable action to be taken if fishers do not comply with the rules. The disadvantage of this option is that whatever emergency measure is taken has the potential to adversely impact on the whole of the domestic tuna longline fleet for a period of time.

17 Should you consider that the situation does not constitute an emergency but agree that urgent action is required, MFish can work urgently with commercial fishers to devise measures to prevent such an occurrence happening again. Measures could be subsequently introduced as

sustainability measures pursuant to section 11 of the Act. As this could take 4-6 weeks to implement, such an approach would rely on industry to voluntarily introduce required measures until such time as they are made mandatory. While MFish is confident of support by industry organisations for this issue to be addressed it is not certain that all parties in the fishery would be willing to comply.

18 Both options are provided in detail below for your consideration.

Option One: Implementation of Emergency Measures

19 Pursuant to s16 emergency measures can be put in place for short periods of time (a maximum of three months) to immediately stop significant adverse effects in order to allow a more detailed assessment of long-term mitigation options. In this instance, should you decide to impose an emergency measure, MFish will also develop a plan of action for implementing effective long-term solutions to this problem.

Legislation

20 Section 16 of the Act provides for the imposition of emergency measures in response to an outbreak of disease, a serious decline in the abundance or reproductive potential of one or more stocks or species, or a significant adverse change in the aquatic environment. You may implement such measures by notice in the Gazette.

21 The imposition of emergency measures may be made in respect of any stocks or areas affected or both, as you consider necessary or expedient in the circumstances. Before giving notice in the Gazette, and to the extent that is reasonably practicable, you must consult those persons or organisations that are representative of those classes of persons who have an interest in the stock or area affected, including Maori, environmental, commercial, and recreational interests. Irrespective of the practicality of consultation with interested persons, you must ensure that all emergency measures are publicly notified.

22 The application of emergency measures may take a number of forms, whether these are generally or specifically targeted to a species, area, time, size, sex, biological state, or some combination of a number of factors. Further, additional reporting requirements on any person may be imposed, as well as a requirement to dispose of any fish, aquatic life, or seaweed in a specified manner.

23 The effect of implementing an emergency measure does not empower you to reduce or cause to be reduced during the fishing year to which it relates any Total Allowable Catch set under section 13 or 14 of the Fisheries Act 1996. Those sections relate to the setting or varying of a Total Allowable Catch or an alternative Total Allowable Catch for such stocks subject to the Quota Management System.

Implementation

24 In order to implement an emergency measure you would need to be satisfied, based on the best information available to you, that one or other of the criteria in s16 had been met. In this case, pursuant to s16(1)(c) you need to be satisfied that there has been a significant adverse change in the aquatic environment (i.e. seabirds).

25 MFish considers that there are two potential emergency measures in this instance that would serve the purpose of preventing any further fishing in order to allow a more detailed assessment of

mitigation options:

a) An area closure; and/or

b) Method specifications.

Area Closure

26 MFish considers that the first option available to you as an emergency measure is the closure of the Kermadec FMA to surface longline fishing for a three month period (likely to be December 2006 – February 2007). Although it is not clear that the excessive level of seabird interaction observed was due to the actual area that was fished, the area is one of the primary fishing grounds for the application of this new fishing technique, and for the targeting of swordfish. Therefore, closing the area will effectively remove access to one of the main fishing grounds for this target fishery.

27 It is unlikely that this measure will have a significant impact on the broader tuna longline fleet as they have not traditionally fished in the Kermadec FMA to any great degree. Further, because of the seasonal nature of the fisheries, the Kermadec area is not fished early in the fishing year when the area would be closed. During 2005/06 only 0.7% of the catch was reported in the first half of the fishing year. However, MFish will need to clarify this with fishers.

28 There is a significant risk, however, that closing the Kermadec FMA may shift effort to other areas, rather than reduce this fishing technique overall. The same high-risk seabirds are distributed within coastal waters particularly in areas around East Cape. There is the potential that the same fishing techniques applied in these areas could also result in incidents of unacceptable seabird bycatch.

Method Specifications

29 MFish considers that the second option available to you as an emergency measure is to require the compulsory night setting of all surface longlines for a three month period.

30 It is expected that the primary cause for the large number of albatross captures observed was that the fishing technique involved shallow set gear that was deployed during the day. The benefit of this option, therefore, is that it addresses the specific problem that is likely to have caused the large number of seabird captures. An additional benefit is that compliance with the measure can be observed to an extent by the set up of the gear.

31 There may be a cost associated with this measure, with some fishers required to change their gear to meet the required specifications. It is unlikely that the measure will impact on tuna longline fishers more broadly however, as the domestic tuna longline fleet already set at night in deep water.

Option Two: Voluntary Measures Followed by Implementation of Sustainability Measures

32 Under this option you would not take any emergency measures and would rely on voluntary measures until such time as regulations could be brought in under normal processes.

Legislation

33 Section 11 of the Act allows you to set or vary any sustainability measure for one or more

stocks or areas, after taking into account any effects of fishing on any stock and the aquatic environment; any existing controls that apply to the stock or area concerned; and the natural variability of the stock concerned. Ensuring sustainability includes avoiding, remedying or mitigating any adverse effects of fishing on the aquatic environment. The aquatic environment includes aquatic life, which in turn includes seabirds (whether or not in the aquatic environment).

34 Section 11 outlines a non-exhaustive list of sustainability measures that you may apply to a stock. It includes, but is not limited to measures that may relate to catch limits, biological characteristics of stocks, fishing areas, fishing methods and fishing seasons. You may implement any such measures by notice in the Gazette or by recommending regulations be made under s 298.

35 However, before implementing any s11 sustainability measure you must consult with persons or organisations that have an interest in the stock or the effects of fishing on the aquatic environment in the area concerned, including Maori, environmental, commercial, and recreational interests, as well as provide for the input and participation of tangata whenua. Currently, the minimum consultation timeframe would be up to 4 – 6 weeks. Further, after setting or varying any sustainability measure, you must provide in writing the reasons for your decision to all parties consulted with.

Implementation

36 Although it is not clear why a bycatch of this magnitude has occurred, the likely causes are a relatively new targeting technique that is applied during daylight hours. The fishing has also occurred in a new area of the fishery, although coastal waters are included in the extensive ranges of albatross species and the same fishing techniques applied in these areas could result in a similar level of bycatch. The types of sustainability measures that could be implemented to mitigate the risk posed by this new targeting method include spatial and temporal closures, improved mitigation devices or activities, or new method specifications.

37 As a first step to determining what measures are appropriate, urgent collaboration with industry would be required. The New Zealand domestic tuna longline fleet has been actively involved in the development and deployment of seabird mitigation devices for many years, using a variety of effective techniques such as tori lines and night setting. Many vessels also operate under strict codes of practice and are committed to continually decreasing bycatch levels.

38 MFish considers that, in the most part, industry will be willing to discuss potential mitigation measures that will be appropriate for this new targeting technique. However, it is recognised that some of the people involved in this new target fishery have not been involved in the domestic tuna longline fleet in the past and may not be as willing to participate in discussions.

39 Engaging industry in the development of measures would have the significant advantage of "buy in" to any measures implemented as a result. In addition, the cooperation of industry effective mitigation measures could be developed combing both scientific knowledge and expertise and the knowledge and experience of commercial fishers.

40 As s11 measures can take up to 4-6 weeks to implement through the legislative process, the successful application of this option would rely extensively on industry cooperation to cease fishing in this manner and to implement new measures voluntarily until such time as they could be regulated. While MFish considers most industry members would cooperate in this way, there is a significant risk that some fishers to which any measures would apply would not comply. This risk is particularly apparent given that the operator of the vessel involved in this bycatch incident has a

history of non-compliance with existing rules and regulations.

Additional Measures

41 In addition to considering short-term measures, there is also an urgent requirement to monitor the current activity of any vessels that leave port to target swordfish and tuna in the Kermadec FMA. To this end, MFish has arranged for two of the three vessels fishing tuna in the area to carry observers on their next trip.

42 The Chief Executive has power to place an observer on any vessel to observe fishing or to collect information on the effect of fishing on the aquatic environment. MFish intends to seek the Chief Executive's view on the option of full observer coverage of vessels that intend to target swordfish or are likely to catch significant quantities of this species.

43 This may result in a significant reprioritisation of resources within the observer programme, however, it will enable all activities on those vessels targeting swordfish and tuna in the Kermadec FMA to be observed.

Additional Measures

44 The Department of Conservation has requested that the following advice be provided to you.

"DOC Views:
The northern foraging distribution of wandering albatrosses, particularly juveniles and adult females, overlaps with the swordfish fishery operating in the FMA 10. Should this level of bykill be repeated, the species will rapidly decline towards critical status.
Accordingly, the Department of Conservation views this incident very seriously, and supports you taking emergency measures if at all possible, especially in light of the vessels planned return to fishing this weekend. The Department is also anxious to see the vessel investigated and potentially prosecuted for its apparent breach of regulations including obstructing the observers duties to return dead specimens."

Summary

45 A single fishing trip has given rise to an unacceptable level of bycatch of vulnerable seabirds. While these seabirds are widely distributed, current advice is that this single fishing incident will have an impact on the populations of albatross concerned and given the fact that this species of albatross is considered to be vulnerable, this impact is, therefore, considered to be adverse. The impact is considered to result from a particular type of fishing aimed at broadbill swordfish but also taking tuna species, i.e. day setting of shallow-set surface longlines. There is also likely to be an area effect involved as this incident suggests that the Kermadec FMA is an area of high risk at least at the current time of year.

46 While any catch of the magnitude reported in the seabird bycatch incident is unacceptable, there is uncertainty surrounding the consistency of the bycatch problem. In one observed trip, the vessel in question caught no seabirds; in the next observed trip the strike rate was extremely high. This suggests the need for very careful consideration of the most appropriate management measures to be utilised. There is, however, a risk of continued incidents of this nature and scale if the fishery continues to operate in the same way and in the same area.

47 If because of the scale of impact and status of the seabirds involved, you consider that this has given rise to an emergency then the emergency provisions of the legislation are available to you. MFish has recommended options that could be introduced for a three month period while more

extensive long term measures are developed in consultation with industry, DoC and other interest groups. Should alternative, more effective, measures be developed in the interim it would be open to you to revoke the emergency measures during that period and replace them with these alternatives. If you elect to adopt this option a letter to be sent to affected parties is attached for your signature and a press release announcing that decision is also attached.

48 Alternatively, if you consider that the matter is urgent but does not meet the criteria for an emergency, as a matter of urgency MFish could commence consultation with industry immediately with a view to implement mitigation measures in the short term through s11 of the Act within a four to six week time frame. The cooperation of industry will be sought to implement agreed measures earlier on a voluntary basis.

49 There will still be a need to hold such measures under review and to monitor their effectiveness in the fishery in a variety of conditions and or areas. MFish will be giving consideration to the need for heightened observer coverage in this fishery to this end.

Recommendations

50 It is recommended that you:

a) **Note** the background issues raised in the brief.

b) **Agree** that either:

i) Subject to a short consultation with affected parties, you are satisfied that there has been a significant adverse change in the aquatic environment and, in the circumstances, you consider it necessary to impose the following emergency measures:

- close the Kermadec FMA to surface longline fishing for a three month period; and
- require the compulsory night setting of all surface longlines for three month period; and
- sign the attached letter

OR

ii) MFish work urgently with commercial fishers to devise effective measures to be implemented initially voluntarily, followed by implementation in due course through s11 of the Act.

c) **Note** the additional measures to be taken regarding full observer coverage on vessels that intend to target swordfish or are likely to catch significant quantities of this species.

d) **Copy** this brief to the Minister of Conservation.

Arthur Hore
for Chief Executive
Ministry of Fisheries

~~APPROVED / NOT APPROVED~~ / APPROVED AS AMENDED

Jim Anderton
Minister of Fisheries

26 / 11 / 2006