Forest & Bird
GIVING NATURE A VOICE

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Ministerial Inquiry into use and operation of Foreign Charter Vessels
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Forest & Bird has focused on the inquiry purpose point a) *the application of New Zealand's legislative regime to the use and operation of fishing vessels, and in particular foreign charter vessels (FCV's) with respect to ..... fisheries management and compliance with that regime by such vessels and their operators.* In particular we have focused on how well FCV's manage bycatch of seabirds and marine mammals in relation to regulations and where information is available also codes of compliance and vessel management plans.

To achieve this we have outlined the policy framework for the Ministerial Panel, followed by an analysis of the FCV's performance in comparison with domestic vessels (where possible) in terms of meeting the regulations and complying with codes of practise as well as their effectiveness in reducing bycatch.

Summary

Our analysis has looked at 4 fisheries which involve Foreign Charter Vessels. These are trawl fisheries for Hoki, Squid and Jack Mackerel and the surface long line fishery mainly for tuna. Overall the FCV in the Hoki and Squid fisheries are performing badly in terms of seabird bycatch. In the Jack Mackerel trawl fishery which is mainly FCV's better implementation of MMOP is required across the whole fishery and in the Tuna fishery the domestic vessels are performing badly compared to the charter vessels.

Hoki. The FCV's had more than twice the seabird capture rates than domestic vessels in the year 2009-10. A close analysis was not possible as we didn't have access to the raw data but the CSP report suggests that one vessel could have contributed a significant proportion of this. More effective management of offal is needed in both domestic and FCV's to reduce the attractiveness of the boats to birds as well as commitment to mitigation.

Squid. 83% of the tows over the 2 years assessed are by FCV's. FCV's did not perform well in terms of seabird bycatch in either year. Although there was a slight decline, both years were extremely high - more than twice as high as the domestic fleet in both years. This fishery performs very badly overall

in terms of bycatch as it also catches the critically endangered NZ sea lion. It is not clear why the FCV's in particular perform so badly. Our opinion of this fishery is that it is overall an unsustainable one for bycatch. Either this needs to radically improve or alternative methods of catching squid should be required such as jigging.

Jack Mackerel. This is mainly undertaken by FCV's so a comparison with a domestic fleet could not be undertaken. The major bycatch problem in this fishery is capture of marine mammals. A new MMOP may be improving this although an increase in observer coverage to ensure boats are applying this code would be beneficial.

Tuna. Here the FCV's (just 4 Japanese vessels) performed better in terms of bycatch management than the domestic fleet. Capture rates for seabirds were extremely high in the domestic fleet and coupled with the low observer coverage – just 7% compared with 100% on the FCV's it is of considerable concern. It appears that the two fleets have different requirements – with night-setting mandatory for the FCV's as well as twin tori lines and other mitigation if needed. Day-setting is only allowed in the domestic fishery if line weights are used however it is not clear how these rules are applied. In addition the FCV's have a target limit of 15 'at risk' birds per boat. These more stringent requirements combined with the high observer coverage are likely to be the reason for the better outcome.

Background on Seabirds.

Why focus on seabirds? Seabirds are a major part of New Zealand's bird fauna making up more than half of our native species. 73 landbird species breed in New Zealand of which 63% are endemic i.e. they breed nowhere else in the world. However there are 84 seabird species which breed in New Zealand 42% of which breed nowhere else in the world[1]. How we effectively manage and protect our seabird fauna is critical to how New Zealand meets our national legislative and policy guidelines but also how we meet our international obligations including the Convention of Biodiversity and other obligations listed below. How we measure up in regards to these obligations has an impact on our international reputation and potentially on trade access.

Marine mammals are also a significant part of our fauna with a huge diversity of whales, dolphins, and pinnipeds (seals and sea lions) present in New Zealand's marine environment. Almost half the worlds cetaceans have been reported in our waters. In particular we have some of the rarest endemic marine mammals in world including the tiny Hector's (*Cephalorhynchus hectori*) and Maui's (*Cephalorhychus hectori maui,)* dolphins and the New Zealand sea lion (*Phocarctos hookeri*).

Legal Framework.

National Legislation

1. The Wildlife Act 1953. Seabirds are absolutely protected under this act. It is an offence to accidentally catch and kill a seabird unless it is reported. It also requires fishers to take all reasonable steps to avoid committing catching seabirds. All seabird deaths must be reported.

[1] Graeme A. Taylor. 2000. Action Plan for Seabird Conservation in New Zealand. Part A:Threatened Seabirds. Department of Conservation Threatened Species occasional Publication No. 16

2. The Marine Mammals Protection Act 1978. This act provides for the conservation protection and management of marine mammals. A permit is required to 'take' marine mammals which by definition includes harm, harass, injure or attract. All fishing related deaths must be reported.

3. Fisheries Act 1996. The purpose of the Act is to provide for the utilisation of fisheries resources while ensuring sustainability. 'Ensuring sustainability' is defined in the Act as maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations, and avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment, which includes seabirds. "Any adverse effects" means not just adverse effects to species that may be considered at risk.

4. Section 9 of the Fisheries Act, requires decision makers, when achieving the purpose of the Act, to take account of the environmental principles in the Act, which include:

    - Associated or dependent species (which includes seabirds) should be maintained above a level that ensures their long-term viability; and

    - Biological diversity of the aquatic environment should be maintained.

5. The Minister of Fisheries has a range of powers to take measures to avoid, remedy, or mitigate the effect of fishing related mortality on seabirds. These include placing a seabird by-catch limit through regulation; through Gazette, prohibit all or any fishing or fishing methods in an area to mitigate the effects of fishing –related mortality on seabirds. For example drift net fishing was banned in 1991. Also promulgating regulations for the purpose of mitigating the impact of catching seabirds. For example regulations requiring the use of tori lines in all tuna longline fisheries were established in 1992.

6. Section 5 of the Fisheries Act requires that it be interpreted in a manner consistent with New Zealand's international obligations relating to fishing. It also requires all persons exercising or performing functions or duties under the Act to act in a manner consistent with these obligations.

International Obligations

7. The New Zealand Biodiversity Strategy reflects NZ's commitment as a signatory to the International Convention on Biological Diversity, to stop the loss of biodiversity world wide. It includes the following objectives;

    - "*Protect biodiversity in coastal and marine waters from the adverse effects of fishing and other coastal and marine resource uses" and*

    - *Protect and enhance populations of marine and coastal species threatened with extinction, and prevent additional species and ecological communities from becoming threatened*".

8. United Nations Convention on the Law of the Sea requires that States "shall take into consideration the effects on species associated with or dependent upon harvest species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened."

9. United Nations Agreement on Straddling Fish stocks and Highly Migratory Fish stocks, 1995. Article 5(f) of the General Principles requires States to "minimize pollution, waste, discards, catch by lost or abandoned gear, catch of non-target species, both fish and non-fish species, (hereinafter referred to as non-target species) and impacts on associated or dependent species, in particular endangered species, through measures including, to the extent practicable, the development and use of selective, environmentally safe and cost-effective fishing gear and techniques";. Article 6. 1 states that "States shall apply the precautionary approach widely to conservation, management and exploitation of straddling fish stocks and highly migratory fish stocks in order to protect living marine resources and preserve the marine environment"

10. The FAO International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds) 2000. This voluntary agreement requires member countries to develop a national plan of action (NPOA-Seabirds) for reducing the incidental catch of seabirds in their longline fisheries. It also sets out guidelines for what should be included. More recently the FAO has produced technical guidelines for responsible fisheries "Fishing Operations 2. Best practices to reduce incidental catch of seabirds in [all] capture fisheries". The central tenet of this guideline is the production of a National Plan of Action for Seabirds(NPOA-S) that applies across all fishing types.

11. The Convention for the Conservation of Migratory Species of Wild Animals. The Agreement on the Conservation of Albatrosses and Petrels is a product of this convention and New Zealand is one of 13 member countries.

12. The Agreement on the Conservation of Albatrosses and Petrels. The main objective is "to achieve and maintain a favourable conservation status for albatrosses and petrels" and "In implementing such measures the Parties shall widely apply the precautionary approach. In particular, where there are threats of serious or irreversible adverse impacts or damage, lack of full scientific certainty shall not be used as a reason for postponing measures to enhance the conservation status of albatrosses and petrels". The ACAP web site also has a series of fact sheets which identify best practise mitigation techniques that can be used for various fishery types http://www.acap.aq/mitigation-fact-sheets

Fisheries analysis

In this next section we have assessed the major fisheries where fishing impacts occur and compared FCV's with the domestic fleets in each fishery. We give an outline of the mitigation which is required under regulation and if additional measures are required through Vessel Management Plans or Codes of Compliance.

Hoki trawl

Mitigation required is for seabird scaring devices either paired streamers, bird bafflers or a warp deflectors for vessels over 28m only. According to the Ministry of Fisheries[2] only tori lines or bird bafflers are used. Here we only compare vessels over 28m as all FCV are over 28m. There are also offal management requirements under the Vessel Management Plans, however as this is not a regulated requirement although audits are undertaken by observers information is provided to the

[2] David Foster, pers comm. Email dated 4th October

Deepwater group to follow up on and were not available in time for this analysis. However offal management is a key management technique in minimising seabird captures. Information on whether or not any vessels are meeting these industry requirements will need to be obtained from the Deepwater Group of Ministry of Fisheries directly.

Mitigation to prevent captures of marine mammals is voluntary via the Marine Mammal Operating Procedure[3] for example not shooting or hauling between certain times, hauling the doors to the surface before turning and not when large numbers of mammals are present.

Observer coverage was slightly higher in the FCV's with 39% in 2008/09 and 27% in 2009/10 compared with 24% and 21% in the domestic fleet.

Looking at the seabird capture data provided by Ministry of Fisheries (data attached), although FCV's were responsible for less than half the tows their capture rates of seabirds in the 09/10 period was more than twice as much as the domestic vessels at 8.2 birds caught per100 tows compared with domestic vessels at 3.4 per 100 tows. The previous year the capture rates between the FCV's and the domestic fleet were similar. As we do not have access to data on compliance with fishing regulations we can only surmise that it is likely to be as a result of poor application of either regulated mitigation or Vessel Management Plan requirements. The Conservation Services Programme Observer report[4] also suggests that offal is a major attractant and needs management. In addition poor management in some boats results in very high interactions for those vessels. We did not receive raw data from Ministry of Fisheries so are unable to assess this directly. Of particular concern was the high captures of the endemic Salvin's albatross (*Thalassarche salvini*) classified as Vulnerable by the IUCN and Nationally Vulnerable in the New Zealand Conservation Status[5]. These birds breed on the Bounty Islands and Snares Islands[6] and are found feeding in waters south of New Zealand and to the West when breeding so are vulnerable to incidental capture in trawl nets[7]. A recent assessment of the risk to seabird populations from commercial fisheries[8] suggests that Salvin's albatross populations are threatened as a direct result of commercial fishing fatalities.

For capture of fur seals the data are less clear. In 2008/9 the capture rate in the FCV's was nearly twice that of the domestic boats 1.7/100 tows c.f. 0.94/100 tows. However the following year the capture rates were similar. It is interesting to note, however that the data provided in the Conservation Services Programme observer reports for those years indicates as many marine mammals are caught in trawlers less than 28m in the domestic fishery as both domestic and FCV's over 28m. We don't have data on the number of trawls undertaken by boats less than 28m. 22 fur seals and 1 sea lion in boats less than 28m in the domestic fishery and 27 fur seals caught c.f. 22 in boats greater than 28m in 2009/10.

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[3] Operating Proceedures. Mitigating Incidental Captures of Marine Mammals. Version 6 October 2008. Deep Water Group

[4] Kris Ramm, 2011 Marine Conservation Services Programme Observer Report: 1 July 2009 to 30 June 2010

[5] Miskelly C. et al 2008. Conservation Status of New Zealand's Birds, 2008.Notornis, 2008, Vol 55: 117-135

[6] Graeme A. Taylor. 2000. Action Plan for Seabird Conservation in New Zealand. Part A:Threatened Seabirds. Department of Conservation Threatened Species occasional Publication No. 16

[7] Ministry of Fisheries 2011. Final research report. Population assessment of Salvin's albatrosses at the Snares Western Chain, 25 September – 14 October 2010. Paul Sagar.

[8] Yvan Richard, Edward R. Abraham & Dominique Filippi (2011). Assessment of the risk to seabird populations from New Zealand commercial fisheries. Final research Report for Ministry of Fisheries projects IPA2009/19 and IPA2009/20 (Unpublished report held by the Ministry of Fisheries, Wellington) 66 pages

Squid. (92% 2008-2010 FCV)

Mitigation required. All boats are over 28m so are required to use a bird scarer of some kind (tori line, warp scarer or bird baffler) Vessel Management Plans identify the need to manage offal, but whether this is done is not clear.

Most tows are by FCV. (4465 in 2008/9 and 4244 in 2009/10 for FCV and 430 and 297 respectively for domestic) 27%-30% observed in the 2 years 2008/9 and 2009/10, compared with 76.8%- 95.4% of the domestic vessels.

These boats tend to operate in the areas where there are massive numbers of albatrosses in the southern oceans and west coast, hence present a significant risk to seabirds. In addition they capture NZ sea lions which are a critically endangered endemic species to NZ. One of the issues with this fishery is that they overlap with the major feeding grounds of the sea lions and so in addition to killing them and dependent pups onshore, they may be competing for their food resulting in an overall 30% reduction in pup production.[9] This fishery now use SLEDS which should enable most sea lions to 'escape' from the nets, however the level of mortality amongst animals ejected from the SLEDS is unknown. Numbers actually brought on board will be a minimum no. of actual mortalities. Three NZ sea lions were observed captured in 2010 on FCV's compared with one on domestic vessels. As only 27% of tows were observed on the FCV's c.f. 77% of the domestic vessels we can be less certain of how many actual captures occurred in the FCV fishery. New Zealand fur seals are also caught but in the years we have data for only in the FCV's and not in the domestic vessels.

The seabird capture rates for the FCV's are very high in this fishery. In 2008-2009, 22.96 birds were observed caught per 100 tows. The capture rate for the domestic vessels is also high at 10 per 100 tows but is less than half that of the FCV's. For the following year there was a slight improvement at 15.3 per 100 tows for the FCV's and 5.4 per 100 tows for the domestic vessels.

Seabirds included Buller's (*Thalassarche bulleri bulleri*) and white-capped albatrosses (*Thalassarchi steadi*), sooty shearwaters (*Puffinus griseus*) and white-chinned petrels (*Procellaria aequinoctialis*). Buller's albatross are an endemic species with two recognised subspecies. White-capped albatrosses are estimated by the risk assessment to have the highest number of fatalities of any bird in NZ fisheries and it is estimated that between 1849 and 2563 are caught annually in the Squid trawl fishery which is likely to be directly impacting this species.

All boats which are observed appear to use required bird mitigation and SLEDS[10],[11]. Offal management should be investigated through the audits undertaken by the observers and supplied to Ministry of Fisheries and the Deepwater Group. There appears to be a major issue around hauling nets when squid becomes available for birds feeding. The numbers of seabirds caught in this fishery is unacceptable high and it appears that the FCV's are contributing the largest impact due to both the fact that they undertake the highest number of tows and their catch rates are 2-3 times higher

[9] B. Louise Chilvers. New Zealand sea lions *Phocarctos hookeri* and squid trawl fisheries: bycatch problems and management options. Endangered Species Research , 2008

[10] Kris Ramm, 2010. Marine Conservation Services Programme Observer report (final draft) 1 July 2008 to 30 June 2009.

[11] Kris Ramm, 2011 Marine Conservation Services Programme Observer Report: 1 July 2009 to 30 June 2010

than the domestic vessels. As the percentage of observers on these boats is also lower there remains considerable uncertainty around the likely capture rates.

Bycatch of corals now also protected species, is also significant for a mid water trawl fishery. E.g. 1 vessel caught 166 kg of coral.

Jack Mackerel (excluding JMA1). 99% FCV. Pelagic Trawl Fishery.

Mitigation required: All vessels > 28m regulations require one bird mitigation capture device to be deployed – tori lines, bird bafflers or warp deflectors to protect from the warps. There is a Marine Mammal Operating Procedure MMOP in place for mitigating the incidental captures of marine mammals. There are also Code of Practice requirements relating to offal (see above)

Observer coverage in 2008-9 averaged 34% and 37% in 2009-10

There have been historical problems with catching dolphins and the fishery has now implemented a Marine Mammal Operating Procedure which may have had some effect in reducing captures, but in the last reported year 2009-2010, three common dolphins were still caught in a single event when setting during the day which is outside the requirements of the MMOP. 11 were caught the previous year as well as 7 NZ fur seals and 2 pilot whales.

Seabird captures are low compared to other fisheries.

Charter Tuna Long lining.

Data for surface long-line fisheries was obtained from the Conservations Services Programme of the Department of Conservations annual observer reports. Comments on compliance were provided by David Foster (Ministry of Fisheries)

Mitigation required: Use of tori lines while setting and night setting or line weighting. Under the Code of Practise provided by the Deepwater Group, there are additional requirements which the FCV's must adhere to and masters are required to sign. There is a limit of 15 'at risk' birds caught, per vessel, after which additional mitigation or moving from the area will be required. In addition only setting at night is allowed, plus other mitigation at high risk times such weighted lines, bird frighteners (sonic guns). Fishers generally use up to 3 tori lines while setting and some also use brikkle curtains and water cannons.

There is 100% observer coverage on the 4 boats involved, on all trips with at least a portion of each line set being observed. 601,082 hooks in 2008-9 and 443,738 hooks in 2009-10.

In 2008-9 the FCV's were trialling tori lines (under permit) and had problems with these lines which may have contributed to higher capture rates. The average capture rate was 0.146 per 1000 hooks. (cf Australian target of no more than 0.05 – nearly 3 times as many) In the previous year the capture rate was 0.055.

Mostly Bullers albatross were caught, but also NZ white-capped albatross and birds were mostly caught on hooks (see comments above about these species)

It appears from observer reports (Ministry of fisheries, David Foster pers comm) that tori lines and night setting were used as is required except on one occasion when night setting may not have been undertaken. Birds were caught on all trips. Fur seals were also caught (16 observed) but all were

released alive. While seabirds may be released alive we have no way of knowing how many are likely to survive. Injuries sustained to seabirds dependant on flight in a difficult environment reduces their chances of survival after release.

Domestic Tuna Long Lining.

The same regulations apply, but there is a different Code of Practice which appears less stringent e.g. the 15 bird capture limit per vessel doesn't apply.

Observer coverage is low on these boats at 6.93% in 2008-9 and 7.31% in 2009-10 The number of hooks set is less than the charter tuna boats 156,845 in 2008-9 (25%) and 192,349 (43%) in 2009-10. The seabird capture rates in the domestic fishery were 0.089 per 1000 hooks in 2008-9 and increased to 0.423 which was extremely high. High numbers of albatrosses including Buller's and NZ white-capped, but also black-browed and the endemic Campbell albatross. Both the endemic black and Westland blacks were also caught. Black and Westland black petrels, and Campbell Albatross (endemic, IUCN Threatened) are at high risk of having their populations depleted by fishing and the surface long line fishery is the highest risk to Campbell Albatross.

Compliance with regulated mitigation was poor. Ministry of Fisheries (David Foster email 4th October) has provided combined data for the two years. Three or four sets were started during the day and 76 of the 345 sets did not use tori lines involving 11 vessels (22% of the sets). Of course it is difficult to know if this was the cause of the high capture rates in the domestic fishery, but it seems likely. Unused bait management also appears to be an issue when poorly managed it attracts more birds close in to the boats.

The comparison of the domestic and FCV's indicates that the FCV's in this instance are better managing their seabird bycatch issue than the domestic boats. The high level of observer coverage coupled with the more stringent Code of Practise is likely to be contributing to this.

Fur seals were caught in both FCV's and domestic vessels, but were released alive. Capture rates per 1000 hooks for the domestic and FCV's were low. FCV's vs domestic in 2008/9 were 0.018 vs 0.038 and for 2009/10 0.036 vs 0.057, higher in both years in the domestic fishery reflecting the seabird bycatch performance. .

Summary

This analysis has looked at 4 fisheries which involve Foreign Charter Vessels. These are trawl fisheries for Hoki, Squid and Jack Mackerel and the surface long line fishery mainly for tuna.

Hoki. Required mitigation was likely to have been used (David Foster, Ministry of Fisheries, email 4th October). The FCV's had more than twice the seabird capture rates than domestic vessels in the year 2009-10. A close analysis was not possible as we didn't have access to the raw data but the CSP report suggests that one vessel could have contributed a significant proportion of this. More effective management of offal is needed in both domestic and FCV's to reduce the attractiveness of the boats to birds as well as commitment to mitigation.

Squid. 83% of the tows over the 2 years assessed are by FCV's. FCV's did not perform well in terms of seabird bycatch in either year. Although there was a slight decline, both years were extremely high - more than twice as high as the domestic fleet in both years. This fishery performs very badly overall in terms of bycatch as it also catches the critically endangered NZ sea lion. It is not clear why the

FCV's in particular perform so badly. Our opinion of this fishery is that it is overall an unsustainable one for bycatch. Either this needs to radically improve or alternative methods of catching squid should be required such as jigging.

Jack Mackerel. This is mainly undertaken by FCV's so a comparison with a domestic fleet could not be undertaken. The major bycatch problem in this fishery is marine mammals. A new MMOP may be improving this although an increase in observer coverage to ensure boats are applying this code would be beneficial.

Tuna. Here the FCV's (just 4 Japanese vessels) performed better in terms of bycatch management than the domestic fleet. Capture rates for seabirds were extremely high in the domestic fleet and coupled with the low observer coverage – just 7% compared with 100% on the FCV's it is of considerable concern. It appears that the two fleets have different requirements – with night-setting mandatory for the FCV's as well as twin tori lines and other mitigation if needed. Day-setting is only allowed in the domestic fishery if line weights are used however it is not clear how these rules are applied. In addition the FCV's have a target limit of 15 'at risk' birds per boat. These more stringent requirements combined with the high observer coverage are likely to be the reason for the better outcome.

Conclusion

In two of the 4 fisheries (Hoki and Squid) the FCV's performed worse than the domestic vessels however in one fishery the FCV tuna fishery they performed much better in terms of seabird bycatch results and probably meeting regulated and Code of Practice requirements.

These results suggest that increasing observer coverage in the badly performing fisheries and increasing the mandatory mitigation requirements including offal and discard management are needed. In the tuna fishery increasing observer coverage in the domestic vessels and increasing mitigation requirements in high risk areas and at high risk times such as during breeding e.g. requiring line weighting as well as night setting would make a difference. One fishery the squid fishery may struggle to ever be considered a sustainable fishery.