

Inshore Demersal Ling Longline Advisory Officer Report

1 May 2003 to 31 October 2003

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Inshore Demersal Ling Longline Advisory Officer Report 2003

1. Executive Summary

This report summarises the activities and key findings of the Inshore Demersal Ling Advisory Officer for the period 1 May 2003 to 31 October 2003. The role of the Advisory Officer was to provide advice and support to fishers on developing and installing mitigation measures and best practice to reduce protected species bycatch. While ling (*Genypterus blacodes*) may be targeted year-round, the inshore demersal ling fishery is principally a seasonal one. There are three main areas of operation: the Wairarapa coast and eastern Cook Strait; the Hokitika Trench, Cook Canyon, and coast of Fiordland; and the east coast of the South Island. Vessels range from 13 to 18m in length. By the very nature of the ling long-line fishing described here, various techniques which reduce the potential for catching seabirds were already in place, namely line weighting; a high rate of setting at night; minimal deck lighting; non-discharge of offal while setting; and the thawing of baits (to stop them floating). A fast setting speed generally is a deterrent to seabirds attracted by baits as the line leaves the surface more quickly, but the slow setting speeds necessitated in this fishery by hand baiting of the hooks can be expected to remain a feature of it. Thirteen vessel visits were made. Based on interviews with ling fishers and combined with observations at sea it is considered that the number of seabirds taken as incidental bycatch in the inshore demersal ling long-line fishery is far fewer than is commonly believed. This is owing to the combination of seabird deterrent practices that are an integral part of this fishery. With the adoption of better offal management and a standard tori line design this fishery will be in a situation where seabird interactions will become a rare event.

2. Introduction

This report summarises the activities and key findings of the Inshore Demersal Ling Advisory Officer for the period 1 May 2003 to 31 October 2003. It does not attempt to provide a quantitative analysis of practices in this fishery or to evaluate the effectiveness of this project – a review of the role of advisory officers will be carried out in 2005/06. The role of the Advisory Officer was to provide advice and support to fishers on developing and installing mitigation measures and best practice to reduce protected species bycatch.

3. The Inshore Demersal Ling Longline Fishery

3.1 Fishery Areas

While ling (*Genypterus blacodes*) may be targeted year-round, the inshore demersal ling fishery is principally a seasonal one with the species being targeted during its spawning period. It is carried out mainly in three distinct areas:

- the Wairarapa coast and into eastern Cook Strait;
- the west coast of the South Island - in the Hokitika Trench, in Cook Canyon, and off the coast of Fiordland; and,
- the east coast of the South Island.

The fishing vessels are coastal general purpose boats ranging from 13 to 18m in length, with a crew of two or three persons. The availability of quota determines the number of vessels targeting ling in any given season.

One vessel takes ling in Cook Strait and alternates between this area and the west coast of the South Island. Other vessels (the number varies seasonally but is seldom more than four) based in Napier or Gisborne fish the Wairarapa coast from August to December but for the remainder of the year are pelagic surface long-liners. The skippers of these vessels are all fully conversant with seabird bycatch prevention techniques from their surface long-line experience and carry this expertise over into the ling fishery.

On the west coast of the South Island, up to eight vessels operate from Greymouth and up to two come from Jackson's Bay. Again this west coast ling fishery is a seasonal one, from August to December. Not all skippers are experienced in seabird bycatch prevention techniques. Two vessels, based in Lyttleton, operate in the South Island east coast fishery from August to December.

3.2 Characteristics of the Ling Fishery

The ling are targeted at depths between 400 and 600 metres around seabed features where the fish spawn. These spawning areas are generally small and localised, and to achieve a high catch per unit effort intensive deployment of fishing gear is necessary. It should be noted that when non-spawning fish are targeted they are usually found in the same areas.

3.3 Fishing Gear

The typical demersal ling long-line consists of a single mainline (= 'backbone') with attached snoods carrying a baited hook. The deployment of a baited long-line for a given period of time is a 'set'. Occasionally (and very much dependent on the particular fishing ground) two mainlines are deployed in the one set.

With the exception of some of the Wairarapa fishers who use a monofilament line, all the fishers spoken to use 8 mm polypropylene line for the backbone, which can be up to four nautical miles long. Each snood (typically 50 to 60 cm long) comprises a 1.2 mm monofilament line inside a non-toxic plastic tube and is attached to the backbone with a metal clip. The snoods are spaced at one-metre intervals. The hooks used are of the 14/0 Mustad tuna circular type. Barracouta (*Thyrsites atun*) is universally used as bait, with the occasional exception being freshly-caught bycatch species or arrow squid (*Nototodarus* species)

An anchor weighing at least 40kg is attached to either end of the backbone and extra anchors may be attached to the line depending on how the gear is being deployed to follow particular underwater features. It is usual for an additional weight (at least 10 kg) to be tied to the backbone at 50-hook intervals. In general, setting speed is slow (from one to three knots) and is dependent upon the speed with which the crew can clip snoods and weights onto the backbone. It is emphasised that the combination of slow setting speed and heavy line weighting gives a very fast sink-rate for the long-line and thus for ten to twenty metres behind a vessel the baited hooks are unavailable to sea birds.

3.4 Fishing Operations

It is the practice of most fishers to deploy the mainline, following the undersea contours, before dawn so that the baited hooks are in position near the sea floor well before daylight arrives. However, afternoon setting is sometimes carried out at a skipper's discretion. Generally the gear is not set in a straight line but follows bottom features and 90-degree turns are not uncommon.

Hauling of the set usually commences in the early afternoon with the catch being processed while the haul progresses. Dependent on the requirements of the company to which the catch will be sold, the ling (and other species) are either headed and gutted or are gilled and gutted. On small vessels offal is discarded immediately but in vessels with adequate storage space it is held for dumping away from the fishing ground. Often over a tonne of offal is generated from each set. The fishing trips vary in duration depending on the weather with long trips common as 'windows' of fair weather are infrequent and when they occur the most has to be made of them. Hence, with only basic freezing capabilities, there is a need to promptly process the catch on board to prevent spoilage of the fish.

3.5 Mitigation Measures

By the very nature of the ling long-line fishing described here, various techniques which reduce the potential for catching seabirds were already in place, namely line weighting; a high rate of setting at night; minimal deck lighting; non-discharge of offal while setting; and the thawing of baits (to stop them floating). A fast setting speed generally is a deterrent to seabirds attracted by baits as the line leaves the surface more quickly, but the slow setting speeds necessitated in this fishery by hand baiting of the hooks can be expected to remain a feature of it.

4. Work Programme

May – June. As ling fishing would not begin until later in the season, this period was occupied with the making of tori lines following the Laurie Hill pattern (which were to be given to interested fishers); attendance at the NZ Federation of Commercial Fishermen's conference in Greymouth; preliminary assessment of locations of ling fishers and their attitudes to seabird bycatch; and meeting key stakeholders and members of fishermen's associations.

July – early August. The making of tori lines continued; meeting with fishers and preparing for vessel visits in August. Attended stakeholder group meetings including the Ling Working Group. The ling fishing season was late starting because the SARS virus epidemic in east Asia caused an abrupt drop in demand for New Zealand fish products including ling. With New Zealand companies unable to export ling, there was no incentive for fishers to target the species.

August - October. Visited vessels in Lyttleton, Greymouth and the Chatham Islands. Vessel visits included the delivery of a tori line, a seabird information pack and a seabird identification book. Skippers were questioned in relation to their fishing practices and their views were recorded in the Advisory Officer Reporting Form. Fishers from the Gisborne and Napier area were interviewed via telephone with the Advisory Officer

deciding that ship visits were unnecessary as all vessels used a full range of the currently applicable seabird bycatch reduction measures. Verbal advice was given regarding the draft National Plan of Action to Reduce the Incidental Catch of Seabirds in New Zealand Fisheries (NPOA), the ling working group code of practice, and other relevant best practice in the inshore ling fishery. All the vessels contacted use Laurie Hill tori lines.

5. Fishing Vessel Visits

Thirteen vessel visits were recorded. All but two of these used coastal ling gear and the other two used Mustad auto-line gear. The skipper of one of these vessels was a member of the ling working group and so had a full seabird bycatch reduction package in place. The made up Laurie Hill pattern tori line was given to him for trialling to compare with his existing tori line.

6. Some additional notes

Codes of Practice: Skippers were all asked their views on the Ling Working Group's Code of Practice and whether they wanted to participate in this group. 100% of fishers considered that their fishing activities were very different from the Mustad auto-line system and did not want to be included. However, none of these were actually critical of the code of practice and the Advisory Officer considers that the code of practice, as it exists, is workable for this fishery.

Offside offal dumping: For some vessels offal dumping is common practice and it was recommended to dump offside (i.e. opposite to the hauling side). For a number of vessels this will require modifications and changes in procedure. Although some vessels are retaining all offal it is only where space is available. Most vessels are small and have no space for offal storage. The Advisory Officer requested that fishers adopt offal retention where practical and fishers were keen to accommodate this.

Setting Speed: All vessels set at a slow speed and make numerous turns, circumstances which make it difficult to operate a tori line. Perseverance and patience has been required from the skippers to satisfactorily adapt a tori line to these conditions. It has been found that shortening the 4 mm line by 60 m between the last strapping and the funnel has helped the line to remain aerial over the vulnerable area behind the vessel especially in turns. In general, it has been found difficult to achieve aerial coverage greater than 60 m so that a typical tori the line is much shorter than this. Also, use of the largest available plastic funnels, 8 inch-plus, is recommended. Because the weighted ling mainline sinks very rapidly the Advisory Officer considers 60 m of aerial coverage by a tori line to be more than adequate. It is worth noting that one skipper has succeeded in deploying an effective tori line while setting at very slow speed and while making numerous turns.

Attitudes: The participants in the programme were all very cooperative, and constructive in their approach to solving the problem of seabird interactions. Even though some of the participants showed negative attitudes in the questionnaire this does not indicate their attitude towards mitigation of the effects of ling long-line fishing on the seabird population, rather it reflects their impatience with the requirements of the various government agencies (including the Department of Conservation) with which they have to deal.

7. Conclusions

Based on interviews with ling fishers and combined with observations at sea it is considered that the number of seabirds taken as incidental bycatch in the inshore demersal ling long-line fishery is far fewer than is commonly believed. This is owing to the combination of seabird deterrent practices that are an integral part of this fishery. With the adoption of better offal management and a standard tori line design this fishery will be in a situation where seabird interactions will become a rare event.

8. Recommendations

As a result of this six-month project, it is recommended that:

- (1) The participants in the inshore ling fishery together with the Seafood Industry Council and the various fisheries stakeholder groups adopt a code of practice devised by the ling working group (or a very similar one);
- (2) Ling fishers share their experiences using the supplied tori line to perfect a best practice method for its use; and,
- (3) Where possible, fishing vessels have holding facilities for all offal and make a single offal dump at night.