

Mitigation Measures to Reduce Incidental Seabird Capture in Commercial Surface Longline Fisheries

Consultation Document

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1 Executive Summary

The purpose of this discussion document is to seek feedback from stakeholders on proposed options to strengthen seabird mitigation requirements for commercial surface longline fishing operations in New Zealand fisheries waters.

New Zealand is home to the most diverse seabird community in the world. This includes the greatest number of albatross and petrel species, many of which are considered threatened. The surface longline fishery in particular poses a significant risk to a number of these species, despite the availability of multiple mitigation techniques.

MPI considers that there is a need to strengthen the current mandatory seabird mitigation requirements. This is because of continued high capture rates across parts of the fleet. Options for change draw on existing measures and recommendations by international seabird experts.

Two options are proposed. Option 1 is remaining with the status quo, which requires commercial fishers to use two out of three prescribed mitigation measures:

1. Use tori lines¹; and
2. *Either*:
 - a. Set lines at night; *or*
 - b. Use weighted lines in accordance with prescribed specifications.

Option 2 proposes the use of tori lines *and* line weighting at all times. Night setting would remain an additional voluntary measure. Under this option, there are sub-options A and B, which propose different line weighting specifications.

Line weighting is a proven effective technique for reducing incidental seabird captures in longline fisheries. Furthermore, a number of vessels operating in this fishery already use line weighting as standard practice. Vessels not using line weighting would have to adapt to the proposed measure. This would involve the purchase and addition of weights into the longline gear, crew training (including safety training) and necessary protective equipment.

¹ According to the Circular 2014, a streamer line is a type of seabird-scaring device, also known as a tori line.

2 Purpose

The purpose of this discussion document is to seek feedback from stakeholders on proposed options to strengthen the seabird mitigation requirements for commercial surface longline fishing in New Zealand fisheries waters.

This consultation document will be available for public feedback for a period of six weeks from the release date of 10 October 2016.

3 Background Information

3.1 POLICY CONTEXT

New Zealand's [*National Plan of Action to reduce the incidental catch of seabirds in New Zealand fisheries*](#) (NPOA Seabirds) was developed in 2004 and revised in 2013. The NPOA Seabirds sets out goals and objectives for the conservation and management of seabirds. The long term objective of the plan is:

New Zealand seabirds thrive without pressure from fishing related mortalities, New Zealand fishers avoid or mitigate against seabird captures, and New Zealand fisheries are globally recognised as seabird friendly.

3.2 THE THREAT TO SEABIRDS

New Zealand has the most diverse seabird community in the world. It is an important breeding ground for 85 species (95 different taxa) of seabirds, including the greatest number of albatrosses and petrels.

Biological characteristics of albatross and petrel species result in a low intrinsic rate of population increase. These include late maturity, low productivity, and prolonged time spent in finding partners. Therefore, these seabirds are not be able to sustain significant mortalities resulting from fishing operations.

Incidental capture by commercial fishing operations is a significant threat to many seabird species globally. This has been acknowledged to be of serious concern since the early 1990s.

The Department of Conservation's [*New Zealand Threat Classification System*](#), has ranked species according to the threat of extinction. A number of species with the highest ranking are captured in the surface longline fishery (e.g. black petrel and Gibson's albatross).

MPI monitors seabird bycatch as part of its at-sea observer program. Observations are used to calculate total estimated captures. This information is further used to model risk from fishing to each seabird species. According to the most recent MPI risk assessment², a number of species are at 'high' or 'very high' risk from commercial fishing³. Of the top nine species with the highest risk ranking, the surface longline fishery poses a substantial portion of the fisheries risk to four⁴.

² Richard, T., Abraham, E.R. (2014) [*Assessment of the risk of commercial fisheries to New Zealand seabirds*](#), 2006–07 to 2012–13. MPI

³ Higher risk rankings are due to the ratio of 'annual potential fatalities' (estimated on the basis of the degree of spatial overlap between known seabird distributions with the distribution of fishing effort, observed capture rates, and multipliers for other factors, for example, unobservable mortalities) to 'potential biological removals' (the maximum number of animals, not including natural mortalities, which may be removed from a population without compromising its ability to reach or maintain its optimum sustainable population level) being close to one.

⁴ The surface longline fishery poses a substantial portion of the fisheries risk to the: black petrel, Gibson's albatross, northern Buller's albatross and Antipodean albatross.

3.3 THE RISK OF INCIDENTAL SEABIRD CAPTURE IN SURFACE LONGLINE FISHERIES

Surface (pelagic) longlines are set near the surface to target species such as tuna or swordfish. For extended periods of time during deployment of the gear, the baited hooks are in diving range of seabirds. This puts the seabirds at risk from being fatally hooked or tangled in the line when they attempt to take the bait. This risk can be exacerbated if, for environmental or operational reasons, hooks are pulled up towards the surface, for example, by seabirds diving and retrieving hooks.

Mandatory mitigation focusses on preventing access to the baited hooks. When setting longlines, line weights increase hook sink rates and tori lines and night setting screen hooks until they sink. A number of voluntary practises also contribute to mitigation. For example, offal management to avoid attracting birds to the vessel and dying baits blue to hide them from view.

There is also risk of seabird capture during hauling if uneaten baits have remained on the hooks. Birds captured on the haul are usually able to be released alive, however there is the possibility of subsequent unseen mortality.

There is relatively low observer coverage in the surface longline fishery (a target of 10 percent of fishing effort per annum). This has led to uncertainty around bycatch information, resulting in high estimations of potential total incidental seabird captures.

3.4 NEW INFORMATION

3.4.1 Updated recommendations

The Agreement on the Conservation of Albatrosses and Petrels (ACAP) is a multilateral agreement which seeks to conserve albatross and petrels by coordinating international activity to mitigate known threats to their populations. New Zealand is a party to the agreement. Because fishing related mortality is a significant threat for albatrosses and petrels, ACAP is very active in this area.

ACAP updated their recommended line weighting specifications in 2016 based on advice from their Seabird Bycatch Working Group.⁵ The update was based on analysis of sink rates. The former regime was replaced with:

- a) 40 grams (g) or greater attached within 0.5 meters (m) the hook; or
- b) 60 g or greater attached within 1 m of the hook; or
- c) 80 g or greater attached within 2 m of the hook.

This regime has quicker sink rates than the former regime, therefore reducing the risk to seabirds. Preliminary research was carried out in pelagic fisheries in Uruguay and Brazil. Results from the Brazilian trial showed significant reductions in seabird bycatch whilst the catch rates of target species were unaffected⁶.

⁵ ACAP Seabird Bycatch Working Group (2016) [Ninth Meeting of the Advisory Committee](#) La Serena, Chile 9-13 May 2016

⁶ In Uruguay, trials were conducted using 40 g weights at the hook. Results yielded a 50 percent reduction in seabird mortality in the absence of other mitigation (tori lines, night-setting). Further discussions moved the weight to within 0.5 m of the hook to increase operational feasibility.

In Brazil, trials were conducted using 60 g weights 1 m from the hook. Results yielded 0.11 birds / 1000 hooks, as opposed to 0.33 / 1000 and 0.85 / 1000 hooks, when using Lumo leads at 3.5 m from the hook and weighted swivels 3.5 m from the hook, respectively.

3.4.2 Incidental seabird captures and fleet behaviour

Recent events of high seabird captures have been observed in the New Zealand surface longline fishery particularly while vessels targeted southern bluefin tuna in southern waters. The seabirds included species listed as ‘Threatened’ and ‘At Risk’ in the *New Zealand Threat Classification System*⁷. Non-compliance with mitigation requirements was a factor in one the high mortality events observed.

The high capture events were followed by other observed instances of non-compliance with existing seabird mitigation requirements which did not result in high seabird mortality.

4 Legal Considerations

4.1 LEGAL SETTING

The majority of seabirds are protected under the Wildlife Act 1953. It is not illegal to accidentally kill seabirds as part of normal fishing operations, however it is an offence not to report their capture⁸ or fail to utilise the mandatory mitigation tools. [Regulation 58A](#) of the *Fisheries (Commercial Fishing) Regulations 2001* provides for the Director-General to issue circulars requiring the use of mitigation measures. The current circular is the [Fisheries \(Seabird Mitigation Measures – Surface Longline\) Circular 2014](#) (the Circular 2014).

To change the seabird mitigation requirements, regulation 58A of the *Fisheries (Commercial Fishing) Regulations 2001* allows the Director-General of MPI to amend a circular by notice in the *Gazette*.

Under regulation 58A, before issuing, amending, or revoking a circular, the Director-General of MPI is required to consult, to the extent that is practicable in the circumstances, with any persons or organisations that he/she considers to be representative of the classes of persons or organisations likely to be substantially affected by the circular. This paper forms part of that consultation process.

4.2 ADDITIONAL CONSIDERATIONS

It is not in the interest of the fishing industry to catch seabirds. As a result, over a number of years there has been heavy investment in developing ways to avoid this. A number of voluntary measures and systems of education and monitoring have been developed across a wide range of fisheries, which have complemented regulated measures.⁹ There is a need to balance between these two implementing mechanisms.

Given the ongoing risk posed by surface longline fishing, MPI has formed the view that line weighting (previously provided as a regulated option) should now become a mandatory requirement.

⁷ The species included Antipodean wandering, Gibson’s, white-capped, Buller’s and royal albatrosses.

⁸ According to Section 63B of the Wildlife Act 1953, accidental or incidental death of seabirds as a result of fishing must be reported.

⁹ A wide range of effort has gone into improving the conservation status of New Zealand’s seabirds. This includes Southern Seabird Solutions workshops and Working Groups on ‘seabird-smart’ fishing; MPI’s NPOA Seabirds; research; and industry-led initiatives (that include mandatory tori line use and other measures, for example, dying bait and careful release of offal). Funding has also gone into the Seabird Liaison Officer Programme for deepwater and coastal fleets. These officers inform fishers and relevant stakeholders about seabird mitigation.

5 Proposed Options

5.1 OPTION 1 – STATUS QUO

Currently, the Circular 2014 requires commercial fishers to use two of three prescribed mitigation measures when setting surface longline fishing gear:

1. Use tori lines; and
2. *Either*:
 - a. Set lines at night; *or*
 - b. Use weighted lines.

When using line weighting, for each hook, weights must be attached to that line as follows:

- a) 40 g or greater attached within 0.5 m of the hook; or
- b) 45 g or greater attached within 1 m of the hook; or
- c) 60 g or greater attached within 3.5 m of the hook; or
- d) 98 g or greater attached within 4 m of the hook.

These requirements were based on early ACAP advice and are incorporated into the Western and Central Pacific Fisheries Commission's (the Commission) [*Conservation and Management Measure for Mitigating Impacts of Fishing on Seabirds*](#) in 2012¹⁰. As a Member of the Commission, New Zealand has implemented this conservation and management measure by way of the Circular 2014.

Impact

Maintaining the status quo regulations would rely on additional voluntary measures to improve mitigation.

Cost

Costs will be associated with increasing non-regulatory efforts (for example, growing the Seabird Liaison Officer Programme). Unless non-regulatory measures are improved there will continue to be a risk to seabirds.

Benefit

MPI has highlighted concern with the current level of seabird bycatch, and in lieu of potential regulatory intervention, this may promote further development and consolidation of stakeholder participation in this area.

5.2 OPTION 2 – REGULATORY MECHANISMS

There are variations of the regulatory option to be considered.

5.2.1 Option 2A – Amend the Circular 2014, mandating line weighting at all hours. Lines are weighted according to current specifications.

When setting surface longlines, commercial fishers would be required to use two mandatory measures, relegating the third to a voluntary measure specified in circular guidelines:

1. Use tori lines;
2. Use weighted lines; and

¹⁰ The [*Conservation and Management Measure to Mitigate the Impact of Fishing for Highly Migratory Fish Stocks on Seabirds*](#) will proceed the current conservation and management measure in January 2017. As a Member, New Zealand will be required to be consistent with the measure.

3. *Voluntarily* set lines at night in high risk fisheries and/or areas.

Line weighting would be required to be in accordance with the specifications as shown in section 5.1 of this document.

Impact

A number of vessels in this fleet already use line weighting as standard practice and therefore impact on them would be minimal. Vessels not using line weighting would have to adapt to implement line weighting into their operations.

Cost

Vessels not already using line weighting would have to purchase line weighting devices and fund replacement devices thereafter. Further costs would be in safety training and protective equipment for crews.

Benefit

According to ACAP's seabird bycatch mitigation review and advice¹¹, line weighting is proven to be an effective mitigation tool and hence its inclusion in the current regulatory framework. The benefits of making it a mandatory requirement lie in part in the ease of ensuring compliance with the measure and also in promoting tori line use by reducing the risk of entanglement. Line weighting is a mandatory measure in the Australian eastern billfish and tuna fishery. A recent assessment by the Department of the Environment of the Australian Government found only three seabirds were caught on hooks in 2012, of which two were released alive (from approximately 6.8 million hooks set)¹².

5.2.2 Option 2B – Amend the Circular 2014, mandating line weighting at all hours. Lines are weighted according to ACAP's updated recommended specifications.

As with Option 2A, commercial fishers would be bound to two mandatory measures (tori lines and line weighting). However, this option would require line weighting to be in done in accordance with the specifications most recently recommended by ACAP as shown in section 3.4.1 of this document.

Impact

Those vessels already using line weighting as a standard practice may have to adapt to the new regime by attaching weights closer to hooks (for example, moving 60 g weights to within 1 m of the hook). Vessels not using line weighting would have to adapt to implement line weighting into their operations.

Cost

Costs would mirror those of Option A.

Benefit

Benefits would mirror and exceed those of Option A and this option would deliver on NPOA Seabirds objectives regarding best practice and the use of best available information. Trials have demonstrated that these specifications provide an enhanced sink rate for longline hooks resulting in improved effectiveness.

¹¹ ACAP information available at: [Bycatch Mitigation Review and Advice](#)

¹² Department of the Environment (2014) [Assessment of the Eastern Tuna and Billfish Fishery](#), Australian Government

6 Other Matters

Safety

Some fishers have expressed concerns about the safety of using weighted lines. MPI acknowledges safety is fundamental element in all fishing operations, including hauling of weighted lines. Safety considerations, along with additional information that fishers may need to take into account when implementing their seabird mitigation measures, are included in the Circular 2014. For example, the use of sliding weights is suggested. These safety considerations are also reflected in best practice as defined by the ACAP^{13,14}. Furthermore, MPI considers that many skippers already using line weighting do so safely and therefore other skippers will be able to adapt accordingly to mitigate potential risks.

Ease of monitoring

Monitoring line weighting would be relatively low cost and simple, compared to at-sea or aerial surveillance. Once lead weights are added to the snoods, they become an intrinsic part of the fishing gear. Monitoring could occur by means of port-based inspections of snood lines in gear bins before and after fishing trips.

Alternative measures

Within the line weighting regimes in Options A and B, the intention is to allow for reasonable flexibility. The distance from the hooks and the associated weight specifications enable fishers to tailor gear configurations to meet the operational requirements (including safety requirements) of their fishing operations. This may include the trialling or employing of alternative measures (for example, hook pods¹⁵).

7 Conclusion

Incidental capture in New Zealand's surface longline fishery is a significant risk to numerous threatened seabird species. It is in the interest of the fishing industry, both in economic terms (a lost bait cannot catch a fish) and in terms of perception of the industry (domestically and internationally), to mitigate this risk.

Given the scale of some recent seabird captures, MPI believes it timely to consider strengthening the regulatory requirements for seabird mitigation in the surface longline fishery by making line weighting mandatory. MPI notes that ongoing support will be required from industry to provide effective seabird mitigation in the surface longline fishery and will continue to work to that effect.

¹³ ACAP (2013) [Improving ACAP's advice on best practice line weighting for coastal state pelagic fisheries](#). Fifth Meeting of the Seabird Bycatch Working Group, La Rochelle, France

¹⁴ The discussion for ACAP's Fifth Meeting included research published this year by the Australian Maritime College on 'The relative safety of ACAP recommended minimum specifications for weighting of branchlines during simulated fly-backs' [and potential injury to head and chest] by McCormack, E and Rawlinson, N. Considered safe were the current ACAP specification of 45 g or greater within 1 m of the hook and the updated specification of 40 g or greater at the hook and 60 g or greater within 1 m of the hook, however only if sliding leads are used. It was also noted that traditional weighted swivels have been used extensively in fisheries with no record of safety incidents.

¹⁵ In a recent working group by ACAP, hook pods are not yet commercially available, however they are estimated to be \$10 per unit and to be widely available soon. See ['Hook Pod' as best practice seabird bycatch](#) (May 2016) for further information, and [Hook Pod Update](#) for development progress.

8 Appendix

Table 1, below, summarises the proposed options, 2A and 2B, and if they do or do not fulfil further relevant statutory considerations. These considerations were taken into account within the discussion document.

Table 1. A table to show if the proposed options, 2A and 2B, fulfil the relevant section of the Act.

Relevant sections of the Act	Option 2A	Option 2B
Section 8 The Purpose of the Act	Yes	Yes
Section 9 Environmental Principles	Yes	Yes
Section 5(a) International obligations	Yes	Yes
Section 10 Information Principles	Yes	Yes