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PROPOSED CHANGES TO CMM 2015-03 IN REGARDS THE SEABIRD MITIGATION REQUIREMENTS

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Paper by New Zealand

Proposed changes to CMM 2015-03 in regards the seabird mitigation requirements

WCPFC Technical and Compliance Committee, 13th Regular Session, Pohnpei, Federated States of Micronesia
27 September – 3 October 2017
New Zealand

Abstract

New Zealand presents the following proposed changes to the mitigation measures used to address seabird bycatch.

Hook shielding devices are recommended for inclusion as a possible alternative measure available to mitigate bird bycatch. Hook shielding devices have recently been recognized by the Agreement on the Conservation of Albatrosses and Petrels (ACAP) as a stand-alone best practice mitigation option for reducing the impact of pelagic longlines on seabirds. As well as shielding the baited hook from seabirds until the hook is below the sea surface the devices serve as line weighting devices.

The proposal recommends changes to the specification for tori lines for vessels under 20m. These proposed changes are based on work presented in WCPFC-SC12-2016/ EB-WP-10 and WCPFC-SC13-2017/EB-WP-08 Rev 1 which developed tori line designs suitable for normal commercial fishing conditions in the New Zealand pelagic longline fleet, comprising small vessels 12-25m in length. The designs were developed to address safety concerns, minimise tangling, and allow deployment at night and in poor weather conditions.

This proposal recommends minor changes to the specification of line weighting, to ensure this aligns with the most recent advice from ACAP.

This proposal also clarifies the existing reporting requirements in paragraph 9 of CMM2015-03.

Rationale for changes

Line weighting

New Zealand has proposed changes which give operators greater flexibility and which recognise the operational constraints of certain vessels. The proposed changes allow members to utilise new and future technology aimed at preventing seabird interaction. The minor changes proposed for line weighting reflect the recommended best practice as proposed by ACAP in 2016, based on the most recent scientific evidence. The changes are based on recommendations in WCPFC-SC12-2016/ EB-IP-05

Hook shielding devices

Hook shielding devices encase the point and barb of longline hooks during line setting, and thus prevent seabirds from being hooked during this period. Experimental research has been undertaken (WCPFC-SC12-2016/ EB-IP-06) to allow assessment of the effectiveness, efficiency and practicality of the technology against the ACAP best practice seabird bycatch mitigation criteria (Appendix 1). This criteria was developed for assessing and recommending best practice advice on seabird bycatch mitigation measures. The results show that hook shielding devices are highly effective at reducing seabird bycatch and do not have a negative impact on target catch rates. New Zealand therefore proposes adding hook shielding devices as a possible alternative mitigation option.

Tori line specification for vessels under 35~~20~~m

Operators of some small longline vessels have reported concerns about the safety of bird-scaring lines or do not consider that current best practice specifications are operationally feasible on small vessels. Observer reports and discussions with fishers have highlighted difficulties in meeting these regulations, particularly noting poor weather conditions, insufficient aerial extent, lack of high attachment points, and entanglements with fishing gear.

In developing specifications or guidance for tori lines to be used on small vessels New Zealand recognised the need to incorporate a degree of flexibility to allow designs to be optimised to each individual vessel. For example, allowing considerable flexibility in the design of the drag section of the tori line is recommended as the method of generating drag is not important. New Zealand therefore proposes minor modifications to the tori line specifications for small vessels to reflect these matters. Currently New Zealand only proposes these changes for tori line use required south of 30° South, though these specifications may also be equally suitable for use in other areas.

Clarification of reporting requirements

CMM 2015-03 (paragraph 9) requires that CCMs provide in their Part 1 reports all available information collected by observers on interactions with seabirds, including bycatch mitigation used. The proposal does not change the requirements of the existing CMM but makes these reporting requirements clearer.

Changes to existing text from CMM 2015-03 are noted as tracked changes.

Consideration of CMM2013-06

1) In considering any new proposal the Commission shall apply the following questions to determine the nature and extent of the impact of the proposal on SIDS and territories in the Convention Area:

a) *Who is required to implement the proposal?*
This proposal applies to all CCMs with flagged longline vessels fishing north of 23^0 N and south of 30^0 S.

b) *Which CCMs would this proposal impact and in what way(s) and what proportion?*
This proposal would require any CMM with flagged longline vessels fishing in the area south of 30^0 S and north of 23^0N to require the use of prescribed seabird bycatch mitigation. It provides additional mitigation options and strengthens line weighting technical specifications aligning it to best practice. Revised tori line specifications for small vessels fishing in the area south of 30^0 S are also proposed to mitigate operational concerns regarding the use of tori lines on small vessels, although these specifications may be equally suitable for use in other areas.

c) *Are there linkages with other proposals or instruments in other regional fisheries management organisations or international organisations that reduce the burden of implementation?* No.

d) *Does the proposal affect development opportunities for SIDS?* No.

e) *Does the proposal affect SIDS domestic access to resources and development aspirations?* No. Implementation of this measure aids the development of environmentally responsible fisheries, and the area of application remains unchanged.

f) *What resources, including financial and human capacity, are needed by SIDS to implement the proposal?* There is no extra cost to nations affected as the required mitigation should already be present on vessels that currently operate in the area to which this measure applies. The improved flexibility for mitigation approaches and more practical specifications for designs of tori lines on small vessels may improve the capacity of SIDS to apply the measure. However, if SIDS apply these measures technical assistance may be required to implement these requirements through their regulatory

frameworks, and provide the necessary outreach and training to ensure vessels comply, and fisheries officers are familiarised, with the use of these mitigation tools.

g) *What mitigation measures are included in the proposal?* None, as there are no extra costs to nations in addition to the costs of implementing the existing measure.
h) *What assistance mechanisms and associated timeframe, including training and financial support, are included in the proposal to avoid a disproportionate burden on SIDS?* None, however the provision of training to support SIDS implementation of the measure would be beneficial.

COMMISSION FOURTEENTH
REGULAR SESSION
Manila, Philippines
3-7 December 2017

CONSERVATION AND MANAGEMENT MEASURE TO MITIGATE THE IMPACT OF FISHING FOR HIGHLY MIGRATORY FISH STOCKS ON SEABIRDS

Conservation and Management Measure 2017 xx

The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

Concerned that some seabird species, notably albatrosses and petrels, are threatened with global extinction;

Noting advice from the Commission for the Conservation of Antarctic Marine Living Resources that together with illegal, unreported and unregulated fishing, the greatest threat to Southern Ocean seabirds is mortality in longline fisheries in waters adjacent to its Convention Area;

Noting scientific research into mitigation of seabird bycatch in surface longline fisheries has showed that the effectiveness of various measures varies greatly depending on the vessel type, season, and seabird species assemblage present; and

Noting the advice of the Scientific Committee that combinations of mitigation measures are essential for effective reduction of seabird bycatch;

Resolves as follows:

1. Commission Members, Cooperating Non-members and participating Territories (CCMs) shall, to the greatest extent practical, implement the International Plan of Action for Reducing Incidental Catches of Seabirds in Longline Fisheries (IPOA-Seabirds) if they have not already done so.

2. CCMs shall report to the Commission on their implementation of the IPOA-Seabirds, including, as appropriate, the status of their National Plans of Action for Reducing Incidental Catches of Seabirds in Longline Fisheries.

[1] ~~This conservation and management measure will replaces CMM 2015-03 and will come into effect on 1 January 2017; until then, all the provisions of CMM 2015-03 will remain in effect~~.

Adopts, in accordance with Article 5 (e) and 10 (1)(c) of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean the following measures to address seabird bycatch:

South of 30^{O} South

1. CCMs shall require their longline vessels fishing south of 30^{O}S, to use either 1) at least two of these three measures: weighted branch lines, night setting and tori lines, or 2) hook shielding devices. Table 1 does not apply south of 30^{O} South. See Annex 1 for specifications of these measures.

North of 23^{O} North

2. CCMs shall require their large-scale longline vessels of 24 meters or more in overall length fishing north of 23^{O}N, to use at least two of the mitigation measures in Table 1, including at least one from Column A. CCMs also shall require their small-scale longline vessels less than 24 meters in overall length fishing north of 23^{O}N, to use at least one of the mitigation measures from Column A in Table 1. See Annex 1 for specifications of these measures.

Table 1: Mitigation measures

Column A	*Column B*
Side setting with a bird curtain and weighted branch lines[2]	*Tori line*[3]
Night setting with minimum deck lighting	*Blue-dyed bait*
Tori line	*Deep setting line shooter*
Weighted branch lines	*Management of offal discharge*
Hook-shielding devices#	

#Hook-shielding devices can be used as a stand-alone measure.

Other Areas

3. In other areas (between 30^{O}S and 23^{O}N), where necessary, CCMs are encouraged to have their longline vessels employ one or more of the seabird mitigation measures listed in Table 1.

General Principles

4. For research and reporting purposes, each CCM with longline vessels that fish in the Convention Area south of 30°S or north of 23°N shall submit to the Commission in part 2 of its annual report information describing which of the mitigation measures they require their vessels to use, as well as the technical specifications for each of those mitigation measures. Each such CCM shall also include in its annual reports for subsequent years any changes it has made to its required mitigation measures or technical specifications for those measures.

[2] If using side setting with a bird curtain and weighted branch lines from Column A, this will be counted as two mitigation measures.

[3] If a tori line is selected from both Column A and Column B, this equates to simultaneously using two (i.e. paired) tori lines.

5. CCMs are encouraged to undertake research to further develop and refine measures to mitigate seabird bycatch including mitigation measures for use during the setting and hauling process and should submit to the Secretariat for the use by the SC and the TCC any information derived from such efforts. Research should be undertaken in the fisheries and areas to which the measure will be used.

6. The SC and TCC will annually review any new information on new or existing mitigation measures or on seabird interactions from observer or other monitoring programmes. Where necessary, an updated suite of mitigation measures, specifications for mitigation measures, or recommendations for areas of application will then be provided to the Commission for its consideration and review as appropriate.

7. CCMs are encouraged to adopt measures aimed at ensuring that seabirds captured alive during longlining are released alive and in as good condition as possible and that wherever possible hooks are removed without jeopardizing the life of the seabird concerned. Research into the survival of released seabirds is encouraged.

8. The intersessional working group for the regional observer programme (IWG-ROP) will take into account the need to obtain detailed information on seabird interactions to allow analysis of the effects of fisheries on seabirds and evaluation of the effectiveness of bycatch mitigation measures.

9. CCMs shall annually provide to the Commission, in Part 1 of their annual reports, all available information on interactions with seabirds reported or collected by observers to enable the~~o estimate~~ estimation of ~~the Scientific Committee to estimate~~ seabird mortality in all fisheries to which the Convention applies. (see Annex 2 for Part 1 reporting template guideline).. These reports shall include information on:

a) the proportion of observed effort with specific mitigation measures used~~The , including mitigation method used at the time of each interaction,~~; and

~~a)~~b) observed and reported species specific seabird bycatch rates and numbers or ~~, to enable the Scientific Committee to estimate seabird mortality in all fisheries to which the Convention applies. (see Annex 2 for Part 1 reporting template guideline). Alternatively,~~ statistically rigorous estimates of species- specific seabird interaction rates (for longline, interactions per 1,000 hooks) and total numbers ~~should be reported~~.

10. This Conservation and Management measure replaces CMM 2015-03, which is hereby repealed. Once adopted entry into force occurs 60 days after the end of the Commission meeting.

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Annex 1. Specifications

1. Tori lines (South of 30° South)

1a) For vessels >=35 m total length

i. Deploy at least 1 tori line. Where practical, vessels are encouraged to use a second tori line at times of high bird abundance or activity; both tori lines shall be deployed simultaneously, one on each side of the line being set. If two tori lines are used baited hooks shall be deployed within the area bounded by the two tori lines.

ii. A tori line using long and short streamers shall be used. Streamers shall be: brightly coloured, a mix of long and short streamers.

   a. Long streamers shall be placed at intervals of no more than 5 m, and long streamers must be attached to the line with swivels that prevent streamers from wrapping around the line. Long streamers of sufficient length to reach the sea surface in calm conditions must be used.

   b. Short streamers (greater than 1m in length) shall be placed no more than 1m apart.

iii. Vessels shall deploy the tori line to achieve a desired aerial extent greater than or equal to 100 m. To achieve this aerial extent the tori line shall have a minimum length of 200m, and shall be attached to a tori pole >7m above the sea surface located as close to the stern as practical.

iv. If vessels use only one tori line, the tori line shall be deployed windward of sinking baits.

1b) For vessels <35 m total length

i. A single tori line using either long and short streamers, or short streamers only shall be used.

ii. Streamers shall be: brightly coloured long and/or short (but greater than 1m in length) streamers must be used and placed at intervals as follows:

   a. Long streamers placed at intervals of no more than 5m for the first 75~~5~~ m of tori line~~, with streamers optional over the first 10 m~~.

   b. Short streamers placed at intervals of no more than 1m.

iii. Long streamers ~~shall~~ should be attached to the line in a way that ~~with swivels that~~ prevent streamers from wrapping around the line. All long streamers shall reach the sea-surface in calm conditions. ~~,~~ Streamers may be modified over the first 15 m to avoid tangling. ~~except within the first 15 m where streamers may be shorter to avoid tangling with gear and weighing down the line.~~

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iv. Vessels shall deploy the tori line to achieve a ~~desired~~ minimum aerial extent of 75 m. To achieve this aerial extent the tori line ~~shall have a minimum length of 100m, and~~ shall be attached to a tori pole >6m above the sea surface located as close to the stern as practical. Sufficient drag must be created to maximise aerial extent and maintain the line directly behind the vessel during crosswinds. To avoid tangling, this is best achieved using a long in-water section of rope or monofilament. ~~Sufficient drag can be created in numerous ways to best suit the vessel's operations and minimise tangling with gear, which includes long lengths of monofilament, shorter lengths of braided ropes, or other configurations or devices designed to generate drag.~~

~~If the tori line is less than 150 m in length, it must have a towed object attached to the end so that the aerial extent is maintained over the sinking baited hooks.~~

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v. If two tori lines are used, the two lines must be deployed on opposing sides of the main line.

2. Tori lines (North of 23° North)

2a) Long Streamer

i. Minimum length: 100 m
ii. Must be attached to the vessel such that it is suspended from a point a minimum of 5m above the water at the stern on the windward side of the point where the hookline enters the water.
iii. Must be attached so that the aerial extent is maintained over the sinking baited hooks.
iv. Streamers must be less than 5m apart, be using swivels and long enough so that they are as close to the water as possible.
v. If two (i.e. paired) tori lines are used, the two lines must be deployed on opposing sides of the main line.

2b) Short Streamer (For vessels >=24 m total length)

i. Must be attached to the vessel such that it is suspended from a point a minimum of 5m above the water at the stern on the windward side of a point where the hookline enters the water.
ii. Must be attached so that the aerial extent is maintained over the sinking baited hooks.
iii. Streamers must be less than 1m apart and be 30 cm minimum length.
iv. If two (i.e. paired) tori lines are used, the two lines must be deployed on opposing sides of the main line.

2c) Short Streamer (For vessels <24 m total length)

This design shall be reviewed no later than 3 years from the implementation date based on scientific data.

i. Must be attached to the vessel such that it is suspended from a point a minimum of 5m above the water at the stern on the windward side of a point where the hookline enters the water.
ii. Must be attached so that the aerial extent is maintained over the sinking baited hooks.
iii. If streamers are used, it is encouraged to use the streamers designed to be less than 1m apart and be 30cm minimum length.
iv. If two (i.e. paired) tori lines are used, the two lines must be deployed on opposing sides of the mainline.

3. Side setting with bird curtain and weighted branch lines

i. Mainline deployed from port or starboard side as far from stern as practicable (at least 1m), and if mainline shooter is used, must be mounted at least 1m forward of the stern.
ii. When seabirds are present the gear must ensure mainline is deployed slack so that baited hooks remain submerged.
iii. Bird curtain must be employed:
    - Pole aft of line shooter at least 3m long;
    - Minimum of 3 main streamers attached to upper 2m of pole;
    - Main streamer diameter minimum 20mm;
    - Branch streamers attached to end of each main streamer long enough to drag on water (no wind) – minimum diameter 10mm.

4. Night setting

i. No setting between nautical dawn and before nautical dusk.
ii. Nautical dusk and nautical dawn are defined as set out in the Nautical Almanac tables for relevant latitude, local time and date.
iii. Deck lighting to be kept to a minimum. Minimum deck lighting should not breach minimum standards for safety and navigation.

5. Weighted branch lines

i. Following minimum weight specifications are required:

- one weight greater than or equal to 40g within 50cm of the hook; or
- ~~greater than or equal to a total of 45g attached to within 1 m of the hook; or~~
- greater than or equal to a total of 60 g ~~attached to~~ within ~~3.5~~1 m of the hook; or
- greater than or equal to a total of ~~98~~ 80 g weight attached to within ~~4~~ 2 m of the hook.

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6. Management of offal discharge

i. Either no offal discharge during setting or hauling;
ii. Or strategic offal discharge from the opposite side of the boat to setting/hauling to actively encourage birds away from baited hooks.

7. Blue-dyed bait

i. If using blue-dyed bait it must be fully thawed when dyed.
ii. The Commission Secretariat shall distribute a standardized colour placard.
iii. All bait must be dyed to the shade shown in the placard.

8. Deep setting line shooter

i. Line shooters must be deployed in a manner such that the hooks are set substantially deeper than they would be lacking the use of the line shooter, and such that the majority of hooks reach depths of at least 100 m.

9. Hook-shielding devices

Hook-shielding devices must encase the point and barb of baited hooks to prevent seabird attacks during line setting. To ensures that baited hooks are released beyond the foraging depth of most seabirds, the devices must

(a) meet current recommended minimum standards for branch line weighting described in 5i and,
(b) maintain encasement of the hook barb until
(i) the hook sinks to a minimum depth of 10 meters, or
(ii) the hook has achieved a minimum period of immersion of 10 minutes after setting.

Annex 2. Guidelines for reporting templates for Part 1 report

The following tables should be included in the Part 1 country reports, summarising the most recent five years.

Table x: Effort, observed and estimated seabird captures by fishing year for [*CCM*] [South of 30°S; North of 23°N; or 23°N – 30°S[1]]. For each year, the table gives the total number of hooks; the number of observed hooks; observer coverage (the percentage of hooks that were observed); the number of observed captures (both dead and alive); the capture rate (captures per thousand hooks) and proportion of mitigation types used by the fleet. TL = tori line, NS = night setting, WB = weighted branch lines, SS = side setting, BC = bird curtain, BDB = blue dyed bait, DSLS = deep setting line shooter, MOD = management of offal discharge.

year	Fishing Effort				Observed seabird Captures		Proportion of observed effort with specific mitigation measures							
	Number of vessels	Number of hooks	Observed hooks	% hooks observed	Number	Rate[2]	TL + NS	TL + WB	NS + WB	TP + WB +NS	SS/BC/WB + DSLS	SS/BC/WB + MOD or BDB	TL	Nil
2011														
2012														
2013														
2014														
2016														
2017														
2018														

[1] State North of 23°N, South of 30°S or 23°N – 30°S, for CCMs fishing in all areas provide separate tables for each; [2] Provide as captures per one thousand hooks.

Table y: Number of observed seabird captures in [*CCM*] longline fisheries, 2012, by species and area.

Species	South of 30°S	North of 23°N	23°N – 30°S	Total
E.g. Antipodean albatross				
E.g. Gibson's albatross				
E.g. Unidentified albatross				
E.g. Flesh footed shearwater				
E.g. Great winged petrel				
E.g. White chinned petrel				
E.g. Unidentified				
Total				

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Appendix 1

Best Practice Seabird Bycatch Mitigation Criteria and Definition

Reviewed at the Ninth Meeting of the Advisory Committee

La Serena, Chile, 9 -13 May 2016

Best Practice Seabird Bycatch Mitigation Criteria and Definition

ACAP's Advisory Committee endorsed the following definition of Best Practice to be used when developing advice on mitigation measures to reduce seabird bycatch:

i. *Individual fishing technologies and techniques should be selected from those shown by experimental research to significantly*[1] *reduce the rate of seabird incidental mortality*[2] *to the lowest achievable levels*. Experience has shown that experimental research comparing the performance of candidate mitigation technologies to a control of no deterrent, where possible, or to status quo in the fishery, yields definitive results. Analysis of fishery observer data after it has been collected on the relative performance of mitigation approaches are plagued with a myriad of confounding factors. Where a significant relationship is demonstrated between seabird behaviour and seabird mortality in a particular system or seabird assemblage, significant reductions in seabird behaviours, such as the rate of seabirds attacking baited hooks, can serve as a proxy for reduced seabird mortality. Ideally, when simultaneous use of fishing technologies and practices is recommended as best practice, research should demonstrate significantly improved performance of the combined measures.

ii. *Fishing technologies and techniques, or a combination thereof, shall have clear and proven specifications and minimum performance standards for their deployment and use.* Examples would include: specific bird scaring line designs (lengths, streamer length and materials; etc.), number (one vs. two) and deployment specifications (such as aerial extent and timing of deployment), night fishing defined by the time between the end of nautical dusk and start of nautical dawn, and line weighting configurations specifying mass and placement of weights or weighted sections.

iii. *Fishing technologies and techniques shall be demonstrated to be practical, cost effective and widely available*. Commercial fishing operators are likely to select for seabird bycatch reduction

[1] Any use of the word 'significant' in this document is meant in the statistical context [2] This may be determined by either a direct reduction in seabird mortality or by reduction in seabird attack rates, as a proxy

measures and devices that meet these criteria including practical aspects concerning safe fishing practices at sea.

www.acap.aq/en/bycatch-mitigation/mitigation-advice

iv. *Fishing technologies and techniques should, to the extent practicable, maintain catch rates of target species.* This approach should increase the likelihood of acceptance and compliance by fishers.

v. *Fishing technologies and techniques should, to the extent practicable not increase the bycatch of other taxa.* For example, measures that increase the likelihood of catching other protected species such as sea turtles, sharks and marine mammals, should not be considered best practice (or only so in exceptional circumstances).

vi. *Minimum performance standards and methods of ensuring compliance should be provided for fishing technologies and techniques, and should be clearly specified in fishery regulations.* Relatively simple methods to check compliance should include, but not be limited to, port inspections of branch lines to determine compliance with branch line weighting, determination of the presence of davits (tori poles) to support bird scaring lines, and inspections of bird scaring lines for conformance with design requirements. Compliance monitoring and reporting should be a high priority for enforcement authorities.