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Review of Conservation and Management Measure to mitigate the impact of fishing for highly migratory fish stocks on seabirds (CMM 2018-03): informal intersessional process, key findings, and management options.

WCPFC-SC20-2024/EB-WP-06 (Rev.01)
6 August 2024

New Zealand

Contents

1 Summary

Over 2023 and 2024, New Zealand led an informal process to review CMM 2018-03 *Conservation and Management Measure to mitigate the impact of fishing for highly migratory fish stocks on seabirds*. The process included the collation of all relevant scientific papers, two informal virtual meetings with WCPFC Members and Participating Territories, their industry representatives, and WCPFC Observers, and several follow-up bilateral meetings with Members. The meetings focused on reviewing the best available scientific evidence on mitigating seabird bycatch in commercial pelagic longline fisheries in the Western and Central Pacific Ocean (WCPO) and comparing the current requirements under CMM 2018-03 with best practice advice from the Agreement for the Conservation of Albatross and Petrels (ACAP), and other best available information.

Key findings from the review process include:

1) Many seabirds that forage within the WCPO are declining at concerning rates and bycatch in pelagic longline fisheries is the most likely cause for some species.

2) Effective mitigation methods[1] are available that minimally impact target catch, however, current specifications under CMM 2018-03 can be improved. Bringing specifications in line with ACAP best practice in high-risk areas, particularly for branch line weighting, could significantly reduce seabird bycatch within the WCPO.

3) Some current mitigation methods in CMM 2018-03 are ineffective and should be removed.

4) Effective combinations of mitigation methods address the limitations of using a single mitigation method, and bycatch can be reduced to close-to-zero by using ACAP best practice combinations of three key methods in high-risk areas - branch line weighting, night setting and tori lines; or alternatively, using the stand-alone methods of hook shielding devices, and/or the underwater bait setter.

5) New research on seabird distribution and diving behaviour highlights that effective combinations of methods are most needed in the Southern Hemisphere waters South of 25°S.

[1] In this paper 'mitigation methods' are the tools and practices used to reduce bycatch of seabirds. 'Mitigation measure' refers to the CMM 2018-03.

2 Recommended management options

New Zealand proposes that the Twentieth Scientific Committee consider the following recommendations to Commission.

<u>Tori line specifications: [4.2.1]</u>

1. *Require* the same aerial extent in Southern Hemisphere and Northern Hemisphere:
    - 75 m for small vessels (<24m)
    - 100 m for large vessels (>24m).

2. *Require* streamers on both large and small vessel tori lines.

3. *Amend* the current requirement for the use of swivels to attach streamers to be *optional* in the Southern Hemisphere.

4. *Amend* the current requirement for a minimum 200m length (i.e. 100m in-water section) to a requirement to have an in-water section which creates sufficient drag.

5. *Encourage* targeted capacity support and design innovation to address challenges of achieving aerial extent where tori poles are difficult to use due to hull material.

6. *Encourage* the use of paired tori lines for large vessels

<u>Night setting specifications: [4.2.2]</u>

7. *Clarify* vessel log reporting and observer reporting requirements for night setting.

<u>Branch line weighting specifications: [4.2.3]</u>

8. *Require* the following branch line weighting specifications for both Hemispheres:
    - ≥40 g within 0.5 m of the hook
    - ≥60 g within 1 m of the hook
    - ≥80 g within 2 m of the hook

9. *Specify* that all branch lines must be weighted when applying this method.

Mitigation method options: [4.2.4 – 4.3.3]

10. *Include* approved underwater bait setters as a standalone mitigation method in addition to the standalone option of using hook-shielding devices.

11. *Remove* blue-dyed bait, deep setting line shooters, and management of offal discharge as primary mitigation methods.

12. *Encourage* all vessels to adopt effective offal management, such that offal and discards should not be discharged during line setting. During line hauling, offal and used baits should preferably be retained or discharged on the opposite side of the vessel from that on which the line is hauled. All hooks should be removed and retained on board before discards are discharged from the vessel.

Effective combinations of mitigation methods: [4.4 – 4.5.2]

13. In the area 25°S to 30°S, *require* the combined use of tori lines, branch line weighting, and night setting or hook shielding devices or underwater bait setters as standalone options.

14. In the area south of 30°S, *require* the combined use of tori lines, branch line weighting, and night setting or hook shielding devices or underwater bait setters as standalone options.

15. In the area 23°N - 25°S, in particular the area 20°S - 25°S – *encourage* use of effective mitigation options, and targeted capacity building to support the implementation of mitigation methods.

16. Strengthen mitigation requirements for the area north of 23°N by improving the specifications of current options and removing ineffective options.

See Annex 1 for an initial CMM 2013-06 assessment of the potential impact of new proposals on small island developing States and territories (SIDS).

3 Background

The 18th Regular Session of the Scientific Committee (SC18) recommended a review of the Conservation and Management Measure to mitigate the impact of fishing for highly migratory fish stocks on seabirds (CMM 2018- 03).

The 19th Regular Session of the Commission (WCPFC19) noted a global decline in specific populations of seabirds listed by the Agreement on the Conservation of Albatrosses and Petrels (ACAP), which are vulnerable to threats posed by commercial pelagic longline fisheries in the WCPO (hereafter pelagic longline fisheries), and the importance of seabird bycatch mitigation methods. WCPFC19 agreed that CMM 2018-03 would be reviewed over 2023 and 2024 and evaluated with respect to new studies and the best practice advice on mitigation from the Agreement on the Conservation of Albatross and Petrels (ACAP).[2]

At the 19th Regular Session of the Scientific Committee (SC19), New Zealand offered to lead the review of CMM 2018-03 and proposed the purpose, scope, and process for the review in an information paper. [3] The agreed purpose of the review is "to ensure that effective mitigation methods are required and applied across the Convention Area where there is bycatch risk to vulnerable seabirds from longline fishing."

The 20th Regular Session of the Commission (WCPFC20) noted that New Zealand would lead informal intersessional meetings with interested Contracting Parties, the Participating Territories, and cooperating Non-Members (CNMs), (referred to collectively hereafter as "CCMs"). This would enable the review of the latest scientific evidence on seabird bycatch mitigation and discussion of CMM 2018-03 with the aim to provide a draft new measure for submission to the 21st Regular Session of the Commission (WCPFC21), following consideration by the Scientific Committee (SC20) and the Technical Compliance Committee (TCC20).[4]

Accordingly, during 2024, New Zealand:

- Collated relevant scientific papers on seabird bycatch mitigation methods and shared these with members via a link to a SharePoint folder.[5]
- Coordinated two online informal meetings for the review – on 20 February 2024 and 7 May 2024. These meetings involved experts and industry representatives as part of CCM's delegations, enabling exchanges of new scientific evidence and practical considerations from industry. The agenda,

[2] See paragraphs 328 and 329 of the Summary Report: WCPFC19 Summary Report - Issued 29 March 2023 | WCPFC Meetings

[3] See WCPFC-SC19-2023/EB-IP-16, Proposed purpose, scope, and process for the seabird CMM 2018-03 review | WCPFC Meetings

[4] Paragraph 88. WCPFC20 Outcomes and Attachments (19Dec2023) - Rev.01 | WCPFC Meetings

[5] Access to this SharePoint folder can be requested by contacting Johannes Fischer via jfischer@doc.govt.nz

presentations, and summary documents from these meetings are on the WCPFC website.[6]

- Additional bilateral meetings were held with some members, including those unable to attend the meetings due to time zone differences.

The Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (the Convention) provides the legal framework for improving CMM2018-03. This includes Article 5 'Principles and measures for conservation and management'',[7] Article 6 'Application of the precautionary approach',[8] and Article 30 'Recognition of the special requirements of developing States'.

4 Key findings of the review

4.1 Many seabirds that forage within the WCPO are declining at concerning rates and bycatch in pelagic longline fisheries is the most likely cause

The WCPO is an important habitat for many seabird species. For example, 17 out of the world's 22 albatross species (77%), depend on the WCPO. Figure 1 shows that the Southern Hemisphere, particularly around New Zealand, has the highest concentration of seabird species.

[6] Informal Intersessional Meetings on the Review of WCPFC's Seabird Measure Led by New Zealand | WCPFC Meetings

[7] Articles are 5 'Principles and measures for conservation and management' sets out: that members shall: "(e) adopt measures to minimize waste, discards, catch by lost or abandoned gear, pollution originating from fishing vessels, 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 and promote the development and use of selective, environmentally safe and cost-effective fishing gear and techniques;
(f) protect biodiversity in the marine environment."

[8] Article 6 (2) requires that "Members of the Commission shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures."

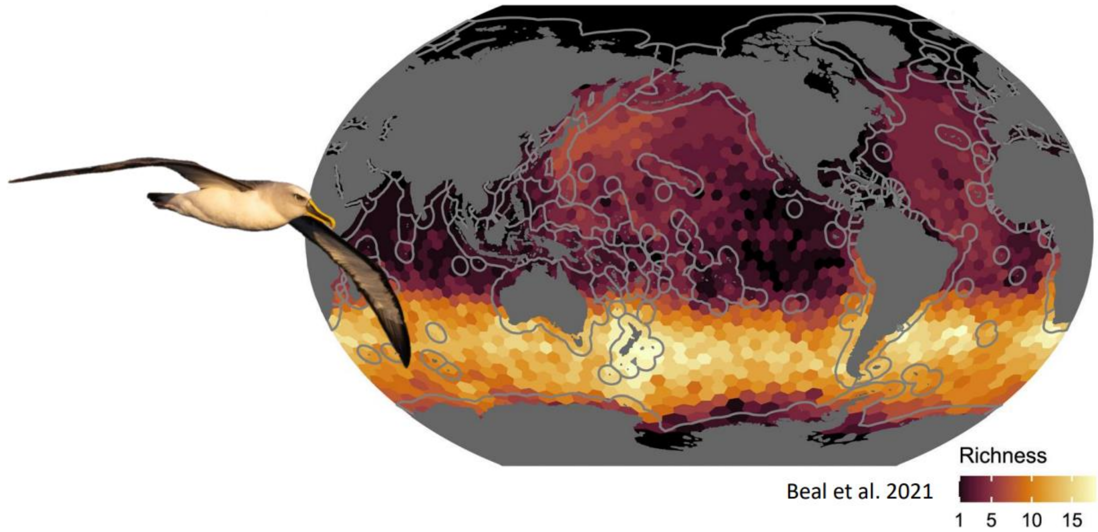

Figure 1. Albatross and large petrel species richness (number of species) around the world, based on Beal et al. 2021.

Many of the seabirds within the WCPO are threatened and populations are declining (Table 1). Following the ACAP trend classification, 69% (9/13) of ACAP listed species that forage in the WCPO are declining, and only one species is increasing.[9] In addition, New Zealand's long-term seabird monitoring programme shows that 73% of the studied albatross and large petrel populations (8/11 taxa) have declined over recent decades and are continuing to fall year-on-year (WCPFC-SC20-EB-WP10).

[9] The population of the Short-Tailed Albatross is increasing.

Table. 1. Updated extract of WCPFC-SC18-EB-WP3 on the population status of ACAP seabird populations.

Species	IUCN status	Breeds in WCPO	Forages in WCPO	Breeding pairs	Trend
Antipodean Albatross	EN	✓	✓	8,654	↓
Northern Royal Albatross	EN	✓	✓	4,261	↓
Southern Royal Albatross	(EN)	✓	✓	6,347	↓
Indian Yellow-nosed Albatross	EN		✓	33,988	↓
Grey-headed Albatross	EN	✓	✓	80,633	↓
Westland Petrel	EN	✓	✓	6,223	↔
Wandering Albatross	VU	✓	✓	10,072	↓
Short-tailed Albatross	VU	✓	✓	1,000	↑
Salvin's Albatross	VU	✓	✓	58,563	↓
Chatham Albatross	VU	✓	✓	5,294	↔
Campbell Albatross	VU	✓	✓	19,349	↓
White-chinned Petrel	VU	✓	✓	1,317,278	↓
Black Petrel	VU	✓	✓	5,456	↔

Two seabirds of particular concern are the Antipodean and Gibson's albatrosses. These albatrosses have shown alarming rates of decline since the mid-2000s. Antipodean albatross is classified 'Endangered' on the IUCN red list of threatened species. The Antipodean albatross has declined 62% since 2004 and continues to decline at 6% each year. This is projected to result in global extinction before the end of the century unless current threats are addressed (Fig. 2).

The Gibson's Albatross is also highly threatened, and its population has declined by 58% since 2004, and it continues to decline at 4% each year. These two seabirds are the most studied examples, yet a wider range of New Zealand albatrosses and large petrels are also showing similar population trends, with some showing extreme declines of >90% (WCPFC-SC20-EB-WP10).

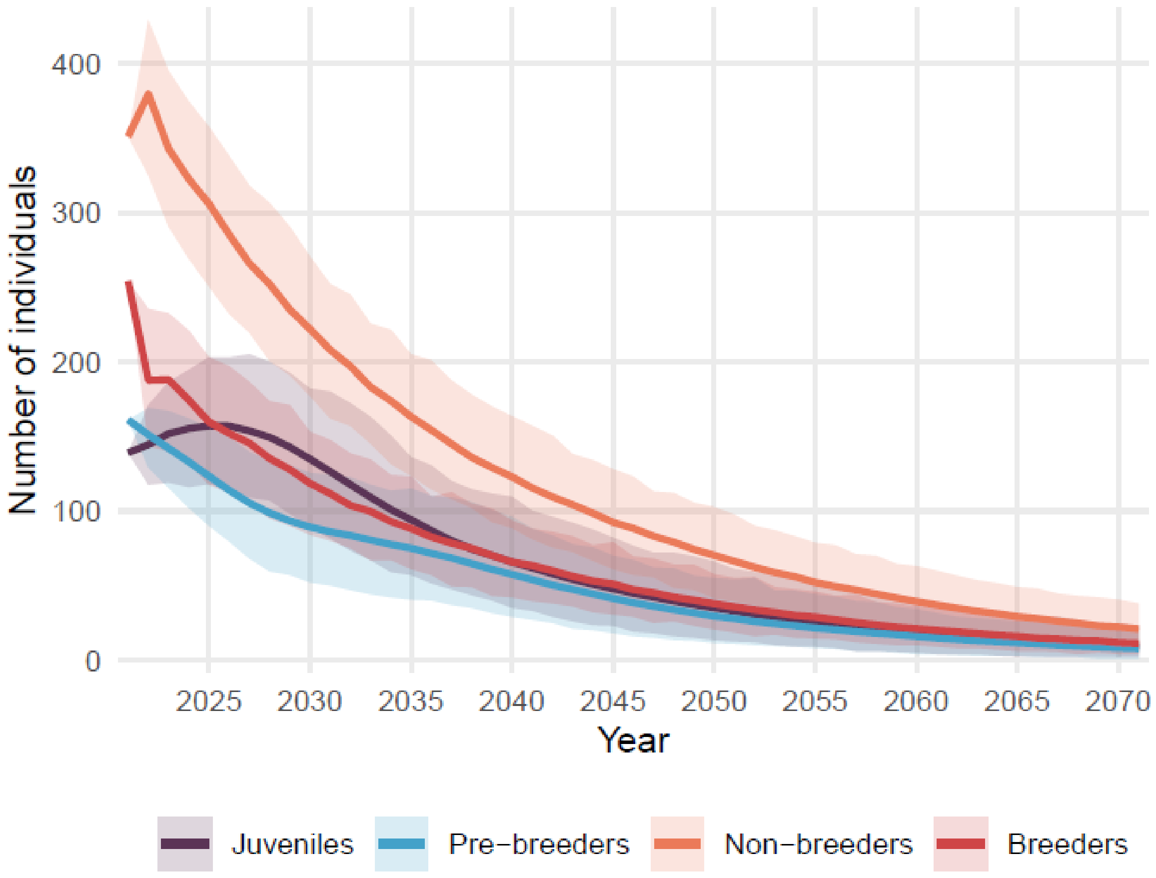

Figure 2. Projected population trend for Antipodean Albatross based on analyses detailed in WCPFC-SC20-EB-IP26.

Bycatch in pelagic longline fisheries is a significant threat to seabirds in the WCPO and the most likely driver of decline for some seabird population declines. Various studies have produced a range of pelagic longline bycatch estimates. These include the following estimates:

- 50,000-75,000 seabirds are bycaught globally every year (Anderson et al. 2011)
- 39,000-43,000 or 12,000-25,000 petrels and albatross are bycaught annually in the Southern Hemisphere (Abraham et al. 2019 and Edwards et al. 2023, respectively)
- 11,000-25,000 seabirds are bycaught annually within the WCPO (Peatman et al. 2019).

Different assumptions and access to data mean it is difficult to make direct comparisons between these studies. In addition to this, challenges with identifying the species of bycaught birds, limited tracking data for some populations, and varying observer coverage between fleets are reflected in the wide ranges of uncertainty within each study.[10]

[10] The estimate provided by Peatman et al. (2019) for the WCPO was not repeated due to these ongoing challenges and the impacts of COVID-19 on observer coverage in the WCPO (WCPFC-SC20-EB-IP27).

A recent Southern Hemisphere Risk Assessment (using New Zealand data only), highlights that the risk from bycatch in pelagic longline fisheries for numerous species is at a level which may drive population declines, and that most of the seabirds at highest risk live in the WCPO (Edwards et al. 2023).[11]

Despite the considerable uncertainty that surrounds all estimates of seabird bycatch in pelagic longline fisheries, the magnitudes of estimates are in line with the observed declines at the seabird colonies in New Zealand (WCPFC-SC20-EB-WP10).

Bycatch in high seas pelagic longline fisheries is likely to be the most significant driver of the population declines of the Antipodean and Gibson's albatross. Fine scale fisheries overlap analysis shows that 76.6% of tracked Antipodean and Gibson's albatross overlapped with high seas pelagic longline fishing vessels (WCPFC-SC20-EB-WP10). A recent multi-threat risk assessment indicates that, while there is bycatch of these species in New Zealand waters, this alone is not sufficient to explain the level of observed population declines. This research concludes that bycatch in high seas within the WCPO is a significant cause (WCPFC-SC20-EB-IP26).

Non-fisheries threats to seabirds in the WCPO have been addressed.. Invasive species at breeding sites have or are being controlled successfully (ACAP 2024, WCPFC-SC20-EB-WP10); there is no direct evidence for climate change driving population declines (WCPFC-SC20-EB-IP26); plastic pollution is not a significant threat for studied Southern Hemisphere taxa (Clarke et al. 2023); and highly pathogenic avian influenza (HPAI) has not reached New Zealand colonies (ACAP 2024).

Considering all lines of evidence, bycatch in pelagic longline fisheries, particularly in the high seas, is likely the most prominent driver of the continued observed population declines. Fortunately, bycatch in pelagic longline fisheries is a manageable threat, and effective bycatch mitigation methods exist (ACAP 2023, Pierre 2023).

4.2 Effective mitigation options are available that minimally impact target catch, however current specifications can be improved

There are a range of effective mitigation methods to reduce seabird bycatch in pelagic longline operations. ACAP recommends that the most effective way to reduce seabird bycatch in pelagic longline fisheries is to use the following three best practice measures simultaneously: branch line weighting, night setting and bird scaring lines (i.e. tori lines). Alternatively, the use of an assessed hook shielding

[11] Note a multi-country update of this modelling effort is in process through CCSBT

device or underwater bait setting device is recommended (ACAP, 2023). Bycatch may be reduced to close to zero by using these ACAP recommended methods if they are implemented to ACAP specifications (Pierre, 2023).

The review highlighted several important gaps between current mitigation specifications in CMM 2018-03 and ACAP best practice specifications. Analysis of relative effectiveness of different specification scenarios shows that adopting ACAP best practice combinations and specifications in high-risk areas[12] could reduce bycatch (measured by relative standardised interaction rates) of 61% for the area south of 30°S, 81% for the area 25°-30°S, and 73% for the area north of 23°N (WCPFC-SC20-EB-WP11).

4.2.1 Tori lines

Tori lines deter seabirds from approaching hooks to feed on baits during setting. It is a line towed from a high point at the stern of the vessel. As the vessel moves forward the section of the line closest to the vessel is lifted off the water. This lifted section (referred to as aerial extent) has flapping streamers that scare seabirds away from sinking baited hooks. Tori lines are generally attached to a strong, purpose-built pole (tori pole). To be most effective, tori lines should be paired – with two tori lines on either side of the baited line, protecting a corridor around the sinking hooks that birds do not enter.

Analysis of relative effectiveness of tori lines at reducing bycatch shows this method can reduce seabird bycatch by approximately 54% over no mitigation at all (WCPFC-SC20-EB-WP11). Evidence from around the world illustrates the efficacy of tori lines at reducing seabird bycatch with no negative effect on target catch rate. In fact, some studies show increased target catch with tori line use (Pierre, 2023).

Effectiveness of tori lines depends on the types of seabirds in the area, and whether the tori line is designed and used correctly. Tori lines must have the right specifications; aerial extent is particularly crucial, as are streamers. The condition of tori lines must also be monitored and maintained as entanglement, and subsequent breakage, can occur.

4.2.1.1 Tori line specifications - Southern Hemisphere

The current Southern Hemisphere tori line specifications are almost completely consistent with ACAP best practice. The only difference is that the current WCPFC CMM 2018-03 requirement for large vessels (>35 m) is for tori line deployment height greater than 7 m, whereas ACAP recommends tori lines are deployed at >8 m (Fig. 3). Increasing the deployment height of tori lines improves the aerial extent and provides better protection.

[12] High-risk areas for seabirds within the WCPO include the area south of 30°S, the area 25°S-30°S, and the area north of 23°N (WCPFC-SC20-EB-WP10).

Tori (bird scaring) line specifications in the Southern Hemisphere (South of 25° S)

Specifications	CMM 2018-03 requirements		ACAP Best Practice	
Vessel size	**≥35 m**	**<35 m**	**≥35 m**	**<35 m**
# tori lines	1-2	1-2	1-2	1-2
Long streamers	• Colourful • Intervals <5 m • Swivels • reach sea surface in calm conditions	Optional: • Colourful • Intervals <5 m for first 75 m • Swivels optional • Reach sea surface in calm conditions (but first 15 m may be modified	• Colourful • Intervals <5 m • Swivels • reach sea surface in calm conditions	Optional: • Colourful • Intervals <5 m for first 75 m • Swivels optional • Reach sea surface in calm conditions (but first 15 m may be modified
Short streamers	• Colourful • >1 m length • <1 m intervals	• Colourful • >1 m length • <1 m intervals	• Colourful • >1 m length • <1 m intervals	• Colourful • >1 m length • <1 m intervals
Aerial extent	≥100 m	≥75 m	≥100 m	≥75 m
Tori line length	>200 m	Sufficient to maintain aerial extent	>200 m	Sufficient to maintain aerial extent
Deployment height	>7 m	>6 m	>8 m	>6 m
Deployment location	If using 1: windward of sinking baits, if using 2: at opposite sides of deployment line	If using 1: windward of sinking baits, if using 2: at opposite sides of deployment line	If using 1: windward of sinking baits, if using 2: at opposite sides of deployment line	If using 1: windward of sinking baits, if using 2: at opposite sides of deployment line

Figure 3. Slide from 20 February 2024 meeting: presentation 7 – showing differences between the current CMM 2018-03 specifications for tori lines and ACAP best practice in the Southern Hemisphere[13]

4.2.1.2 Tori line specifications - Northern Hemisphere

The current Northern Hemisphere tori line specifications are different from ACAP best practice in many important aspects (Fig. 4). Improving the specifications to meet ACAP best practice could result in improvements in bycatch reduction (measured by relative standardised interaction rates) of 19% (WCPFC-SC20-EB-WP11).

The significant differences between current specifications for the Northern Hemisphere and ACAP recommended specifications are:

- Aerial extent is not specified (ACAP best practice recommends greater or equal to 100m for large vessels, and greater or equal to 75m for small vessels)
- Small vessel (<24m) tori lines do not require streamers (ACAP best practice recommends the use of at least short (>1m) streamers)
- Long streamers are optional – they are not required to be used in combination with short streamers and there is no specified minimum length for streamers (ACAP recommends the use of long and short streamers together, with long streamers reaching the sea surface in calm conditions for large (>35m) vessels)
- Streamers can be very short >0.3 m (ACAP recommends >1m streamers)

[13] WCPFC CMM 2018-03 review presentation 7 - Tori (bird scaring) lines | WCPFC Meetings

- Tori line length is greater or equal to 100m for large vessels and not specified for small vessels (ACAP recommends "sufficient to maintain aerial extent" for small vessels).
- Deployment height should be greater than or equal to 5m above the water (ACAP recommends deployment is greater than 8m for large vessels and greater than 6m for small vessels).

Tori (bird scaring) line specifications in the Northern Hemisphere (North of 23° N)

Specifications	CMM 2018-03 requirements		ACAP Best Practice	
Vessel size	**≥24 m**	**<24 m**	**≥35 m**	**<35 m**
# tori lines	0-2	0-2	0-2	0-2
Long streamers	Optional: • Intervals <5 m • Swivels optional • As close to water as possible	Optional: • Intervals <5 m • Swivels optional • As close to water as possible	Required: • Colourful • Intervals <5 m • Swivels required • Reach sea surface in calm conditions	Optional: • Colourful • Intervals <5 m • Swivels optional • Reach sea surface in calm conditions
Short streamers	• >0.3 m length • <1 m intervals	Optional: • >0.3 m length • <1 m intervals	• Colourful • >1 m length • <1 m intervals	Required: • Colourful • >1 m length • <1 m intervals
Aerial extent	Over sinking hooks	Over sinking hooks	≥100 m	≥75 m
Tori line length	≥100 m	NA	≥200 m	Sufficient to maintain aerial extent
Deployment height	≥5 m from where line enters water	≥5 m from where line enters water	>8 m	>6 m
Deployment location	If using 1: windward of sinking baits, if using 2: at opposite sides of deployment line	If using 1: windward of sinking baits, if using 2: at opposite sides of deployment line	If using 1: windward of sinking baits, if using 2: at opposite sides of deployment line	If using 1: windward of sinking baits, if using 2: at opposite sides of deployment line

Figure 4. Slides from 24 February 2024 meeting: presentation 7 – showing differences between the current CMM specifications for tori lines and ACAP best practice in the Northern Hemisphere[14]

CMM 2018-03 states that the inclusion of a streamer-less tori line option for small vessels in the North Pacific required further evaluation to determine if such designs are effective. Further studies have since been reported (Ochi 2022, Ochi 2023). Initially, results suggested that streamer-less tori lines are as effective as small streamer tori lines. However, results were difficult to interpret because experiments were confounded by varying aerial extents, which is a key factor influencing the effectiveness of tori lines. Additionally, bycatch of seabirds during all streamer-less tori line trials was still extremely high.[15]

In summary, the best available scientific evidence shows that tori lines without streamers and tori lines that achieve limited aerial extent are not effective at reducing seabird bycatch.

4.2.1.3 Tori lines - practical considerations

[14] WCPFC CMM 2018-03 review presentation 7 - Tori (bird scaring) lines | WCPFC Meetings

[15] For example, a bycatch rate of approximately 2 birds per 1000 hooks was reported for the better performing streamer-less design tested by Ochi (2022)

During the review meetings, industry participants highlighted several practical challenges with tori lines. These include achieving adequate aerial extent in small vessels, tori lines twisting and tangling, the degradation of materials which can cause breakage, and the need for frequent replacement.

Industry participants also shared their experiences in testing, trialling designs and developing solutions to challenges. For example, the New Zealand pelagic longline fleet now uses movable tori poles which help achieve aerial extent.[16] However, challenges may persist where the vessel/hull/superstructure material means a tori pole is not easily attached.

In another example, there has been significant effort to develop effective tori lines for the Hawaiian deep-set fishery, including a design that addresses the challenge of entanglement. Fishers were involved in the process and trials, which found that using a braided in-water drag section reduces twisting of the tori line. They also found that some streamer materials such as dyneema can significantly reduce tangling.[17]

An ACAP representative highlighted that in the Brazilian fishery, swivels have been useful to reduce twisting. Others, however, including Chinese vessels, have experienced difficulties with swivels adding weight and increasing breakages.[18] Additionally, fishers have found the requirement for a minimum 200m length (i.e. 100m in-water section) increases the likelihood of entanglement with fishing gear. The purpose of the 200m requirement is to create sufficient drag to lift the tori line, however there are other ways to create drag and lift with shorter in-water sections.

These practical challenges highlight that specifications should allow for design innovation to achieve performance objectives such as aerial extent, and to manage challenges such as twisting and tangling.

Tori lines - limitations

Once baited hooks float past the aerial extent of the tori line, and if they have not sunk, then seabirds may still be attracted. Seabirds can dive down and bring hooks back to the surface. Seabirds that are not good at diving, like albatrosses, can grab the baited hook off a diving seabird and become caught. Combining tori lines with night setting and branch line weighting further reduces the risk of seabirds becoming hooked.

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[16] 7 May 2024 Meeting, presentation 7. WCPFC CMM 2018-03 review2 presentation 7 - Implementation of S Hemisphere mitigation options - a NZ perspective | WCPFC Meetings

[17] 7 may 2024 Meeting. Presentation 5. WCPFC CMM 2018-03 review2 presentation 5 - Seabird bycatch mitigation experiments in the Hawaiian deep-set fishery | WCPFC Meetings

[18] 7 May 2024 Meeting summary report. Summary report of the second informal intersessional meeting to review WCPFC CMM 2018-03 – Conservation and Management Measure to mitigate the impact of fishing for highly migratory fish stocks on seabirds | WCPFC Meetings

4.2.2 *Night setting*

Many seabirds are less active at night, so setting lines when it is dark means birds are less likely to attack baits and become hooked. Night setting means that there is no setting after nautical dawn and before nautical dusk.[19] The night setting specification of CMM 2018-03 aligns with ACAP advice.

Analysis of relative effectiveness of night setting at reducing bycatch shows this method provides a 54% improvement over no mitigation at all (WCPFC-SC20-EB-WP11).

4.2.2.1 Night setting - Practical considerations

Effective night setting requires the entire set to be between nautical dusk and nautical dawn the following day, which can be challenging for some fisheries. This is particularly the case for vessels fishing in high northern latitudes in summer (when there are minimal dark hours), or vessels fishing for some target species.

Globally, the implementation of night setting has been found to be poor. For example, only 3% of pelagic longline sets globally were found to be set entirely at night (Kroodsma et al., 2023).

Within the WCPO, it is common practice for vessels to start setting before dawn but continue until mid-morning. There is also some inconsistency in how night setting is implemented and reported across time zones. Some confusion about definitions and methods of determining nautical dawn and dusk may be contributing to this.[20]

4.2.2.2 Night setting - limitations

Some seabirds are still active and feed at night. The effectiveness of night setting is greatly reduced during moon-lit nights, particularly during full moon periods. In addition, light sticks and bright deck lighting may also reduce efficacy of the method (Brothers and Foster 1997; McNamara 1999; Parker 2017).

These limitations can be overcome by adding tori lines and line weighting to further reduce the risk of seabirds becoming hooked, or by using a standalone method such as hook shielding devices or the underwater bait setter.

4.2.3 *Branch line weighting*

Branch line weighting helps to rapidly sink hooks beyond the reach of seabirds. A faster sink rate reduces the time that baited hooks are available to seabirds which reduces bait loss and bycatch. Branch line weighting is the most commonly reported seabird mitigation method in the WCPO (WCPFC-SC20-EB-IP27).

[19] Nautical dusk and nautical dawn are defined as set out in the Nautical Almanac tables for relevant latitude, local time and date. (CMM2018-03, Annex 1)
[20] Ibid.

Branch line weighting is highly effective at reducing seabird bycatch as lines are being set and it is one of the only mitigation methods that can reduce bycatch during the period when hooks are soaking. Weights help to keep the hooks below the depth of diving birds.

The relative effectiveness of branch line weighting at reducing bycatch is a 69% improvement over no mitigation at all (WCPFC-SC20-EB-WP11). However, this method is only effective to this level if all branch lines are weighted to certain specifications.

There are some significant differences between the line weighting specifications in CMM 2018-03 and those recommended by ACAP (Fig. 5). The current specifications for line weighting do not achieve sufficient sink rate to protect seabirds, particularly in areas where deep and fast diving large petrels range, because the weights are not heavy enough and they can be attached too far from the hook. There is no scientific evidence to suggest branch line weights at greater than 2m from the hook are sufficient to adequately reduce bycatch.[21]

New analyses of seabird diving behaviour indicates that a precautionary approach would be to protect seabirds to 20m dive depth in the Southern Hemisphere and 6m in the Northern Hemisphere (WCPFC-SC20-EB-IP29). Achieving this level of protection would require improving the line weighting specifications to meet ACAP best practice in the Southern and Northern Hemispheres. ACAP recommends heavier weights and reduced distance from hooks to achieve sink rates of >0.5 m/s, which is faster than most diving birds. The ACAP specifications would also allow the lines to sink to greater depths (e.g. 20 m).

Adopting the ACAP specifications for branch line weighting could result in 52% improvement in relative bycatch reduction (WCPFC-SC20-EB-WP11), with no or little effect on target catch (Pierre, 2023).

[21] Meeting 1, presentation 6. WCPFC CMM 2018-03 review presentation 6 - Branch line weighting | WCPFC Meetings

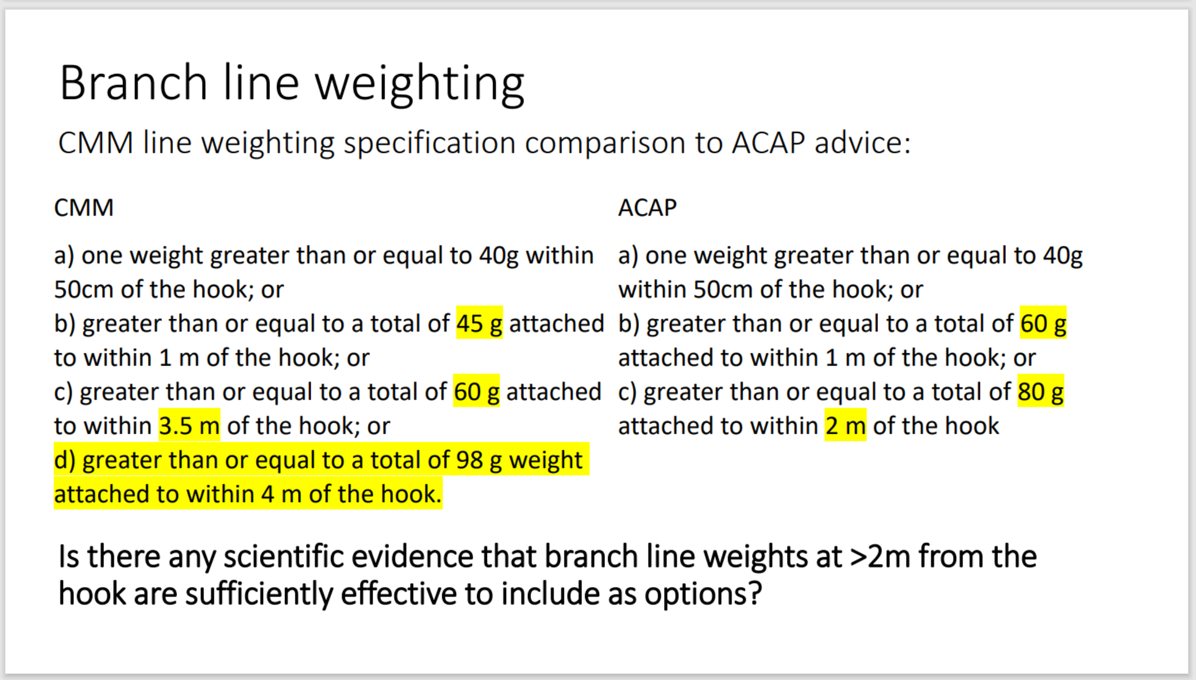

Figure 5. Slide from 24 February 2024 meeting, presentation 6 – showing differences in current CMM 2018-03 specifications for branch line weighting and ACAP recommendations[22]

4.2.3.1 Branch line weighting - practical considerations

Branch line weighting is integrated into the vessel's set up and it takes time and effort to change line weighting to meet different requirements across different ocean areas. The positive aspect is that once the weights are on the gear, they stay on, which makes for easy, "passive deployment." This also means that after an initial startup cost of obtaining the gear, they become integrated into vessel set up and become standard practice. Weights are also easy to verify during port or on-board inspections.[23]

During compliance inspections, common issues with implementation of branch line weighting have been reported, including: weights are not placed within the prescribed distance to hook; some vessels have added steel tracers which extend the distance of hook to weight; and sometimes weights are not employed on all branch lines.[24] These issues indicate the current set of requirements could be further clarified and the need for support and training to ensure specifications are achieved.

Several industry participants during the intersessional meetings highlighted safety concerns with line weighting.[25] Specifically, weights can increase the risk of line

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[22] Ibid

[23] 7 May 2024 Meeting, presentation 8. WCPFC CMM 2018-03 review2 presentation 8 - Implementation of N Hemisphere mitigation options - a US perspective | WCPFC Meetings

[25] 7 May 2024 Meeting, presentation 8 and 9: WCPFC CMM 2018-03 review2 presentation 8 - Implementation of N Hemisphere mitigation options - a US perspective | WCPFC Meetings; and WCPFC

flybacks (i.e., when hooks and/or weights on the line fly back to the vessel due to a shark biting off the hook, or a hook tearing out of the mouth of a fish), creating a safety hazard for crew.

Industry representatives also highlighted that the challenges of safely implementing branch line weighting can be overcome with new designs and crew training.[26] For example, sliding weights have been tested and found to be much safer than weighted swivels (Sullivan et al. 2012, Robertson et al. 2013, Santos et al. 2019). Sliding weights of 60g at 1m from the hook almost always slide right off the branch line during a simulated bite off or tear out. The collision between recoiling hook and sliding weight often shears the hook from the line, resulting in both the hook and the weight being lost rather than flying back towards the vessel (Rawlinson et al. 2018).

In addition, comprehensive safety advice has been developed by ACAP to provide information on safety concerns (ACAP, 2021).

4.2.3.2 Branch line weighting - limitations

When hooks are first set, it takes around 20 to 25 seconds for adequately weighted hooks to reach depths that are beyond diving seabirds. In this period seabirds are at most risk of bycatch. The use of a tori line and setting at night, in addition to line weighting, minimises this risk.

4.2.4 Hook-shielding devices

Hook-shielding devices cover the point and barb of the hook to protect seabirds from becoming caught during line setting. Once the hook sinks, the device opens and releases the hook. Hook-shielding devices can be used without other mitigation options.

Hook-shielding devices can achieve lower bycatch rates than any other single bycatch mitigation method (WCPFC-SC20-EB-WP11). An analysis of relative effectiveness of reducing bycatch shows that hook-shielding devices provide a 96% improvement over no mitigation at all (WCPFC-SC20-EB-WP11). These devices do not decrease target catch rates (Pierre 2023).

Noting that some fishing operations may find the use of other mitigation methods challenging (e.g. night setting at high latitudes in summer, or for some target species), hook-shielding devices provide an alternative, effective standalone mitigation option.

Practical considerations of hook-shielding devices were discussed in both informal meetings. Some practical challenges identified include that hook-shielding devices

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CMM 2018-03 review2 presentation 9 - Implementation of S Hemisphere mitigation options - an AUS perspective | WCPFC Meetings.

[26] 7 May 2024 Meeting, presentation 7. WCPFC CMM 2018-03 review2 presentation 7 - Implementation of S Hemisphere mitigation options - a NZ perspective | WCPFC Meetings

are expensive, create some entanglement potential, and require training. An industry representative from New Zealand highlighted that 14 pelagic longline vessels are now successfully using hook-shielding devices. It was noted that it does take a little extra time to learn to use Hookpods (the brand name of the hook-shielding devices), but vessel operators were generally supportive.[27]

Two hook-shielding devices that are currently approved by ACAP and comply with the current specifications in CMM 18-03 Annex 1 include: Hookpod LED (Sullivan et al. 2018) and Hookpod Mini (Goad et al. 2019).

4.2.5 Underwater bait setters

Underwater bait setters set bait automatically below the dive depth of seabirds. They substantially reduce seabird bycatch and have no effect on target catch rates or bait loss (Robertson et al. 2015, 2018). An analysis of relative effectiveness of reducing bycatch shows that underwater bait setters provide an 85% improvement over no mitigation at all (WCPFC-SC20-EB-WP11).

Underwater bait setters are considered practical and easy to use by fishers, but expensive. They are currently not listed as an accepted bycatch mitigation method under CMM 2018-03. Underwater bait setters could provide another standalone mitigation alternative when the use of other mitigation methods may be challenging. The inclusion of underwater baitsetters as a mitigation option would allow for even more choice and flexibility for fishing operators.

4.3 Some current mitigation options in CMM 2018-03 are ineffective and should be removed as primary mitigation methods

The review highlighted that several mitigation options in the current CMM 2018-03 have poor results in reducing bycatch including blue dyed bait, deep setting line shooter, and management of offal discharge.

4.3.1 Blue dyed bait

Blue-dyed bait is hypothesised to make bait less visible to seabirds. Some studies show that blue dyed bait can result in some levels of seabird bycatch reduction (e.g., Ochi et al. 2011), particularly when squid bait is used. However, the overwhelming body of evidence suggests that blue dyed bait is usually ineffective, weather dependent, and that any positive effect, if present, is far smaller than mitigation methods recognised by ACAP as best practice – including tori lines, branch line weighting, night setting and hook shielding devices (WCPFC-SC20-EB-WP11). Additionally, some studies have found blue dyed bait may decrease target catch rate

[27] Ibid.

(Ochi et al. 2011) and finally, blue dyed bait is perceived by some fishers as impractical. (Gilman et al. 2007, 2008).[28]

4.3.2 *Deep setting line shooter*

Line shooters deploy mainlines faster than the vessel speed, removing tension and allowing mainlines to enter the water immediately astern of the vessel. A single study (Lokkeborg 2003) suggested that this method could be effective in reducing seabird bycatch, but this study took place in the North Atlantic which is not representative of the WCPO. Follow-up studies have highlighted that line shooters slow down the sink rates of hooks and increase bycatch risk (Robertson et al. 2010). There is no strong evidence for the effectiveness of line shooters in reducing seabird bycatch.

4.3.3 *Management of offal discharge*

Recent studies show that fish waste (offal) discharge is not an effective primary mitigation method during setting. In fact, evidence suggests offal discharge attracts birds to vessels and can cause higher bycatch rates (e.g., Rexer-Huber & Parker 2019).

To protect birds, the safest practice is to hold fish waste on board and release it outside of the time of setting or hauling. However, if it cannot be held during hauling, strategically discharging offal on the opposite side of the haul (i.e. batch discharging) can be useful to reduce the risk of seabird interactions with hooks, particularly when offal is mealed.

4.4 Effective combinations of mitigation methods can reduce bycatch to close to zero

Review of the best available science shows that bycatch can be reduced to close to zero by using combinations of three key methods - branch line weighting, night setting and tori lines; or alternatively, using the stand-alone methods of hook shielding devices or underwater bait setters (Pierre, 2023).

Additionally, new analysis of the relative effectiveness of different mitigation methods provides empirical evidence that adopting ACAP best practice in the high-risk areas of the WCPO (including south of 30°S, 25°-30°S, and north of 23°N[29]) could provide relative improvements of bycatch mitigation performance of 61% for the area south of 30°S, 81% for the area 25°-30°S, and 73% for the area north of 23°N (WCPFC-SC20-EB-WP11).

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[28] The Hawaiian Longline Association explained at the second informal intersessional meeting that for the Hawaiian fleet, blue dyed bait is considered ineffective, messy, and expensive ($50/trip). WCPFC CMM 2018-03 review2 presentation 8 - Implementation of N Hemisphere mitigation options - a US perspective | WCPFC Meetings

[29] See WCPFC-SC20-EB-WP10 for information about the high-risk areas for seabirds.

Combining effective mitigation methods addresses the limitations of the use of single methods. Branch line weighting, tori lines and night setting have each been demonstrated to be effective to differing degrees; however, each have limitations when used alone:

- There is a period of time when hooks are accessible to birds even when branch lines are weighted.
- Night setting used alone is less effective at reducing seabird bycatch for nocturnally active birds and during bright moon-lit conditions.
- Tori lines used alone can rarely protect baited hooks beyond the aerial extent of the line.[30]

Standalone best practice mitigation options such as hook-shielding devices and underwater bait setters have been designed to overcome the limitations of other single mitigation methods.

Reported mitigation use shows that combining methods is already common for some fleets (Fig. 6; WCPFC-SC20-EB-IP27). For example, 69% of fishing effort in the area 25°-30°S reported use of two or three mitigation methods (i.e., weighted branch lines, tori lines, or night setting), despite CMM 2018-03 requiring only one out of three methods.

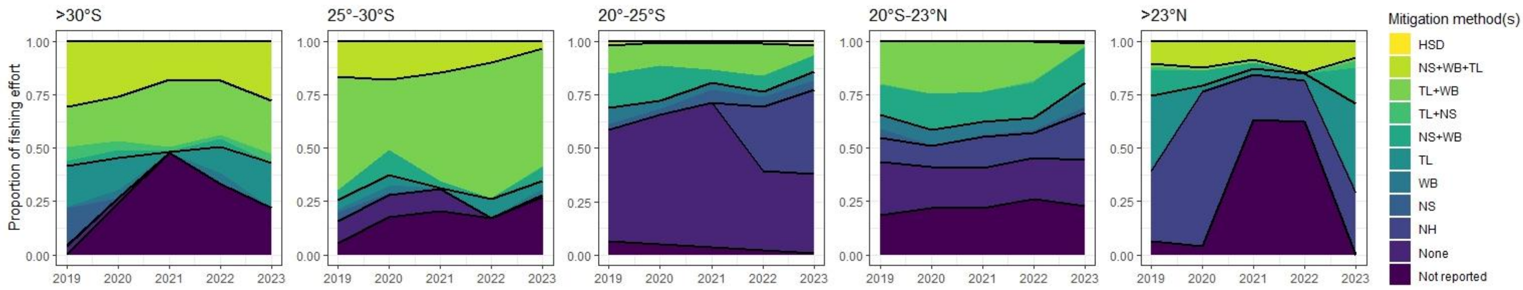

Figure 6. Reported observed mitigation use per fishing effort per latitudinal band, based on WCPFC-SC20-EB-IP27.

Under paragraph 4 in CMM 2018-03, the bycatch mitigation requirements in the area between 25°S and 30°S do not apply to the EEZs of French Polynesia, New Caledonia, Tonga, Cook Islands and Fiji. An analysis showed that the relative fishing effort within the area of these EEZs between 25°S and 30°S was <1% of total pelagic longline fishing effort within this latitudinal band, and has remained constant over time (WCPFC-SC20-EB-27). This suggests that fisheries within this portion of these EEZs remain of minor concern to seabird bycatch.

[30] 7 May 2024 Meeting, presentation 6. WCPFC CMM 2018-03 review2 presentation 6 - Combining mitigation methods | WCPFC Meetings

4.5 New research on seabird distribution and diving behaviour highlights where effective combinations of methods are most needed

4.5.1 Seabird distribution

New seabird tracking studies show that vulnerable seabird species range into the northern latitudes of the Southern Hemisphere, which are currently poorly protected (see WCPFC-SC20-EB-WP10 for details).

WCPO seabird distribution analyses show that waters south of 25°S are a hotspot for 11 species of seabirds studied WCPFC-SC20-EB-WP10, which are vulnerable to bycatch in pelagic longline fisheries and have declining populations trends. Waters around New Zealand, the Tasman Sea, and the South Pacific east of New Zealand are of particular importance (Fig. 7).

Waters up to 20°S are also frequented by some vulnerable seabirds including Gibson’s and Salvin’s Albatross, Black Petrels, and Flesh-footed Shearwaters.

Additional research has highlighted that even though vulnerable seabirds spend most of their time south of 30°S, when they venture further north, i.e., between 30°S-25°S or 25°S-20°S, the bycatch risk increases. This is because increased fishing effort north of 30°S means a greater probability of birds overlapping with pelagic longline fishing effort (see WCPFC-SC20-EB-WP10 for Antipodean and Gibson’s Albatross analyses and WCPFC-SC20-EB-IP30 for Black Petrel analyses). The bycatch risk is also higher in this area because CMM 2018-03 requires only one out of three mitigation methods between 30°-25°S and none north of 25°S.

In the Northern Hemisphere, vulnerable sea birds range in the waters around the Japanese and Hawaiian seabird colonies, east of Japan and the Kuril Islands, the Bering Sea, south of the Aleutians and some core areas in the central North Pacific (Figure 7).

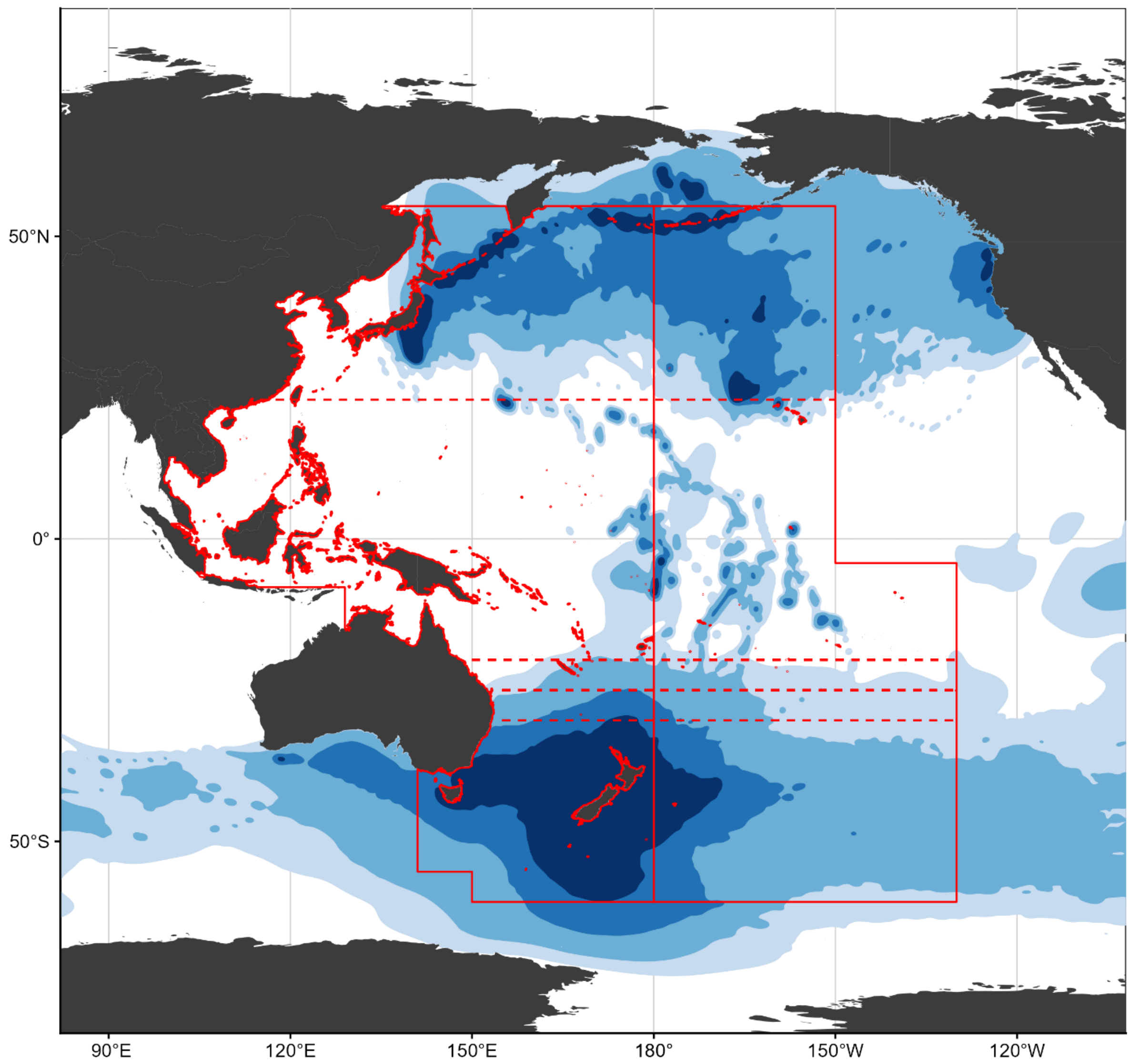

Figure 7. Distribution of vulnerable seabirds in relation to the WCPFC Convention Area and relevant latitudinal zones, based on analyses detailed in WCPFC-SC20-EB-WP10.

4.5.2 Seabird dive depths and speeds

How seabirds dive can influence how effective mitigation methods are at preventing bycatch. Mitigation methods must protect sinking hooks until they are deeper than the dive depths of seabirds. A combination of weighted branch lines and tori lines are two of the best tools. However, if seabird dive speeds exceed typical hook sink rates and the aerial extent of tori lines, night setting may need to be added to protect fast and deep diving seabirds.

CMM 2018-03 requirements in the Northern and Southern Hemispheres are different based on the assumption that northern species do not dive as deep as southern species. However, a synthesis of dive depth studies (existing and new) shows diving behaviour of seabird species in the Southern and Northern Hemispheres is more similar than previously concluded. See table 2.

Table 2. Mean dive depth of Southern and Northern Hemisphere species of large petrels and albatross that range in the WCPO.

	Large petrels		**Albatross**	
	Mean dive depth (m)	Maximum dive depth (m)	Mean dive depth (m)	Maximum dive depth (m)
Southern Hemisphere species[31]	3.3	28.9	1.6	7.5
Northern Hemisphere species[32]	2.4	21.7	0.5	4.8

Southern Hemisphere

New studies on dive behaviour shows petrels in the Southern Hemisphere dive to >20m, and at fast speeds – up to 1 m/s.[33] All of these species are threatened and some species range far north where they overlap regularly with pelagic longline fisheries (see WCPFC-SC20-EB-IP29 for Black Petrel overlap analyses). Dive data highlight that mitigation regimes should aim to protect seabirds from baited hooks to depths of at least 20m in the Southern Hemisphere.

Large albatrosses are not known for deep diving behaviour. However, new studies reveal that some large albatross species regularly dive to depths between 10 and

[31] Southern Hemisphere large petrels include White-chinned, Westland, Black, and Grey Petrels and Flesh-footed Shearwaters; Southern Hemisphere albatrosses include Black-browed, Grey-headed, Light-mantled, and Shy Albatrosses.

[32] Northern Hemisphere large petrels include Flesh-footed Shearwaters; Northern Hemisphere albatrosses include Laysan and Black-footed Albatrosses.

[33] New studies of dive depth and speed show Black Petrels (*P. parkinsoni*) dived the deepest, with a maximum depth of 38.5 meters and 25.5% of dives >10 m depth. Westland Petrels (*P. westlandica*) dived up to 17.3 m, with 0.6% of dives >10 m, and showed the fastest descent rates at 1 m/s. White-chinned Petrels (*P. aequinoctialis*) reached maximum depths of 21.7 m, with 2.1% of dives >10 m. (WCPFC-SC20-EB-IP29)

20m (Guilford et al. 2022). Even those that do not, can still be at significant risk of bycatch if other diving birds bring baited hooks to the surface. These secondary attacks are well documented in the Southern Hemisphere (Jimenez et al. 2012).

To achieve adequate protection for fast and deep diving species, hooks need to sink deeper than 20m by the time the hooks are 100m behind the vessel (beyond the protection of the tori line). This is challenging and will require branch line weighting at ACAP specifications and effective tori lines. Even then, branch line weighting and effective tori lines may not be enough to protect fast and deep diving sea birds. The addition of night setting would improve the certainty that the 20m depth range is protected during setting and would be an appropriate precautionary approach.

Northern Hemisphere

A study of the dive depths of Laysan and Black-footed Albatrosses shows that 65-74% of the studied individuals engaged dived up to 6m. While most individuals dive relatively deeply, they only do so occasionally – with only 2% of dives exceeding 2m of depth.

While secondary attacks (where albatross try to eat bait from hooks brought to the surface by other diving seabirds) are not well documented in the Northern Hemisphere, the presence of northern diving species such as flesh-footed shearwaters could increase bycatch risk for northern albatrosses. Such dynamic ecosystem interactions create uncertainty and the need to apply a precautionary approach.

A precautionary approach to mitigating bycatch would aim to protect baited hooks within 6m dive depth during setting. The current Northern Hemisphere mitigation regime, which does not require weighted branch lines (it is one of several options in CMM 2018-03 Table 1), will not assure protection up to 6m deep at the set.

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Annex 1: CMM 2013-06 – preliminary assessment of the potential impact of new proposals on Small Island Developing States and Territories

"CCMs shall develop, interpret and apply conservation and management measures in the context of and in a manner consistent with the 1982 Convention and Articles 24, 25 and 26 of the Agreement. To this end, CCMs shall cooperate, either directly or through the Commission, to enhance the ability of developing States, particularly the least developed among them and SIDS and territories in the Convention Area, to develop their own fisheries for highly migratory fish stocks, including but not limited to the high seas within the Convention Area.

The Commission shall ensure that any conservation and management measures do not result in transferring, directly or indirectly, a disproportionate burden of conservation action onto SIDS and territories."

Given that this paper provides a number of recommendations for the development of a revised conservation and management measure, New Zealand considers that a *preliminary* CMM 2013-06 assessment of the proposed recommendations is appropriate and welcomes further input into our assessment from Small Island Developing States and Territories.

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:

Who is required to implement the proposal?

Generally, the proposed recommendations that could be binding in WCPFC-SC20-2024/EB-WP-06 apply to all CCMs engaged in pelagic longline fishing south of 25° South or the area north 23°North.

However, the proposed recommendations would not apply in the EEZs of Small Island Developing States and Territories in Paragraph 4 (French Polynesia, New Caledonia, Tonga, Cook Islands and Fiji) of the current CMM-2018-03.

Which CCMs would this proposal impact and in what way(s) and what proportion?

The proposed recommendations are for all CCM's with pelagic longline vessels fishing in the area south of 25° South or the area north 23°North to require the use of prescribed seabird bycatch mitigation methods.

These areas are the same as the areas outlined in CMM 2018-03 and all CCMs have existing requirements to use seabird bycatch mitigation methods on the high seas and in EEZs - unless they are exempt as per Paragraph 4 in CMM 2018-03.

Are there linkages with other proposals or instruments in other regional fisheries management organizations or international organizations that reduce the burden of implementation?

As the proposed recommendations in WCPFC-SC20-2024/EB-WP-06 follow the approach set out in CMM 2018-03 to avoid placing a disproportionate burden on Small Island Developing States and Territories the recommendations are intended to reduce burden of implementation, while still meeting the objective of protecting vulnerable seabirds across the main area of their distribution.

Does the proposal affect development opportunities for SIDS?

Our preliminary assessment is that we do not consider that the proposed recommendations affect development opportunities, however we welcome further feedback from Small Island Developing States and Territories.

Does the proposal affect SIDS domestic access to resources and development aspirations?

New Zealand considers that the recommendations do not affect SIDS *domestic access to resources* as proposed recommendations would not apply in the EEZs of Small Island Developing States and Territories named in Paragraph 4 of the current CMM 2018-03.

New Zealand notes that in terms of SIDS *development aspirations* on the high seas the recommendations in WCPFC-SC20-2024/EB-WP-06 do include:

I) increased requirements of seabird bycatch mitigation methods in the areas beyond the EEZs of SIDs exempt under Paragraph 4 in CMM 2018-03 in the WCPO south of 25°S and
II) encouragement of the use of mitigation use in areas north of 25°S, particularly in the area of 20°S-25°S.

Consequently, Small Island Developing States fishing in the high seas beyond their EEZs in areas south of 25°S could be required to increase the application of seabird bycatch mitigation methods under the proposed recommendations. These recommendations do not deviate from the current spatial requirements in CMM 2018-03. We welcome further feedback from SIDS to our initial assessment and how this proposal may or may not effect development aspirations.

What resources, including financial and human capacity, are needed by SIDS to implement the proposal?

There should be little to no extra cost to most SIDS affected as at least part of the required mitigation methods should already be in use on vessels for those SIDS fishing outside of the EEZs exempt under Paragraph 4 of CMM 2018-03. A number existing capacity building programmes are available to further support implementation. We welcome further information from Small Island Developing States and Territories about their individual financial or human capacity needs.

What mitigation measures are included in the proposal?

The primary mitigation measure designed to prevent disproportionate burden on Small Island Developing States and Territories is Paragraph 4 in CMM 2018-03. This exempts Small Island Developing States and Territories with EEZs that include areas south of 25°S from the requirements under CMM 2018-03 - and instead encourages the use of seabird bycatch mitigation. All proposed recommendations in WCPFC-SC20-2024/EB-WP-06 retain Paragraph 4 and thus is the key mitigation measure designed to prevent impacts on Small Island Developing States and Territories impacted by the measure.

This approach retains the risk-based approach that was employed when CMM 2018-03 was adopted, in which the impact of fishing of Small Island Developing States and Territories within their EEZs south of 25°S on seabirds was assessed as minimal (<1% of fishing effort in 25°S-30°S).

Upon re-evaluating the potential impact of fishing on seabirds in these areas (south of 25°S) within the EEZs of the Small Island Developing States and Territories, it was further confirmed the fishing effort in the EEZs of Small Island Developing States and Territories are having a minimal impact of on seabirds. New Zealand considers that requiring Small Island Developing States and Territories to bare the administrative burden of domestic regulation or otherwise, would be disproportionate - not least considering the benefit to seabirds would be minimal.

From SC20-EB-IP-27 - *"The relative fishing effort of the CCMs and territories whose EEZs are exempt of WCPFC CMM 2018-03 requirements for the area of 30°-25°S did not change significantly following the inception of CMM 2018-03. Jointly, the relative fishing effort within the exempt EEZs of the CCMs and Territories within the area of 30°-25°S equated to a mean of* ***0.22% for 2019-2023****, which mirrors the* ***2010-2016*** *mean calculated by McKechnie (2016):* ***0.25%."***

What assistance mechanisms and associated timeframe, including training and financial support, are included in the proposal to avoid a disproportionate burden on SIDS?

New Zealand welcomes collaboration with Small Island Developing States and Territories who wish to implement seabird bycatch mitigation methods.

New Zealand, in collaboration with others, has been working directly with some Small Island Developing States and Territories to support implementation of seabird bycatch mitigation and is committed to continuing this work. Examples of this include the existing port-based outreach programme in Fiji, a seabird bycatch mitigation implementation workshop run in French Polynesia in January 2024, seabird bycatch mitigation trials conducted over 2024 in Fiji, and another seabird bycatch mitigation implementation workshop planned in May 2025 in New Caledonia.

Furthermore, the proposed continuation of the exemption in Paragraph 4 ensures there is no additional administrative burden for the listed Small Island Developing States and Territories within their EEZs.