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**THE SCOPE OF THE UPDATED CONSERVATION AND MANAGEMENT MEASURE
FOR SEABIRD BYCATCH IN THE WESTERN CENTRAL PACIFIC FISHERIES
COMMISSION.**

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The scope of the updated Conservation and Management Measure for Seabird bycatch in the Western Central Pacific Fisheries Commission.

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Background

The Western Central Pacific Fisheries Commission last updated its CMM for seabirds in 2007 with CMM 2007-04. Paragraph 6 of this measure requires the Scientific Committee and Technical and Compliance Committee to provide updated mitigation measures, specifications or areas for application to the Commission for its consideration. Since the last CMM, further information on the risks to seabirds in the WCPFC region have been provided to the SC in the form of risk assessments, reports of mitigation research and updated best practice advice from the Agreement for the Conservation of Albatrosses and Petrels (ACAP). ICCAT and IOTC have strengthened their seabird bycatch mitigation requirements. SC 8 has now recommended that the Commission revise the current CMM for seabirds. This paper reviews the current WCPFC seabird CMM in light of recent information and makes recommendations for the scope of the updated CMM in the WCPFC.

The Current WCPFC Seabird CMM 2007-04

CMM 2007-04 requires longline vessels to use two seabird bycatch mitigation measures, selected from a list of mitigation options (Table 1) in areas south of 30 degrees South (all longline vessels) and north of 23 degrees North (large-scale longline vessels 24 metres or more in length). CMMs must require their longline vessels to select at least one from Column A .

Table 1.

<i>Column A</i>	<i>Column B</i>
<i>Side setting with a bird curtain and weighted branch lines²</i>	<i>Tori line³</i>
<i>Night setting with minimum deck lighting</i>	<i>Weighted branch lines</i>
<i>Tori line</i>	<i>Blue-dyed bait</i>
<i>Weighted branch lines</i>	<i>Deep setting line shooter</i>
	<i>Underwater setting chute</i>
	<i>Management of offal discharge</i>

² This measure can only be applied in the area north of 23 degrees north until research establishes the utility of this measure in waters south of 30 degrees south. If using side setting with a bird curtain and weighted branchlines from Column A, this will be counted as two mitigation measures.

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

Technical specifications are provided in the annex, but were considered provisional at the time the CMM was passed as the SC and TCC had not given them their consideration and the CMM tasked the SC and TCC to annually review information on existing or new mitigation measures.

Agreement on the Conservation of Albatrosses and Petrels (ACAP) Best Practice Mitigation

ACAP updated its advice on best practice for reducing the impact of pelagic longlines on seabirds at the sixth meeting of the Advisory Committee in August 2011. A combination of weighted branchlines, bird scaring lines and night setting are considered best practice mitigation in pelagic longline fisheries and these measures should be applied in high risk areas such as the high latitudes of the southern hemisphere oceans and lower to mid-latitude fisheries of both the northern and south east Pacific Oceans to reduce the incidental mortality to lowest possible levels. Other factors such as safety, practicality and the characteristics of the fishery should be recognised. Currently no single mitigation measure can reliably prevent the incidental mortality of seabirds in most pelagic longline fisheries. The most effective approach is to use the above measures in combination.

Strengthened seabird bycatch mitigation requirements in other tRFMOs

The International Commission for the Conservation of Atlantic Tunas (ICCAT) and The Indian Ocean Tuna Commission (IOTC) in November 2011 and June 2012 respectively, passed new conservation measures that required CPCs to use 2 out of 3 seabird bycatch mitigation measures south of 25°S in their areas of competence, choosing between night setting, bird-scaring (tori) lines and line weighting. The ICCAT and IOTC CMMs give similar technical specifications.

Seabird Bycatch in the WCPFC Convention Area

Ecological Risk Assessment. At the 5th Regular Session of the SC in 2009, Working Paper EB-WP-06 was presented by Kirby, Waugh and Fillipi on 'Spatial risk indicators for seabird interactions with longline fisheries in the Western Central Pacific'. The paper is now being published in the journal *Marine Policy*¹. The risk assessment compared the distribution of seabirds and their likelihood of

¹ Waugh SM, et al. Ecological Risk Assessment for seabird interactions in Western and Central Pacific longline fisheries. *Mar. Policy* (2012), doi:10.1016/j.marpol.2011.11.005

capture in relation to longline fishing effort in the WCPFC area, using a Productivity-Susceptibility Analysis (PSA) to identify the areas of greatest risk of occurrence and impacts of bycatch, the species of greatest concern for population level impacts and the fisheries which contributed the greatest risk.

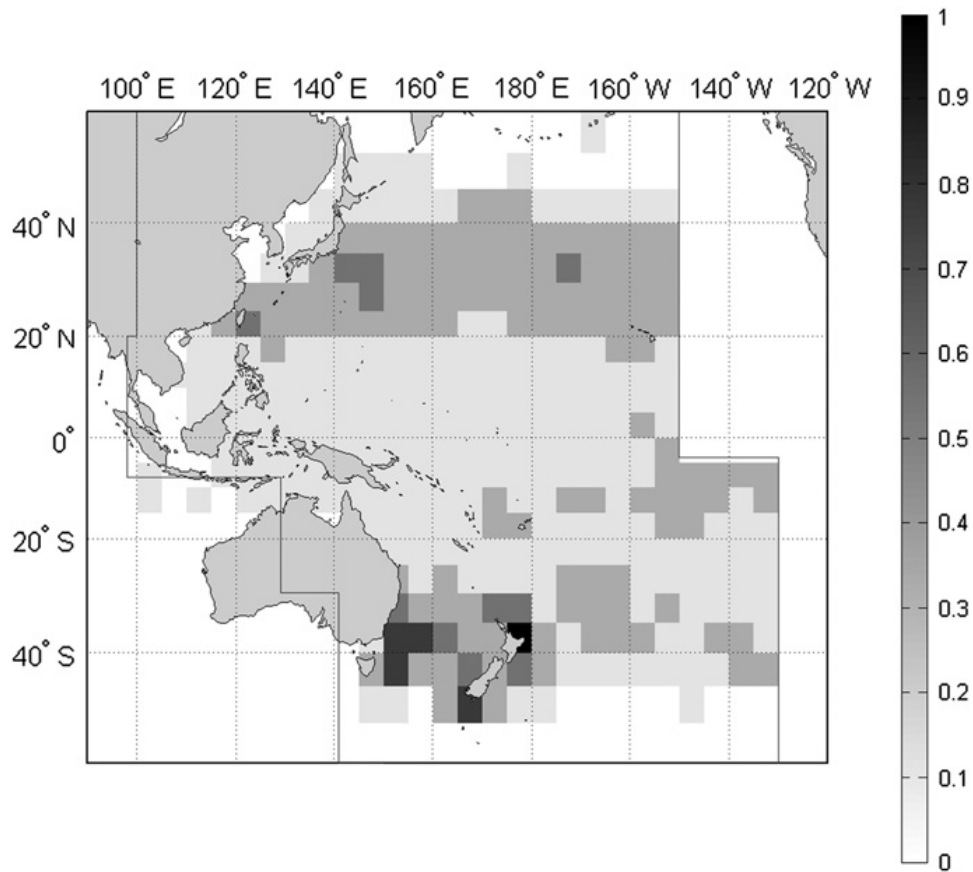


Figure 2 from Waugh et al Annual risk areas for the WCPFC Area. Black – highest risk, white lowest risk

Figure 2 identifies areas with the greatest risk of adverse effects of fishing mortality on seabird populations in the WCPFC area. Areas of risk in the Northern Hemisphere occur from 20 to 40° N and in the Southern Hemisphere are from 25 to 50°S, particularly in the Tasman Sea.

Shortcomings of current WCPFC measure

Bycatch mitigation measure options: Currently the WCPFC seabird measure requires longline vessels to use two mitigation measures from a list which does not reflect current best practice advice from ACAP. In particular, line shooter, blue dyed bait and underwater setting chute are not considered proven as effective measures. ACAP’s advice is that a combination of weighted branchlines, bird scaring lines and night setting are best practice mitigation in pelagic longline fisheries.² There has been recent significant development of new line weighting options with

² Amended at the Sixth Meeting of the Advisory Committee Guayaquil, Ecuador, 29 August-2 September 2011

improved safety for fisherman including safe leads³ and the Japanese double weight system Smart Gear winner⁴ and 2 papers presented at SC8. The ACAP advice recognises that side setting with bird curtain is used in the Hawaiian surface longline fishery but has not been tested in other fisheries. The new IOTC and ICCAT seabird measures require vessels to select two from just tori line, night setting and line weighting.

Vessel exemptions: In addition mitigation is only required for boats over 24m in length in the Northern Hemisphere. In other areas of the globe (and in the North Pacific for demersal longline vessels), vessels <24m are known to catch seabirds. There is a need now to remove the current exemption.

Areas. The current conservation measures apply from 30°S and 23°N. It is apparent from the risk assessment that this leaves some risk areas of seabird – fishery interactions unprotected. Huang 2011⁵ and Huang and Yeh 2011⁶ identified highest bycatch rates by Taiwanese boats in the southern hemisphere were between 25-35°S from 2002 and 2007 and between 25 and 40°N in the northern hemisphere. Species most at risk by Taiwan are black-footed (EN) and Laysan albatross (NT) in the northern Pacific and wandering albatross (VU) in the South Pacific. The area north of 20°N is also considered within the range of the endangered short tailed albatross⁷. All four albatross species had highest risk rankings in the ecological risk assessment by Waugh et al. Inoue et al⁸ also found highest levels of bycatch were south of 25°S in the Tasman Sea for albatrosses especially wandering albatross from latitude 25°S. This together with new measures adopted in other tRFMOs suggest that the WCPFC conservation measures should be updated to require best practice mitigation be applied in these additional risk areas especially from 25°S – 30°S but also 20°N-40°N to provide consistency with other tRFMO CMMs.

³ Experimental determination of factors affecting the sink rates of baited hooks to minimise seabird mortality in pelagic longline fisheries. Robertson, R. Candy, S., Weinecke, B and Lawton, K in *Aquatic Conservation: Marine and Freshwater Ecosystems* 20:419-427. 2011, and

Bycatch Mitigation Fact Sheet 8 Birdlife International

⁴ Preliminary Report of 2010 weighted branch-line trials in the joint venture fishery in the South African EEZ. E. Melvin, T. Guy and N.Sato. WCPFC-SC7-2011/EB-WP-08

⁵ Bycatch of high sea longline fisheries and measures taken by Taiwan: Actions and challenges. Hsiang-Wen Huang in *Marine Policy* 35 (2011) 712-720

⁶ Impact of Taiwanese distant water longline fisheries on the Pacific seabirds: finding hotspots on the high seas. H-W Huang & Y-M Yeh in *Animal Conservation* 2011, 1-13

⁷ Biological Opinion of the US Fish and Wildlife Service for the Operation of the Hawaiian-based Pelagic Longline Fisheries, Shallow Set and Seep Set. 2012 Michael D Tosatto
<http://www.fpir.noaa.gov/SFD/pdfs/2012-01-06%20USFWS%20BiOp%20Hawaii%20Deep-set%20&%20Shallow-set%20Longline.pdf>

⁸ Distribution of seabird bycatch at WCPFC and the neighbouring area of the southern hemisphere. Yukiko Inoue, Kotaro Yokawa, Hiroshi Minami, Daisuke Ochi, Noriyoshi Sato, Nobuhiro Katsumara. WCPFC-SC7-2011/EB/-WP-07

BirdLife urges that the Technical and Compliance Committee recommend updating the current WCPFC seabird bycatch mitigation requirements in order to (i) require the two mitigation measures to be selected from the list used by ICCAT and IOTC as recommended by SC8, but also (ii) to extend the area of application in the southern hemisphere from south of 25°S south to include the additional risk areas in the Tasman Sea and Eastern Pacific. BirdLife also believes that the current vessel exemptions for vessels <24m in the northern hemisphere should be addressed, as it was agreed in 2007 on the basis of political factors, not evidence that vessels aren't catching birds. The WCPFC ERA indicates highest risk areas in the southern hemisphere, but also that there are widespread risk areas in the northern hemisphere, and BirdLife urges that both must be addressed in the near future.

The new measure would read such as:

- In the area south of 25 degrees South latitude, and north of 20 degrees North latitude, CPCs shall ensure that all longline vessels use at least two of the mitigation measures in **Table 3**. These measures should also be considered for implementation in other areas, as appropriate, consistent with scientific advice.

It is recognised that the southern hemisphere 25°S latitudinal line passes just inside 200nm EEZ's of French Polynesia, Pitcairn, New Caledonia, Tonga, Cook Islands and Fiji. See Table 2 and attached map for a summary of the overlap with each PIC's EEZ.

Table 2 Pacific Island Country's EEZ overlap with proposal to extend CMM to 25°S

Country	Sovereign	Total EEZ Area	EEZ Area in WCPFC	% EEZ Area in WCPFC	% EEZ Area in WCPFC and South of 25°S
French Polynesia	France	4,771,711.99	4,771,677.23	100	14.53
Pitcairn	UK	836,126.89	225,051.02	26.92	12.35
New Caledonia	France	1,442,568.81	1,421,687.31	99.94	10.29
Tonga	Tonga	664,787.89	664,669.63	99.98	3.32
Cook Islands	New Zealand	1,960,018.14	1,959,983.50	100	0.06
Fiji	Fiji	1,280,414.58	1,279,412.32	99.92	0.06

Table 3 Mitigation Measures that comply with the following minimum technical standards (from ACAP and IOTC)

<i>Mitigation measure</i>	<i>Description</i>	<i>Specification</i>
Night setting with	No setting between	Nautical dusk and nautical dawn are defined as

<p>minimum deck lighting</p>	<p>nautical dawn and before nautical dusk.</p> <p>Deck lighting to be kept to a minimum</p>	<p>set out in the Nautical Almanac tables for the relevant latitude, local time and date. Minimum deck lighting should not breach minimum standards for safety and navigation</p>
<p>Bird-scaring lines (Tori lines)</p>	<p>Bird-scaring lines shall be deployed during the entire longline setting to deter birds from approaching the branch line.</p>	<p>For vessels greater than or equal to 35m:</p> <ul style="list-style-type: none"> ✓ Deploy at least 1 bird-scaring line. Where practical, vessels are encouraged to use a second tori pole and bird scaring line at times of high bird abundance or activity; both tori lines should be deployed simultaneously, one on each side of the lines being set ✓ Aerial extent of bird-scaring lines must be greater than or equal to 100m ✓ Long streamers of sufficient length to reach the sea surface in calm conditions must be used. ✓ Long streamers must be at intervals of no more than 5m <p>For vessels less than 35m:</p> <ul style="list-style-type: none"> ✓ Deploy at least 1 bird-scaring line. ✓ Aerial extent must be greater than or equal to 75m. ✓ Long and/or shore (but greater than 1m in length) streamers must be used and placed at intervals as follows: <ul style="list-style-type: none"> ○ Short: intervals of no more than 2m ○ Long: intervals of no more than 5m for the first 55m of bird scaring line. <p>Additional design and deployment guidelines for bird-scaring lines are provided in of this Resolution.</p>
<p>Line weighting</p>	<p>Line weights to be deployed on the snood prior to setting</p>	<p>Greater than a total of 45g attached within 1m of the hook or;</p> <p>Greater than 60g attached within 3.5m of the hook or;</p> <p>Greater than a total of 98g weight attached within 4m of the hook.</p>

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