



**SCIENTIFIC COMMITTEE
SIXTH REGULAR SESSION**

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Nuku'alofa, Tonga

SEABIRD BYCATCH MITIGATION

WCPFC-SC6-2010/EB-IP-04

Prepared by the Secretariat

Introduction

1. Paragraph 6 of Conservation and Management Measure 2007-04(CMM 2007-04) states,

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.”

Background

2. The Fourth Regular Session of the Scientific Committee (SC4) recommended that the Secretariat seek advice from other RFMOs on the working of CMM 2007-04, Attachments O, Annex1, 1 a) (iv) and 1 b) (iv) to ensure that tori lines include branch streamers along the aerial extent of the line and that 1 a) (iv) the branch streamers are of a length that ensures that they would touch the surface of the water in the absence of wind and swell. The Fourth Regular Session of the Technical and Compliance Committee (TCC4) considered advice provided in the Commission for the Conservation of Antarctic Living Marine Resources (CCAMLR) Conservation Measure 25-02(2007) appended as Attachment A of WCPFC-TCC4-2008/19 (Rev.1).

3. On the issue of best practice advice available to TCC4 on this issue, CCMs noted that the Indian Ocean Tuna Commission (IOTC) has recently adopted a binding measure relating to pelagic longlines that was not available to the Secretariat at the time of writing WCPFC-TCC4-2008/19 (Rev.1).

4. TCC4 discussed the technical specifications provided as Attachment O, Annex 1 and recommended further review of these specifications at SC5 and TCC5, drawing on the most recent decision by IOTC on this matter. An analysis of differences between the IOTC Resolution 08/03 and CMM 2007-04 is appended at **Attachment 1**.

SC5 recommendations on seabirds

5. The Fifth Regular Session of the Scientific Committee (SC5) recommended that CCMs should be encouraged to provide information on new or existing mitigation measures

on seabird interactions to the SC consistent with para.6 of CMM 2007-04. It also recommended that reviews of the effectiveness of mitigation measures for seabirds currently required under CMM 2007-04, and reviews of any new mitigation measures for possible incorporation into the CMM should be conducted.

6. SC5 recommended that ongoing research, following from the spatial risk assessment presented in WCPFC-2009-SC5/EB-WP-6, during the inter-sessional period and for review at SC6 should be contacted. The Ecosystems and Bycatch Specialist Working Group further recommended the use of data from the Regional Observer Programme in order to validate spatial risk assessments so that a recommendation can be brought before SC6 to determine initial spatial zones for the differential management and monitoring of seabird bycatch. It recommended that these assessments should be updated as new information becomes available (SC5 Summary Report paragraph 375).

TCC5 recommendations on seabirds

7. TCC5 reviewed the Secretariat paper “seabird by-catch mitigation” (WCPFC-TCC5-2009/33). While noting the SC’s role in this issue, CCMs stressed the importance of TCC to act on technical aspects. TCC5 noted the work on this subject being done within the Kobe process and encouraged the participation of WCPFC and CCMs. TCC5 recommends that WCPFC6 consider the Secretariat paper in the further development of technical specifications (TCC5 Summary Report paragraph 335).

Advice and Recommendations

8. WCPFC6 is invited to:
 - a) review the information in **Attachment 1** and any other new or existing mitigation measures or on seabird interactions from observer or other monitoring programmes; and
 - b) consider reviewing CMM 2007-04, as appropriate, to incorporate an updated suite of mitigation measures, specifications for mitigation measures, or recommendations for areas of application.

Attachment 1

ANALYSIS OF DIFFERENCES BETWEEN THE IOTC RESOLUTION 08/03 AND WCPFC MEASURE CMM 2007-04

	IOTC RESOLUTION 08/03	WCPFC measure 2007-04	Analysis
1. Preamble	<p>TAKING INTO ACCOUNT the United Nations Food and Agriculture Organization (FAO) International Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries (IPOA-Seabirds);</p> <p>ACKNOWLEDGING that to date some Contracting Parties and Cooperating non-Contracting Parties (hereinafter referred to as “CPCs”) have identified the need for, and have either completed or are near finalizing, their National Plan of Action on Seabirds;</p>	<p>1. Commission Members, Cooperating Non-members and participating Territories (CCMs) shall, to the extent possible, implement the International Plan of Action for Reducing Incidental Catches of Seabirds in Longline Fisheries (IPOA-Seabirds) if they have not already done so.</p> <p>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.</p>	<p>Both Measures:</p> <p>Acknowledge/Implement the FAO IPOA-Seabirds.</p> <p>Note the need to implement NPOA-Seabirds</p> <p>Neither Measure:</p> <p>Takes guidance from the FAO Best Practice Technical Guidelines to the NPOA-Seabirds, adopted at COFI in 2009, which is formulated to deal specifically with seabird bycatch in RFMOs</p>
2. Preamble	<p>RECOGNISING the concern that some species of seabirds, notably albatross and petrels, are threatened with global extinction;</p> <p>RECOGNISING the need to strengthen mechanisms to protect seabirds in the Indian Ocean;</p>	<p><i>Noting</i> 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.</p> <p><i>Concerned</i> that some seabird species, notably albatrosses and petrels, are threatened with global extinction.</p>	<p>Both measures:</p> <p>Note the need to act to reduce seabird bycatch which are threatened with extinction</p>

	IOTC RESOLUTION 08/03	WCPFC measure 2007-04	Analysis
3. Preamble	NOTING the recommendations of the IOTC Working Party on Ecosystems and Bycatch (WPEB) on measures to mitigate seabird interactions as outlined in their 2007 Report;	<p><i>Noting</i> 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.</p> <p><i>Noting the advice of the Scientific Committee</i> that combinations of mitigation measures are essential for effective reduction of seabird bycatch.</p>	<p>Both measures:</p> <p>Note the scientific advice indicating that mitigation measures to reduce bycatch have been reviewed within their scientific subsidiary bodies.</p> <p>Only WCPFC:</p> <p>Notes that combinations of measures are the most effective ways to reduce bycatch, although this is implicit in the IOTC measure by the requirement to choose two measures.</p>
4. Preamble	NOTING that the Agreement on the Conservation of Albatrosses and Petrels, which opened for signatures at Canberra on 19 June 2001, has entered into force;		<p>Only IOTC:</p> <p>Notes the Agreement on the Conservation of Albatrosses and Petrels.</p>
5. Preamble	NOTING that the ultimate aim of the IOTC and the CPCs is to achieve a zero bycatch of seabirds for fisheries under the purview of the IOTC, especially threatened albatrosses and petrel species in longline fisheries;		<p>Only IOTC:</p> <p>Notes the objective of achieving zero bycatch in the fisheries under its purview.</p>

	IOTC RESOLUTION 08/03	WCPFC measure 2007-04	Analysis
7. Numbered text	3. CPCs shall ensure that all longline vessels fishing south of 30°S use at least two of the mitigation measures in Table 1 below, including at least one from Column A..	1. CCMs shall require their longline vessels to use at least two of the mitigation measures in Table 1, including at least one from Column A in areas south of 30 degrees South and north of 23 degrees North.	<p>Both measures:</p> <p><i>Have a similar area of application for the measure (temperate waters in their area of competence)</i></p> <p><i>Require use of at least two measures to be employed in these areas, using a 'two column' system.</i></p>
8. Numbered text	3.....Vessels shall not use the same measure from Column A and Column B		<p>Only IOTC:</p> <p><i>States that different measure from each column to be deployed (i.e. Allowing measures such as weighted branch lines to be named in both columns</i></p>
9. Numbered text	CPCs shall provide to the Commission, as part of their annual reports, information on how they are implementing this measure and all available information on interactions with seabirds, including bycatch by fishing vessels carrying their flag or authorised to fish by them. This is to including details of species where available to enable the Scientific Committee to annually estimate seabird mortality in all fisheries within the IOTC area of competence.	CCMs shall annually provide to the Commission, in part 1 of their annual reports, all available information on interactions with seabirds, including bycatches and details of species, to enable the Scientific Committee to estimate seabird mortality in all fisheries to which the WCPF Convention applies. CCMs are encouraged to undertake research to further develop and refine measures to mitigate seabird bycatch including mitigation measures for use during the 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.	<p>Both measures:</p> <p>Require reporting of seabird catch in their annual reports, including information on implementation of the measures.</p> <p>Only IOTC:</p> <p>Provides for an annual assessment of catch for the area of competence of the agreement</p>
	IOTC RESOLUTION 08/03	WCPFC measure 2007-04	Analysis

10. Numbered text	<p>The Scientific Committee....shall advise the Commission on any modifications that are required, based on experience to date of the operation of the Resolution and/or further international studies or research on the issue, in order to make the Resolution more effective.</p>	<p>CCMs are encouraged to undertake research to further develop and refine measures to mitigate seabird bycatch including mitigation measures for use during the 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.</p> <p>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.</p>	<p>Both measures:</p> <p>Require review of information relating to research on seabird bycatch, in order to update (make more effective) their measures.</p> <p>Allow review of information from any research, not just research conducted by parties to the agreements.</p>
11. Numbered text	<p>The Scientific Committee, based notably on the work of the WPEB and information from CPCs, will analyse the impact of this Resolution on seabird bycatch no later than for the 2011 meeting of the Commission.</p>		<p>Only IOTC:</p> <p>Requires the assessment of the efficacy of the management measures to reduce seabird bycatch in the area of competence of the agreement by a specified date (2011).</p>

	IOTC RESOLUTION 08/03		WCPFC measure 2007-04		Analysis
12. Columns	IOTC measure columns		WCPFC measure columns		<p>Shaded text indicates where there are differences between the two measures.</p> <p>Both measures:</p> <p>Adopt a 'two column' approach which offers options as to which mitigation measures are deployed, and requires that two are implemented in the specified zone.</p> <p>Only IOTC:</p> <ul style="list-style-type: none"> - Requires use of only squid bait to be used in the blue-dyed bait option - Names night setting in both columns - Has wording that ensures a different measure is chose from each column (see item 8, above) <p>Only WCPFC:</p> <ul style="list-style-type: none"> - Allows use of underwater setting - Allows side setting with a bird curtain and weighted branch line
	Column A	Column B	Column A	Column B	
	Night setting with minimum deck lighting	Night setting with minimum deck lighting	Side setting with a bird curtain and weighted branch line	Tori line	
	Bird-scaring lines (Tori Lines)	Bird-scaring lines (Tori Lines)	Tori line	Blue-dyed bait	
	Weighted branch lines	Weighted branch lines	Night setting with minimum deck lighting	Weighted branch lines	
		Blue-dyed squid bait	Weighted branch lines	Deep setting line shooter	
		Offal discharge control		Underwater setting chute	
		Line shooting device		Management of offal discharge	

	IOTC RESOLUTION 08/03	WCPFC measure 2007-04	Analysis
14. Annexes	<p>Weighted branch lines Weights must be attached to all branch lines in accordance with specifications provided</p> <ul style="list-style-type: none"> – minimum of 45 grams weight attached to all branch lines; – less than 60 grams weight must be within 1 metre of the hook; – 60 grams or greater and less than 98 grams must be within 3.5 metres of the hook; and – 98 grams or greater must be within 4 metres of the hook 	<p>Weighted branch lines</p> <p>i. Following minimum weight specifications are required:</p> <p>ii. Minimum weights attached to all branch lines is 45 g, with the following options:</p> <ul style="list-style-type: none"> • less than 60 g weight attached to within 1 m of the hook or; • greater than 60 g and less than 98 g weight attached to within 3.5 ms of the hook or; • greater than 98 g weight attached to within 4 m of the hook. 	<p>Both measures:</p> <p>Have similar specifications for use of weighted branch lines</p>
15. Annexes	<p>Blue-dyed squid bait All bait must be dyed to the colour and shade shown in the placard provided by the IOTC Secretariat. The standardized colour shall be equivalent to bait dyed using “Brilliant Blue” food dye (Colour Index 42090, also known as Food Additive Number E133) mixed at 0.5% for a minimum of 20 minutes.</p>	<p>Blue dyed bait</p> <p>i. The Commission Secretariat shall distribute a standardized color placard.</p> <p>ii. All bait must be dyed to the shade shown in the placard.</p>	<p>Only IOTC:</p> <p>Specifies that blue dyed bait must be squid bait.</p>
16. Annexes	<p>Management of offal discharge No offal discharge during setting. Strategic offal discharge may occur during hauling.</p>	<p>Management of offal discharge</p> <p>i. Either:</p> <ul style="list-style-type: none"> • No offal discharge during setting or hauling; or • Strategic offal discharge from the opposite side of the boat to setting/hauling to actively encourage birds away from baited hooks. 	<p>Both measures:</p> <p>Have similar specifications for management offal discharge.</p>

	IOTC RESOLUTION 08/03	WCPFC measure 2007-04	Analysis
17. Annexes	<p>Bird-scaring lines (tori lines) A bird-scaring line shall be deployed during longline setting to deter birds from approaching the branch line.</p> <p>Bird-Scaring Line Design</p> <ol style="list-style-type: none"> 1. The bird-scaring line shall be a minimum of 100 m in length and if less than 150 m in length will include an object towed at the seaward end to create tension to maximise aerial coverage. The section above water shall be a strong fine line of a conspicuous colour such as red or orange. 2. The above water section of the line shall be sufficiently light that its movement is unpredictable to avoid habituation by birds and sufficiently heavy to avoid deflection of the line by wind. 3. Streamers for the bird-scaring line shall be made of material that is conspicuous and produces an unpredictable lively action (e.g. strong fine line sheathed in red polyurethane tubing) and shall be suspended in pairs from a robust three-way swivel attached to the bird scaring line and shall hang just clear of the water. 4. There shall be a maximum of 5 m between each streamer pair. 5. The number of streamers shall be adjusted for the setting speed of the vessel, with more streamers necessary at slower setting speeds. 	<p>1a) Tori Lines</p> <ol style="list-style-type: none"> i. Minimum length: 100 m ii. Must be attached to the vessel such that it is suspended from a point a minimum of 5 m 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 the tori line is less than 150 m in length, must have a towed object attached to the end so that the aerial extent is maintained over the sinking baited hooks. vi. If two (i.e. paired) tori lines are used, the two lines must be deployed on opposing sides of the main line. 	<p><i>Shaded text indicates where there are differences between the two measures.</i></p> <p>Both measures:</p> <p>Have a largely similar streamer line description for tori lines (excluding light tori lines)</p> <p>Require minimum length of 100m</p> <p>Require a towed object if the line is less than 150 m in length</p> <p>Require that streamers be less than 5 metres apart</p> <p>Require the lines to be deployed over the baited hookline</p> <p>Require that streamers be long enough so that they are close to the water surface.</p> <p>Only WCPFC:</p> <p>Allows light tori lines to be deployed</p> <p>Provides advice on the deployment of paired tori lines</p> <p>Requires that the streamer line be attached 5 m above the water and requires that swivels be used</p>

	IOTC RESOLUTION 08/03	WCPFC measure 2007-04	Analysis
16. Annexes	<p>Bird-scaring lines (tori lines) (CONTINUED)</p> <p>Deployment of Bird scaring Lines</p> <ol style="list-style-type: none"> 1. The line shall be deployed before longlines enter into the water. 2. The line should have an aerial coverage of at least 100 metres. To achieve this coverage the line shall be suspended from a point a minimum of 5 metres above the water at the stern on the windward side of the point where the branch line enters the water. 3. The bird scaring line shall be set so that streamers pass over baited hooks in the water. The position of the object towed shall be maintained so as to ensure, even during crosswinds, that the aerial extent of the bird-scaring line is over the branch line as far astern of the vessel as possible. 4. Because there is the potential for line breakage and tangling, spare bird scaring lines shall be carried onboard to replace damaged lines and to ensure fishing operations can continue uninterrupted. 	<p>Tori Lines (CONTINUED)</p> <p>1b) Tori Line (light streamer)</p> <ol style="list-style-type: none"> i. Minimum length of tori line: 100 m or three times the total length of the vessel. ii. Must be attached to the vessel such that it is suspended from a point a minimum of 5 m above the water at the stern on the windward side of a 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 1m apart and be 30 cm in minimum length. v. If two (i.e. paired) tori lines are used, the two lines must be deployed on opposing sides of the main line 	<p>(CONTINUED)</p> <p>Only IOTC:</p> <p>Provides a performance specification in relation to aerial extent and deployment, with specific guidance on the materials to be used to construct a streamer line.</p> <p>Requires the numbers to be adjusted in relation to the speed of the vessel</p> <p>Requires an aerial extent of at least 100m.</p> <p>Provides information on the deployment of lines: To be deployed before longlines enter water.</p> <p>Requires that replacement lines be carried on board vessels</p> <p>Provides detailed guidance on materials for streamer lines</p>