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**Advice to the TCC 20 on Straddling Sets: Clarification of RFMO seabird bycatch mitigation requirements
for timing of longline setting**

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Submitted by BirdLife International

Advice to the TCC20 on Straddling Sets: Clarification of RFMO seabird bycatch mitigation requirements for timing of longline setting

BirdLife International and Humane Society International

Context

Article 10 *Functions of the Commission*, paragraph (c) states [The Commission] “adopt, where necessary, conservation and management measures and recommendations for non-target species and species dependent on or associated with the target stocks, **with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened**”. Noting advice from the 20th meeting of the Scientific Committee in paragraph’s 143 and 146 of the SC20 outcomes document [WCPFC21-2024-SC20-01](#) that read:

Para 143: “**SC20 noted that at least eight albatross species that breed in New Zealand show significant, long-term, and ongoing population declines, which, for some, are most likely caused by bycatch in commercial pelagic longline fisheries.**”

Para 146: “**SC20 noted that studies (SC20-EB-IP-26) suggest that the Antipodean Albatross is at risk of extinction if the current rate of decline continues and is predicted to become extinct around 2070.**”

Recommendations for the Review of CMM 2018-03

In evaluating a revised Conservation and Management Measure (CMM) for seabirds, we ask that the 20th meeting of the Technical and Compliance Committee consider the following advice:

1. Fulfil obligations of the Convention under Article 5 (b): “ensure that such measures are based on the best scientific advice available” by adopting the recommended changes to CMM 2018-03 from the 20th meeting of the Scientific Committee.
2. The Agreement for the Conservation of Albatrosses and Petrels (ACAP) revised text to pelagic longline mitigation best practice advice that clearly indicates that unless every hook is set in darkness (therefore a night set), the mitigation obligation of a day set remains applicable.
3. Consider the compliance implications for bycatch mitigation for sets that straddle night and day, such that night setting expires as a mitigation measure at dawn leaving a vessel non-compliant unless the two other mitigation measures are in use for the remainder of the set
4. Consider the compliance implications when a vessel has the capability to change gear mid-set, that is from Tori Line (TL) + Night Setting (NS) to TL + Branch Line Weighting (LW).
5. Consider that for line weighting – straddling sets or otherwise –verification of the line weighting specifications is necessary to ensure mitigation measure configurations are effective.
6. Act on the urgent need to strengthen the monitoring and reporting framework to ensure that information on the effectiveness of all methods is available to inform future revisions of the CMM.
7. Contemplate the logical resulting options as follows:
 - a. Clarify that provided every hook is set in darkness, either LW or BSL remain a requirement for the entirety of the set.
 - b. Clarify that straddling sets are considered daylight sets, and therefore both LW + TL apply for the entirety of the set.
 - c. Report straddling sets as two separate fishing operations along with all associated mitigation use and bycatch information.

Summary

There are four RFMOs (WCPFC, IATTC, IOTC, ICAAT) with Conservation and Management Measure (CMM) wording which consistently defines the use of seabird bycatch mitigation, concerning daylight and darkness, both intervals of time having been clearly defined. An additional RFMO, the CCSBT, is by Member agreement ([CCSBT](#)¹) obliged to follow the CMMs applicable in the jurisdictions of overlap. What constitutes night or day is not in question. The question is what the mitigation obligations are when a set, as typically is the preference ([Kroodsma et al 2022](#)²), spans both daylight and darkness.

Furthermore, within the wording of the ACAP advice and the text in the CMMs regarding the obligations of employing night setting as a mitigation measure, there may be an assumption that line weights are not able to be introduced mid-set. While not all vessels will have the capacity to switch weighting configurations mid-set, some fleets may have this capability. This is important for the Scientific Committee to consider for wording of a revised CMM for seabirds.

RFMO Conservation and Management Measures

The current wording is as follows:

‘Night setting - no setting between nautical dawn and before nautical dusk’.

This exact wording is consistently reflected by three RFMOs (indirectly four including CCSBT) - ICCAT’s [Supplementary Recommendation 11-09](#), IOTC’s [Resolution 23/07](#), WCPFC’s [CMM-2018-03](#), with IATTC [Recommendation C-10-02](#) being slightly different - *‘no setting between local sunrise and one hour after sunset’.*

Any part of a set made in darkness is presumptively being employed for mitigation purposes, to qualify as a night set, thus meeting the mitigation measure obligations as per the relevant CMM. Under current wording, the full set must be completed between nautical dusk and nautical dawn, in addition to either Branch Line Weighting (LW) OR Tori Lines (TL).

An interpretation is being used relating to straddling sets (the term applied when setting overlaps daytime and nighttime hours). That is, for the portion of a set deployed in darkness (after nautical dusk and before nautical dawn), only LW OR TL are necessary until after nautical dawn, when both LW+TL then become obligatory.

The proportion of setting that occurs in nighttime or daylight has consequences for seabird bycatch and associated mortality. These have been discussed in detail ([Brothers 2016](#)³) but notably seabird mortalities are reduced when setting at night. However, when hauling in daytime there are additional bycatch issues including an increase in non-lethal bycatch. So further mitigation measures are warranted, although these are poorly developed and promoted ([ACAP 2024](#)⁴, Brothers 2016³).

¹ CCSBT, 2023. Resolution to Align CCSBT’s Ecologically Related Species measures with those of other tuna RFMOs.

² Kroodsma, D., Turner, J., Luck, C., Hochberg, T., Miller, N., Augustyn, P., & Prince, S. (2023). Global prevalence of setting longlines at dawn highlights bycatch risk for threatened albatross. *Biological Conservation*, 283, 110026.

³ Nigel Brothers 2016 Incidence of live bird haul capture in pelagic longline fisheries. Examination and Comparison of live bird haul captures in Fisheries other than the Hawaii shallow set fishery SBWG7 Doc 18 Agenda Item 7.1 Seventh Meeting of the Seabird Bycatch Working Group La Serena, Chile, 2 - 4 May 2016

⁴ Sebastian Jimenez & Jonathon H S Barrington 2024. ACAP Review of mitigation measures and best practice advice for reducing the impact of pelagic longline fisheries on seabirds. SBWG 12 Doc 07 Agenda item 7.1 Twelfth Meeting of the Seabird Bycatch Working Group, Lima, Peru, 5 – 7 August 2024.

The ACAP Advice

At the Agreement for the Conservation of Albatrosses and Petrels (ACAP) meeting of the Seabird Bycatch Working Group (SBWG11) in May 2023, text was added to pelagic longline mitigation best practice advice, clearly indicating that unless every hook is set in darkness (therefore a night set), the mitigation obligation of a day set remains applicable. Specifically, the inclusion of the following text was endorsed by the ACAP Advisory Committee:

‘Setting longlines across night and day does not represent night setting: either when setting commences at night and finishes after the nautical dawn, or when setting commenced prior to the nautical dusk and continues into the night’ (AC13, 2023).

The proviso of ‘night setting’ becomes, unless the set is completed entirely in darkness, it is non-compliant with CMM 2018-03 as it falls outside the night setting definition and vessels would be obligated to either use Hook Shielding Devices or, Line Weighting with Tori Line (LW+TL) for the entirety of the set. In practical terms, the majority of sets tend to fall into the straddling set category, confirmed by Kroodsma et al 2023³ (and by Member reporting [CCSBT CC 18-05, 2023](#)⁵).

Set Timing Considerations

There are many factors which might contribute to preferences in the fishing equipment and methods to obtain the best possible fishing efficiency, in terms of CPUE. A set time preference cannot be ascertained though, based on current Member reporting, such as in [CCSBT CC18-05 2023](#)⁵. Similarly, measuring the efficacy of night setting as a seabird bycatch mitigation option is hampered by the extremely low levels of observer coverage.

Further clarification is required on the interpretation of night vs day vs straddling sets and CPUE data partitioning, because vessels already follow vessel-specific setting time routines. Noting the exception of set timing can, as [Brothers and Wellbelove \(2022\)](#)⁶ suggest, be pre-determined by other vessels first operating in the same area – that is, when one vessel day sets, they all must day set.

Kroodsma et al (2023)³ found that only 3% of line setting occurs entirely at night, and around dawn setting-time is critical for optimum mitigation of bycatch because this is a peak time for seabird foraging. The use of just TL over this near-darkness period as observer records suggest, is exposing birds to much higher capture risk. Crucially, *‘the most common time to start a set is in the hour before sunrise and sets that were mostly during the day were far more common than sets that were mostly at night and entirely at night, only 3.1%’*.

Importantly, because the practice of setting hooks at night is alone a highly effective seabird mitigation measure, any proportion of a set made in darkness is preferable to none ([Brothers and Wellbelove 2022](#)⁶). It needs to be encouraged, not discouraged. Therefore, recognising that some vessels that are employing straddling sets have the capability to change gear mid-set, that is from TL + NS to TL + LW, a revision of the seabird CMM should consider this in its wording.

Straddling set gear switching should only be allowed if:

1. implementation and verification of the line weighting specifications that meet ACAP best practice standards

⁵ CCSBT CC18-03 2023 Annual report on Member’s implementation of ERS measures and performance with respect to ERS.

⁶ Nigel Brothers and Alexia Wellbelove. 2022. Pelagic Longline Setting - How day/night-straddling sets impact monitoring, compliance and effectiveness of seabird bycatch mitigation. CCSBT-ERS/2203/Info 01 (ERSWG Agenda item 5.1.4)

2. mandatory monitoring (EM or observer) and verification of those sets is implemented to ensure timing of the full deployment of LW is reported

Monitoring and Compliance

A recognised failing in bycatch management is insufficient monitoring capacity of obligatory requirements which in turn would allow efficacy evaluation, leading to improvement in performance (bycatch reduction). **Identifying and removing non-compliance risks is therefore of critical importance to minimise the impacts on ecologically related species.** Likewise, consistency across jurisdictions is necessary, along with the improvement of verification and reporting (through electronic monitoring).

Any modification to CMM 2018-03 in the WCPFC Convention area requires the simultaneous improvement of monitoring and compliance verification. Critically, this means increasing observer coverage in high-risk areas for seabirds (South of 25°S and North of 23°N).