



**SCIENTIFIC COMMITTEE
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Straddling Sets:

Clarification of RFMO seabird bycatch mitigation requirements for timing of longline setting

WCPFC-SC20-2024/EB-IP-24

BirdLife International and Humane Society International

Straddling Sets: Clarification of RFMO seabird bycatch mitigation requirements for timing of longline setting

BirdLife International and Humane Society International (Aus)

Recommendations

In adopting a revised Conservation and Management Measure (CMM) for seabirds, the Scientific Committee:

1. Reflect on [ACAP Best Practice Scientific Advice](#) to clearly define night setting in the revised CMM. Specifically, clarity of advice is required for sets that occur entirely in darkness, versus straddling sets (where a portion of total hooks set enter the water in the daytime, which currently are non-compliant with night setting as a mitigation option).
2. Consider that some vessels have the capability to change gear mid-set, that is from Tori Line (TL) + Night Setting (NS) to TL + Branch Line Weighting (LW).
3. Take into consideration that for line weighting – for straddling sets or otherwise – verification of the line weighting specifications is necessary to ensure mitigation measure configurations are effective.
4. Recognise 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.
5. Contemplate the logical resulting options as follows:
 - a. Require 3/3: LW + TL + NS, or the standalone measures of hook shielding devices (HSD) or underwater bait setters (UBS) – as advised by ACAP as best practice.
 - b. Clarify that provided every hook is set in darkness, either LW or BSL remain a requirement.
 - c. Clarify that straddling sets are considered daylight sets, and therefore both LW + TL apply for the entirety of the set.
 - d. 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

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.

line weights are not able to be introduced mid-set. While not all vessels will have the capacity to switch hook 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 line LW OR TL are necessary until after nautical dawn, when both LW+TL then become an alternative option.

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 2016](#)³).

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 falls outside the night setting definition and vessels would be obligated to either use Hook Shielding

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.

Devices or, Line Weighting with Tori Line (LW+TL) for the entirety of the set to be compliant with CMM 2018-03 in its current wording. In practical terms, the majority of sets tend to fall into the straddling set category, confirmed by Kroodsmas et al 2023³ (and by Member reporting [CCSBT CC 18-05, 2023⁵](#)).

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 2023⁵. 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.

Kroodsmas 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 BSL 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 2022⁶). 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
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

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)

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. Critically, this means increasing observer coverage in high-risk areas for seabirds (South of 25°S and North of 23°N).