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HSBI Bycatch Mitigation Measuring Guide Review_Rev02

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Submitted by HSBI WG Chair

Voluntary HSBI Regional Guides

TOOLS FOR HIGH SEAS BOARDING AND INSPECTIONS

Bycatch Mitigation Measuring

Document history

Version	Effective date	Description of revision	Prepared by	Reviewed by
1	03 Feb 2026	Initial version based on 2018-03	HSBI WG	WCPFC22
2	TBD	Updated to reflect CMM 2025-05,	HSBI WG	WCPFC23

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PURPOSE STATEMENT

1. This document provides guidance to Authorised inspectors conducting WCPFC High Seas Boarding and Inspections[1] (HSB) on:
   - assessing bycatch mitigation measures that require quantifiable measurements and
   - the minimum standards for taking and recording measurements

2. The development of this Guide aims to support a consistent approach to the monitoring of bycatch mitigation measures on the high seas in such cases where the bycatch mitigation measure requires a quantifiable measurement (e.g., length, weight, presence or absence).

3. The application of this Guide will be voluntary and apply to authorised HSBI activities within the WCPFC Convention Area.

4. This guide should be modified in response to future amendments to bycatch mitigation

[1] HSBI, refers to boarding, inspection, and related activities on the high seas within the Convention Area conducted pursuant to CMM 2006-08 Western and Central Pacific Fisheries Commission Boarding and Inspection Procedures or any successor CMMs

measures for any species and emerging technologies. It is expected that this guide will continue to evolve as the field develops.

5. This Guide is intended to provide enduring procedural guidance. All quantitative requirements, thresholds, and spatial or technical specifications are governed by applicable WCPFC Conservation and Management Measures (CMMs), including any future amendments or successor instruments.

Assessing bycatch mitigation measures in WCPFC HSBI activities.

6. The aim of HSBIs is to ensure a vessel is compliant with the WCPFC Convention and all applicable WCPFC Conservation and Management Measure (CMM) obligations.

7. Authorised inspectors conducting HSBI activities should inspect required bycatch-catch mitigation measures (methods, tools and equipment) that are on board, being used, or are available for use, including to:
   - confirm presence or absence of bycatch mitigation measures.
   - confirm application of bycatch mitigation methods by trip
   - verify configuration and construction of bycatch mitigation methods
   - record condition of bycatch mitigation methods

8. Inspection and recording bycatch mitigation measures (methods, tools and equipment) by Authorised Inspectors during HSBI activities assesses compliance with CMMs for:
   - Seabirds,
   - Shark,
   - Cetaceans,
   - Sea turtles, and
   - Mobula rays

9. Authorised inspectors are to be fully familiar with the provisions of the CMMs in force on bycatch mitigation measures, including with respect to any areas of application with obligations. These should be taken into consideration with the vessel's current location and trip operations.

10. Inspecting and recording bycatch mitigation measures during HSBI activities, can provide the flag CCM with information at vessel and fishing trip level related to the implementation of bycatch related CMMs.

Bycatch mitigation measuring minimum standards

11. The general principles and procedures for taking measurements of bycatch mitigation measures in HSBIs.

12. Authorised inspectors should:
   - document any measurements taken using the HSBI report, a recording device, including photographs and videos
   - take any measurements with witness' present (master or crew,) and prioritise that witnesses from the fishing vessel are present
   - ideally work in pairs
   - use certified tape measures and calibrated weighing scales
   - inspect the Vessel Master's notes including fishing vessel operation tracking and the electronic daily catch and effort records.
   - make their best efforts to communicate with the master of the fishing vessels in a language

that the master can understand, using the relevant part of the standardized multi-language questionnaire

13. The HSBI report should record bycatch mitigation measure information (refer Annex 1. Example HSBI report template / inspection checklist - Seabird mitigation measures). The authorised inspector should record as much as possible, including but not limited to the following information related to bycatch mitigation:
    - bycatch mitigation measures used by vessel
    - all measurements taken (including unit of measurement)
    - witness name, role and signature.

14. The master of the vessel must be provided with an interim copy of the report which includes detail of any bycatch mitigation methods and measurements. The master must also be given the opportunity to include any objection or comment to be included in the interim report.

Collection and analysis of bycatch mitigation measures for seabirds

Weighted branch lines

15. To measure weighted branch lines, Authorised Inspectors should:
    - measure the distance from the weight to the eye[2] (top) of the hook
    - document the packages of weights on board
    - document the weights showing weight amount if readable
    - use calibrated scales to weigh individual weights.

Tori lines

16. Space is limited when measuring a tori line at-sea, however, an indicative assessment of length can be achieved using mathematical techniques. To measure the tori line, authorised inspectors should:
    - choose and clear an area on the vessel deck, running along the vessel is often an open and clear space
    - measure the area on the vessel deck
    - lay the tori line out in sections along this length (back and forth)
    - measure to confirm length of sections
    - count number of lengths
    - measure the overage, the leftover piece of tori line
    - calculate overall length of tori line e.g. 10 sections of line, measuring 15m = 150m tori line length (plus any overage)
    - carry out a second measurement in case of discrepancy
    - measure both tori lines if the vessel has two.

17. Authorised inspectors should document and record the presence or absence of a towing object.

18. If the tori line is deployed during the HSBI, authorised inspectors should:
    - document the deployment of tori line
    - document the number of tori lines deployed (single or dual)
    - document the presence or absence of long and short streamers on the aerial extent]
    - document the deployed tori line using photos/video].

[2] The eye of a hook is the closed or open loop located at the top or front of the hook where the fishing line is tied

Tori line streamers

19. Authorised inspectors should:
    - measure the portion of tori line with streamers measure distance between long streamers
    - measure distance between short streamers
    - measure the length of long and short streamers.

Tori pole

20. Authorised inspectors should:
    - document and record the presence or absence of a tori pole
    - measure from top of tori pole (estimate) to the sea surface.

Night Setting

21. Where night setting is declared, Authorised inspectors should:
    - document the start time (UTC) and end time of setting (UTC) or
    - document which time zone the sets are recorded in if not in UTC
    - document the location
    - identify the time of nautical dawn and dusk using a nautical almanac
    - document if setting of fishing gear has occurred after nautical dawn or before nautical dusk using vessel records where possible.

Hook-shielding devices

22. Where hook shielding devices are identified, authorised inspectors should:
    - document if hook shielding devices are used on all gear (full or partial)
    - measure and record the weight of the hook shielding device and
    - measure the distance of the weight to the eye (top) of the hook.

Management of offal discharge

23. Where management of offal discharge is identified, authorised inspectors can speak with the master and crew to record fishing practices during setting and/or hauling. Where offal discharge is occurring, authorised inspectors should document the activity.

Blue dyed bait

24. Where blue dyed bait is identified as used, Authorised inspectors should:
    - confirm that bait used is fully thawed when dyed
    - compare the colour of dye to the vessel placard showing the colour to which bait is to be dyed (provided by the Commission Secretariat)

Deep setting line shooter

25. Where a deep setting line shooter is used, Authorised inspectors should:
    - document the presence of absence of a deep setting line shooter
    - document the settings the vessel uses.

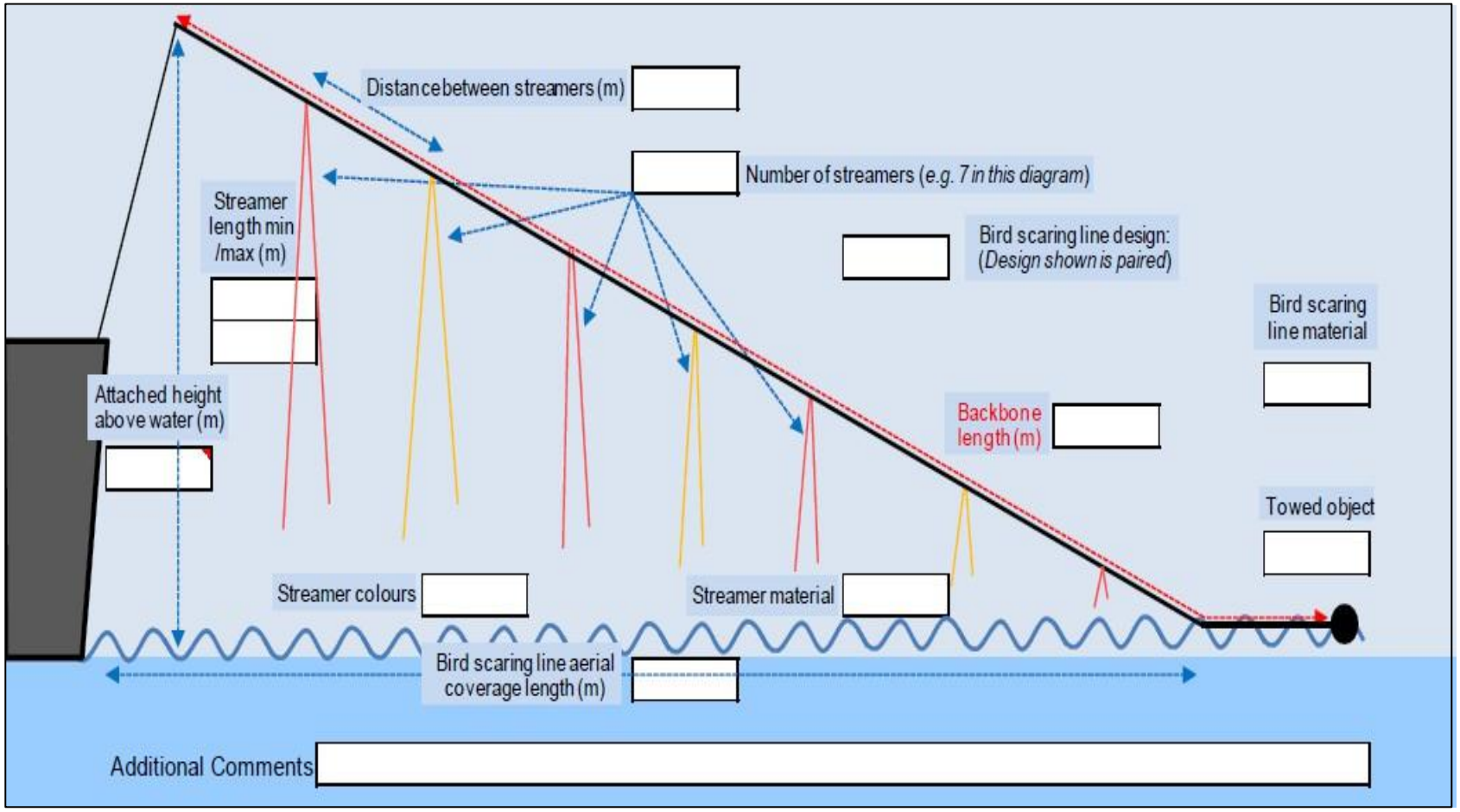
Accessibility of bycatch mitigation measuring and multi-language information

To assist the bycatch mitigation measuring process during HSBI activities, it may be beneficial for these procedures to be translated into languages that are in use on fishing vessels and/or as pictographs to bridge any language barriers. The following supporting documentation should be considered for translation by CCMs:

- HSBI multi-language cards
- Measuring of bycatch mitigation measure procedures translated into flag CCM languages, provided online.
- Measuring of bycatch mitigation measure procedures given/shown to master of vessel by HSBI Authorised inspectors.

In addition, flag CCMs should also consider providing information about measuring bycatch mitigation measure procedures that may be used during HSBI inspections to their fishing vessels in languages used by their vessels.

Annex 1. Example HSBI report template / inspection checklist - Seabird bycatch mitigation measures

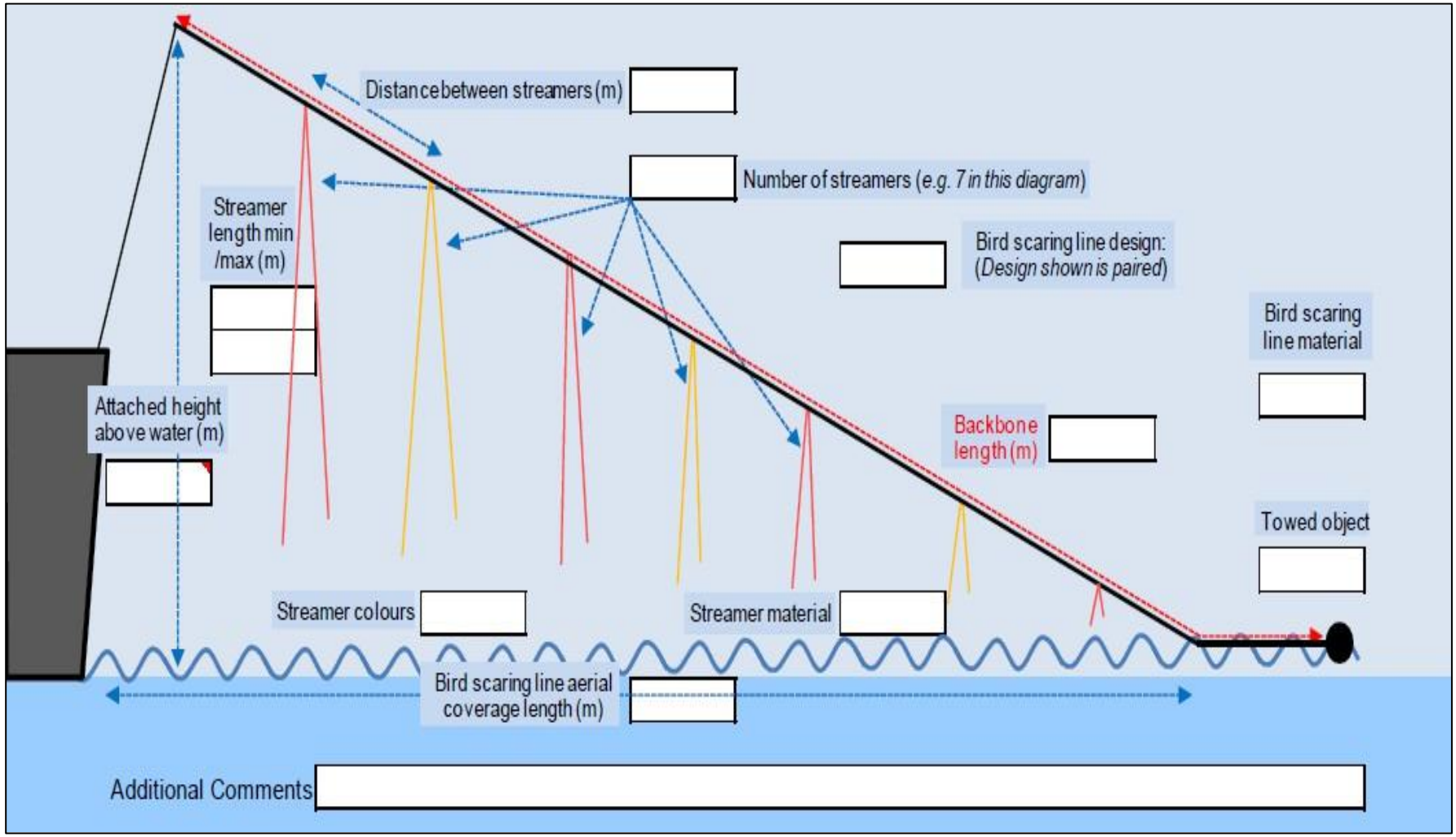
Tori Line for vessels >=35m total length and below 25° South (WCPFC CMM 2025-05, Annex 1,1a)
Image of a tori line [*Schematic needs to fully reflect WCPFC requirement, i.e. clear differentiation between long/short streamers, aerial extent, and total length*] 

Inspection theme	Inspection note	Inspector comment	
Tori Line General Specifications	Application	Has the vessel been fishing below 25° South during the current fishing trip? (Y/N) Does the vessel have a tori line? (Y/N) Number of tori lines examined?	
	Long/short streamers	Does the tori line have long and short streamers? (Y/N) Are streamers attached along the tori line at least for the first 100m from behind the stern? (Y/N)	
	Overall tori line length	What is the overall length (m) of the tori line? Is the tori line at least 200m in total length? (Y/N) *or* Is the tori line at least 120m in total length, in case that a towing object is attached? Is a towing object attached to the end of the tori line? (Y/N)	
	Tori pole	Does the vessel have a tori pole? (Y/N) What is the height (m) at which the tori line is secured? Is the height greater than 7m from the sea surface? (Y/N)	
Long Streamer Specifications	Streamer spacing	What is the distance (m) between long streamers? Are streamers spaced no more than 5m apart? (Y/N)	
	Streamer attachment method	Are streamers attached to avoid entanglement with the main line (Y/N)	
	Long streamer length	What is the length (m) of long streamers used? Are long streamers likely to reach the sea surface when the sea is calm over the length of the aerial extent? (Y/N)	
Short Streamer Specifications	Streamer spacing	What is the distance (m) between short streamers? Are streamers spaced no more than 1m apart? (Y/N)	
	Short streamer length	What is the length (m) of short streamers used? Are short streamers greater than 1m in length? (Y/N)	

Tori Line for vessels <35m total length and below 25° South (WCPFC CMM 2025-05, Annex 1,1b)

Image of a tori line

[Schematic needs to fully reflect WCPFC requirement, i.e. clear differentiation short streamers, aerial extent, and total length]



Inspection theme	Inspection note	Inspector comment	
Tori Line General Specifications	Application	Has the vessel been fishing below 25o South? (Y/N) Does the vessel have a tori line? (Y/N) Number of tori lines examined?	
	Long/short streamers	Does the tori line have short streamers? (Y/N) *and/or* Does the tori line have long streamers? (Y/N) Are long streamers included over at least the first 75m of the tori line? (Y/N)	
	Streamer Colour	Colour of streamers:	
	Overall tori line length	What is the overall length (m) of the tori line?	
	Tori pole	Does the vessel have a tori pole? (Y/N) What is the height (m) at which the tori line is secured? Is the height greater than 6m from the sea surface? (Y/N)	
Long Streamer Specifications	Streamer spacing	What is the distance (m) between long streamers? Are streamers spaced no more than 5m apart? (Y/N)	
	Long streamer swivels	How are long streamers secured to the tori line?	
	Long streamer length	What is the length (m) of long streamers used? Are long streamers likely to reach the sea surface when the sea is calm over the length of the aerial extent? (Y/N)	
Short Streamer Specifications	Streamer spacing	What is the distance (m) between short streamers? Are streamers spaced no more than 1m apart? (Y/N)	
	Short streamer length	What is the length (m) of short streamers used? Are short streamers greater than 1m in length? (Y/N)	

Tori Lines North of 23° North (WCPFC CMM 2025-05, Annex 1, 2a, b, and c)			
Inspection theme	**Inspection Note**	**Inspector Comment**	
Tori Line General Specifications	Application	Has the vessel been fishing above 23° North? (Y/N)	
	General requirements	Is the vessel length is 24m or above? (Y/N) Does the vessel have a tori line? (Y/N) Number of tori lines examined?	
	Minimum length	What is the overall length (m) of the tori line? Is the tori line at least 100m in total length? (Y/N)	
	Attachment point	What is the height (m) at which the tori line is secured? Is the height greater than 5m from the sea surface? (Y/N)	
Long Streamers	Streamer spacing	What is the spacing between long streamers? Is the interval between long streamers less than 5m? (Y/N)	
	Streamer specifications	How are the long streamers secured to the tori line? Are long streamers secured using swivels? (Y/N) Are long streamers as close to the water as possible? (Y/N)	
Short Streamers[1]	Streamer spacing	What is the spacing between streamers? Is the interval between short streamers less than 1m? (Y/N)	
	Streamer specifications	What is the length of short streamers? Are streamers at least 30cm in length? (Y/N)	

[1] Note: only encourage where the vessel is <24m total length

Night setting (WCPFC CMM 2025-05, Annex 1, 4)			
Inspection theme	**Inspection note**	**Inspector comment**	
Night Setting	Application	Has the vessel been fishing below 30° South, or West of 175° W and 25°-30° South, or above 23° North? (Y/N) Does the vessel indicate use of night setting? (Y/N)	
	Setting Times[2]	Does the vessel set fishing lines after nautical dawn and before nautical dusk? (Y/N) Has Daily catch and Effort Records been provided to examine Night Setting? (Y/N)	
		What is the start time of setting? What is the time of nautical dawn and/or nautical dusk at the operation latitude/longitude)? What is the end time of setting? What time did the setting switch to weighted branch-line?	
	Deck Lighting	Is the master aware of the need for deck lighting kept to a minimum (note lights should not breach minimum standards for safety and inspection (Y/N)	

[2] Note: however, that during a HSBI, obtaining all this information may be impractical for Authorised inspectors. Where times are recorded, specify in UTC.

Weighted Branch Lines (WCPFC CMM 2025-05, Annex 1, 5)			
Inspection theme	Inspection note	Inspector comment	
Weighted branch line	Application[3]	Has the vessel been fishing below 25° South, or above 23° North? (Y/N)	
		Does the vessel use weighted branch lines? (Y/N) Are weighted branch lines used on all fishing gear? (Full, Partial, No)	
		What is the number of weighted branch lines and what times are they set? What is the number of unweighted branch lines and what times are they set?	
	Specification	Do weighted branch lines meet minimum weight and length specifications? (Y/N) At least 40g within 50cm of the hook? At least 45g within 1m of the hook? At least 60g within 3.5m of the hook? At least 98g within 4m of the hook?	

[3] Note: however, that during a HSBI, obtaining all this information may be impractical for Authorised inspectors. Where times are recorded, specify in UTC.

Hook Shielding devices (WCPFC CMM 2025-05, Annex 1, 6)			
Inspection theme	Inspection note	Inspector comment	
General Specifications	Application	Has the vessel been fishing below 25° South, or above 23° North? (Y/N) Does the vessel use hook shielding devices? (Y/N) Are hook shielding devices used on all fishing gear? (Full, Partial, No)	
	Specification	What is the weight (g) of the hook shielding device?	

Side Setting with bird curtain and weighted branch lines (WCPFC CMM 2025-05, Annex 1, 3)			
Inspection theme	Inspection note	Inspector comment	
General Specifications	Application	Has the vessel been fishing above 23° North? (Y/N) Does the vessel side set and use a bird curtain? (Y/N)	
	General requirements	Is the mainline deployment deployed from port or starboard side as far from the stern as possible (at least 1m)? (Y/N) Is a mainline shooter used? (Y/N) If Yes, it must be mounted at least 1m forward of the stern.	
	Bird streamers	Pole aft of line shooter at least 3m long? (Y/N) Has a minimum of 3 main streamers attached to upper 2m of pole? (Y/N) What is the diameter of the streamers? Is the diameter of the main streamers at least 20mm? (Y/N? What is the diameter of branch streamers? Is the diameter of the branch streamers at least 10mm? (Y/N) Are the branch streamers long enough to drag on water? (Y/N)	

Management of offal discharge (WCPFC CMM 2025-05, Annex 1, 7)			
Inspection theme	Inspection note	Inspector comment	
General Specifications	Application	Has the vessel been fishing above 23° North? (Y/N)	
	General requirements	Does the vessel discharge offal during setting or hauling? (Y/N) If Yes, is offal discharged from the opposite side of the boat to setting/hauling?	

Blue-dyed bait (WCPFC CMM 2025-05, Annex 1, 8)			
Inspection theme	Inspection note	Inspector comment	
General Specifications	Application	Has the vessel been fishing above 23° North? (Y/N)	
	General requirements	Does the vessel use dyed bait? (Y/N)	

Deep setting line shooter (WCPFC CMM 2025-05, Annex 1, 9)			
Inspection theme	Inspection note	Inspector comment	
General Specifications	Application	Has the vessel been fishing above 23° North? (Y/N)	
	General requirements	Does the vessel use a deep setting line shooter? (Y/N) Is the master aware of the requirement that the majority of hooks set by the deep setting line shooter reach depths at least 100m? (Y/N)	