14TH MEETING OF THE SPRFMO COMMISSION

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Information paper on the Voluntary High Seas Boarding and Inspection Guidelines – adopted by Western and Central Pacific Fisheries Commission (WCPFC) in 2025

Australia

Voluntary High Seas Boarding and Inspection Guidelines – adopted by Western and Central Pacific Fisheries Commission (WCPFC) in 2025.

Summary

Australia is providing this paper to inform the SPRFMO Commission of the recent adoption by the Western and Central Pacific Fisheries Commission (WCPFC) of five voluntary regional guides to support high seas boarding and inspection (HSBI) and an updated multi-language questionnaire. The guides were developed by WCPFC members as part of an intersessional working group, chaired by Australia, and the multi-language questionnaire was a joint submission by China and Australia. The purpose of the guides is to support the HSBI process under the WCPFC and provide guidance and consistency to inspecting officers as they undertake inspections.

Australia welcomes consideration of the guides for their potential regional and technical relevance to high seas boarding and inspection under SPRFMO CMM 11-2023.

In 2024, during its annual commission meeting, the Western and Central Pacific Fisheries Commission (WCPFC) noted the efforts made by several of its members in conducting high seas boardings and inspections (HSBI) and the various tools and methods used by the relevant inspections team(s)[1]. The WCPFC decided to establish an intersessional working group, chaired by Australia, to develop regional voluntary guidelines for the use of HSBI tools. This was to further assist the WCPFC HSBI Conservation and Management Measure (CMM 2008-06) to be as effective as possible in combatting IUU fishing and monitoring compliance of CMMs in force.

The working group focused on developing five guides:

- HSBI DNA sampling guide;
- HSBI catch quantification guide;
- HSBI measuring tool calibration guide;
- HSBI bycatch mitigation measuring guide and the
- HSBI collection and dissemination of photographic and video evidence guide.

The purpose of the voluntary guides and questionnaire is to support the HSBI process and provide guidance and consistency to inspecting officers as they undertake inspections in accordance with the WCPFC HSBI CMM (CMM 2006-08). The guides include minimum technical standards and procedures for data collection and sampling protocols.

The working group also reviewed the multi-language questionnaire for improved clarity and relevance and an updated version was jointly submitted by China and Australia . The multi-language questionnaire is a standardized list of questions covering initial radio contact, and pre-boarding and boarding, which are used to facilitate communications between the inspectors and the crew of the vessel.

In December 2025, at its annual Commission meeting (WCPFC22), the WCPFC adopted the five voluntary guides for the use of tools in conducting high seas boarding and inspection (HSBI) and updated its existing multi-language questionnaire. The five guides and the questionnaire are included at Attachment 1 below and will be made available on the WCPFC website. Each guide clearly outlines a purpose statement, the application of the guide and the minimum technical standards. The guides include content specific to WCPFC CMMs, however, they are also of general applicability and relevance to high seas boarding and inspection of fishing vessels.

[1] See WCPFC-TCC20-2024-**DP02** submitted by China and TCC20 Outcomes | WCPFC Meetings and the WCPFC21 Provisional Outcomes WCPFC21 Provisional Outcomes | WCPFC Meetings for further background on the discussions and decisions relating to the development of the guides.

In 2026 the HSBI Working Group will focus its work to develop a new guide to support WCPFC inspection procedures related to crew labour standards (CMM 2024-04).

Australia is providing this overview and the adopted guides for consideration of their possible regional and technical relevance to high seas boarding and inspection under SPRFMO CMM 11-2023.

STANDARDIZED MULTI-LANGUAGE QUESTIONNAIRE

INITIAL RADIO CONTACT

1. _____(a)_____VESSEL____(b)_____ THIS IS THE _____(c)_____CALLING YOU ON CHANNEL 16 VHF-FM----OVER.

   (a) Fishing, Carrier or Bunker
   (b) Fishing, Carrier or Bunker vessel's name
   (c) Patrol Vessel's name

2. Please use radio channel 16, (one six).

3. Fishing vessel (name), this is patrol vessel (name) --- we are here on behalf of the Western and Central Pacific Fisheries Commission and are authorized to ensure you are complying with all applicable conservation and management measures. Our international radio call sign is [ ]. We intend to board and inspect your vessel, and you are required to cooperate.

PRE-BOARDING QUESTIONS

Pre boarding questions may also help communication during a boarding, or for a radio inquiry. The intention is mainly to assist with a smooth boarding and confirm some details. Answers may also be obtained through visual observation of the vessel and the RFV. These questions may apply to fishing, carrier or bunker vessels.

1. Prior to boarding your vessel, we need to ask you a few questions.

2. Is your vessel registered with the Western and Central Pacific Fisheries Commission?

3. Under which country's flag are you registered?

4. What is your international radio call sign?

5. What is your homeport?

6. How much _(a-c)__ do you have onboard?
    a. Fish
        i. what type?
    b. Supplies
    c. Fuel

7. What was your last port of call?

8. What is your next port of call?

9. What is the name and nationality of vessel master?

10. How many crew do you have onboard?
    a. what are their nationalities?

11. Do you have any weapons onboard?
    a. where are they located?

12. Do you have a fishery observer onboard?
    a. what is the observer's name and nationality?

13. We will be sending over a boarding party in (a-c) minutes or after the completion of your current operation;

    a. five
    b. fifteen
    c. thirty

14. To assist our boarding party in boarding your vessel, we request you to___(a-e)__.
    a. Stop your vessel
    b. Slow your vessel
    c. Continue on your present course and speed
    d. Turn to (port / starboard)
    e. Lower a ladder on the (port / starboard) side

15. Do you have a safe boarding ladder for our inspectors to use?
    a. Please ensure that it is attached securely to your vessel on the starboard side—this is the lee side with minimal wind and wave action and hangs 1-1.5 meters above the waterline.
    b. Have one crew member stand by the ladder to assist our team if needed.

16. Please be advised that the destruction or disposal at sea of prohibited fisheries products, prior to or during the inspection process, may be deemed an obstruction of the inspection procedures and is strictly prohibited.

17. Please continue to monitor radio channel 16 (or other indicated channel) while our inspectors prepare to embark upon your vessel.

18. Direct crew members not assisting with boarding to remain in their cabins or the mess hall until further notice. This will keep the boarding area clear for safety.

19. Inform our team of any on-board medical emergencies or crew health concerns prior to boarding, to facilitate coordinated support and avoid disruptions.

BOARDING QUESTIONS

1. Good (morning / afternoon / evening), are you the master of the vessel?
    (a) please notify master to come to us for further inquiries.

2. I am here to inspect your vessel for compliance with measures adopted by the Western and Central Pacific Fisheries Commission.

3. These are our identity cards and a copy of the relevant conservation and management measures.

4. This is a list of actions being considered as serious violation.

    [Refer to Attachment 1 for translated list of serious violations]

5. All data collected during the inspection will be used solely for law enforcement and compliance purposes, in line with data protection principles of WCPFC.

6. Do you understand?

7. You have the right to provide a statement and to explain your position on any matters raised during this inspection. Your explanation will be noted as part of the official record.

8. The Vessel master or authorized crew is welcome to accompany us during the inspection. This allows for real-time communication about vessel operations.

9. The boarding team will record videos and take photos to verify compliance with WCPFC measures. Your vessel may also voluntarily record video of the inspection process.

10. Once the inspection is complete, we will provide an interim report. It will include any objection or statement you want to include in the report.

11. You are entitled to contact the authorities of your flag states.

12. We will complete the inspection within 4 hours. However, if a serious violation is found, we will extend the boarding time.

13. You are entitled to report any action which you consider harassment of the vessel, officers or crew during the boarding, and request these statements to be inserted into the boarding report. You may also report to your flag state authorities after the boarding.

14. You may report to the authority of the flag state any damage or loss attributable to boarding action which you believe is unlawful or exceeds what is reasonably required in the light of available information.

15. Is there anyone here who speaks _____(a-f)_____
    a. English
    b. Japanese
    c. Korean
    d. Chinese
    e. French
    f. Spanish

16. I do not have anyone onboard who can speak your language.

17. I am using bilingual language cards. Please answer my questions simply and slowly, using yes or no whenever possible.

18. These people will assist me in my inspection.

19. Please muster your crew on the (fantail / bow / open deck).

20. Please indicate where you keep your weapons onboard.

21. This is a copy of the text of the Western and Central Pacific Fisheries Convention which provides me the authority to board your vessel and conduct this inspection.

22. Please review this document and let me know if you have any questions.

23. This is a copy of the relevant Commission Conservation and Management Measures which apply to your vessel.

24. When were you inspected last? Who inspected you?

25. I intend to inspect your vessel to ensure your compliance with these conservation and management measures.

26. Please show me:
    a. Your vessel's documents
    b. Your current permits
    c. Your catch logs
    d. Your plotting charts

27. When reviewing documents, our team will handle them with care and return each document immediately after verification. We may take photographs of the document.

28. Please show me line cutters and the de-hookers

29. Please show me tori-lines. I need to measure the length of them.

30. I would like to take two or three small tissue samples of this fish to confirm the species identification. One sample will be taken back to a certified lab for DNA analysis; the other will be retained if your flag state requests the sample and the third may be kept as a backup.

31. You should sign the seal after we put the samples in the evidence box/bag.

32. How do you deal with plastic waste on board? Do you have an incinerator on board your vessel?

33. Have you transshipped since your last landing at port? Please show me the related documents.

34. Your documents and records indicate you are in complete compliance with all Commission Conservation and Management Measures.

35. Your documents and records indicate you are not in complete compliance with all Conservation and Management Measures.

36. This is the specific conservation and management measure by which you are not in compliance.

37. Please provide any comments or statements here.

38. This (is / is not) considered by the commission to be a serious violation.

39. I am collecting this evidence to verify if there is a violation.

40. I am photographing this item to document a potential violation.

41. I will use this boarding report to document my inspection of your vessel.

42. Please sign here.

43. This boarding report indicates you (are / are not) in compliance with all commission conservation and management measures.

44. This is your copy of the boarding report.

45. A copy of this boarding report will be provided to the fisheries enforcement authorities of your country (for further action).

46. Thank you for your assistance on this boarding.

47. I have completed the inspection of your vessel.

48. We are departing your vessel at this time.

49. Assist our team in safely disembarking by ensuring the boarding ladder remains secure.

50. To assist our boarding party in disembarking your vessel, we request you to_(a-e)_until_(1-3).

    a. Stop your vessel
    b. Slow your vessel
    c. Continue on your present course and speed
    d. Turn to (port / starboard)
    e. Lower a ladder on the (port / starboard) side

    1. 30 minutes after our departure
    2. We give you the signal
    3. We contact you through the radio

51. You may resume normal vessel operations immediately after our team departs. No further clearance is required.

Attachment 1. List of actions being considered as serious violation

According to the conservation and management measures of WCPFC, a serious violation means the following violations of the provisions of the Convention or conservation and management measures adopted by the Commission:

a. fishing without a license, permit or authorization issued by the flag Member, in accordance with Article 24 of the Convention;

b. failure to maintain sufficient records of catch and catch-related data in accordance with the Commission's reporting requirements or significant misreporting of such catch and/or catch-related data;

c. fishing in a closed area;

d. fishing during a closed season;

e. intentional taking or retention of species in contravention of any applicable conservation and management measure adopted by the Commission;

f. significant violation of catch limits or quotas in force pursuant to the Convention;

g. using prohibited fishing gear;

h. falsifying or intentionally concealing the markings, identity or registration of a fishing vessel;

i. concealing, tampering with or disposing of evidence relating to investigation of a violation;

j. multiple violations which taken together constitute a serious disregard of measures in force pursuant to the Commission;

k. refusal to accept a boarding and inspection, other than as provided in paragraphs 26 and 27;

l. assault, resist, intimidate, sexually harass, interfere with, or unduly obstruct or delay an authorized inspector; and

m. intentionally tampering with or disabling the vessel monitoring system;

n. such other violations as may be determined by the Commission, once these are included and circulated in a revised version of these procedures.

Western and Central Pacific Fisheries Commission

Voluntary HSBI Regional Guides

TOOLS FOR HIGH SEAS BOARDING AND INSPECTIONS

HSBI DNA Sampling Guide

Document History

Version	Effective Date	Description of Revision	Prepared by	Reviewed by
1.1	31 October	For WCPFC22 Consideration	HSBI WG	HSBI WG Chair
1.2	27 November	For WCPFC22 Consideration	HSBI WG	HSBI WG Chair
1.3	4 December	Includes revisions at WCPFC22	HSBI WG	HSBI WG Chair

Contents

PURPOSE STATEMENT

1. This document provides guidance to Authorised inspectors conducting tissue sampling and subsequent DNA sequencing and analysis (hereafter, broadly referred to as "DNA sampling") as part of WCPFC High Seas Boarding and Inspections (HSBI[1]). For CCMs wishing to use DNA sampling for HSBI, the development of this Guide also intends to:
   - support the establishment of a robust DNA sampling process by CCMs at the CCM's level to verify species identification of individual specimens in support of HSBI
   - assist CCMs in ensuring that DNA data are credible and admissible using appropriate methods and procedures throughout the entire DNA sampling process
   - support the establishment of minimum practices at the CCM's level which are necessary to ensure that DNA sampling produce accurate, precise analytical findings, and findings are conveyed in an unbiased, objective manner

[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 CMM.

- provide guidance to CCMs on tools that can be used for gathering and preserving tissue samples during HSBI and the minimum standards for DNA sequencing and analysis, where the results or findings are intended to be admissible as evidence in support of potential court or administrative proceedings

2. This Guide sets out the minimum standards in the application of DNA sampling during a HSBI and the post analysis process, which includes:
   - tissue sampling
   - tissue sample handling, preservation, sealing and storage
   - tissue sample transfer/shipping
   - DNA extraction, sequencing, and analysis in accordance with accredited procedures
   - transmission of DNA results
   - DNA sequence, extracted DNA, and tissue sample retention and accessibility for flag CCM testing.

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

4. This guide can be modified in response to new information, technical innovations, and perspectives. It is expected that this guide will continue to evolve as the field develops.

Application of DNA sampling in WCPFC HSBI activities.

5. The aim of HSBI is to check whether a vessel is operating in compliance with the WCPFC Convention and all applicable WCPFC Conservation and Management Measure (CMM) obligations.

6. Inspectors conducting HSBI activities can detect and confirm species on board at the time of inspection. Sometimes, a visual inspection of morphological characteristics may be all that is needed to obtain a species identification.

7. The application of molecular genetics offers a powerful tool to complement the work of Authorised inspectors conducting HSBI activities, including the conclusive identification of specimens at the species level.

8. Genetic analysis can be a useful method for species identification when species identity cannot be determined on a purely morphological basis, for example if the morphological characteristics are unfamiliar to the inspector, similar, or are absent (e.g. processing of specimens retained onboard).

9. Genetic analysis through DNA sequencing of fish for identification can support investigations to verify a vessel's reported catch, through providing additional proof and the ability to confirm the identity of the species in question. Examples include, to determine between:
   - Pacific and Southern bluefin tunas
   - small-sized bigeye and yellowfin tunas, and

- different bycatch species that are prohibited for retention.

10. DNA sequencing results can be used to corroborate other forms of evidence such as vessel logbooks and photographs taken by the Authorised inspectors. This can be used, among other tools and sources of information, to support risk assessments to prioritise the vessel for further inspection, investigation and prosecution as determined by the flag CCM.

11. The use of DNA sampling during HSBI can assist the flag CCM, or the inspecting CCM, where field-based tools are applied, with assessing compliance with vessel licensing, catch and reporting obligations, including to:
    - confirm species identification
    - verify that only species which a vessel is authorised to catch are being retained and declared
    - verify catch reporting and catch log data
    - verify, or provide rapid screening for retention of protected species.

HSBI DNA SAMPLING Minimum Standards

Methods of tissue sampling (not limited to)

Laboratory-based analysis		Field-based analysis
Muscle Biopsy	Fin Biopsy	Other
DNA biopsy sampling involves taking a tissue sample from a single fish.	Tissue sample is collected from a single fish through cutting off a section of the fin.	Rapid field-based DNA testing (ie. environmental/tissue samples) designed for risk assessment and screening purposes only.

EVIDENTIARY PROCEDURES for DNA Sampling

12. The general principles and procedures for DNA sampling for evidentiary purposes in fisheries monitoring and investigations:

a) Documenting and recording tissue sampling

13. Tissue sampling should be documented using a recording device, including photographs and videos. To the extent practicable, the entire sampling process (and any field-based DNA testing, if conducted) should be recorded (preferably with video) for evidentiary purposes. Additional notations with details of suspected infringements and time stamps for relevant tissue sampling and analysis results should be provided with the video files.

14. Tissue sampling should be conducted by authorised inspectors, with witnesses' present (master or crew), especially if not documented with a recording device (and prioritise that witnesses from the fishing vessel are present.

15. Authorised inspectors should record in the HSBI report, including but not limited to the following information related to DNA sampling:
    - tissue sampling information:
        - sample identification number
        - location of fish sampled (e.g. blast freezer, hold #)
        - description (processed state of fish)

  - comments, including the reason for or background of the tissue sampling
- the master of the vessel must be provided with an interim copy of the report which includes details of any tissue sampling. The master must also be given to opportunity to include any objection or comment to be included in the final report.

b) Collection and preservation of tissue samples

16. Authorised inspectors should:
- photograph and video record tissue sampling (see chain-of-custody, below)
- take tissue samples, to the extent practicable, from the commercially least valuable part of the fish, such as the tail.
- take at least two tissue samples and ideally three samples from the same fish, one for the inspecting CCM and one for the flag CCM (if requested) and one for the laboratory to keep as a backup and confirm in case of diverging results].
- collect, label, preserve and seal each tissue sample separately, at the sampling site.
- label each tissue sample with the following minimum details on the sample labels:
  - Date
  - Unique sample reference number
  - Vessel name
  - Collector name
  - Witness name, role and signature
- affix the waterproof sample labels directly to the sample vials or collection bags.
- secure each sample container or evidence bag containing the tissue sample, with a tamper-evident seal. The seal should be signed by at least one authorised inspector and the vessel master, or a crew member designated by the master.
- ensure both vials and associated evidence bags can be traced back to the same sampled fish.
- photograph the sealed container or evidence bag showing these signatures.
- keep the tissue samples in a freezer. If a freezer is not available samples should be stored in a cool, dark environment, as long as they are not deteriorated.

c) Preventing cross-contamination of tissue samples

17. Protective measures are necessary to prevent cross-contamination of samples. The following should be used for each individual sample:
- Use new or unopened sampling tools.
- Wear single-use disposable gloves.

d) Maintaining a chain of custody for tissue samples between the sample site and the testing laboratory

18. From the beginning to the end of the DNA sampling process, it is crucial to be able to demonstrate every single step undertaken to ensure traceability and continuity of the sample. The integrity of tissue samples and, later, extracted DNA samples, must be maintained as they pass from one person to another.

19. The ‘chain of custody’ is a continuous record of the life of the sample from the moment it was sampled to the moment it is analysed. Every step must be recorded and verified to ensure the

sample is not tampered with, changed or lost. It is the Authorised inspector's responsibility to ensure chain of custody of the tissue sample by ensuring:

- the tissue samples are stored in a tamper-evident sealed bag or envelope, preferably stamped with a unique serial number.
- the chain of custody record is maintained.
- the tissue samples are sent to an accredited laboratory for testing as outlined in the CCM's DNA sampling procedures.

e) Transmission of DNA sampling results to the flag CCM

20. Authorised inspectors should note in the full inspection report, that DNA sampling occurred.

21. The inspecting CCM should update without delay, but no later than 30days, the flag CCM of the sample arriving in port and advise them when testing results are expected to be available, if not already shared with flag CCM.

22. Timing of DNA analysis and results will vary depending on circumstances, such as:
    - time for tissue sample to return to port
    - time to facilitate arrangements to deliver the tissue sample to an accredited laboratory
    - time to deliver the tissue sample to an accredited laboratory
    - time for extraction, sequencing, and analysis of the DNA by an accredited laboratory.

23. Once the finalised DNA sampling results are received by the relevant authority of the inspection vessel, they should be provided, together with the inspection report, to the flag CCM within 5 business days. In addition to the results, the credentials from the testing laboratory and recognised standards as outlined in the CCMs Sampling Procedures including the DNA extraction, analysis method information and reference sequence database used should be attached.

CCM DNA sampling and analysis procedures

24. CCMs wishing to use DNA testing for HSBI evidentiary purposes should share their DNA Sampling for Evidentiary Purposes Procedures with the Secretariat for posting on the HSBI page on the WCPFC website.

25. The CCM's DNA Sampling for Evidentiary Purposes Procedures should include:
    - DNA sampling method for HSBI activities
    - DNA sampling procedures for HSBI activities
    - Chain of custody form
    - Details of testing Laboratory and credentials and recognised standards, these could include:
        - ISO 17025 / 9001 – *this accreditation supports laboratories in maintaining complex processes of testing and calibration to the highest standards and demonstrates to external clients that the laboratory outputs are valid and reliable.*
        - Quality Management Systems (QMS)

- Society for Wildlife Forensic Science (SWFS) Standards and Guidelines for Wildlife Forensic Analysis – *the minimum standards and additional guidelines for wildlife forensic analysts in the sub discipline of DNA*
- Genetic reference database – *used for species assignment for WCPFC catch and compliance. This should include the GenBank Accession number of the reference sequence used for positive species identification*.
- Sample retention and accessibility – tissue and DNA extracts should be retained, for up to 2 years to allow for future testing by the flag CCM, if requested.
- If requested, the DNA sample should be sent to the flag CCM within 30 days after DNA extraction, sequencing and analysis by the laboratory.
- The flag CCM retains the right to conduct DNA sampling to verify the sampling results submitted by the inspection vessels. If the flag CCM conducts DNA sampling, it should observe the same standards as set out in this guide and follow similar methods to the original testing as much as possible (including assay and genetic reference database used for species identification).

Accessibility of DNA Sampling and Multi-language information

26. To assist the DNA sampling process during HSBI activities, it may be beneficial for the CCM's DNA sampling procedures to be translated into languages that are in use on fishing vessels and/or as pictographs to bridge any language barriers.

27. The following supporting documentation could be considered for translation into flag CCM languages by the Authorized inspector CCMs:
    - HSBI multi-language cards
    - DNA sampling for Evidentiary Purposes procedures provided online.
    - DNA sampling for Evidentiary Purposes procedures potentially given/shown to master of vessel prior to DNA sampling by HSBI Authorised inspectors.

28. In addition, flag CCMs should also consider providing information about DNA sampling procedures that may be used during HSBI Inspections to their fishing vessels in a language(s) used by their vessels.

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Western and Central Pacific Fisheries Commission

Voluntary HSBI Regional Guides

TOOLS FOR HIGH SEAS BOARDING AND INSPECTIONS

HSBI Catch Estimation Guide

Document History

Version	Effective Date	Description of Revision	Prepared by	Reviewed by
1.1	31 October	For WCPFC22 consideration	HSBI WG	HSBI WG Chair
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1.3	4 December	Includes revisions at WCPFC22	HSBI WG	HSBI WG Chair

Contents

PURPOSE STATEMENT

1. This document provides guidance to Authorised inspectors conducting WCPFC High Seas Boarding and Inspections (HSBI[1]) on:
   - an estimation on the quantities of fish on board, when direct weighing or weighing by sampling is not possible
   - tools and methods for catch quantifications
   - the minimum standards for analysis.

2. The development of this Guide also aims to:
   - support the establishment of robust catch estimation methods to quantify and estimate the catch on board

[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 CMM.

- ensure that catch estimates are credible and are consistently using appropriate methods and procedures.

3. This guide refers to general considerations in the application of estimating the catch[2] on board during a HSBI and the estimation and analysis process, which includes:
   - catch document[3] analysis
   - freezer and Fish Hold inspections
   - verifying Catch
   - quantifying catch
   - weight estimations
   - analysis
   - reporting.

4. The application of this Guide will be voluntary and apply to HSBI activities within the WCPFC area of competence.

5. This guide can be modified in response to new information, technical innovations, and perspectives. It is expected that this guide will continue to evolve as the field develops.

Estimate catch weights in WCPFC HSBI activities.

6. The aim of HSBIs is to ensure compliance of a vessel with the WCPFC Convention and all applicable WCPFC CMM obligations.

7. A key function of an authorised inspectors during a HSBI is to identify potential misreporting, unreported transhipment, under reporting or record keeping errors.

8. Inspectors conducting HSBI activities can detect and confirm species on board at the time of inspection. They can do this by comparing the information in catch documents with a visual check, count or estimation of catch on board.

9. The purpose of estimating catch is to verify what is declared on the log sheets is what is on board the fishing vessel. It is an important tool for Inspectors to assess if the catch is being recorded accurately, and in line with the relevant WCPFC CMMs.

10. The use of catch estimation during HSBI activities can assist with assessing compliance with vessel licensing and reporting obligations, including to:
    - verify catch reporting/ catch log data
    - estimate total catch held on the vessel
    - assist a risk assessment for a more extensive sampling i.e. Port inspection.

11. The general process of catch estimation, might very according to the type of fishing vessel, but in general involves the following steps:

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[2] Catch refers to the target, bycatch or non-bycatch species.
[3] Catch documents can include logbooks, log sheets, observer reports, transhipment declarations, captain's notes, engineers' reports - both electronic or written.

- In the absence of a hold capacity plan, and when possible measure the hold as accurately as possible to calculate the total hold space[4]
- estimate the area of the hold filled with fish to estimate tonnage of fish
- compare estimated tonnage with the amount of fish recorded in the fishing logbook
- assess whether there is reasonable suspicion that non-compliances can be linked to tonnage inconsistency.

12. This is an initial estimate so Authorised Inspectors can check the logbook to identify significant discrepancies. If significant discrepancies are found:
    - this may inform or call for a more accurate approach, such as a port inspection within the framework provided by WCPFC CMMs, or unload/offload, or;
    - inform the flag State and request an enquiry into the vessel.

HSBI Catch estimation

Table 1. Methods of estimating catch quantity

Volumetrics	Subsample	Processed unit counts
Estimate fish in the hold where the volume of the hold is known, or can be calculated	weighing a subsample of a species then calculating average fish weight	counting the total number of specimens (processed or whole), multiplied by theestimated average weight to find the total weight of the species

13. The most appropriate estimation method will depend on various parameters such as the type of vessel[5], type of fish hold, the type (e.g. whole, processed, frozen etc.) and amount of catch on board. It may be useful to use two methods in combination. Consider what fish are onboard, how they are stored and what information you have available to help decide what method(s) could assist.

14. The general principles and procedures for catch estimation in fisheries inspections:
    - documentation and records
    - information gathering
    - hold measurements: density and conversion factors
    - compare catch information to catch estimates.

a) Documentation and records

15. Authorised inspectors should:
    - document the catch estimation process including analysis, using photographs and videos
    - conduct the catch estimation process with witnesses' present (master and crew), where practicable.
    - ideally work in pairs or as a trio, to cover the tasks:

[4] Further guidelines on how to measure the hold capacity may be considered by the HSBI SWG in 2026.
[5] The estimation method in paragraph 21 may not be applicable to fresh fish stowed in tuna longliners at this moment.

- reviewing the logbooks and interviews the master for species, product types, and estimated catch
- performing the necessary physical measurements in each fish hold for fish volume estimation[6], based on the hold capacity plans

16. The HSBI report should record any catch estimation and analysis. The authorised inspector should record as much as possible, including but not limited to the following information:
    - date of the inspection
    - vessel name
    - vessel coordinates
    - catch estimation methods, measurements (including unit of measurement), estimations, conversion factors and analysis
    - Witness name, role and signature.

17. The master of the vessel must be provided with an interim copy of the report which includes details of any catch quantification analysis. The master must also be given to opportunity to include any objection or comment to be included in the final report.

b) Procedural steps

18. Authorised inspectors should calculate the total cubic capacity of each cargo hold, measured in cubic metres. Information on the vessel cargo holds, freezer or storage areas can be found in various ships documents, and ideally, be certified by the CCM and valid:
    - Vessel Plans or Capacity Plan
    - Hull Survey Certificates
    - General Arrangements
    - Stability Book.

19. Authorised inspectors should check ships beam (width) for verification of vessels principal dimensions. This will confirm information on the plans belongs to that vessel.

c) Measuring the hold – volumetrics

20. To obtain the hold volume by measuring interior dimensions, Authorised inspectors can either, measure the volume occupied by the fish in the hold, or measure the free air space in the hold, and deduct it from the total cubic capacity of the hold (paragraph 18).

21. To obtain fish volume estimation by species, convert the fish volume into fish weight. The factors below are illustrative examples for the inspector's reference:

    i. Apply density factors[7].. Some examples (mean values)*:

- Marlin (MLS): 1080 kg/m^3
- Bigeye tuna (BET): 1064 kg/m^3

[6] Further guidelines on how to measure hold capacity may be considered by the HSBI SWG in 2026.
[7] Magnuson, J. J. 1973. Comparative study of adaptations for continuous swimming and hydrostatic equilibrium of scombroid and xiphoid fishes. Fishery Bull. 71:337–356.

- Pacific bluefin tuna (PBF): 1070 kg/m^3
- Albacore tuna (ALB): 1054 kg/m^3
- Skipjack tuna (SKJ): 1090 kg/m^3
- Swordfish (SWO): 1075 kg/m^3

ii. Apply processing conversion factor[8] if fish is processed, species by species. The following conversion factors are some of the examples:

Species (FAO code)	Whole	Gutted	Gutted + Head off
Marlin (MLS)	1.00	1.10	1.30
Bigeye tuna (BET)	1.00	1.29	1.33
Pacific bluefin tuna (PBF)	1.00	1.16	1.36
Albacore tuna (ALB)	1.00	1.23	1.31
Skipjack tuna (SKJ)	1.00	1.10	1.29
Swordfish (SWO)	1.00	1.31	1.30
Sharks (CWZ)	1.00	1.10	2.00
Yellowfin tuna (YFT)	1.00	1.10	1.36

iii. Apply stacking factors[9], taking into account if stacking is loose (factor 0.45), medium (factor 0.51, mean value for frozen tuna), or tight (factor 0.54).

Example Calculation

Hold: 8 × 8 × 2.5 m = 160 m^3

Fill rate: 70%

Species: Bigeye tuna (BET), gutted

Density: 1064 kg/m^3

Stacking factor: 0.51

Processing factor: 1.29

Usable volume: 160 × 0.7 = 112 m^3

Gross weight = 112 × 1064 = 119168 kg

Stacked weight = 119,280 × 0.51 = 60775,68 kg

[8] The Food and Agriculture Organization's (FAO) Coordinating Working Party on Fishery Statistics (CWP) Handbook of Fishery Statistics: Indicative factors for converting product weight to live weight for a selection of major fishery commodities.

[9] Note that stacking factors vary depending on the type of fishing vessel (e.g. purse seine, longline, trawler).

Catch weight = 60775,68 × 1.29 = 78400,6 kg ≈ 78,4 tonnes

d) Analysis of Results

22. Compare the estimation result with the fishing logbook, captain's declarations, and any landing or transhipment data. Calculate the data and assess whether there are significant differences between the figures.

    - If fishing logbook figure significantly > estimates of catches onboard:
        - look for concealed space where fish could be stored
        - look for evidence that an undeclared transshipment occurred during the fishing vessel trip, where the fishing vessel gave fish.
    - If fishing logbook figure significantly < estimates of catches onboard:
        - look for evidence that an undeclared transshipment occurred during the fishing vessel trip, where the fishing vessel received fish
        - look for species that might be underreported.

Accessibility of catch estimation method information

23. To assist the catch estimation process during HSBI, it may be beneficial for the catch quantification procedures to be translated into languages that are in use on fishing vessels and/or as pictographs to bridge any language barriers.

24. Information accessibility of the HSBI Catch estimation process for the vessel master crew and for the HSBI Authorised inspectors could be supported via:
    - HSBI Multi-language cards
    - the catch quantification procedures given/shown to master of vessel by HSBI Authorised inspectors
    - the voluntary guide translated by CCMs.

Western and Central Pacific Fisheries Commission

Voluntary HSBI Regional Guides

TOOLS FOR HIGH SEAS BOARDING AND INSPECTIONS

Measuring Tool Calibration and Certification Guide

Document History

Version	Effective Date	Description of Revision	Prepared by	Reviewed by
1.1	31 October	For WCPFC22 consideration	HSBI WG	HSBI WG Chair
1.2	27 November	For WCPFC22 consideration	HSBI WG	HSBI WG Chair
1.3	4 December	Includes revisions at WCPFC22	HBSI WB	HSBI WG Chair

Contents

PURPOSE STATEMENT

1. This document provides guidance to Authorised inspectors conducting WCPFC Hish Seas Boarding and Inspections (HSBI[1]) on the minimum standards for the use of measuring tools during a HSBI, which includes:
   - tape measures, and
   - weighing scales.

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

3. This guide should be modified in response to new information, technical innovations, and perspectives. It is expected that this guide will continue to evolve as the field develops.

[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 CMM.

Application of measuring tools in WCPFC HSBI activities.

4. The aim of HSBIs is to check a vessel is operating in compliance with the WCPFC Convention and all applicable WCPFC Conservation and Management Measures (CMM) obligations.

5. Inspectors conducting HSBI activities should use calibrated measuring tools to take measurements of the:
   - length and weight of fishing gear
   - the fishing holds
   - catch, and
   - vessel markings

6. Taking measurements during HSBI activities can assist with assessing compliance with:
   - by-catch mitigation methods
   - logbook reporting and catch estimations
   - vessel marking and identification

7. The calibration and independent certification of measuring tools is crucial and constitutes an important factor in successful compliance investigations and to ensure consistency between inspections.

Measuring tool calibration minimum standards

Table 1. Types of commonly used measuring tools:

Tape measures			
steel, retractable	fabric, retractable	Infrared and laser	Magnetic
Weighing scales			
Hook		pocket	

8. The general principles and procedures for measuring tool use and calibration in fisheries investigations:

a) Documentation and records

9. Authorised inspectors should:
   - document the taking of measurements using a recording device, including photographs and videos that identify the measurement tools used and their serial number and certification number where available.
   - take measurements with witnesses' present (master and crew,) and prioritise that witnesses from the fishing vessel are present.
   - ideally work in pairs.
   - record any measurements taken in the HSBI report. The page which records measurements and applied tools should also record the witness name, role and signature.

10. The master of the vessel must be provided with an interim copy of the report which includes details of any measurement taken. The master must also be given to opportunity to include any objection or comment to be included in the final report.

b) Certification guidelines and details of the measuring tools

11. Measuring tools should be certified by an independent nationally accredited body at the point of manufacturing in accordance with ISO or international recognised standards.

12. Certification details should be available and provided to the flag CCM upon request, and on reasonable grounds such as to support flag state investigation. Certification details could include:
    - type of measuring tool
    - technical data sheet
    - certified calibration certificates
    - independently verified by a national body
    - manufacturing information on ISO or international standards
    - EC Class[2] (I, II, III)
    - the inspecting CCM keeps all certification material available to be shared with the flag CCM if requested.

c) Guidelines for calibration of measuring tools

13. Measuring tools should be periodically tested for accuracy, such as:
    - comparing the measurements on a measuring tape to a known standard, typically a certified reference or master tape
    - the recalibration of weighing scales
14. Pre-boarding condition checks should be conducted on measuring tools to ensure they are undamaged and in working order.

[2] Measuring tape accuracy is guided by harmonised standards set out by the European Committee which divide the category into three classes according to their level of accuracy.

Western and Central Pacific Fisheries Commission

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
1.1	31 October	For WCPFC22 consideration	HSBI WG	HSBI WG Chair
1.2	27 November	For WCPFC22 consideration	HSBI WG	HSBI WG Chair
1.3	4 December	Includes revisions at WCPFC22	HSBI WG	HSBI WG Chair

Contents

PURPOSE STATEMENT

1. This document provides guidance to Authorised inspectors conducting WCPFC High Seas Boarding and Inspections (HSBI[1]) 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 or weight).

[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 CMM.

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

Assessing bycatch mitigation measures in WCPFC HSBI activities.

5. 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.

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

7. 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

8. 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.

9. 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

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

a) Documentation and records

11. Authorised inspectors should:
    - document any measurements taken using a recording device, including photographs and videos.

- Take any measurement with witness' present (\ master or crew,) and prioritise that witnesses from the fishing vessel are present.
- ideally work in pairs
- inspect the Vessel Master's notes including fishing vessel operation tracking and the daily catch and effort records.

12. The HSBI report should record bycatch mitigation measure information. The authorised inspector should record as much as possible, including but not limited to the following information related to bycatch mitigation:
    - Bycatch mitigation methods (refer Annex 1):
        - used by vessel
        - measurements (including unit of measurement)
        - witness name, role and signature.

13. 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 to opportunity to include any objection or comment to be included in the final report.

b) Equipment

- Calibrated/certified tape measure and weighing scales
- Photo and video recorder
- HSBI report / recording information materials

Collection and analysis of bycatch mitigation measures (and tools) for Seabirds

Weighted branch lines

14. Branch lines are to be weighted accordingly, based on the distance from the hook. Authorised Inspectors should:
    - measure the distance from the weight to the eye (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

15. Tori lines specifications are dependent on the total length of the vessel (on the RFV and confirmed via the ships documents) and applicable areas on the high seas of the WCPFC Convention Area (i.e. North of 23 North, South of 25 South and 30 South). Refer to Annex 1. Example HSBI report template/inspection checklist - seabird mitigation measures.

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 overage piece of line leftover
- 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.

Tori line streamers

17. Authorised inspectors should:
    - measure distance between long streamers
    - measure distance between short streamers
    - measure the first long streamers from the start of the tori line that meets the attachment point
    - measure from attachment point to the first long streamer
    - measure and record the length of long and short streamers.

Tori pole

18. The tori pole or attachment point is where the tori line is deployed from. Authorised inspectors should:
    - measure from top of tori pole (estimate) or attachments point to the sea surface.

Night Setting

19. Depending on the area of fishing, night setting may be an approved seabird mitigation measure. Information on mitigation measures may be recorded in the vessels' Daily Catch and Effort Records or the ships log. Where night setting is declared, Authorised inspectors should:
    - identify the start time (UTC) and end time of setting (UTC),
    - verify the location and corresponding requirement
    - identify the time of nautical dawn and dusk using a nautical almanac
    - identify if setting of fishing gear has occurred after nautical dawn or before nautical dusk using vessel records.

Hook-shielding devices

20. Hook shielding devices may be used as a stand along seabird mitigation measure. Where identified, authorised inspectors should:
    - identify if hook shielding devices are used on all gear (full or partial)
    - measure and record the weight of the hook shielding device and distance to the eye (top) of the hook.

Management of offal discharge

21. Management of offal discharge is a permitted as a seabird mitigation measure where fishing occurs north of 23° North. 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.

Blue dyed bait

22. 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).

Accessibility of bycatch mitigation measuring and multi-language information

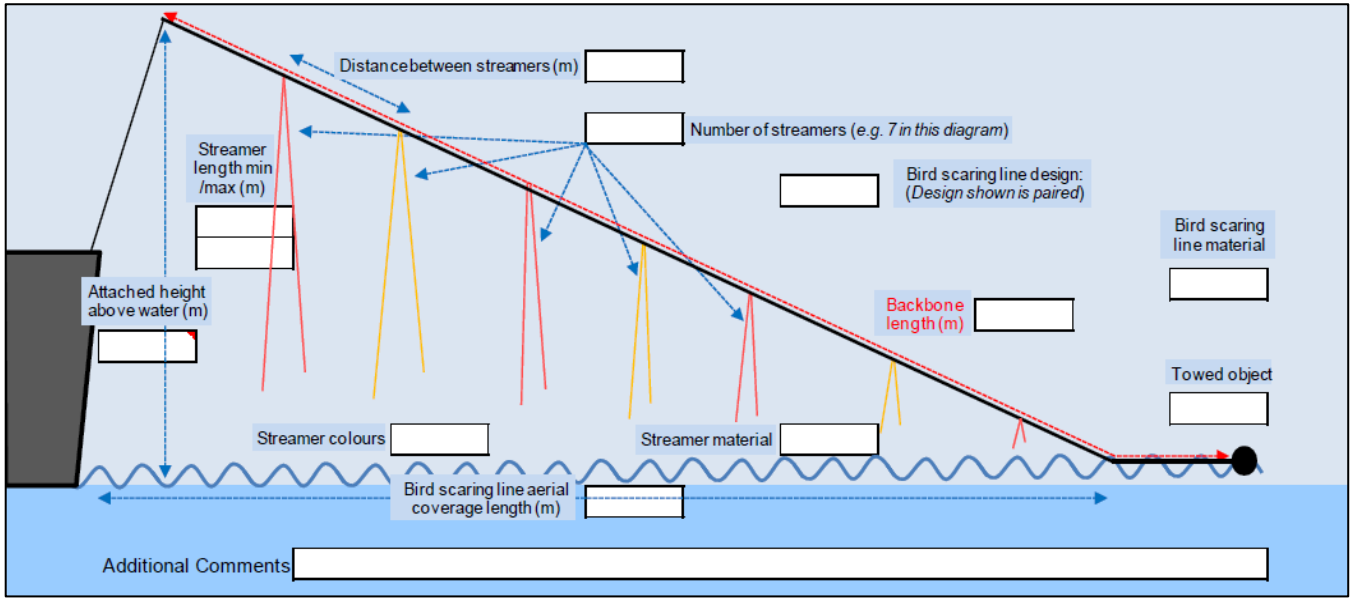
To assist the bycatch mitigation measuring process during HSBI activities, it may be beneficial for these procedures to be translated into languages that are in use on fishing vessels and/or as pictographs to bridge any language barriers.

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 a language(s) used by their vessels.

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

<table>
<tr><th colspan="4">Tori Line for vessels >=35m total length and below 25° South (WCPFC CMM 2018-03, Annex 1,1a)</th></tr>
<tr><td colspan="4">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]
 
</td></tr>
<tr><th>Inspection Theme</th><th>Inspection Note</th><th colspan="2">Inspector Comment</th></tr>
<tr><td>Tori Line General Specifications</td><td>Did the vessel have at least one tori line?</td><td>Has the vessel been fishing below 25 South during the current fishing trip? (Y/N)

Does the vessel have a tori line? (Y/N)

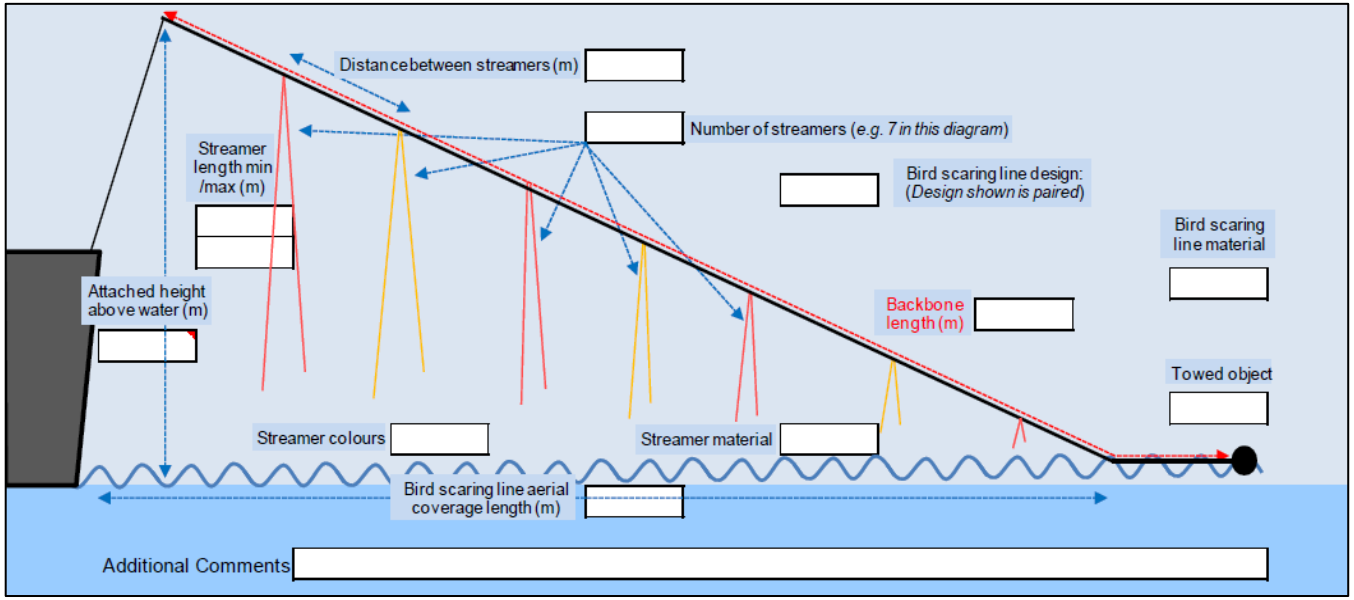
Number of tori lines examined?</td><td></td></tr>
</table>

	Long/Short Streamers	Does the tori line have long and short streamers? (Y/N)	
	Streamer Colour	Colour of streamers:	
	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)	
	Aerial Extent	Over what length (m) are streamers included over the total length 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 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)	
	Long Streamer Swivels	Are swivels used to secure the long streamers to the tori 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 2018-03, 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	Did the vessel have at least one tori line?	Has the vessel been fishing below 25 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)	
	Streamer Colour	Colour of streamers:	
	Overall tori line length	What is the overall length (m) of the tori line?	
	Aerial Extent	Over what length (m) are streamers included over the total length of the tori line? Are streamers included over the at least the first 75m 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 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)	
	Streamer spacing	What is the distance (m) between short streamers? Are streamers spaced no more than 1m apart? (Y/N)	

Short Streamer Specifications	Short Streamer Length	What is the length (m) of short streamers used? Are short streamers greater than 1m in length? (Y/N)	

Night setting (WCPFC CMM 2018-03, Annex 1, 4)			
Inspection Theme	**Inspection Note**	**Inspector Comment**	
Night Setting	Night Setting Applicable	Has the vessel been fishing below 30 South? 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)	Annex 1,4(iii)

[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 2018-03, Annex 1, 5)			
Inspection Theme	**Inspection Note**	**Inspector Comment**	
Weighted branch line	Application[3]	Has the vessel been fishing below 25 South? (Y/N) Does the vessel use of 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?	

Hook Shielding devices (WCPFC CMM 2018-03, Annex 1, 6)			
Inspection Theme	**Inspection Note**	**Inspector Comment**	
Weighted branch line	Application	Has the vessel been fishing below 25 South? (Y/N) Does the vessel use of 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?	

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

Tori Lines North of 23° North (WCPFC CMM 2018-03, 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) Is the vessel length is 24m or above? 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	Streamer Spacing	What is the spacing between streamers? Is the interval between short streamers less than 1m? (Y/N)	(Note only encourage where the vessel is <24m total length).
	Streamer specifications	What is the length of short streamers? Are streamers at least 30cm in length? (Y/N)	(Note only encourage where the vessel is <24m total length).

Side Setting with bird curtain and weighted branch lines (WCPFC CMM 2018-03, 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 so, must be mounted at least 1m forward of the stern.	
	Bird Streamers	Is bird curtain: 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 2018-03, 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 2018-03, 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) Does the vessel have a placard showing the standardised colour of bait? (Y/N)	

Deep setting line shooter (WCPFC CMM 2018-03, 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)	

Western and Central Pacific Fisheries Commission

Voluntary HSBI Regional Guides

TOOLS FOR HIGH SEAS BOARDING AND INSPECTIONS

HSBI Collection and Dissemination of Photographic and Video Evidence

Document History

Version	Effective Date	Description of Revision	Prepared by	Reviewed by
1.1	31 October	For WCPFC22 consideration	HSBI WG	HSBI WG Chair
1.2	27 November	For WCPFC22 consideration	HSBI WG	HSBI WG Chair
1.3	4 December	Includes revisions at WCPFC22	HBSI WG	HSBI WG Chair

Contents

PURPOSE STATEMENT

1. This document provides guidance to Authorised inspectors on the collection and dissemination of photographic and video media collected as part of WCPFC High Seas Boarding and Inspections (HSBI[1]). For CCMs with an authorized inspection presence conducting HSBI activities, the development of this Guide also intends to:
   - support the generation and dissemination of clear, detailed, and evidentiary-quality boarding and alleged violation reports to CCM authorities
   - assist CCMs in investigation any alleged compliance issues identified onboard fishing vessels subjected to HSBI and support CCM follow up processes, including judicial

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 CMM.

processes if relevant, with robust photographic and video media that will afford reliable evidence for such purposes.
- support the establishment of best practices amongst inspecting authorities.

2. This Guide refers to general considerations in the application of common photographic and video collection and reporting practices conducted by inspectors during and subsequent to HSBI activities, which includes:
   - device settings
   - documentation protocols
   - media file handling
   - reporting
   - transmission of media to flag state.

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

4. This Guide can be modified in response to new information, technical innovations, and perspectives. It is expected that this guide will continue to evolve as the field develops.

5. Inspectors should consider any specific evidentiary protocols relevant to the national requirements of the fishing vessel authorities that are raised to the attention of the inspection authority or HSBI Working Group when conducting collection and reporting activities.

Application of Photography and Video Collection During HSBI Activities.

6. The aim of HSBIs is to verify compliance of a vessel with the WCPFC Convention and all applicable WCPFC CMM obligations and support the flag state conduct a fulsome investigation into any potential violations observed.

7. Inspectors conducting HSBI activities should seek to document potential violations of WCPFC obligations with photographic and video recording devices wherever deemed practicable during the course of a boarding and inspection in order to supply the best evidence to the flag CCM, together with the inspection report. Photographic and video documentation is recognized as a compelling source of visual evidence to substantiate non-compliance.

Photographic and Video Collection Practices

Devices

8. The appropriate media recording device (video recording, photography, audio, etc.) to be used is at the discretion of the inspector and will depend on the nature of the potential violation(s) being documented.
9. The inspector should ensure that a correct and consistent time/date stamp be used by all media collection devices. The time zone used (i.e. Coordinated Universal Time (UTC), Pohnpei Standard Time, local time, etc.) should be indicated in the boarding and/or potential violation report.
10. Media imagery should be recorded in a conventional or standard file format and wherever possible, with maximum resolution and minimal compression. Example file formats include JPEG, RAW, and TIFF for photography and MP4 and AVI formats for video recording.
11. To the extent possible, metadata[2] should be recorded and preserved within the media files documented by inspectors, in case it is required for evidentiary purposes by the flag CCM. This metadata may often be embedded within files as EXIF data.

Photography and Video Recording

12. Wherever practicable, photograph or video record evidence in situ, or in place, prior to removal or movement of item.
13. Inspectors recording photographic or video evidence should attempt to use a systematic approach to evidence collection in order to support comprehensive, credible, and clear documentation of potential evidence (i.e. systematic and not random documentation of catch holds), especially with evidence relating to DNA sampling.
14. Depending on the nature of the evidence being documented, a systematic approach to the documentation of individual spaces or items may also be warranted in order to document the context or relation of evidence aboard a vessel. This may involve sequenced recording that transitions from wide-angle view to mid-range view and finally a close-up detailed view.

Media Files

15. Inspectors shall not intentionally alter, edit or manipulate media evidence in any manner that could distort or misrepresent the evidence. If imagery enhancements are performed, it should be documented within the report.
16. Whenever possible, all original media files should be maintained by the inspection authority and not deleted until the flag CCM has finalized their investigation, or files have been transmitted to their authorities.

[2] Metadata is data that often specifies additional details about file creation, such as date and time, modification history, camera type, geographic coordinates, and other relevant data.

17. Inspectors should preserve media files in their original format and filename, without modification, and make them available to a CCM upon request, until the conclusion of any administrative or judicial processes.

Inspector Documentation and Reporting

18. Wherever practicable, inspectors should document the following aspects of photographic and video collection activities:
    a. identification number or official contact point for the photographer/videographer[3].
    b. date and time
    c. description and location of imagery and/or subject
    d. file details.

19. The creation and transmittal of media collection (photographic, video, or any combination) logs is widely accepted as a best practice to support legal admissibility, clear reporting, and establish chain of custody for media evidence collection supporting judicial or administrative proceedings.

20. Boarding and/or potential violation reports transmitted to the flag state should include details and/or descriptions of any necessary context relating to media evidence submitted within the report that is not otherwise self-evident. This may include such details as the location, subject, relationship or significance of the evidence depicted in the media. Reference to specific media files affording key evidence within the report may support clearer interpretation of evidence.

Dissemination of Media Evidence to Flag State

21. The submission of annotated photograph or media to the flag CCM is generally a useful aid to support in the interpretation of media with evidentiary value and understanding context. Providing access to both annotated and original media formats is encouraged.

22. If media evidence, such as photographs, are transmitted to the flag CCM within a document other than the original file format, such as PDF or Word, the inspection authority should take additional steps to either transmit the original media files in original formats or make them available upon request. Ensuring access to full resolution and original media evidence may support analysis and evidentiary standards.

23. The transmission of large media evidence files – such as video footage or extensive photo collections – may not be feasible via the official HSBI email contact points designated by the Secretariat due to bandwidth limitations associated with e-mail servers. Therefore, the use of cloud-based servers may be warranted to facilitate the exchange of larger media files between CCMs. Wherever possible, security features such as password protection, end-to-end encryption or e-mail-specific access links should be used to ensure the confidentiality and protection of such sensitive data.

[3] name of photographer/videographer - disclosure is at the discretion of inspecting CCM but suggested where required to support administrative or judicial processes.

24. Additional transmission mediums, such as the potential use of the Secretariat's HSBI notification portal or Case Compliance File System (CCFS), should be assessed for the potential ability to deliver this capability of file sharing between CCMs.