



Minimum data collection standards for Pacific halibut by scientific observer programs

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PURPOSE

To provide the Commission with an opportunity to consider minimum data collection standards for Pacific halibut by scientific observer programs.

BACKGROUND

The Report of the 2nd Performance Review of the IPHC (PRIPHC02), [IPHC-2019-PRIPHC02-R](#) (adopted on 11 October 2019), included a recommendation that was subsequently modified and adopted by the Commission as follows:

PRIPHC-Rec-09: “*The Commission **RECOMMENDED** that the IPHC Secretariat, in consultation with the Commission, develop minimum data collection standards for Pacific halibut by scientific observer programs. The intention would be for the Commission to review and approve the minimum standards, and recommend them for implementation by domestic agencies.*”

Subsequent to this recommendation, the IPHC Secretariat has received conflicting directions from Contracting Parties, and as such, we are seeking direct input and feedback from the Commission at AM099 on how the Commission would like us to proceed with this Performance Review recommendation. To assist, we have provided a number of potential paths forward, as detailed in this present document.

DISCUSSION

There is a wealth of options available for the Commission to consider when developing minimum data collection standards for observer programs collecting data on Pacific halibut.

Attached are some examples from Regional Fisheries Management Organisations (RFMO's) that the Commission may find useful as a starting point for discussion.

Alternatively, the Commission may wish to use the two national standards in place from each Contracting Party, and seek to combine into a mutually agreeable standard for Pacific halibut.

However the Commission decides to proceed, there are a number of key elements that should be incorporated:

- 1) Robust training, debriefing/briefing, certification, and professional development program for the observers. This ensures high quality data at the time of collection as well as a robust QAQC process;
- 2) Statistically sound methods for sampling catch which account for the variance in, and is both representative and unbiased relative to, space, time, vessel size, fishing method, and fishing effort;

- 3) Statistically sound sub-sampling design for collecting length, weight, viability, and other biological data from Pacific halibut;
- 4) For both 2 and 3 above, sampling designs should lead to precise estimates of Pacific halibut removals, noting that industry standards (ref Tech Memo) suggest that a coefficient of variation of <30% is desirable;
- 5) In fisheries where only a portion of vessels can be monitored by observers, an EM system could be deployed on the remainder of the vessels to obtain data from otherwise unobserved vessels. This would bring monitoring to near 100%.

RECOMMENDATION/S

That the Commission:

- 1) **NOTE** paper IPHC-2023-AM099-16, that provides the Commission with an opportunity to consider minimum data collection standards for Pacific halibut by scientific observer programs;
- 2) **PROVIDE** direction to the IPHC Secretariat on how it would like to proceed.

APPENDICES

Appendix A: SPRFMO

Appendix B: WCPFC

Appendix C: IOTC

Appendix D: ICCAT

Appendix E: CCSBT

Appendix F: ICCAT/IOTC/CCSBT Manual

CMM 16-2021

Conservation and Management Measure Establishing the SPRFMO Observer Programme (Supersedes CMM 16-2019)

The Commission of the South Pacific Regional Fisheries Management Organisation;

RECOGNISING United Nations General Assembly Sustainable Fisheries Resolutions 63/112 and 71/123 which encourage the development of observer programmes by regional fisheries management organisations (RFMOs) and arrangements to improve data collection;

RECALLING that, according to Article 28 of the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean (the Convention), the Commission shall establish an observer programme, to be operated in accordance with standards, rules and procedures developed by the Commission;

NOTING that Article 28 of the Convention sets out the functions of the observer programme and that the observer programme shall be coordinated by the Secretariat of the Commission in a flexible manner to take account of the nature of the fisheries resources and other relevant factors;

NOTING that the primary function of observers on board fishing vessels is the collection of scientific information and that observers are not enforcement officials, but that Article 28 of the Convention specifies that the information collected by the observer programme shall, as appropriate, also be used to support the functions of the Commission and its subsidiary bodies, including the Compliance and Technical Committee (CTC);

NOTING the importance of the collection of robust scientific information, consideration should be given to *inter alia* cost-effectiveness and safety at sea;

NOTING that Article 19(2)(b) of the Convention stresses the need to avoid adverse impacts on, and ensure access to fisheries by, subsistence, small-scale and artisanal fishers and women fish workers when establishing CMMs for fishery resources covered by the Convention;

NOTING ALSO that one of the functions of the Commission is to promote the conduct of scientific research to improve knowledge of fishery resources and marine ecosystems in the Convention Area and of the same fishery resources in adjacent waters under national jurisdiction;

NOTING FURTHER that scientific research vessels performing fishing operations for research purposes will have on board scientific personnel whose primary function is the collection of scientific data and information;

ACKNOWLEDGING that high-quality data and information related to the fishing activity in the Convention Area, and its impacts on the marine environment occurring in the SPRFMO area are essential for the Commission to adopt and implement effective and timely Conservation and Management Measures (CMMs);

DETERMINED to ensure the collection of data and information that can be used for effective assessment and management of SPRFMO fisheries resources, including target species and bycatch, and interaction of fishing activities with the environment and species occurring in the Convention Area, to improve the certainty of future scientific advice while taking into account ecosystem considerations;

RECOGNISING the international nature of fishing activity and management of SPRFMO fisheries resources, and the consequent need to deploy well-trained and accredited observers;

RECOGNISING the nature of the observer's work at sea and that the collection of data and information needs



to be coupled with safe conditions for observers while on board fishing vessels;

ACKNOWLEDGING that electronic monitoring systems, study fleets and self-sampling have been successfully tested for certain types of data in some fisheries and that the Commission, with the advice of the Scientific Committee (SC), could explore minimum standards for their implementation, as practical and appropriate;

COMMITTED to ensure that the SPRFMO Observer Programme (SPRFMO OP) is developed under a robust and transparent governance framework;

RECOGNISING the need to establish clear procedures for attaining accreditation of national observer programmes and service providers under the SPRFMO OP;

ADOPTS the following CMM in accordance with Articles 8 and 28 of the Convention:

General Rules

1. This CMM establishes the standards, rules and procedures to establish the SPRFMO OP and to ensure it achieves the objectives specified in Article 28 of the Convention.
2. The purpose of the SPRFMO OP is to facilitate the collection of verified scientific data and additional information related to fishing activities in the Convention Area and its impacts on the ecosystem, and also to support the functions of the Commission and its subsidiary bodies, including the CTC.
3. The SPRFMO OP shall apply to all fishing vessels flying the flag of a Member or Cooperating non-Contracting Party (CNC) fishing for fisheries resources in the Convention Area for which a minimum level of observer coverage applies in the relevant CMMs in force.
4. Notwithstanding paragraph 3 above, for artisanal fishing vessels less than 15 metres from coastal developing States fishing for jumbo flying squid, where extraordinary accommodation and safety concerns may exist that precludes deployment of an onboard observer in accordance with the SPRFMO Observer Programme, a coastal developing State will employ an alternative scientific monitoring approach that will collect data equivalent to that specified in this Observer Programme and in CMM 18-2020 (Squid), in a manner that ensures comparable coverage. In any such cases, the Member or CNC wishing to avail itself of an alternative approach must present the details of the approach to the Scientific Committee for evaluation. The Scientific Committee will advise the Commission on the suitability of the alternative approach for carrying out the data collection obligations set forth in this Observer Programme and in CMM 18-2020 (Squid). Alternative approaches implemented pursuant to this provision shall be subject to the approval of the Commission at the annual meeting prior to implementation. Once the alternative approach has been approved, the coastal developing State will notify the Commission prior to the start of their fishing operations. This derogation does not extend to any other obligations contained in this or other CMMs in force. This exception will be revised by the Commission in 2026. Unless otherwise decided by the Commission, this derogation will expire on 1 January 2026.
5. Members and CNCs are encouraged to undertake their best efforts to have observers on board their fishing vessels¹ flying their flags and fishing for fisheries resources in the Convention Area for which there is no fishery-specific CMM in force. The Scientific Committee shall provide advice to the 8th meeting of the Commission in 2020 on the appropriate levels of observer coverage for these fisheries.
6. Observers shall have the rights and duties set out in Annex 1 of this CMM. Members and CNCs shall ensure that observers from their national observer programmes perform their duties.

¹ For the purposes of this paragraph, fishing vessels exclude reefer and supply vessels.



7. Members and CNCPs shall also ensure that owners and fishing operators, vessel captains, officers and crew of vessels flying their flag:
 - a) Respect the rights of observers set out in Annex 1 of this CMM, and
 - b) comply with the standards and duties set out in Annex 2 of this CMM.
8. Members and CNCPs shall ensure that their national observer programmes and service providers only deploy independent and impartial observers.
9. The Commission, based on the advice of the SC, should explore and, where feasible, complementary with other means of collecting scientific data and additional information in conjunction with human observers.

Deployment of Observers

10. To fulfil their obligations under the Convention and the relevant CMMs adopted by the Commission, Members and CNCPs shall only deploy observers sourced from a national observer programme or service provider accredited according to the provisions of this CMM.
11. Observers from an accredited national observer programme of a Member or CNCP shall only be deployed on board vessels flagged to another Member or CNCP with the consent of both Members or CNCPs.
12. Individual observers have the right to refuse a deployment on board a fishing vessel for justified reasons, including when safety issues have been identified on the vessel to be deployed or due to serious illness of the observer before boarding. The national observer programme or service provider shall ensure that the reasons for such refusal are documented and that a copy of such documentation is provided to the SPRFMO Secretariat, which will forward it to the relevant Member or CNCP.

Levels of Coverage

13. Members and CNCPs shall ensure that all fishing vessels flying their flag carry observers from a national observer programme or service provider accredited under the SPRFMO OP to meet the minimum levels of observer coverage required by the relevant applicable SPRFMO CMM(s) while operating in the Convention Area².
14. Scientific research vessels flying the flag of a Member or CNCP fishing for research purposes in the Convention Area shall be exempted from the obligation to carry accredited observers on board³. In these cases, Members and CNCPs shall comply with the data collection and reporting obligations of paragraphs 44, 45 and 46, and shall ensure that scientific personnel on board possess the capacity to perform in full all of the observation and reporting responsibilities contained in those paragraphs.
15. For fisheries where 100 percent of observer coverage is not required, Members and CNCPs shall ensure that the method of assigning observers on vessels flying their flag is representative for the fishery to be monitored and commensurate with the specific data needs of the fishery as a whole. This requirement is subject to practical constraints related to Members and CNCPs with a small number of fishing vessels or trips.
16. In relation to paragraph 15 of this CMM, Members and CNCPs shall document and provide information on the methods used to allocate observers on fishing vessels flying their flag to meet the observer coverage requirements, and shall also provide this information in their National Annual Report to the SC. The SC shall review the method used by each Member or CNCP and provide recommendations for improvement, when necessary.

² CMM 01-2020 (*Trachurus murphyi*), CMM 03-2020 (Bottom fishing) and CMM 13-2020 (Exploratory fisheries) specify observer coverage levels for these fisheries.

³ This paragraph does not apply to fishing under CMM 13-2021 (Exploratory Fisheries) - observer requirements for exploratory fishing are specified under paragraph 20 of that CMM.



Accreditation

Accreditation Evaluator

17. The SPRFMO OP Accreditation Evaluator is the public or private person or entity tasked by the Commission to assess and evaluate the applications for accreditation. The SPRFMO OP Accreditation Evaluator shall have addressed any potential or actual conflict of interest in the course of delivering its service.
18. Applications for the accreditation of national observer programmes may be submitted by Members or CNCPs while applications by service providers may be submitted directly by an external, non-governmental provider of observers, or a Member or CNCP under the SPRFMO OP. Subject to paragraphs 36 and 38 of this CMM, the evaluation of each national observer programme or service provider shall only be undertaken by the SPRFMO OP Accreditation Evaluator.
19. Subject to paragraphs 29, 30 and 31 of this CMM, the SPRFMO OP Accreditation Evaluator shall evaluate the national observer programmes and service providers against the minimum requirements and standards set by the Commission in Annex 3 of this CMM.
20. The Secretariat shall ensure that the SPRFMO OP Accreditation Evaluator is required, through its service contract, to maintain the confidentiality of any information received by a Member, CNCP or service provider pursuant to this accreditation process.
21. A Decision of the Commission will designate a SPRFMO OP Accreditation Evaluator no later than at its 8th annual meeting. The procedure for appointing the SPRFMO OP Accreditation Evaluator, as well as the terms and conditions of engagement, are outlined in COMM7-Report Annex 7i.
22. The SPRFMO OP Accreditation Evaluator shall be paid out of the Commission budget.

Evaluation of Observer Programmes of Members, CNCPs and Service Providers by the SPRFMO OP Accreditation Evaluator

23. Consistent with Article 28(1) of the Convention, the SPRFMO OP, including the accreditation process, shall be coordinated by the Secretariat and operated in accordance with the standards, rules and procedures detailed in this CMM.
24. Each Member, CNCP or service provider seeking to accredit its observer programme under the SPRFMO OP shall submit to the Secretariat and the Accreditation Evaluator, at any time, all the relevant information and documentation to fulfil the standards provided for in Annex 3, including manuals, guides and training materials. Where applications are submitted by service providers on behalf of a Member or CNCP, final responsibility for the completeness and accuracy of the information submitted shall rest with the Member or CNCP. All the information and documentation shall be provided in the official language of the Commission or with appropriate translations. The Secretariat may recommend that the Member, CNCP or service provider complete the application when there is clear evidence that substantive or essential information is missing.
25. Members and CNCPs are encouraged to inform the Secretariat and the Accreditation Evaluator a year in advance of their intention to pursue accreditation under the SPRFMO OP and to commence the accreditation process at least six months prior to the date fixed for the opening of the next Commission meeting.
26. The Secretariat shall promptly provide the information and documentation referred to in paragraph 24 to the SPRFMO OP Accreditation Evaluator.



27. The SPRFMO OP Accreditation Evaluator shall liaise with Members, CNCP and service providers, as appropriate. Members, CNCPs and service providers shall have the opportunity to provide additional information and corrections relevant to their evaluation to the Secretariat and the Accreditation Evaluator. This process will be conducted by the SPRFMO OP Accreditation Evaluator in a fair, equitable, transparent and non-discriminatory manner.
28. Following evaluation and bilateral consultation, the SPRFMO OP Accreditation Evaluator shall provide a Draft Preliminary Evaluation Report to the Member, CNCP or service provider pursuing accreditation within 30 days for comment prior to the report being provided to the Secretariat. The SPRFMO OP Accreditation Evaluator shall then incorporate any additional information and provide the Preliminary Evaluation Report simultaneously to both the Secretariat and the Member, CNCP or service provider indicating whether the nominated national observer programme or service provider has met the minimum standards for accreditation under the SPRFMO OP.
29. When preparing a Preliminary Evaluation Report, and in addition to assessing the fulfilment of the standards indicated in Annex 3, the SPRFMO OP Accreditation Evaluator shall also consider those national programmes and service providers currently accredited by other RFMOs.
30. The SPRFMO OP Accreditation Evaluator shall assess the consistency and compatibility between the SPRFMO Minimum standards for accreditation under Annex 3 and those required by other RFMOs, along with their practical implementation and functioning. The Member or CNCP shall provide to the Secretariat the name of the national observer programme or service provider accredited by other RFMOs, the RFMO that has accredited it, and any other supporting information requested by the Accreditation Evaluator.
31. If the Accreditation Evaluator finds that the observer programme has accreditation under another RFMO or arrangement that meets the SPRFMO Minimum standards for accreditation under Annex 3, along with its practical implementation and functioning, it will find the application favourable.
32. The Accreditation Evaluator shall submit the Final Evaluation Report to the Secretariat no later than 60 days in advance of the next Commission meeting. The Secretariat shall circulate the Final Evaluation Report as an annex to the SPRFMO Observer Programme Implementation Report prior to the next CTC meeting.
33. The CTC shall assess the Final Evaluation Report and make recommendations to the Commission regarding whether the observer programme has met the requirements of this CMM and, where relevant, whether a recommendation based on paragraphs 35 to 38 is appropriate.
34. The Commission shall decide whether to grant accreditation at its next meeting on the basis of the Final Evaluation Report and any recommendations from the CTC.
35. If the Final Evaluation Report by the SPRFMO OP Accreditation Evaluator is favourable, the Commission may decide to adopt the report and grant accreditation under the SPRFMO OP for 5 years from the date upon which accreditation is granted.
36. Should the Commission decide that, despite the favourable findings of the Final Evaluation Report by the SPRFMO OP Accreditation Evaluator, the application does not meet the minimum standard required for accreditation (Annex 3), it may decide not to grant accreditation. In that case it shall clearly outline the basis for its decision.
37. If the Final Report by the SPRFMO OP Accreditation Evaluator is not favourable, the Commission may decide to adopt the report and not grant accreditation.
38. Should the Commission decide that, despite the findings of the non-favourable Final Evaluation Report by the SPRFMO OP Accreditation Evaluator, the application meets the minimum standard required for accreditation (Annex 3), the Commission may decide to grant accreditation under any conditions as may be specified by the Commission. These conditions may include the accreditation of a national observer programme or a service provider on a temporary and conditional basis pending the fulfilment by that Member, CNCP or service provider of the deficiencies detected during the accreditation process.



39. In case an application for accreditation is not granted, nothing prevents a Member, CNCP or service provider from presenting a new application to seek accreditation. When reapplying for accreditation Members, CNCPs and service providers shall consider the findings and recommendations of the SPRFMO OP Accreditation Evaluator and the Commission.
40. Members, CNCPs and service providers shall be entitled to renew accreditation.
41. A Member may request that the Commission revoke, condition or suspend accreditation for a national observer programme or service provider at any time but not later than 30 days in advance of the next CTC meeting by providing evidence that the national observer programme or service provider is not meeting the minimum standards for accreditation. The Executive Secretary shall circulate the request for revocation, condition or suspension to Members as soon as possible but no later than 15 days after the request is received, and the SPRFMO OP Accreditation Evaluator shall be asked to advise the CTC on the matter no later than 20 days after the request was circulated.
42. The CTC shall assess the request to revoke, condition or suspend an accreditation and the information provided at its next annual meeting, as well as any information provided by other Members, and may provide recommendations to the Commission. The Commission shall consider the CTC's recommendations and the request to revoke suspend or condition accreditation at its next annual meeting.
43. The Secretariat shall publicise the name of all observer programmes accredited under the SPRFMO OP, together with relevant contact details, on the SPRFMO website and shall include a list of all national observer programmes or service providers accredited under the SPRFMO OP in the annual OP Implementation Report described in paragraph 47.

Data Collection

44. Members and CNCPs shall ensure that observers deployed on vessels flying their flag, and, where applicable, complementary means of collecting data and information, collect and provide the information specified in Annex 7 of CMM 02-2021 (Data Standards) in the manner set forth in that CMM and shall also provide relevant observer information required under any other CMM.
45. Nothing in this CMM shall prevent Members and CNCPs from taking additional actions related to data collection compatible with this measure.

Reporting

46. Members and CNCPs shall include a brief overview of the national observer programmes or service providers covering its fishing activity as a component of the Annual National Reports submitted by Members and CNCPs to the SC and developed in accordance with the "Guidelines for Annual National Reports to the SPRFMO Scientific Committee".
47. The Secretariat shall prepare a report on the implementation of the SPRFMO OP for presentation at each annual meeting of the CTC, using information from annual reports, observer data, and all other suitably documented and relevant information in its possession. The SPRFMO OP Implementation Report will address, *inter alia*: (1) information on problems that have been encountered; (2) recommendations for improving current standards and practices; (3) developments in observer programmes and observational methods; (4) constraints to accreditation and (5) in general any identifiable problem or obstacle in fulfilling the objectives and purpose of this CMM as outlined in paragraphs 1 and 2.
48. The SPRFMO OP Implementation Report shall be distributed to Members and CNCPs 30 days prior to each annual CTC meeting.
49. The CTC shall review the recommendations delivered by the SPRFMO OP Implementation Report and provide advice to the Commission thereon, including proposed actions to be taken.



50. The Secretariat shall make available observer data to the SC, at its request. Data confidentiality shall be maintained as set forth in procedures specified in Paragraph 6 of CMM 02-2021 (Data Standards) and in any other data procedures that may be adopted by the Commission.

Review

51. The CTC shall review the implementation and effectiveness of this CMM at least every five years, including the observer safety requirements, the applicability of the SPRFMO OP to other fishing vessels and any additional requirements as necessary to meet the objectives of both Article 28 of the Convention and this CMM.

52. The SC shall periodically review and provide advice on the appropriate level of observer coverage needed in each fishery to meet data needs.

53. Should the SC recommend that a change in coverage or research priorities for specific fisheries is needed, the revised coverage levels, if adopted by the Commission, will be specified in the relevant fishery CMMs.

Entry into Force

54. This CMM shall enter into force 120 days after the conclusion of the Commission's 2019 Annual Meeting.

55. Members and CNCPs may continue using their own non-accredited national observer programme or service provider to meet observer coverage requirements until 31 December 2023. From 1 January 2024 Members and CNCPs shall only deploy observers from national observer programmes or service providers accredited under the SPRFMO



ANNEX 1

Minimum Standards for Observers

Observer Rights

In fulfilling their tasks and duties, observers shall have the following rights:

- a) Freedom to carry out their duties without being assaulted, obstructed, delayed, intimidated or interfered with;
- b) Access to and use of all facilities and equipment of the vessel necessary to carry out the observer's duties, including but not limited to full access to the bridge, catch before being sorted, processed catch and any bycatch on board, as well as areas which may be used to hold, process, weigh, and store fish, as safety permits;
- c) Access to the vessel's records, including logbooks, vessel diagrams and documentation for reviewing records, assessment and copying, as well as access to navigational equipment, charts, and other information related to fishing activities;
- d) Access to and use of communications equipment and personnel, upon request, for entry, transmission, and reception of work-related data or information;
- e) Reasonable use of the communication equipment on board to communicate with the observer programme on land at any time including emergencies;
- f) Access to additional equipment, if present, to facilitate the work of the observer while on board the vessel, such as high-powered binoculars, electronic means of communication, freezer to store specimens, scales, et cetera;
- g) Safe access to the working deck or hauling station, during net or line retrieval and access to specimens on deck (alive or dead) in order to collect samples;
- h) Unrestricted access to food, accommodation and sanitary facilities of a standard equivalent to those normally available to an officer on board the vessel as well as medical facilities that meet international maritime standards;
- i) Access to verify safety equipment on board (through a safety orientation tour provided by officers or crew) before the vessel leaves the dock;
- j) Unrestrained permission to record any pertinent information relevant for scientific purposes and data collection;
- k) A designated contact or supervisor on land to communicate with at any time while at sea;
- l) To refuse deployment on board a fishing vessel for justified reasons, including where safety issues have been identified. The national observer programme or service provider shall ensure that the reasons for such refusal are documented and a copy of such document is provided to the SPRFMO Secretariat, which will forward it to the flag State of the vessel;
- m) The ability to communicate at any time the occurrence of safety issues to the vessel captain, national observer programme, service provider, the Secretariat, and flag State, as appropriate;
- n) Upon request by the observer, receiving reasonable assistance by the crew to perform their duties including, among others, sampling, handling large specimens, releasing incidental specimens and measurements;
- o) Privacy in the observer's personal areas;
- p) Not performing duties assigned to the crew, such as gear handling (for fishing purposes), offloading fish, et cetera;
- q) Observer data, records, documents, equipment and belongings will not be accessed, harmed, or destroyed.

Members and CNCPs shall ensure that operators, captains, officers and crew on board vessels flying their flag respect the rights of observers and that a copy of these rights are provided to the crew and/or prominently displayed.



Observer duties

The duties of observers include:

- a) Carrying complete and valid documents before boarding the vessel, including, when relevant, identification documents, passport, visas, and certificates of at sea security training;
- b) Submitting copies of the documents indicated above to the programme managers of the national observer programme or service provider, as required;
- c) Maintaining independence and impartiality at all times while on duty;
- d) Complying with the laws and regulations of the Member or CNCP whose flag the vessel is flying, as applicable;
- e) Respecting the hierarchy and general rules of behaviour that apply to the vessel personnel;
- f) Performing duties in a manner that does not unduly interfere with the operations of the vessel and while carrying out their functions giving due consideration to the operational requirements of the vessel and communicating regularly with the captain or master of the vessel;
- g) Being familiar with the emergency procedures aboard the vessel, including the locations of life rafts, fire extinguishers, and first aid kits, and participating regularly in emergency drills for which the observer has received training;
- h) Communicating regularly with the vessel captain on relevant observer issues and duties;
- i) Refraining from actions that could negatively affect the image of the SPRFMO OP;
- j) Adhering to any required codes of conduct for observers, including any applicable laws and procedures;
- k) Communicating as regularly as is required with the programme managers and/or national programme coordinator on land;
- l) Complying with any SPRFMO CMMs whose provisions are directly applicable to observers;
- m) Respect the privacy in the captain and crew areas.



ANNEX 2

Duties of Vessel Operators, Captain, Officers and Crew

Members and CNCPs shall ensure that vessel operators and captains, officers and crew, as applicable, comply with the following provisions regarding the SPRFMO OP:

Rights of Vessel Operators and Captains

Vessel operators and captains shall have the following rights:

- a) To agree to the timing and placement, when required to take on board one or more observers;
- b) To conduct operations of the vessel without undue interference due to the observer's presence and performance of the observer's duties;
- c) To assign, at his or her discretion, a vessel crew member to accompany the observer when the observer is carrying out duties in hazardous areas;
- d) To be timely notified by the observer provider on completion of the observer's trip of any comments regarding the vessel operations. The captain shall have the opportunity to review and comment on the observer's report and shall have the right to include additional information deemed relevant or a personal statement.

Duties of Vessel Operators and Captains

Vessel operators and captains shall have the following duties:

- a) Accept on board the vessel one or more persons identified as observers by the SPRFMO OP when required by the Member or CNCP to which the vessel is flagged;
- b) Ensure the vessel crew is properly briefed and does not assault, harass, obstruct, resist, intimidate, influence, or interfere with the SPRFMO OP observer or impede or delay the observer in the performance of duties;
- c) If required by a SPRFMO CMM, as a complementary monitoring tool, install and maintain functioning electronic monitoring systems or devices throughout the selected fishing trips;
- d) Ensure the observer has access to the catch before any sorting, grading or other separation of the components of the catch are made;
- e) Ensure that vessels operating in the Convention Area include adequate space for the observer to conduct bycatch sampling or other sampling as needed, in a safe manner that limits interference with vessel operations, with a dedicated sample station and other equipment such as scales;
- f) Maintain a safe and clean sampling station to be used by the observer;
- g) Not alter the sampling station during an observed trip without consultation with the observer and subsequent notification to the Member or CNCP in control of the vessel;
- h) Inform the crew regarding the timing and objectives of the SPRFMO OP and schedule for observer boarding, as well as their responsibilities when an observer from the SPRFMO OP boards the vessel;
- i) Assist the SPRFMO OP observer to safely embark and disembark the vessel at an agreed upon place and time;
- j) Allow and assist the SPRFMO OP observer to carry out all duties safely and ensure the observer is not unduly obstructed in the execution of duties unless there is a safety issue that requires intervention;
- k) Allow and assist the SPRFMO OP observer to remove and store samples from the catch and allow the observer access to stored specimens;
- l) Provide the observer, while on board the vessel, at no expense to the observer, national programme or service provider, with food, accommodation, adequate sanitary amenities and medical facilities of a standard equivalent to those normally available to an officer on board the vessel according to generally accepted international standards;



- m) Allow and assist full access to and use of all facilities and equipment of the vessel that is necessary for the observer to carry out his or her duties, including but not limited to full access to the bridge, catch before being sorted, processed catch and any bycatch on board, as well as areas which may be used to hold, process, weigh and store fish;
- n) Follow an established mechanism, if adopted by the Commission, for solving conflicts that would complement the established dispute settlement processes provided by observer programmes and providers;
- o) Cooperate with the observer when the observer is sampling the catch;
- p) Provide notice to the observer at least fifteen (15) minutes before fishing gear hauling or setting procedures, unless the observer specifically requests not to be notified;
- q) Provide adequate space to the observer in the bridge or other designated area for clerical work, as well as adequate space on deck or the factory to perform the observer's duties;
- r) Provide personal protective equipment, and, where appropriate, an immersion suit;
- s) Provide to the observer timely medical attention in case of physical or psychological illness or injury;
- t) Develop and maintain an emergency action plan (EAP) regarding observer safety.

Safety Orientation Briefing

Vessel captains or a crew member designated by the captain shall provide the observer with a safety orientation briefing at the time of boarding the vessel and before it leaves the dock. The orientation briefing shall include:

- a) Safety documentation of the vessel;
- b) Location of life rafts, raft capacities, observer's assignment, expiration, installation, and any other relevant safety related information;
- c) Location and instructions for use of emergency radio beacons indicating position in case of an emergency;
- d) Location of immersion suits and personal floating devices, their accessibility, and the quantities for everyone onboard;
- e) Location of flares, types, numbers, and expiration dates;
- f) Location and number of fire extinguishers, expiration dates, accessibility, et cetera;
- g) Location of life rings;
- h) Procedures in case of emergencies and essential actions of the observer during each type of emergency, such as a fire on board, recovering a person overboard, et cetera;
- i) Location of first aid materials and familiarity with crew members in charge of first aid;
- j) Location of radios, procedures for making an emergency call, and how to operate a radio during a call;
- k) Safety drills;
- l) Safe places to work on deck and safety equipment required;
- m) Procedures in case of illness or accident of the observer or any other crew member.

Procedure in the Event of an Emergency

If a SPRFMO observer dies, is missing or presumed fallen overboard, the Member whose flag the vessel is flying shall ensure that the fishing vessel:

- a) Immediately ceases all fishing operations;
- b) Immediately commences search and rescue if the observer is missing or presumed fallen overboard, and searches for at least 72 hours, unless the observer is found sooner, or unless instructed by the Member whose flag the vessel is flying to continue searching;
- c) Immediately notifies the Member whose flag the vessel is flying;
- d) Immediately notifies the Member or observer provider to whom the SPRFMO OP observer belongs, if



- applicable;
- e) Immediately alerts other vessels in the vicinity by using all available means of communication;
 - f) Cooperates fully in any search and rescue operation;
 - g) Whether or not the search is successful, return the vessels for further investigation to the nearest port, as agreed by the Member whose flag the vessel is flying and the national observer programme or service provider;
 - h) Provides the report to the observer providers and appropriate authorities on the incident; and
 - i) Cooperates fully in any and all official investigations, and preserves any potential evidence and the personal effects and quarters of the deceased or missing observers.

Flag States shall take and implement all steps, as a matter of due diligence, to prevent incidents causing serious harm or death to observers on board vessels flying their flag, and to sanction or punish those involved, including through criminal investigation and prosecution. The flag State and other Members and CNCPs shall cooperate to that end.



ANNEX 3

Minimum Standards for Accreditation Under the SPRFMO OP

This Annex contains the Commission's minimum standards for accreditation under the SPRFMO OP. In accordance with paragraphs 28 and 32 of this CMM, the OP Accreditation Evaluator shall assess and decide all applications against these standards.

Impartiality, Independence and Integrity

1. National observer programmes and service providers shall only deploy independent and impartial observers. This means that neither the national observer programme or service provider, as the case requires, nor the individual observers, have a direct financial interest, ownership or business links with vessels, processors, agents and retailers involved in the catching, taking, harvesting, transporting, processing or selling of fish or fish products.
2. The national programme or service provider, and the individual observers:
 - a) Shall not have a direct financial interest, other than the provision of observer services, in the fisheries under the purview of the Commission, including, but not limited to: i) any ownership, mortgage holder, or other secured interest in a vessel or processor involved in the catching, taking, harvesting or processing of fish; ii) any business selling supplies or services to any vessel or processor in the fishery; iii) any business purchasing raw or processed products from any vessel or processor in the fishery;
 - b) Shall not solicit or accept, directly or indirectly, any gratuity, gift, favour, entertainment, inordinate accommodation, loan or anything of monetary value from anyone who either conducts activities that are regulated by a Member or CNCP connected with its services or the Commission, or has interests that may be substantially affected by the performance or non-performance of the observer's official duties;
 - c) Shall not serve as an observer on any vessel or at any processors owned or operated by a person who previously employed the observer in another capacity within the last three years (e.g., as a crew member); and,
 - d) Shall not solicit or accept employment as a crew member or an employee of a vessel or processor while employed by a national observer programme or service provider.

Observer Qualifications

The qualification of individual observers is the responsibility of national observer programmes or service providers. The national observer programme or service provider shall demonstrate that observers that are recruited into their programme have relevant education or technical training and/or experience for the fleets concerned; ability to meet the observer duties described in this annex; no record of convictions calling into question the integrity of the observer or indicating a propensity towards violence; and the ability to obtain all necessary documentation, including passports and visas.

Observer Training

National observer programmes or service providers shall demonstrate that observers are adequately trained before their deployment. Training shall include the following:

1. The relationship between fisheries science and fisheries management and the importance of data collection in this context;
2. The relevant provisions of the Convention and SPRFMO CMMs relevant to the functions and duties of observers;
3. Importance of observer programmes, including understanding the duties, rights, authority and responsibilities of observers;
4. Safety at sea, including emergencies at sea, donning survival suits, use of safety equipment, use of radios, survival at sea, management of conflicts, and cold-water survival;



5. First aid training, appropriate to working at-sea or in remote situations;
6. Species identification and record of species encountered at sea, including target and non-target species, protected species, seabirds, marine mammals, sea turtles, invertebrates indicating vulnerable marine ecosystems, et cetera;
7. Knowledge of the different types and functioning of bycatch mitigation devices required by SPRFMO CMMs;
8. Safe handling protocols to rehabilitate and release seabirds, marine mammals and sea turtles;
9. Fishing vessel and fishing gear types relevant to SPRFMO;
10. Techniques and procedures for estimating catch and species composition;
11. Use and maintenance of sampling equipment including scales, callipers, et cetera;
12. Sampling methodologies at sea, i.e., fish sampling, fish sexing, measuring and weighing techniques, specimen collection and storage, and sampling methodologies;
13. Understand potential biases in sampling, how they arise and how they could be avoided;
14. Preservation of samples for analysis;
15. Data collection codes and data collection formats;
16. Familiarity with catch logbooks and recordkeeping requirements to aid observers' collection of data as required under SPRFMO CMMs;
17. Use of digital recorders or electronic notebooks;
18. Electronic equipment used for observer work and understanding their operation;
19. Use of electronic monitoring systems as a complement to their work, when applicable;
20. Verbal debriefing and report writing;
21. Training on relevant aspects of the International Convention for the Prevention of Pollution from Ships (MARPOL).

Refresher training should be ongoing dependent on the qualification requirements. Relevant updates to CMMs and observer requirements should be communicated to observers before each deployment as part of the briefing process, for example in an updated manual.

Observer Trainers

National programmes or service providers shall demonstrate that observer trainers have the appropriate skills and have been authorised by that national programme or service provider to train observers.

Briefing and Debriefing

National observer programmes or service providers shall demonstrate that there are systems for briefing and debriefing observers and communicating at any time with vessel captains. The briefing and debriefing process shall be conducted by properly trained personnel and shall ensure that observers and vessel captains clearly understand their respective roles and duties.

Data Validation Process

National observer programmes or service providers shall demonstrate that they have in place an observer data validation process in place. The data validation process shall be conducted by properly trained personnel and shall ensure that data and information collected by an observer are checked for discrepancies or inaccuracies that are corrected before the information is entered into a database or used for analysis. This includes ensuring that the national observer programme or service provider has in place a mechanism to receive data, reports and any other relevant information from an observer in such a way that prevents interference in that data from other sources. The data validation process shall ensure that the data meet the following standards:

- a) A mechanism that allows scientific data to be stored and transferred to the national observer programme (or service provider) in a secure and confidential manner.
- b) Vessel information uniquely identifies the actual vessel from which the fishing occurred;
- c) Dates and times of fishing effort are included and internally consistent (for example an end time should be after a start time);
- d) Location of fishing is included and valid (for example, logical latitude/longitude combinations), internally consistent and entered in the correct units;



- e) Effort data allows quantification of the amount of effort invested by the vessel, appropriate to the fishing method used, which is also identified;
- f) Catch information identifies the fishery resource (to the species level where possible) and the quantity of that species retained or discarded. If used, species codes are accurate;
- g) Where biological or length information is collected for a fish, it is directly linked to the effort in which it was caught – including date and time, location, and fishing method information, and includes the methodology of data collection;
- h) If the observer programme extends to transshipment and/or landings, then the amount and species of fishery resources transhipped/landed is quantified and recorded according to a standard methodology;
- i) Interaction data involving marine mammals, seabirds, reptiles and/or other species of concern identifies the individual species (where possible), the number of animals, fate (retained or released/discarded), life status if released (vigorous, alive, lethargic, dead), and the type of interaction (hook/line entanglement/warpstrike/net capture/other).

Observer Identification Cards

National observer programmes or service providers shall provide observers with identification cards that include the full name of the observer, date of issue and expiration, the name of the national observer programme or service provider, a unique identifying number (if issued by the national observer programme or service provider) a passport style photo of the observer, an emergency phone number.

Coordinating Observer Placements and Observer Deployments

National observer programmes or service providers shall demonstrate responsibility and capacity for the timely deployment of observers and will ensure that the selected observer receives all possible assistance during the entire length of their placements.

National observer programmes or service providers shall have in place a protocol to replace an observer if the observer becomes unable to perform their duties.

National observer programmes or service providers shall also seek, to the extent possible, to avoid deploying a single observer on multiple consecutive trips on the same vessel.

It is the responsibility of a national observer programme or service provider to administer observer placements, to maintain the independence and impartiality of observers as described in this measure and ensure that all placements are administratively finalised as soon as practicable after the observers return to port. The national observer programme or service provider is expected to communicate with the observer regarding upcoming deployments, coordinate observer travel, and provide the necessary supplies for observer duties.

Observer Safety Equipment

National observer programmes or service providers must demonstrate that observers are provided with appropriate equipment, including safety equipment, which is in good working order, routinely checked and renewed to carry out their duties on board a vessel. Essential equipment includes a lifejacket, independent two-way communication device capable of sending and receiving voice or text communications, personal locator beacons (PLBs), immersion suits, hard hat, proper deck working boots or shoes, gloves and protective glasses (including sunglasses).

Responding to Allegations of Observer Misconduct

National observer programmes or service providers must establish procedures for preventing, investigating, and reporting on the misconduct of observers, in coordination with observers, vessel captains, and relevant Members and CNCPs.



Dispute Settlement

National observer programmes or service providers shall demonstrate the existence of a dispute resolution process fair to all parties that provides a process to resolve issues through appropriate means including facilitation and mediation.

Observer Safety

National programmes or service providers must demonstrate that procedures are in place to support observers in their ability to carry out their duties unimpeded and in a safe working environment, including an established Emergency Action Plan (EAP). The EAP must provide instructions on sending reports to the provider's designated 24-hour point(s) of contact to report unsafe conditions, including instances of harassment, intimidation or assault.

National observer programmes or service providers must also provide a permanent delegate or supervisor on land to communicate with the observer at any time while at sea.

Insurance and Liability

National observer programmes or service providers must demonstrate that observers have health, safety and liability insurance commensurate with the national standards of the observer programme or service provider for such insurance for the duration of any deployment before placing the observer on a vessel.



SCIENTIFIC COMMITTEE THIRD REGULAR SESSION

13-24 August 2007
Honolulu, United States of America

WCPFC DATA STANDARDS FOR REGIONAL OBSERVER PROGRAMME

WCPFC-SC3/GN WP-6

Introduction

1. Standards for data collection and reporting have been in place in the Pacific Island SPC/FFA member countries since 1996. The standards are flexible and discussion on changes and new data fields occurs on a bi-annual basis at the FFA/SPC Tuna Fishery Data Collection Committee (DCC). The DCC has put in place data format standards for all SPC/FFA Pacific Island Observer programmes operating in the FFA and SPC region. The bi-annual meeting reviews all the data collection formats and makes adjustments where they are required. Wherever practical all coding in the formats have been standardised using global standards such as the FAO species identifiers. Where no practical code system is in place codes have been developed. Discussion on formats at DCC involves the current needs of scientists, compliance, mitigation measures and any other current priorities. Vessel trip monitoring standards will be same as standards for the Trip Monitoring and ROP Incident Forms.
2. The Commission ROP will monitor the outcomes of the DCC to ensure that minimum ROP observer data collection standards are maintained. National observer programmes with different observer collection formats to the ROP should not be affected by the ROP requirements on standardised data collection, providing the data that are collected by their programme is able to satisfy the requirements for minimum ROP standards.

Sampling Protocols

3. Sampling protocols for observers depend on the objective of the sampling programme. The current protocols widely used in the WCPFC region for sampling the species composition and the size composition of the catch are as follows.
 - a) offshore longline, the species and the length are recorded for all of the catch, for all sets during a trip;
 - b) distant-water longline, the species and the length are recorded for all of the catch, for two out of every three sets during a trip;
 - c) purse seine, the species and the length are recorded for five fish randomly collected from every brail for every set."

Minimum Standards for ROP Data

4. Regional Observer Programme Minimum Data Standards required to be collected by ROP observers, when performing duties on a vessel chosen to take a ROP observer for Commission coverage purposes.

Table 1. Vessel and trip information

VESSEL IDENTIFICATION	
Name of vessel	Name of vessel includes any number
Flag	Country where vessel is flagged
Flag state registration number	Registration number issued by flag State of vessel
International radio call sign	Call sign used by vessel & painted on vessel
TRIP INFORMATION	
Date and time of departure from port	
Port of departure	Port name vessel departs from for start of trip
Date and time of return to port	
Port of return	Port name vessel returns to end trip
OBSERVER INFORMATION	
Observer name	First name first - last name last
Observer's ROP certification number	Number given to observer when certified for ROP
Date, time and location of embarkation	When and where observer boards the vessel
Date, time and location of disembarkation	When and where observer leaves the vessel
CREW INFORMATION	
Name of captain	First name first - Last name last
Nationality of captain	Passport nationality
Name of fishing master	First name first - Last name last
Nationality of fishing master	Passport nationality
Other crew	Number of crew, by nationality from passports
VESSEL ATTRIBUTES	
[to be determined by TCC and SC]	TBD
VESSEL ELECTRONICS	
Radars	Presence or absence, and usage for all equipment recorded. Usage codes. ALL - used all the time TRA - used only in transit OIF - used often but only in fishing SIF - used - sometimes only in fishing
Depth sounder	
Global positioning system (GPS)	
Track plotter	
Weather facsimile	

Sea surface temperature (SST) gauge	RAR - rarely used BRO - broken now but used normally NOL - no longer ever used
Sonar	
Radio/ Satellite buoys	
Doppler current meter	
Expendable bathythermograph (XBT)	
Satellite communications services	
Fishery information services	
Vessel monitoring system	Presence or absence? Security seals in tact?

Table 2. Longline information and data

VESSEL ATTRIBUTES	
Refrigeration Method	Ice, chilled sea water, refrigerated sea water, blast freezer, or other
GEAR ATTRIBUTES	
Mainline material	Monofilament or kuralon [further types]
Mainline length	Nautical miles
Mainline diameter	Millimeters
Branch line material(s)	Monofilament [further types]
Wire trace	Presence or absence
Mainline hauler	Presence or absence, and usage
Branch line hauler	
Line shooter	
Automatic bait thrower	
Automatic branch line attacher	
Hook type	J, square, circle [other types]
Hook size	size numbers for hooks
Tori pole	Presence/absence/usage code
Bird curtain	Presence/absence/usage code
Weighted branch lines	Presence/absence/usage code
Blue dyed bait	Presence/absence/usage code
Underwater setting shoot	Presence/absence/usage code
Disposal method for offal management	Retained/mass dispersal/ad hoc dispersal
SET AND HAUL INFORMATION	
Date and time of start of set	Ship's date and time, and UTC date and time

Latitude and longitude of start of set	dd°mm' .mmm N/S - ddd°mm' .mmm E/W
Date and time of end of set	Ship's date and time
Latitude and longitude of end of set	dd°mm' .mmm N/S - ddd°mm' .mmm E/W
Total number of baskets or floats	Count buoys set to determine baskets used
Number of hooks per basket or number of hooks between floats	Count hooks , if varied indicate
Total number of hooks used in a set	Number of hooks used
Length of float-line	metres
Distance between branch-lines	metres
Length of branch-lines	metres
Time-depth recorders (TDRs)	Presence or absence
Number of light-sticks	# branch-lines with light-stick
Target species	Tuna, swordfish, marlins or shark
Bait species	Name(s) of species
Date and time of start of haul	Ship's date and time
Date and time of end of haul	Ship's date and time
Total number of baskets or floats observed	How many did observer watch out of a set
INFORMATION ON CATCH OF INDIVIDUAL FISH FOR EACH SET	
Hook number between floats	Number of hooks set between each float, Do not record hooks attached directly to floats, these are accounted for elsewhere
Species code	FAO 3-alpha code
Length of fish	Centimetres
Length measurement code	<u>Length codes</u> TL - tip of snout to end of tail UF - upper jaw to fork in tail LF - lower jaw to fork in tail PF - pectoral fin to fork in tail TW - total width (tips of wings - rays) CL - carapace length (turtles) NM - not measured
Gender	<u>Gender codes</u> Male (M), female (F), indeterminate (I) unknown (U).
Condition when caught	<u>Condition codes</u> A0 – Alive unable to further categorise condition. A1 - Alive and healthy. A2 – Alive injured or distressed probably will survive. A3 - Alive, unlikely to live. D - Dead

	U - Condition unknown
Fate	<p><u>Retained Fate codes</u></p> <p>RGG - Retained - gilled and gutted RGT - Retained - gilled gutted and tailed RWW - Retained - whole RPT - Retained - partial (e.g. fillet, loin, trunk) RFR - Retained - both fins and trunk (sharks) RHG - Retained - headed and gutted (billfish) RSD - Retained - shark damaged RCC - Retained - crew consumption RGO - Retained - gutted only ROR - Retained - other reason (specify)</p> <p><u>Discard Fate codes</u></p> <p>DFR - Discarded trunk - fins retained (sharks) DGD - Discarded - gear damage (target species only) DSD - Discarded - shark damage DWD - Discarded - whale damage DUS - Discarded - uneconomic species DDL - Discarded - too difficult to land DSO - Discarded - struck off before landing DTS - Discarded - too small (target species only) DPQ - Discarded - poor quality (target species only) DPA - Discarded - species of special interest Alive DPD - Discarded - species of special interest Dead DPU - Discarded in an unknown condition DOR - Discarded for other reasons (specify reason) ESC - Escaped</p>
Condition when discarded	Condition codes same as when caught
Tag recovery information	Number of tags recorded, Tag number, species code, length and gender, for each tag

Table 3. Pole-and-line information and data

GEAR ATTRIBUTES	
Automatic poling devices	Presence or absence, and usage
INFORMATION ON DAILY ACTIVITIES	
Date and time of start of daily activities	Ship's date and time, and UTC date and time
Time of activity	Ship's time
Latitude and longitude of activity	dd°mm' .mmm N/S - ddd°mm' .mmm E/W
Type of activity	<p><u>Activity codes</u></p> <p>1 Spraying, chumming or poling 2 Searching 3 Transit 4 No fishing - breakdown 5 No fishing - bad weather 6 In port - please specify</p>
Numbers of school sighted per day	Numbers of schools, by type of association

BAITFISHING INFORMATION	
Bait species caught	Names of main species caught
Number of buckets of bait caught	
SCHOOL INFORMATION	
Method of detection of school	<u>Detection codes</u> 1 Seen from vessel 2 Seen from helicopter 3 Marked with beacon 4 Bird radar 5 Sonar / depth sounder 6 Info. from other vessel 7 Anchored FAD / payao }
Type of school association	<u>School Association (tuna)</u> 1 Unassociated 2 Feeding on Baitfish 3 Drifting log, debris or dead animal 4 Drifting raft, FAD or payao 5 Anchored raft, FAD or payao 6 Live whale 7 Live whale shark 8 Other (please specify)
INFORMATION ON CATCH PER SCHOOL FISHED	
Number of crew poling	How many crew used for each set
Time of start of spraying, chumming and poling	Ship's time
Time of end of spraying, chumming and poling	Ship's time
Retained catch, by species	FAO 3-alpha species code; catch in number of fish or tonnes
Discards, by species	FAO 3-alpha species code; discards in number of fish or tonnes
Tag recovery information	Tag number, species code, length and gender, for each tag
SAMPLING DATA	
Species code	FAO 3-alpha code
Length measurement code	As per 'Length Measurement codes' for longline
Length	Centimetres

Table 4. Purse seine information and data

VESSEL AND RELATED ATTRIBUTES	
Vessel cruising speed	Knots

Helicopter	Presence or absence
GEAR ATTRIBUTES	
Maximum depth of net	Metres
Maximum length of net	Metres
Net mesh size	Centimetres
INFORMATION ON DAILY ACTIVITIES	
Date and time of start of daily activities	Ship's date and time, and UTC date and time
Time of activity	Ship's time
Latitude and longitude of activity	dd°mm' .mmm N/S - ddd°mm' .mmm E/W
	<u>Activity and Helicopter codes</u> 1 Set 2 Searching 3 Transit 4 No fishing - Breakdown 5 No fishing - Bad weather 6 In port - please specify 8 Investigate free school 9 Investigate floating object 10D Deploy - raft, FAD or payao 10R Retrieve - raft, FAD or payao 11 No fishing - Drifting at day's end 13 No fishing - Other reason (specify) 16 Transshipping or bunkering
Numbers of school sighted per day	Numbers of schools, by type of association
SCHOOL INFORMATION	
Method of detection of school	<u>How Detected</u> 1 Seen from vessel 2 Seen from helicopter 3 Marked with beacon 4 Bird radar 5 Sonar / depth sounder 6 Info. from other vessel 7 Anchored FAD / payao (recorded)
Type of school association	<u>School Association (tuna)</u> 1 Unassociated 2 Feeding on Baitfish 3 Drifting log, debris or dead animal 4 Drifting raft, FAD or payao 5 Anchored raft, FAD or payao 6 Live whale 7 Live whale shark 8 Other (please specify) 9 No tuna associated
SET INFORMATION	
Observer's record of date and time of start of set	Skiff launched. Ship's date and time

Observers record of date and time of end of set	Skiff on board, ships date and time
Vessel's record of date and time of start of set	Ship's date and time
Retained catch, by species	FAO 3-alpha species code; catch in number of fish or tones
Discards, by species	FAO 3-alpha species code; discards in number of fish or tones
Tag recovery information	Amount of Tags Recovered -Tag number, species code, length and gender, for each tag
SAMPLING DATA	
Species code	FAO 3-alpha code
Length measurement code	<u>Length codes</u> TL - tip of snout to end of tail UF - upper jaw to fork in tail LF - lower jaw to fork in tail PF - pectoral fin to fork in tail TW - total width (tips of wings - rays) CL - carapace length (turtles) NM - not measured
Length	Centimetres

Table 5. Species of special interest

GENERAL INFORMATION	
Type of interaction	Landed on deck, interacted with vessel or gear only, or sighted only
Date and time of interaction	Ship's date and time
Latitude and longitude of interaction	dd°mm'.mmm N/S - ddd°mm'.mmm E/W
Species code of marine reptile, marine mammal or seabird	FAO 3-alpha code
LANDED ON DECK	
Length	Centimetres
Length measurement code	<u>Length codes</u> TL - tip of snout to end of tail UF - upper jaw to fork in tail LF - lower jaw to fork in tail PF - pectoral fin to fork in tail TW - total width (tips of wings - rays) CL - carapace length (turtles) NM - not measured
Gender	Male, female, indeterminate, unknown
Condition when landed on deck	<u>Condition codes for Species of Special Interest</u> A0 – Alive unable to further categorise condition. A1 - Alive and healthy.

	A2 – Alive injured or distressed probably will survive. A3 - Alive, unlikely to live. D - Dead U - Condition unknown.
Condition when released	Same as condition codes for landed on deck
Tag recovery information	Type (dart, archival or pop-up, acoustic, leg band, wing, flipper) and tag number
Tag release information	Type (dart, archival or pop-up, acoustic, leg band, wing, flipper) and tag number
INTERACTION WITH VESSEL OR GEAR ONLY	
Vessel's activity during interaction	Setting, hauling, transiting, other
Condition observed at start of interaction	Same as condition codes for landed on deck
Condition observed at end of interaction	Same as condition codes for landed on deck
Description of interaction	For example, "dolphin trapped in net and then released"
SIGHTING ONLY	
Number of animals sighted	How many sighted away from vessel and including any interactions

Table 6 Vessels & Aircraft sightings

Date & Time of sighting	UTC Date and time only
Observers Vessel position	dd°mm'.mmm N/S - ddd°mm'.mmm E/W
Sighted Vessel or Aircraft Name / Callsign	Vessel full or part name & full or part callsign
Flag of Vessel	International abbreviation codes for countries
Type of Vessel	<u>Vessel Type codes</u> 1 Single purse seine 2 Longline 3 Pole and Line 4 Mother-ship 5 Troll 6 Net boat 7 Bunker 8 Search, Anchor, or Light boat 9 Fish Carrier 10 Trawler 21 Light aircraft 22 Helicopter 31 Other- please specify
Compass bearing to sighted vessel	Bearing in degrees
Distance to sighted vessel	Distance in nautical miles
Activity of sighted vessel	<u>Action codes of sighted vessel</u> FI Fishing PF Possibly fishing NF Not fishing SR Set Sharing (Vessel receiving fish)

	SG Set Sharing (Vessel giving fish) TR Transshipping fish (Vessel receiving fish) TG Transshipping fish (Vessel giving fish) BR Bunkering (Vessel receiving fuel) BG Bunkering (Vessel giving fuel) DF Dumping of fish OR Other (Vessels receiving please specify item/s) OG Other (Vessel Giving please specify item/s)
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Table 7 Vessel Trip Monitoring record

Vessel trip monitoring	Vessel trip monitoring standards will be same as standards for the ROP incident form.
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APPENDIX C

RESOLUTION 22/04 ON A REGIONAL OBSERVER SCHEME

The Indian Ocean Tuna Commission (IOTC),

TAKING INTO ACCOUNT the need to increase the scientific information, in particular to provide the IOTC Scientific Committee (SC) working material in order to improve the management of the tuna and tuna-like species fished in the Indian Ocean;

REITERATING the responsibilities of flag States to ensure that their vessels conduct their fishing activities in a responsible manner, fully respecting IOTC Conservation and Management Measures;

CONSIDERING the need for action to ensure the effectiveness of the IOTC objectives;

CONSIDERING the obligation of all IOTC Contracting Parties and Cooperating Non-Contracting Parties (hereinafter CPCs) to fully comply with the IOTC Conservation and Management Measures;

AWARE of the necessity for sustained efforts by CPCs to ensure the enforcement of IOTC's Conservation and Management Measures, and the need to encourage Non-Contracting Parties (NCPs) to abide by these measures;

UNDERLINING that the adoption of this measure is intended to help support the implementation of Conservation and Management Measures as well as scientific research for tuna and tuna-like species;

CONSIDERING the provisions set forth in Resolution 11/04 *On A Regional Observer Scheme*, adopted by the Commission;

CONSIDERING Resolution 16/04 *On the implementation of a pilot project in view of promoting the regional observer scheme of IOTC*;

FURTHER CONSIDERING the deliberation of the 21st Session of the IOTC Scientific Committee held in Seychelles, from 3 to 7 December 2018;

RECALLING the discussion of the 23rd session of the IOTC held in Hyderabad, India, from 17 to 21 June 2019;

FURTHER RECALLING that the 23rd session of the IOTC Scientific Committee expressed the concern on the low observer coverage level at 2.15% and on the fact that there is no coverage of the artisanal fleet, which comprise a large portion of catches taken in the Indian Ocean;

CONSIDERING the recurrent non-compliance of multiple fleets to the minimum observer coverage since the adoption of Resolution 11/04;

ADOPTS, in accordance with the provisions of Article IX, paragraph 1 of the IOTC Agreement, the following:

Definition

1. In this Resolution:

- a. "field sampler" means a person who collects information on land during the unloading of fishing vessels and field sampling programs can be used *inter alia* for quantifying catch, retained bycatch and collecting tag returns; and
- b. "observer" means a person who collects information on board fishing vessels, in the framework of observer programs, can be used *inter alia* for monitoring fishing activities, quantifying species composition of target species and bycatch, whether they are retained or discarded and deploying or collecting tags.

- c. “Electronic Monitoring System” (EMS) means an integrated system of hardware and software that supports acquisition of video footages of fishing activity, positional data and/or sensor, that allows the analysis and reporting of EM records.
- d. “Pool of observers” means a list of IOTC recognised observers that have been allocated an IOTC registration number and trained according to IOTC standards who may be called upon by other flag States.

Objective

2. The objective of the IOTC Regional Observer Scheme (ROS) shall be to collect verified catch data and other scientific data related to the fisheries for tuna and tuna-like species in the IOTC area of competence.

Observer Scheme

3. In order to improve the collection of scientific data, each CPC shall ensure that all fishing vessels of 24 meters length overall and above and under 24 meters, if they operate outside the exclusive economic zone (EEZ) of the flag CPC and in the IOTC area of competence, comply with the minimum observer coverage of 5% as defined by the number of operations/sets.
4. The IOTC Scientific Committee, in collaboration with the Compliance Committee, shall develop and agree on minimum standards for the use of EMS for purse seine, longline, bait boat (pole and line), handline, and gillnet fleets by 2023 at the latest, including on modalities of the substitution of the human observer coverage by an EMS, taking into account factors such as, the principles and regulations regarding minimum safe manning requirements. The Commission may consider and adopt these standards by 2024 in a separate Resolution.
5. Once the EMS standards are adopted and providing CPCs meet the minimum mandatory ROS data reporting standards, the minimum human observer coverage provided for in paragraph 3 may be complemented or substituted by means of an EMS. To ensure the minimum mandatory ROS data reporting standards are met, the EMS may be complemented by port sampling and/or other Commission approved data collection methods. CPCs are encouraged to use an EMS to improve the collection of scientific data before the standards mentioned in paragraph 4 are adopted.
6. CPCs shall endeavor to provide a list of observers to the IOTC Secretariat constituting the basis for the development of a regional pool of observers. The regional pool of observers shall be composed of observers registered through authorised observer providers according to the IOTC ROS standards. Each observer shall be allocated an IOTC registration number that must be included on reported data.
7. When purse seiners are carrying an observer in accordance with paragraph 3, this observer shall also monitor the catches at unloading to identify the species composition of targeted tuna species. The requirement for the observer to monitor catches at unloading is not applicable to CPCs already having a sampling scheme, with at least the coverage set out in paragraph 3.
8. Landings from artisanal fishing vessels shall also be monitored at the landing place by field samplers. The indicative level of the coverage of the artisanal fishing vessels shall be 5% of the total levels of vessel activity (i.e. total number of vessel trips or total number of active vessels).
9. Field samplers shall monitor catches at the landing place with a view to estimating catch-at-size by type of boat, gear and species, or carry out such scientific work as may be requested by the IOTC Scientific Committee.
10. CPCs shall:
 - a. have the primary responsibility to obtain qualified observers and each CPC may choose to use either deployed national or non-national of the flag State of the vessel on which they are deployed;
 - b. ensure that the minimum level of coverage is met;
 - c. take all necessary measures to ensure that observers are able to carry out their duties in a competent and safe manner;
 - d. endeavour to ensure that the observers alternate vessels between their assignments;

- e. ensure that observers perform duties described in paragraphs 7, 15 and 16. If observers are entrusted with complementary tasks by the relevant CPC fisheries research institutes, this shall in no way affect their performance on the above-mentioned duties;
 - f. ensure that the vessel on which an observer is placed shall provide suitable food and lodging during the observer's deployment at the same level as the officers, where possible; and
 - g. require vessel masters to ensure that all necessary cooperation is extended to observers in order for them to carry out their duties safely including providing access, as required, to the retained catch, and catch which is intended to be discarded.
11. If the coverage referred in paragraphs 3 is not met by a CPC, any other CPC may, subject to the consent of the CPC who has not met its coverage, place an observer to fulfil the tasks defined in the paragraphs 7, 15, 16 and 17 until that CPC provides a replacement or the target coverage level is met.
 12. CPCs shall provide to the IOTC Secretariat and the IOTC Scientific Committee, annually in their national scientific reports, a description of the protocols supporting their observer programs and sampling schemes mentioned in paragraphs 3, 5, 7 and 8, the number of fishing vessels and of fishing effort sampled, as well as the coverage achieved by gear type in accordance with the provisions of this Resolution.
 13. Observers shall:
 - a. record and report fishing activities, verify positions of the vessel;
 - b. observe and estimate catches as far as possible with a view to identifying catch composition and bycatch and to monitoring discards including their fate (e.g. released alive) and size frequency;
 - c. record the gear type, mesh size and attachments employed by the master;
 - d. collect information to enable the cross-checking of entries made to the logbooks (species composition and quantities, live and processed weight and location, where available); and
 - e. carry out such scientific work (e.g. collecting samples), as requested by the IOTC Scientific Committee.
 14. The IOTC Scientific Committee shall adopt by 2023 the IOTC ROS Observer Manual and the IOTC Observer Forms used for reporting (including minimum data fields) and provide advice on a training program.
 15. Once adopted by the IOTC Scientific Committee, observers shall use the IOTC ROS *Minimum Standard Data Fields*, the IOTC data collection forms, the IOTC Species identification cards, the IOTC Regional Observers Scheme (ROS) Observer Manual and the IOTC Observer Forms when carrying out their duty. The Secretariat shall publish this information in a dedicated area of the IOTC website.
 16. Each observer shall provide, within 30 days of completion of each trip, a report to the flag CPC of the vessel. If the vessel was fishing in the EEZ of a coastal State, the part of the observer report covering fishing activities in the EEZ shall be also submitted to that coastal State.
 17. Each CPC shall provide, to the IOTC Secretariat within 150 days the latest, each report and observer data, following IOTC observer reporting templates and standards. The Executive Secretary shall make the information available to the IOTC Scientific Committee.
 18. The data referenced in paragraph 17 shall be provided by 1°x1° square and month. CPC shall endeavor to send these data in an electronic format suitable for automated data extraction.
 19. The confidentiality rules set out in Resolution 12/02 *Data confidentiality policy and procedures for fine-scale data* shall apply.
 20. The funds available from the IOTC balance of funds may be used to support the implementation of this program in developing coastal CPCs, notably the training of observers and field samplers.

21. The elements of the Observer Scheme, notably those regarding its coverage and the adoption of EMS standards, are subject to review and revision, as appropriate, for application in 2023 and subsequent years.
22. All provisions in this resolution related to the deployment of observers onboard fishing vessels, shall apply *mutatis mutandis* to the use of EMS, as applicable.
23. This Resolution supersedes Resolution 11/04 *On A Regional Observer Scheme*.

16-14

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**RECOMMENDATION BY ICCAT TO ESTABLISH MINIMUM STANDARDS FOR
FISHING VESSEL SCIENTIFIC OBSERVER PROGRAMS**

RECALLING that Article IX of the Convention requires Contracting Parties to furnish, on the request of the Commission, any available statistical, biological and other scientific information needed for the purposes of the Convention;

FURTHER RECALLING the 2001 *Resolution by ICCAT on the Deadlines and Procedures for Data Submission* [Res. 01-16], in which the Commission established clear guidelines for the submission of Task I and Task II data;

ACKNOWLEDGING that poor quality data impacts the ability of the SCRS to complete robust stock assessments and provide management advice as well as the ability of the Commission to adopt effective conservation and management measures;

DETERMINED to ensure the collection of data accounting for all sources of mortality in ICCAT fisheries, for both target species and by-catch, to improve the certainty of future scientific advice while taking into account ecosystem considerations;

RECOGNIZING that observer programmes are used at both the national and RFMOs level for the purposes of collecting scientific data;

RECOGNIZING the international nature of the fishing activity on and management of ICCAT species and the consequent need to embark well-trained observers to improve the collection of relevant data, in terms of consistency and quality;

TAKING INTO ACCOUNT the needs of developing States with regard to capacity building;

RECOGNIZING the United Nations General Assembly Sustainable Fisheries Resolution 63/112, that encourages the development of observer programmes by RFMOs and arrangements to improve data collection;

CONSIDERING that the SCRS suggested that the current level of scientific observers (5%) seems to be inappropriate to provide reasonable estimates of total by-catch and recommended increasing the minimum level to 20%;

FURTHER CONSIDERING that the SCRS recommended studying the issue further, in order to determine the level of coverage appropriate to meet management and scientific objectives;

RECOGNIZING that the SCRS noted that the current mandatory level of observer coverage of 5% may have not been implemented by many of the fleets and underlined the need for achieving those minimum coverages so the SCRS could address the mandate given by the Commission;

ACKNOWLEDGING that electronic monitoring systems were successfully tested in some fisheries and that the SCRS adopted minimum standards for their implementation for the tropical purse seine fleet;

RECALLING the *Recommendation by ICCAT to Establish Minimum Standards for Fishing Vessel Scientific Observer Programs* [Rec. 10-10] and desiring to enhance its provisions to improve the availability of scientific data and the safety of observers;

THE INTERNATIONAL COMMISSION FOR THE CONSERVATION
OF ATLANTIC TUNAS (ICCAT) RECOMMENDS THAT:

General Provisions

1. Notwithstanding additional observer program requirements that may be in place or adopted by ICCAT in the future for specific fisheries or fishing activities, each Contracting Party and Cooperating non-Contracting Party, Entity, or Fishing Entity (CPC) shall implement the following minimum standards and protocols with respect to their domestic scientific observer programs to ensure the collection and reporting of relevant scientific information from ICCAT fisheries.

Qualifications of Observers

2. Without prejudice to any training or technical qualifications recommended by the SCRS, CPCs shall ensure that their observers have the following minimum qualifications to accomplish their tasks:
 - a) sufficient knowledge and experience to identify ICCAT species and fishing gear configurations;
 - b) the ability to observe and record accurately the information to be collected under the Program;
 - c) the capability of performing the tasks set forth in paragraph 7 below;
 - d) the ability to collect biological samples; and
 - e) minimum and adequate training in safety and sea survival.
3. In addition, in order to ensure the integrity of their domestic observer program, CPCs shall ensure the observers:
 - a) are not crew members of the vessel being observed;
 - b) are not employees of the owner or beneficial owner of the fishing vessel being observed ; and
 - c) do not have current financial or beneficial interests in the fisheries being observed.

Observer Coverage

4. Each CPC shall ensure the following with respect to its domestic observer programs:
 - a) A minimum of 5% observer coverage of fishing effort in each of the pelagic longline, purse seine, and, as defined in the ICCAT glossary, baitboat, traps, gillnet and trawl fisheries. The percentage coverage will be measured:
 - i. for purse seine fisheries, in number of sets or trips;
 - ii. for pelagic longline fisheries, in fishing days, number of sets, or trips;
 - iii. for baitboat and trap fisheries, in fishing days;
 - iv. for gillnet fisheries, in fishing hours or days; and
 - v. for trawl fisheries, in fishing hauls or days.
 - b) Notwithstanding paragraph a), for vessels less than 15 meters, where an extraordinary safety concern may exist that precludes deployment of an onboard observer, a CPC may employ an alternative scientific monitoring approach that will collect data equivalent to that specified in this recommendation in a manner that ensures comparable coverage. In any such cases, the CPC wishing to avail itself of an alternative approach must present the details of the approach to the SCRS for evaluation. The SCRS will advise the Commission on the suitability of the alternative approach for carrying out the data collection obligations set forth in this Recommendation. Alternative approaches implemented pursuant to this provision shall be subject to the approval of the Commission at the annual meeting prior to implementation.

- c) Representative temporal and spatial coverage of the operation of the fleet to ensure the collection of adequate and appropriate data as required under this Recommendation and any additional domestic CPC observer program requirements, taking into account characteristics of the fleets and fisheries;
 - d) Data collection on pertinent aspects of the fishing operation, including catch, as detailed in paragraph 7.
5. CPCs may conclude bilateral arrangements whereby one CPC places its domestic observers on vessels flying the flag of another CPC, as long as all provisions of this Recommendation are complied with.
 6. CPCs shall endeavour to ensure that observers alternate vessels between their assignments.

Tasks of the Observer

7. CPCs shall require, *inter alia*, observers to:
 - a) record and report upon the fishing activity of the observed vessel, which shall include at least the following:
 - i. data collection, that includes quantifying total target catch, discards and by-catch (including sharks, sea turtles, marine mammals, and seabirds), estimating or measuring size composition as practicable, disposition status (i.e., retained, discarded dead, released alive), the collection of biological samples for life history studies (e.g., gonads, otoliths, spines, scales);
 - ii. collect and report on all tags found;
 - iii. fishing operation information, including:
 - location of catch by latitude and longitude;
 - fishing effort information (e.g., number of sets, number of hooks, etc.);
 - date of each fishing operation, including, as appropriate, the start and stop times of the fishing activity;
 - use of fish aggregating objects, including FADs; and
 - general condition of released animals related to survival rates (i.e. dead/alive, wounded, etc.).
 - b) observe and record the use of by-catch mitigation measures and other relevant information;
 - c) to the extent possible, observe and report environmental conditions (e.g., sea state, climate and hydrologic parameters, etc.).
 - d) observe and report on FADs, in accordance with the ICCAT Observer program adopted under the multi-annual conservation and management programme for tropical tuna; and
 - e) perform any other scientific tasks as recommended by SCRS and agreed by the Commission.

Obligations of the Observer

8. CPCs shall ensure that the observer:
 - a) does not interfere with the electronic equipment of the vessel;
 - b) is familiar with the emergency procedures aboard the vessel, including the location of life rafts, fire extinguishers and first aid kits;
 - c) communicates as needed with the Master on relevant observer issues and tasks;

- d) does not hinder or interfere with the fishing activities and the normal operations of the vessel;
- e) participates in a debriefing session(s) with appropriate representatives of the scientific institute or the domestic authority responsible for implementing the observer program;

Obligations of the Master

9. CPCs shall ensure that the Master of the vessel to which the observer is assigned:

- a) permits appropriate access to the vessel and its operations;
- b) allows the observer to carry out his/her responsibilities in an effective way, including by:
 - i. providing appropriate access to the vessel's gear, documentation (including electronic and paper logbooks), and catch;
 - ii. communicating at any time with appropriate representatives of the scientific institute or domestic authority;
 - iii. ensuring appropriate access to electronics and other equipment pertinent to fishing, including but not limited to:
 - Satellite navigation equipment
 - Electronic means of communication;
 - iv. ensuring that no one on board the observed vessel tampers with or destroys observer equipment or documentation; obstructs, interferes with, or otherwise acts in a manner that could unnecessarily prevent the observer from performing his/her duties; intimidates, harasses, or harms the observer in any way; or bribes or attempts to bribe the observer.
- c) provides accommodation to observers, including berthing, food and adequate sanitary and medical facilities, equal to those of officers;
- d) provides the observer adequate space on the bridge or pilot house to perform his/her tasks, as well as space on deck adequate for carrying out observer tasks;

Duties of the CPCs

10. Each CPC shall:

- a) require its vessels, when fishing for ICCAT species, to carry a scientific observer in accordance with the provisions of this recommendation.;
- b) oversee the safety of its observers;
- c) encourage, where feasible and appropriate, their scientific institute or domestic authority to enter into agreements with the scientific institutes or domestic authorities of other CPCs for the exchange of observer reports and observer data between them;
- d) provide in its Annual Report for use by the Commission and the SCRS, specific information on the implementation of this recommendation, which shall include:
 - i. details on the structure and design of their scientific observer programs, including, *inter alia*:
 - the target level of observer coverage by fishery and gear type as well as how measured;
 - data required to be collected;
 - data collection and handling protocols in place;

- information on how vessels are selected for coverage to achieve the CPC's target level of observer coverage;
 - observer training requirements; and
 - observer qualification requirements;
- ii. the number of vessels monitored, the coverage level achieved by fishery and gear type, and details on how those coverage levels were calculated;
- e) following the initial submission of the information required under paragraph 10(d)(i), report changes to the structure and/or design of its observer programs in its Annual Reports only when such changes occur. CPCs shall continue to report the information required pursuant to paragraph 10(d)(ii) to the Commission annually.
 - f) each year, using the designated electronic formats that are developed by the SCRS, report to the SCRS information collected through domestic observer programs for use by the Commission, in particular for stock assessment and other scientific purposes, in line with procedures in place for other data reporting requirements and consistent with domestic confidentiality requirements.
 - g) ensure implementation of robust data collection protocols by its observers, when carrying out their tasks referred to in paragraph 7, including, as necessary and appropriate, the use of photography.

Duties of the Executive Secretary

11. The Executive Secretary facilitates access by SCRS and the Commission to relevant data and information submitted pursuant to this recommendation;

Duties of the SCRS

12. The SCRS shall:
 - a) develop, as needed and appropriate, an observer working manual for voluntary use by CPCs in their domestic observer programs, that includes model data collection forms and standardized data collection procedures, taking into account observer manuals and related materials that may already exist through other sources, including CPCs, regional and sub-regional bodies, and other organizations;
 - b) develop fisheries specific guidelines for electronic monitoring systems;
 - c) provide the Commission with a summary of the scientific data and information collected and reported pursuant to this recommendation and any relevant associated findings;
 - d) make recommendations, as necessary and appropriate, on how to improve the effectiveness of scientific observer programs in order to meet the data needs of the Commission, including possible revisions to this Recommendation and/or with respect to implementation of these minimum standards and protocols by CPCs.

Electronic Monitoring Systems

13. Where they have been determined by SCRS to be effective in a particular fishery, electronic monitoring systems may be installed on board fishing vessels to complement or, pending SCRS advice and a Commission decision, to replace the human observer on board.
14. CPCs should consider any applicable guidelines that are endorsed by SCRS on the use of electronic monitoring systems.
15. CPCs are encouraged to report to the SCRS their experiences in the use of electronic monitoring systems in their ICCAT fisheries to complement human observer programs. CPCs who have not yet implemented such systems are encouraged to explore their use and report their findings to the SCRS.

Support to Developing States

16. Developing States shall report to the Commission on their special requirements in the implementation of the provisions of this Recommendation. The Commission shall take due regard of these special requirements.
17. Available ICCAT funds will be used to support the implementation of scientific observer programs in developing States, notably the training of observers.

Final provisions

18. The Commission shall review this Recommendation no later than its 2019 annual meeting and consider revising it, in particular, in the light of information provided by CPCs and of SCRS recommendations.
19. Recommendation [10-10] is repealed and replaced by this Recommendation.

Commission for the
Conservation of Southern
Bluefin Tuna



みなまぐろ保存委員会

CCSBT Scientific Observer Program Standards

(revised at the Twenty-Ninth Annual Meeting: 14 October 2022)

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1.

BACKGROUND

The Commission for the Conservation of Southern Bluefin Tuna (CCSBT) has adopted a Scientific Research Program (SRP) with an overall objective of improving the quality of the data and information used as input to the stock assessment for Southern Bluefin Tuna (SBT), contributing to the development of reliable indices to monitor future trends in SBT stock size and identifying directions for further scientific research.

At CCSBT7 in April 2001 the Commission adopted the report of the Fifth Meeting of Scientific Committee, which recommended a SRP incorporating a Scientific Observer Program as one of four priority elements. The Observer Program endorsed by the Commission comprised the following features:-

- an observer coverage of 10% for catch and effort as a target level
- the level of observer coverage for estimation of tag reporting rates will depend on the scale of the tagging program subsequently agreed by the Commission and the tag recapture rate.
- standards for training of observers, operation of observer programs and the data to be collected including the forms to be used will be prepared
- data collected would become part of the CCSBT database as subsequently agreed in CCSBT protocols
- member countries will be responsible for operation of observers in high seas and domestic EEZ fisheries on their flag vessels
- all fleet components should be observed and target levels of observer coverage should be the same for all fleet components
- an exchange of observers between countries on a regular basis should be encouraged to maintain consistency and increase mutual trust in the results of the observer program
- recruitment of some observers from non-member nations would be encouraged

To facilitate implementation, the 6th Scientific Committee agreed that:-

- there would be an exchange of data sheets and standards for longline fleets between member countries through the Secretariat
- Australia would develop proposed program standards and data forms for the surface fisheries, taking note of the characteristics of observer programs administered by other fisheries management organizations
- the information gathered would be exchanged through the Secretariat
- proposals on draft CCSBT observer program standards will be presented and finalized at the 7th Scientific Committee meeting in 2002

Dr. Ianelli of the Advisory Panel together with the SC chair developed an initial draft of proposed outline of a CCSBT scientific observer program at the 6th Scientific Committee to serve as a basis for further discussion (See the Attachment F of the 6th SC Report.).

CCSBT8 endorsed the 6th Scientific Committee's proposals in October 2001.

Advances in the development of electronic monitoring systems (EMS) presented an opportunity to diversify monitoring options and some Members independently developed systems to provide additional coverage of their fleets both domestically and on the high seas. At CCSBT29 in 2002 the Commission adopted the recommendation of ESC27 to update the Scientific Observer Program Standards to accommodate this development.

The standards set out in this document reflect these decisions of the Commission and were developed in consultation with national observer program coordinators. A target level of observer coverage to meet tag reporting rate objectives has not yet been determined. When determined, the standards will be updated.

In developing the standards, the Secretariat has prepared a generic document for both surface and longline fisheries. Where the nature of the two types of fishery are differentiated in terms of observer activity, this is identified.

The tasks and record keeping requirements have been formulated to gather only that information,

which is relevant to the objectives of the SRP. Consideration was also given to the practical limitations on the ability of observers to complete tasks in the fishing environment they would be operating in.

In order to facilitate implementation of the standards, the term “member” in this document means any Member of the Extended Commission of the CCSBT.

Reference to the acronym CCSBT is inclusive of the Commission and Extended Commission.

2. **OBJECTIVES**

The standards set out below provide the framework for the operation of the CCSBT Scientific Observer Program by members.

The objectives of the standards are:

1. To provide a framework for the alignment of members’ scientific observer programs with the objectives of the SRP.
2. To standardize scientific observer programs across fleets and fisheries among members.
3. To specify minimum standards for the development of a scientific observer program for members without a program.
4. To provide a minimum set of standards for collection of bycatch data, consistent with international recommendations, and where appropriate to assist in harmonization of bycatch data collection across tuna Regional Fisheries Management Organisations.

All members are expected to adapt their respective programs to, at a minimum, meet these standards but noting that members are encouraged to implement further requirements in their respective programs.

3. **RESPONSIBILITY FOR PROGRAM OPERATION**

Responsibility for the operation of the CCSBT Scientific Observer Program on the high seas and in domestic EEZ fisheries will lie with the member whose flag is flown on the vessel.

Each member’s Scientific Observer Program will be managed taking into account these standards.

Where there is an external observer exchanged under agreements concluded between members or an observer recruited from a non-member nation, that observer shall comply with the laws and regulations of the member which exercises jurisdiction over the vessel to which the observer is assigned.

4. **COVERAGE**

The CCSBT Scientific Observer Program, including electronic monitoring systems (EMS), will cover the fishing activity of CCSBT members and cooperating non-members wherever southern bluefin tuna are targeted or are a significant bycatch.

5. **LEVELS OF SCIENTIFIC OBSERVER COVERAGE**

The Program will have a target observer coverage of 10% for catch and effort monitoring for each fishery. For the purposes of this document, ‘observer coverage’ is defined as monitoring by either human observers deployed physically onboard vessels, or reviewed catch and effort data from EMS.

Observer coverage, including the selection of EMS data for review, should therefore be representative

of different vessel-types in distinct areas and times¹.

In order to approach 10% coverage in some strata (e.g., specific vessel-types in certain areas and times) it may be necessary to have higher than 10% coverage in other strata².

The exact level of observer placement or EMS data review will require periodic assessment to determine if the target level of coverage is achieved.

Consideration should also be given to higher levels of coverage in some strata from time to time to address specific fisheries management questions (e.g. to better quantify non-fish and protected species bycatch where this is identified as a risk). Review of historically gathered EMS data may also be used for this purpose.

6. ASSIGNMENT OF SCIENTIFIC OBSERVERS TO VESSELS AND SELECTION OF EMS DATA FOR REVIEW

From the scientific perspective, it is important to ensure that the data collected through the scientific observer programs and EMS provide representative information and sampling for the entire fleet. Ideally, each individual operation should have an equal and independent probability of being physically observed or having EMS data from the vessel reviewed. In practice, this ideal may not be possible to achieve. Nevertheless, the basic principle of representative sampling should underlie the assignment of scientific observers to vessels and/or the selection of EMS data for review.

It is the responsibility of each member when implementing an observer program, to assign observers or EMS to its vessels and cruises based on a carefully considered and appropriately designed sampling scheme that has a high likelihood of ensuring reasonably representative coverage. The program should ensure that, within the main fishing areas and seasons and to the extent possible, all representative vessels, areas, and time periods have an approximately equal probability of being sampled.³

Each member should evaluate and analyse the sampling scheme used for the assignment of observers against the principles outlined above. Each member should document the scheme used for the observer assignments or selection of EMS footage for review that is implemented and make this information and data collected available to the Commission in the manner described in Section 11 to enable review within the Commission of whether or not the standards are being met.

The placement of observers and EMS should also encompass arrangements to ensure the independence and scientific integrity of the data.

7. TAGGING PROGRAM

Observer programs make a very valuable contribution to the direct recording of recaptured tags, and to the estimation of non-reporting rates. Failure to adequately quantify the uncertainty associated with estimates of tag reporting rates will substantially degrade the value of any resultant mortality estimates for use in stock assessments.

Observer plans and training programs should include specific provision for the role and responsibilities of observers for tag recapture reporting. A supplemental level of observer coverage

¹ For the purpose of this standard, it is recognized that there are many ways in which catch and effort can be stratified including vessels, areas and times. This level of coverage is relative to actual fishing operations, which, if randomly distributed, should result in about 10% of the catch.

² While it might be possible to observe 10% of the catch from a single vessel (if a hypothetical fleet consisted of 10 vessels with equal catch allocations), this would not achieve the objective of sampling fishing operations with approximately equal probability, particularly if the vessels fish in different areas using different techniques. Clearly there are logistical difficulties in achieving random observations of fishing operations.

³ To achieve a desired target coverage level may require a higher observer placement level. For example, it may take 150 observed vessel days out of a hypothetical 1,000 vessel-day year to achieve a target of 10% coverage for all important strata. In part, this may be due to the fact that the ability of observers to transfer among vessels on the fishing grounds is limited. The factors affecting this include the heterogeneity of the fleet and fishing behaviour.

may be required to take into account the results of the CCSBT tagging program.

8.

RECRUITMENT AND TRAINING

Each member is responsible for the recruitment and training of observers for placement on their flagged vessels. Details of the processes maintained for this responsibility are for members to manage consistent with the domestic environment in which they operate.

Training schemes should be constructed to impart the skills necessary to adequately collect the scientific data and should take account of the following principles.

Qualifications of Observers

Scientific Observers for the program should have the following attributes:

- Technically trained or experienced personnel for the fleets concerned, with interests related to fisheries.
- Ability to work at sea in difficult conditions.
- Ability to work under stressful psychological and physical situations.
- Ability to work with a boat's crew on a cooperative and team basis over long and continuous periods at sea.
- Soundness of mind and body.

Independence / Integrity

Observers should not have current financial or beneficial interests in the fisheries in which they will be required to operate as observers.

Observers should not have been found guilty of a serious criminal offence for five years prior to appointment as an observer.

Scientific Observer Training

Members should establish and maintain a structured training program for the CCSBT Scientific Observer Program. Manuals should be developed for this purpose and courses operated, which would allow for observers to exchange approaches and experiences to improve the data collection process.

A Scientific Observer Training program of each Member should include, at least, the following items.

- Briefing on the CCSBT SRP, particularly the CCSBT Scientific Observer and Tagging Program elements to promote a full understanding of the rationale for the Programs.
- Fishery management and biological field collection programs including species identification, data collection and sampling procedures. This should also include identification of bycatch species, such as seabirds, sharks, marine reptiles, other ERS and knowledge of current mitigation measures that are used in the CCSBT.
- Monitoring tag recovery.
- Training on safety at sea and first aid.
- Protocols for dealing with difficult situations (personal conflicts and physical hazards).
- Preparation of cruise/trip reports
- De-briefing with observers to provide feedback on improvement.
- Any additional technical training required for special project such as tagging fish, when necessary

Recruitment of Observers

Scientific observers could be recruited from a variety of related fishery sectors to widen the knowledge and experience base of the observer cohort.

Exchange of observers between members and recruiting some observers from non-members should be encouraged to improve consistency and transparency in the program. Responsibility for implementing observer exchanges would reside with members and the exchanges would be

organised between relevant members and non-members as appropriate

9. THE OBSERVED VESSEL

Any vessel selected for an observation should be capable of meeting the minimum requirements for accommodation, sanitary facilities, meals, equipment and communication systems equivalent to those of the crew (junior officer when possible) so that the observer's duties are not compromised.

A selected vessel should be advised of its responsibility for the observer while they are on board.

10. ELECTRONIC MONITORING SYSTEMS (EMS)

Each member is responsible for the evaluation and contracting of EMS for placement aboard their flagged vessels. Details of the proportion of the fleet that is covered by EMS, as well as the proportion and diversity of footage that is reviewed, is for members to manage consistent with the domestic environment in which they operate.

EMS should be designed and installed to adequately collect relevant scientific information and data, and reporting provided to the Secretariat per section 12 of this document.

EMS can be used by Members on an experimental basis prior to the development of a new set of standards specific the use of EMS in SBT fisheries. Data from EMS may be used to contribute to the 10% target for observer coverage set out in this document. Members using EMS should report its implementation to ESC to review including the items related to EMS in this document.

11. INFORMATION AND DATA

Scientific data to be collected by observers and/or, where relevant, by EMS, should include the following categories of information:

- A. Details of the observed vessel, including its size, capacity and equipment.
- B. Summary of the observed trip, which will include information such as the observer name and identification number, degree of experience, dates of embarkation and disembarkation.
- C. Comprehensive catch, effort and environmental information for each set that occurred while the observer was on-board the vessel, regardless of whether the set/haul was actually observed. This includes the target species, location fished and quantity of gear used.
- D. Fishing methods and gear, including mitigation measures in use while fishing. The observer should record/describe mitigation measures, including the configurations that were in use during the observed period. This includes the details of mitigation measures and their use as described in Attachment 1. Where applicable, the absence of mitigation equipment should also be noted.
- E. Observed catch information for each period of observation, including the time at start and end of observation, the number of hooks observed, the observed catch in number and weight for SBT and all other species caught to the extent possible.
- F. Biological measurements taken of individual SBT, as much as possible, including its condition, length, weight, sex and details of samples (otoliths, scales, gonads, etc.) that were taken from the SBT for later analysis.
- G. Information on SBT and ERS not retained should include counts by species and their life status (using the relevant codes as detailed in Attachment 1).
- H. SBT tag recovery information, including, both tag numbers (actual tags also to be provided), date, location, length, weight, sex, details of samples taken (e.g. otoliths), and whether or not the tags were spotted during a period of fishing that was being observed.

Most of the above categories of information are related to each other in a hierarchical relationship.

So, the biological details of a fish (F) relates to a particular observed period (E) from a specific set (C) for a trip (B) on a particular vessel (A).

A detailed description of the proposed information to be collected for each of the above categories is provided in Attachment 1. Hierarchies for prioritising the collection of data by species caught and SBT data are at Annex 1. In severe weather conditions, data collection should only be conducted to the extent that is it safe for the observer to do so.

12.

REPORTING

Each member shall provide a report to the Extended Scientific Committee and the Ecologically Related Species Working Group on the sampling scheme and arrangements for collecting data of its observer program as a separate section in the member's annual fishery report. Attachment 2 documents the information that should be provided.

Each member shall include in National Reports to the Compliance Committee and Commission, a summary of the levels of compliance in relation to the implementation of mandatory mitigation measures.

13.

CONFIDENTIALITY OF DATA AND INFORMATION

All data and information obtained through an observer program belongs to the flag country of the observed vessel. An observer should not disclose any information without the permission of the flag country.

Type and Format of Scientific Observer Data

For observer coverage provided by EMS, not all of the information below will be readily available; therefore, as much detail as possible should be provided based on the below descriptions of data type/format

A) Details of the observed vessel and gear

The vessel details are recorded only once for an entire trip

All fishing:

- Vessel's Name
- Vessel's Call-sign
- Vessel's Flag Country
- Name of the Captain
- Name of the fishing master
- Year vessel built
- Engine brake power (kw/hp)
- Overall length (metres)
- Gross tonnage (tonnes)
- Number of people in crew (all staff, excluding observers)
- Total freezer capacity (cubic metres)
- Fuel capacity (tonnes)
- Instrumentation and electronic fishing equipment

Instrumentation	Yes/No (or code)
GPS	
Radio direction finder	
Radar	
Weather Fax	
Track plotter	
NOAA receiver	
Sounder (1=colour monitor, 2=monochrome monitor, 3=printer)	
Sonar (1=scanning, 2=PPI)	
Doppler current monitor	
Sea surface temperature recorder	
Bathy-thermograph	
Bird radar	

Longliners only:

- Material of mainlines (Nylon, Cotton thread, Other)
- Material of branchlines (Nylon, Cotton thread, Type of trace, Other)
- Material of buoylines (Nylon, Cotton thread, Other)

Purse seiners only:

- Capacity of power block
- Capacity of purse winch
- Lengths and depths of all nets on board including expanded figure
- Mesh sizes of nets on board
- Number of net skiffs on board

B) Summary of the observed trip

- Observer's name
- Observer's organisation
- Date observer embarked (translatable to 24 hour clock, UTC to the day)
- Date observer disembarked (translatable to 24 hour clock, UTC to the day)

C) Comprehensive catch, effort and environmental information for each set

This information is recorded for each set while the observer is on-board a vessel, regardless of whether the set/haul was actually observed.

All fishing:

- Date and time at start of Set (translatable to 24 hour clock, UTC)
- Date and time at end of Set (translatable to 24 hour clock, UTC)
- Date and time at start of Retrieval (translatable to 24 hour clock, UTC)
- Date and time at end of Retrieval (translatable to 24 hour clock, UTC)
- Location at start of Set (latitude+N/S and longitude+E/W to a minute of accuracy)
- Wind speed (with unit) and direction (N, NNE, NE, etc.) of the operation
- Time of wind measurement for operation (e.g. Noon, start of set etc.)
- Sea surface temperature (degrees Celsius, to 1 decimal place) at start of Set⁴
- Intended target species⁵

Longlining:

- Location at end of Set (latitude+N/S and longitude+E/W to a minute of accuracy)
- Direction of line set (eg straight, curved)⁶
- Direction of line set (straight,curved)
- Actually used mainline length (km)
- Actually used branchline length (m)
- Actually used buoyline length (m)
- Intended depth of the shallowest hook (m)
- Intended depth of the deepest hook (m)
- Type of hooks
- Number of hooks
- Number of baskets
- Seabird mitigation measure used:
 - Line weights used (Y/N)
 - Mass of added line weight (where applicable)
 - Distance between weight and hook (where applicable)
 - Number of tori lines used (where applicable)
 - Estimate of the aerial coverage achieved by tori lines (m)
 - Night setting with minimal deck lighting (Y/N)
 - Bait thrower/line shooter used (Y/N)
 - Dyed Bait (Y/N)
 - Details about management of offal
 - Underwater setting chute (Y/N)
 - Side setting (Y/N)
 - Haul mitigation (Y/N)
 - Branch line/snood haulers
 - Brickle curtain
 - Water cannon
 - Other mitigation measures used
- Distance between baskets, beacons, buoys, or floats as is appropriate to the operation (m)
- Percentage of bait by bait categories that were Fish, Squid, Artificial, and Other
- Bait status (live or dead)
- Total number by species⁵ of SBT, and other tuna and tuna-like species caught, retained or discarded.
- Total processed weight (kg) and Processed State⁷ by species⁵ of SBT, and all other species caught.

Purse Seining:

⁴ It is sufficient to collect the temperature at the start of a set – i.e. at the time the location and wind are measured (e.g. Noon, start of set, etc.).

⁵ All species should be reported with FAO species codes, or using National codes and providing a translation to FAO species codes. Individuals should be identified as far as possible to species level.

⁶ Codes will be used to describe the type of line set, e.g. S=straight, C=curved, U=u-shaped.

⁷ As per processing codes identified in the CCSBT CDS Resolution.

- Spotter plane used (Y/N). If used:
 - Time (translatable to 24 hour clock, UTC) and location aircraft began search
 - Time (translatable to 24 hour clock, UTC) and location aircraft ended search
 - Number, location of schools spotted by aircraft
 - Estimated size of each school spotted by the aircraft
 - Total searched distance
- Bird Radar used (Y/N)
- Logbook number and type
- Start and end Time spent for searching (from xx:xx to yy:yy translatable to 24 hour clock, UTC), location and total searched distance
- School finder (plane/vessel)
- Chumming boat used (yes/no)
- Chum status (Alive/Dead)
- Amount of chum used
- Start and end time for chumming (translatable to 24 hour clock, UTC)
- Start and end time for net shooting (translatable to 24 hour clock, UTC)
- Start and end time for net hauling (translatable to 24 hour clock, UTC)
- Start and end location for net shooting
- Start and end location for net hauling
- Light attraction used (yes/no)
- Total of wattage of lights used
- Start and end time for light attraction
- School type (e.g., shoaling/surface, FAD/debris associated)
- Length (m) of net set
- Height (m) of the net
- Number of net skiffs used
- Date and time that transfer to tow cage commenced
- Identification number of the tow cage to which the SBT were transferred
- Name of Carrier Boat that received the fish
- Estimated catch per set, species composition
- Estimated weight (kg) and/or number by species of SBT and other species caught
- Estimated weight of SBT caught alive
- Estimated weight and/or number of SBT dead during operation

Cage Towing:

- Name of carrier boat
- Tow cage identification number
- Cage depth (metres)
- Cage ring diameter (metres)
- Cage mesh size (in centimetres)
- Cage has second or predator net (Y/N)
- Number of divers used
- Chute fitted in cage (Y/N)
- Effective tow speed (km/hour)
- If the catch was received from fishing operations, then for each catcher boat from which SBT were transferred, record:
 - Name of catcher boat
 - Call sign of catcher boat
 - Date and time (translatable to 24 hour clock , UTC) transfer started
 - Estimated weight of SBT transferred (tonnes)/dead SBT before transfer
- If the catch was received from another tow cage, then, record:
 - Name of the carrier boat from which the SBT came
 - Identification number of the tow cage from which the SBT came
 - Date and time (translatable to 24 hour clock, UTC) transfer started.
 - Estimated weight of SBT transferred (tonnes)/dead SBT before transfer
- Date and time (translatable to 24 hour clock, UTC) and place that tow finished
- Total weight of SBT mortalities per day from commencement of towing to end of transfer to farm

- Total number of SBT mortalities per day from commencement of towing to end of transfer to farm

D) Observed catch information

This relates to that part of the catch that was actually observed by the observer during the hauling process. All information recorded here relates only to the period(s) that were observed. Annex 1 provides hierarchies for the collection of data. Observers should use these hierarchies to prioritise data collection as circumstances prevail on the observed vessel.

Longlining:

- Date and time at the start of the observation period (translatable to 24 hour clock, UTC)
- Date and time at the end of the observation period (translatable to 24 hour clock, UTC)
- Number of hooks observed
- Total number by species⁵ of all species caught and retained during the observed period⁸
- Total processed weight (kg) by species⁵ and Processed State⁷ of all species caught and retained during the observed period
- Total number and weight when possible (whole weight, in kilograms) by species⁵ of all species caught but discarded during the observed period and life status^{8,9}.

Purse Seining:

The entire purse seining shooting and hauling operation should be observed

- Date and time at the start of the observation period (translatable to 24 hour clock, UTC)
- Date and time at the end of the observation period (translatable to 24 hour clock, UTC)
- Estimated % of school caught
- Estimated weight (tonnes for SBT, kg for all other species⁵) and/or number by species of SBT, and all other species caught, retained or discarded including life status^{8,9}
- Weight of SBT mortalities from commencement of fishing to end of transfer to cage
- Number of SBT mortalities from commencement of fishing to end of transfer to cage
- Number of species identified as escaped from commencement of fishing to end of transfer to cage
- Number by species identified as discarded from commencement of fishing to end of net hauling

Cage Towing:

The observer must observe or conduct each mortality count during the period of the tow.

- Date and time at the start of the observation period (translatable to 24 hour clock, UTC)
- Date and time at the end of the observation period (translatable to 24 hour clock, UTC)
- Total weight of SBT mortalities per day from commencement of towing to end of transfer to farm
- Total number of SBT mortalities per day from commencement of towing to end of transfer to farm

E) Biological measurements of individual fish. Biological measurements are only required for SBT, but where possible, effort should be made to measure other species.

For the purposes of SBT analyses, accurate size measurements of SBT are required. SBT should be selected in a manner to ensure within strata randomness. For example, for large numbers of fish caught in a single operation (e.g., a purse seine vessel) a systematic sampling may be appropriate.

The actual number of fish should be spread throughout as many separate fishing operations as possible. For example, it is nearly always the case that sampling 20 fish (randomly) from 10 operations is much better than sampling 200 fish from every 10th operation. The required actual number of samples should be re-evaluated from time to time and as needs change.

⁸ This includes target species (such as SBT) and all bycatch species such as seabirds, sharks, marine reptiles etc.

⁹ Individuals that are discarded with significant injuries and are not considered likely to survive should be included in the number of dead individuals.

- Species⁵
- Life status category¹⁰
- Length (for SBT, fork length measured on straight length, rounded up to the centimetre¹¹)
- Length unit
- Length code (fork length, eye fork, etc.)
- Length, lower jaw-fork length
- Whole weight (kg), if possible. This is the measured weight before processing as opposed to a calculated whole weight.
- Processed weight (kg)
- Processed State⁷
- Sex (F=female, M=male, I=indeterminate, D= not examined)
- Samples taken, specifying:
 - A unique identification number given to the sample
 - The type of samples taking, including: whole specimen, or samples of otoliths, scales, vertebrae, stomach, muscle, tissue, gonads, feathers, bird bands etc.)
 - Any additional details that may explain the capture of the sample (e.g. for seabirds the specific mitigation at the time of capture)

F) SBT Tag recovery information

Some of the data recorded here duplicates data that already exists in the previous categories of information. This is necessary because tag recovery information may be sent separately to other observer data.

- Observer's name
- Vessel's name
- Vessel's call sign
- Vessel flag
- Collect and provide the actual tags
- Tag colour
- Tag numbers (The tag number is to be provided for all tags when multiple tags were attached to one fish. If only one tag was recorded, a statement is required that specifies whether or not the other tag was missing)
- Date and time of capture (UTC)
- Location of capture (latitude+N/S and longitude+E/W to 1 minute of accuracy)
- Length (fork length, rounded up to the nearest centimetre¹¹)
- Processed Weight (kg.)
- Processed State⁷
- Details of samples taken, specifying:
 - A unique identification number given to the sample,
 - The type of samples taking, including: whole specimen, or samples of otoliths, scales, vertebrae, stomach, muscle, tissue, gonads, etc.)
- Sex (F=female, M=male, I=indeterminate, D=not examined)
- Condition of recaptured fish and their life status
- Whether the tags were found during a period of fishing that was being observed (Y/N)
- Reward information (e.g., name and address where to send reward)

¹⁰ The observer program will, as a minimum, distinguish the following life status categories: dead and damaged; dead and undamaged; alive and vigorous; and unknown.

¹¹ Length should be rounded (not truncated) to the nearest centimeter. For example, 62.4cm becomes 63cm and 62.5cm becomes 63cm (63 cm for both cases).

HIERARCHIES FOR DATA COLLECTED BY SPECIES AND SBT DATA

This annex provides a guideline for the collection of data by observers to enable prioritising of observer activities.

The flow of the main data collection activities are:

Fishing operation information

- All vessel and shot information

Monitoring of hauls

- Record time and species caught
- Record whether the specimen was retained or discarded (with lifestatus)

Monitoring of sets

- To collect counts of seabird abundance around the vessel when setting (using standard counting practices)

Biological sampling

- Collect data on length and whole and/or processed weight (including processed state)
- Check for presence of tags
- Record sex
- Collect biological samples
- Take photos, in particular to facilitate the identification of ERS

Both the monitoring of hauls and the biological sampling procedures should be prioritised among species groups as follows:

Species	Priority (1 is the highest)
SBT	1
Other tunas, billfishes, Gasterochisma, and sharks	2
All other species	3

“other tunas” means all *Thunnus* species except SBT

The allocation of observer effort among these activities will depend on the type of operation and setting. The size of sub-samples relative to unobserved quantities (e.g., number of hooks examined for species composition relative to the number of hooks set) should be explicitly recorded under the guidance of member country observer programs.

**FORMAT OF NATIONAL REPORT SECTIONS ON DEVELOPMENT AND
IMPLEMENTATION OF SCIENTIFIC OBSERVER PROGRAMS**

REPORT COMPONENTS

The observer program implementation report should form a component of the annual National Reports submitted by members to the Scientific Committee. This report should provide a brief overview of observer programs for SBT fisheries, and is not intended to replace submitted papers containing proper analyses of collected observer data. This observer program report should include the following sections:

A. Observer Training

An overview of observer training conducted, including:

- Overview of training program provided to scientific observers.
- Number of observers trained.
- Summary of qualifications / training and years of experience of the observers deployed in SBT fisheries during the past year.
- A copy of the latest version of relevant manuals in their original language for reference

B. Scientific Observer Program Design and Coverage

Details of the design of the observer program, including:

- Which fleets, fleet components or fishery components were covered by the program.
- How vessels were selected to carry observers within the above fleets or components.
- How was observer coverage stratified: By fleets, fisheries components, vessel types, vessel sizes, vessel ages, fishing areas and seasons.
- The proportion of coverage provided by observers vs. EMS.

Details of observer coverage of the above fleets, including:

- Components, areas, seasons and proportion of total SBT catch, specifying units used to determine coverage.
- Total number of observer employment days, and number of actual days deployed on observation work.
- Total number of vessels with EMS systems deployed onboard, as well as the proportion of data returned to agencies that was analysed.

C. Observer Data Collected

List of observer data collected against the agreed range of data set out in Attachment 1. In broad structure this would include:

- Effort data: Amount of effort observed (vessel days, sets, hooks, etc), by area and season and % observed out of total by area and seasons
- Catch data: Amount of catch observed of SBT and other species (if collected), by area and season, and % observed out of total estimated SBT catch by area and seasons
- Length frequency data: Number of fish measured per species, by area and season.
- Biological data: Type and quantity of other biological data or samples (otoliths, sex, maturity, Gonosomatic index, etc) collected per species.
- The size of sub-samples relative to unobserved quantities.

D. Tag Return Monitoring

Number of tags returns observed, by fish size class and area.

E. Problems Experienced

- Summary of problems encountered by observers and observer managers that could affect the CCSBT Observer Program Standards and/or each member's national observer program developed in the light of the Standards.



ICCAT, IOTC and CCSBT Regional Observer Programme

Programme Manual



Version: ICCAT / IOTC / CCSBT ROP 3; Last Updated: June 2019

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Abbreviations

ATF	Authorisation to Fish
ATT	Authorisation to Tranship (ICCAT only)
AVL	Active Vessel List (ICCAT)
CCSBT	Commission for the Conservation of Southern Bluefin Tuna
CDS	Catch Documentation Scheme (for SBT)
CMF	Catch Monitoring Form (for SBT)
CMM	Conservation and Management Measures
CPC	Cooperating Non-Contracting Party, Entity or Fishing Entity (ICCAT) / Contracting Parties and Cooperating Non-Contracting Parties (IOTC)
CV	Carrier Vessel
CVO	Carrier Vessel Operator
EEZ	Economic Exclusive Zone
EPIRB	Emergency Position-Indicating Radiobeacon Station
FAO	Food and Agriculture Organization
FV	Fishing vessel including LSPLV / LSTLV
GMDSS	Global Maritime Distress and Safety System
ICCAT	International Commission for the Conservation of Atlantic Tunas
IOTC	Indian Ocean Tuna Commission
IRCS	International Radio Call Sign
LSPLV	Large Scale Tuna Longlining Vessel (ICCAT)
LSTLV	Large Scale Tuna Longlining Vessel (IOTC)
MARPOL	International <i>Convention</i> for the Prevention of Pollution from Ships
MoU	Memorandum of Understanding
NAVTEX	NAVigational TEXT messages
NRN	National Registration Number
RAV	Record of Authorised Vessels (IOTC)
RFMO	Regional Fisheries Management Organization (including CCSBT, ICCAT and IOTC)
ROP	Regional Observer Programme
RoV	Record of Vessels (IOTC)
SART	Search and Rescue Transponder
SOLAS	International Convention for the Safety Of Life At Sea
VMS	Vessel Monitoring System

1 Deployment Status

MRAG and Capfish (the Consortium) will maintain a list of observers that have completed training and have observed in the past year. Observers will be notified of potential deployments and trips will be assigned to available observers based on a rota system.

1.1 Standby

Between leaving home and boarding the vessel observers will be in 'Travel Status' and on a lower pay rate. This will normally be two days and will include a briefing in the office where they will collect their equipment and travel documents. Additional items required by observers for travelling are covered in Section 3.1 below.

1.2 Travel and Briefing

Observers are considered deployed once they board the vessel and they will go onto the higher pay rate. If they board the vessel before 12:00 they will receive a full at sea day pay, after 12:00 and they will receive half a day at sea rate and half a day at travel rate. 'At Sea Status' ends when the observer disembarks the vessel to begin return trip and they will go back to travel status.

1.3 At Sea

Observers are considered deployed once they board the vessel, complete the T3-Pre-Sea Safety Check and R1-Boarding report. "At Sea Status" ends when the observer disembarks the vessel to begin return trip. During this phase of the deployment the observer will need to submit regular 5-day R2 reports and will complete T4 and T5 forms for every transshipment.

1.4 Debriefing

Observers will be expected to attend a debriefing at the completion of the cruise. Observers should have the following completed prior to debriefing:

- R4-Final Report completed.
- All R1, R2, T3, T4 forms inputted into the database
- All pictures correctly labelled and tagged
- Daily Notes and Transshipment Declarations in order; and,
- Gear cleaned, packed and ready to return

2 Deployment Preparation

Any personal matters, immunisations and other medical requirements must be attended to before accepting a contract. An observer must ensure that their passport has a minimum of **four blank pages** remaining and that it is valid for a minimum of **six months** from the beginning of the deployment. When an observer goes on Standby Status, the Consortium will provide any details regarding deployment location, vessel name, flag state, crew nationality, trip length and previous observer feedback. Observers should prepare for a deployment period of up to three months in what can sometimes be a demanding environment. Once a contract has been accepted they should be prepared to deploy at short notice. Care should be taken when packing personal gear as the observer may be liable for excess baggage charges if they have taken an unreasonably large amount.

Observers must ensure they have a **current medical (ENG1), survival at sea and first aid** certificate. These are requirements for the programme and it is the observer's responsibility to ensure these are in date (ENG 1 medicals are normally valid for two years, survival at sea and first aid will vary). Without these, insurance will be invalidated and the observer will not be allowed to deploy. You must ensure your employer has current copies. Observers are also encouraged to seek out their own insurance to cover personal effects and loss of earnings due to illness.

2.1 Deployment Checklist

Observers may be required to travel large distances and accommodation facilities may be limited. There are certain essential items that they should bring, a provisional list is provided below:

- passport – with sufficient blank pages (minimum of four) and at least six months validity;
- Transshipment ROP ID Card as issued by the Consortium;
- travel letter / immigration document where required;
- cash (reasonable amount to cover things like taxis and other sundry items);
- credit card to cover emergencies such as excess baggage payments, change of or purchase of flight¹.
- copy of the MoU;
- complete gear set, issued by the Consortium (see below);
- medicinal - need items such as prescriptions² (in observer's name), vitamins, first-aid, etc.;

¹ All purchases will be refunded by the Consortium with receipt, provided that the changes or flight purchases were unavoidable.

² Observers on prescription should notify the Consortium when first contacted about the deployment as some prescriptions may not be compatible with the work required and conditions at sea

- phrase book(s);
- mobile / cell phone with roaming enabled (ensure that consortium are aware of the number);
- contact details and arrangements made with the vessel agent (if applicable); and
- personal items, clothes, footwear, sunglasses, books, music, etc.

2.2 Issued Gear Set (Equipment)

A set of gear will be issued prior to deployment and a Gear Checklist will be signed upon receipt. Observers will need to provide their own safety boots which should have steel toe caps and protective soles. Equipment issued by the coordinator is outlined below.

2.2.1 Health & Safety Gear:

- 1 PLB (Personal Locator Beacon)- a 406MHz Emergency Position Indicating Radio Beacon (EPIRB), with integrated GPS navigation receiver³;
- 1 satellite communicator (for example, InReach) with two-way communications to allow emergency communications with the coordinator⁴;
- 1 Immersion suit with whistle;
- 1 Personal Floatation Device (PFD);
- 1 Signal mirror;
- 1 Strobe;
- 1 Safety helmet; and,
- Safety boots with steel toe caps and protective soles – **to be provided by the observer.**

2.2.2 Professional Gear:

- 1 Protective Case to store all electronic and sensitive equipment;
- 1 Laptop computer and USB storage device;
- programme Manual, Electronic and hard copies programme manual and forms; and other resources (provided on storage device);
- 1 plug adapter;
- 1 digital camera (video capable) and memory card;
- species ID guide, inspection ID guides;
- 1 clipboard;
- 1 kit bag;
- pens, pencils, binder, etc.; and,

³ The EPIRB must be carried with the observer's hand luggage while travelling.

⁴ The Satellite Communicator must be carried with the observer's hand luggage while travelling.

- Observer RFMO Stamp

Observers will thoroughly check that all issued gear is in working order before signing the checkout list. Gear checkout list must be signed prior to travelling and a copy retained for debriefing. During the deployment the gear should be maintained and kept clean and should be washed and dried at the end of the deployment before the debrief.

Observers will be held responsible for any item damaged due to mistreatment (at the discretion of the coordinator) and ***a written explanation will be required for any damaged, broken, or missing items.***

Observers wishing to use their own laptops may do so but personal laptops are not covered under the programme insurance. They must also ensure that that they have the correct software installed so that Access and Picasa run correctly on their machine.

2.3 Travel Logistics and Travel Letter

The Consortium will make all international travel arrangements, including visas where required. Prior to being deployed, observer will be issued a Travel Pack detailing flights and any other travel, immigration documents, vessel agent contacts, and hotel reservations. Observers will sometimes be travelling on a one-way flight and, it is important to have the printed immigration documents (where appropriate) available to provide to immigration authorities at the arrival airport or departure port. Observers are encouraged to get Seaman's Books to ease transit through immigration and allow them excess baggage.

All boarding passes must be kept by observers, failure to do so will result in the cost of flight being deducted from your payment. Electronic boarding passes are also valid, although these must be PDF, NOT screen shots of mobile boarding passes.

In the port of the intended deployment, local agents appointed by the operator/company of the Carrier Vessel (CV) will be available to assist by meeting at the airport, and arranging accommodation and transport.

Observers may be required to organise local travel or accommodation themselves in which case they should keep the Consortium and local agents informed of any arrangements they have made. Travel expenses incurred can only be reimbursed if receipts are presented at the end of the deployment.

The Consortium coordinator will provide a travel advance prior to flight if necessary to ensure observers have sufficient funds for travelling, two days' notice must be given before a travel advance can be given.

It is also recommended that observers carry an amount of cash in the local currency, as well as American dollars to cover any expenses incurred on the vessel.

While in transit, observers must behave in a responsible manner and in accordance with the Observer Standards of Conduct, a signed copy of which will be included with every observer contract. Observers will always keep their coordinator updated in regards to all actions and developments pertinent to their deployment particularly any changes in embarkation and disembarkation dates.

While in 'Travel Status', observers are still under contract and as such are considered on duty. They represent the Consortium and the ROP and any behaviour not considered in line with this will not be tolerated. They will be considered to be in breach of contract and will subsequently be dismissed and their pay withheld.

2.4 Memorandum of Understanding (MoU)

Prior to any deployment, a Memorandum of Understanding (MoU) (refer Appendix A: MoU), between the CV operator and the Consortium, will have been signed. It outlines the rights and obligations of all parties: the observer, the vessel operator, the vessel and the Consortium. Through the MoU the vessel operator must ensure that all vessels have adequate health and safety measures, including up to date certifications, before an observer can be deployed. All vessels will be subject to a pre-sea safety check by the observer and the MoU alerts the operators to this procedure. It runs through the items that will be checked and the actions to be taken if a vessel fails. The observer should be familiar with its contents, an example is given in Appendix A for reference.

3 Pre-Sea Observer Duties

Prior to the CV's departure from port and within 24 hours of embarkation (deployment), observers will complete the following pre-sea duties:

1. With the local vessel agent, meet with the vessel's Captain/Officers to discuss accommodation, trip plans, the MoU, observer duties, vessel access, etc;
2. Conduct the Pre-Sea Safety Check (PSSC) and familiarisation tour, completing Form T3 and R1 Report. The PSSC should be completed during daylight hours and should not under any circumstances be completed at night;
3. Email the R1 Report to the coordinator within 24 hours of boarding the vessel, the T3 form should also be emailed through to the Consortium. Should there be a problem identified during the PSSC then the observer provider should be notified of the problem immediately and the vessel must remain in port until rectified;
4. If you are unsure of anything during the PSSC, contact your Coordinator for guidance;
5. Complete initial entry in Observer Daily Log and complete Form T1 and Form T2.

3.1 At sea Transfers

Observers will normally embark via an in-port launch or directly from the dockside. However, on very rare occasions, an observer may be required to deploy or disembark at sea, via use of transfer vessel(s) between port and the assigned CV. This procedure is not without risk and the Consortium shall consider transfer options under the following Terms and Conditions:

- CV must notify the Consortium at least 3 days (72 hours) prior to an at sea transfer
- Transfer vessels involved must be identified and approved by the IOTC and the Consortium to undertake such transfers;
- Approved transfer vessels are required to have port inspections and must have a clean safety record issued by the flag state safety authority; and
- When possible, the observer may arrange for a safety check while the two vessels are alongside. When this is not possible, agents for these vessels must at least submit safety certification prior to the observer embarking the vessel.

Observers will verify (with the Consortium, and their CV) that these terms and conditions have been met prior to embarking on any transfer vessel.

3.2 CVO / Captains Refusal to embark the observer

If the captain or owner refuses to accept the observer on a vessel, the observer must notify their coordinator immediately, and they will inform the Secretariat. The Consortium will provide instruction to the observer on what to do next.

4 General Data Form and Reporting Instructions

Observers should initially record all their observations onto paper forms, the data are then then transferred into their database at the earliest possible opportunity, preferably after each transshipment but at least on a daily basis. At the end of each trip the data will be transferred into the master database which is then submitted to the Secretariat.

Observers are required to maintain both electronic and hard copies of data until debriefing. Electronic copies should be maintained on the computer and a copy on the USB that has been provided. Back-up of all digital files regularly (preferably daily).

- **RFMO Observer Number:** This is unique to each observer and will have been assigned by the Coordinator on completion of training. It will remain the same through all deployments and across ICCAT, IOTC and CCSBT. You can find this on your observer identification card.
- **RFMO Request Number:** This is unique for each deployment, and will be provided by the coordinator prior to deployment. It should be used for all forms, reports, photographs and in the database.
- **FV RFMO Number:** This is a unique, vessel-specific, identifier assigned to each vessel on the ICCAT / IOTC / CCSBT authorised vessel list. Each vessel should keep the same number throughout its history even if other details such as name or callsign change. The RFMO number can be found in the observer database, vessels not on the database should be verified with the consortium after transshipment. Observers should not modify the vessel list in the database, this will be amended, should a vessel be missing, at debriefing. The vessel list is dynamic, and may have been updated since the observer was deployed.

The authorised vessel list can also be accessed from the websites:

RFMO	Hyperlink
ICCAT	https://www.iccat.int/en/vesselsrecord.asp
IOTC	https://www.iotc.org/vessels
CCSBT	https://www.ccsbt.org/en/content/ccsbt-record-authorised-vessels

This can be downloaded prior to deployment for use as reference material only.

- **CV RFMO Number** (observed vessel): This number can be found in the authorised vessel list and the observer database.
- **(Vessel) National Registration Number (NRN):** This is a vessel-specific identifier, issued to the vessel by their Flag state authority. This “number” may be made up

of digits, characters, and sometimes dashes. Record it exactly how it is printed with characters always recorded as capital letters. This will be available on the vessel list / database for verification, and displayed on vessel markings or the vessels documentation (including Transshipment Declarations).

- **FV Vessel Name:** Record the name exactly as it is marked on the vessel. It should be noted that there are different ways by which a numerical value may be associated with a vessel’s name for example: No. 4 Sea Bird, Sea Bird No. 4, Sea Bird IV. Additionally, there may be breaks in the name or words joined together. Refer to Appendix F: Guidelines for Vessel and Gear Markings for further information on vessel markings. All vessel markings (bow, stern, TD, ATF, Logbook) should be identical to the name recorded in the list of authorised vessels. Different companies may operate similarly named vessels, and these seemingly small differences may have significance in verifying the identity of a vessel. Follow the non-compliance reporting procedure for vessel markings outlined in Appendix E: PNC’s Instructions and Forms (ICCAT only).
- **International Radio Call Sign (IRCS):** This is an international vessel identifier and should be displayed on the side of the vessel, on the top of the wheelhouse. All characters will be recorded as capital letters. Call signs are included in the vessel list provided. Guidelines on vessel markings are given in Appendix F: Guidelines for Vessel and Gear Markings.
- **Operator/Company:** The terms “operator” and “company” are interchangeable. Observers can retrieve the Operator by asking FV captains. CVs will have documentation of this available on board. Record operator/company names exactly as they are provided - names may be very similar in spelling though not at all associated. Owners of the vessels may be different to the operators of the vessel as many vessels are chartered.
- **Flag State:** The flag state of a vessel is the jurisdiction under whose laws the vessel is registered or licensed, and is deemed the nationality of the vessel. However, this does not always correlate with the nation of origin of the vessel, the crew on board the vessel, or the operating company of the vessel. Flag states participating in the ROP are listed below.

ICCAT	IOTC		CCSBT
Belize	China	Oman	Japan
China	Taiwan, China	Philippines	Korea
Chinese Taipei	Indonesia	Seychelles	Taiwan
Japan	Japan	Tanzania	
Korea	Korea	Thailand	
St. Vincent & the Grenadines	Malaysia		
Namibia			

- **Date:** Record date fields in the following format:

dd/mm/yyyy

- **Time:** Record time fields in the following format:

hh:mm in 24-hour format.

Record all times in local (vessel) time according to the time they use on the CV. Make a note of the time zone the vessel is operating in on the T2 form (i.e. GMT + X hours).

- **Position:** Latitude and Longitude will be filled out in the following format

DD°MM' N/S / DD°MM.' W/E
(Degrees, Minutes)

- **Weight:** Is recorded in metric tonnes in the database but reported as kg in the final report.
- **Measurements:** If taken will be reported in centimetres.
- **Speed:** Will be reported in knots (nautical miles / hour).
- **Deployment Method:** There are three recognised methods for an observer to embark (board) or disembark a vessel (carrier or transfer), thus beginning or ending a deployment on a vessel:
 - Portside, directly on to/off of the CV.
 - Within port, by way of a launch, on to/off of the CV.
 - At sea, off of/on to a transfer vessel on to/off of a CV.
- **Species Names:** When writing out species names (for the final report), common names will all be written in lower case and the scientific name should follow when mentioned for the first time e.g. bigeye tuna (*Thunnus obesus*). After that the common name should be used.

- **Product types:** Observers should refer to the product types document included in Appendix C: IOTC and ICCAT Species guides for guidance on identifying species product types.

Product Code	Product Type	Description
GG	Gilled & Gutted	Transhipped with gills, guts, fins and tail removed.
RD	Rounded Weight	Transhipped frozen whole and intact.
FL	Fillet	Sections of meat frozen into fillets.
DR	Dressed Weight	Gilled and gutted, head and fins removed.
BM	Belly Meat	Sections of belly meats transhipped in tied bundles.
SF	Shark Fins	Bundles / blocks of frozen shark fins, not accompanied with shark bodies.

- **Species Group Codes:** Observers should identify transhipped fish down to the species level. However, they may need to classify unidentifiable species under a more general code; below are the codes used for grouping commonly transhipped species:
 - **SKH** (various sharks; Selachimorpha/Pleurotremata): unclassified shark species. Shark fins will be listed under this code, the product should be recorded as fins.
 - **BIL** (marlin, sailfish, spearfish; Istiophoridae): unidentified billfish species (i.e. blue marlin; BUM; *Makaira nigricans*) will be recorded under this code. Swordfish (SWO; *Xiphus gladius*) will be readily identifiable and shouldn't be recorded under BIL. .
 - **MIX** (Mixed tunas): where BET and YFT are transferred together and it is not possible to record separately, they should be counted together and then proportioned by species in accordance with the TD, **MIX** should not be used.
 - **TUN** (tunas; Thunnini): unidentified tuna or tuna products should be record as TUN. Tuna roe and stomachs will be listed under this code, though notes should accompany these tuna products.
 - **OTF** (other fish unclassified): unidentified fish transhipped (or a group of unidentified fish products) will be recorded as OTF. For instance, when a brailer/cargo net is being used to tranship miscellaneous fish products and cannot be identified.
- **Templates:** A complete electronic pack of template forms, reports, and databases will be provided to the observer with the electronic version of the observer manual. It is recommended that a backup is made of this file as soon as they are

received at briefing and additionally kept on the USB provided. A copy of this pack should be used for working on and editing. This should be renamed DeploymentRequestNo_VesselName_ObserverName. E.g. 561_Yong Man Shun_Joe Bloggs.

- **Photographs:** All photographs and naming conventions for photographs are outlined in the guidance document under Appendix K: Tagging photos using Picasa.
- **Emails:** All emails should be sent to rop_reports@mrag.co.uk
- **Database:** A database instruction guide is provided in Appendix M. This covers data entry and how to fulfil reporting requirements using the database. Please pay particular note to this as database use is not covered in this manual.

5 Pre-Sea Forms and Report

The pre-sea forms can all be found in Appendix B and are summarised below:

- Form T1 - observer/vessel details
- Form T2 - deployment form
- Form T3 – Pre-Sea Safety Check checklist
- R1 Report – observer deployment report

5.1 Form T1 - Observer/Vessel Details:

Form T1 gives the basic information about the observer's deployment and their assigned CV, it will only be completed once in hard copy.

5.2 Form T2 - Deployment Form:

If the observer uses a transfer vessel (other than pilot vessels in port) for the beginning of the deployment (Outgoing) or for the end of deployment (Return) from the CV, complete the T2. Please note section 3.1 (At sea Transfers) – for direction on the protocol on transfers at sea.

From the working/editing copy of the deployment pack provided. Complete the form T2 (found in Logbooks T1 to T5 folder) as a Word document; renaming the file in the following format:

ICCAT_RequestNo_VesselName_T2 / IOTC_RequestNo_VesselName_T2.

5.3 Form T3 – Pre-Sea Safety Check Checklist:

The form T3 , will be completed for all carrier and transfer vessels boarded by the observer during a deployment. This should be sent with the R1 within 24 hours of boarding as outlined in Section 3: Pre-Sea Observer Duties.

Depending on the circumstances of embarkation on to a vessel, arranging a proper Pre-Sea Safety Check may require foresight and planning on the part of the observer (especially in cases of at sea transfers). At the point of embarkation, the captain and officers will be busy preparing the vessel for its voyage into open ocean. It is recommended that the observers remind the captain/officers/agent (if present) that they need to do the PSSC prior to sailing and that the observer should remain patient until an officer becomes available. Vessels may move between anchorages within the port limits, it is fine to remain on board the vessel without PSSC until such a time that the vessel intends to leave port.

In completing the form, the observer will need to personally check a number of features around the vessel, particularly relating to safety and communications. This Inspection will be performed by the observer in the presence of at least one vessel officer and, when possible, a local vessel agent.

The following items are considered to be **Minimum Compulsory Requirements** for passing the PSSC (as defined in the MoU):

- **Safety Certificate (Safety Management Certificate)**
 - The vessel must have onboard a current valid safety certificate that does not expire for a period of at least four months from the date of embarkation of the observer. This (or similar documentation) must display the total compliment that the vessel is certified to carry.
 - The observer must take a photograph or receive an electronic copy of this.
- **Life Rafts / Life Boats**
 - The capacity of the life rafts and boats on both the Port and Starboard sides of the vessel must have the capacity to accommodate the full crew complement; including the observer. (The total life raft / boat capacity must be 200% of the vessels compliment).
 - Life rafts / boats must be within their serviceable dates, which must cover the expected maximum duration of observer deployment. Under SOLAS regulations all life rafts shall be serviced at 12-month intervals unless this is impractical in which case this can be extended to 17 months by the relevant Administration.
 - All Life Rafts must be fitted with a hydrostatic release mechanism.
 - The observer must photograph the life rafts / boats service certificates and plates.
- **Life Jackets**
 - There must be a total number of life jackets onboard, stowed at a readily location, to accommodate all persons onboard.
 - All Life Jackets must comply with IMO – SOLAS standards
 - The observer must photograph the life jackets and model information. Not all lifejackets need to be photographed, just a sample.
- **Immersion Suits**
 - There must be a total number of Immersion Suits onboard, stowed at a readily location, to accommodate all persons onboard.
 - All Immersion Suits must comply with IMO – SOLAS standards
 - The observer must photograph the Immersion Suits and model information. Not all Immersion Suits need to be photographed, just a sample.

Including the minimum compulsory requirements (listed above), ensure that each field of the T3 is completed. Instruction on what is required in section is given on the form. Some notes are included below

- Vessel details:
 - Size GRT: record in metric tons; found in vessel documentation
 - Length over all (LOA): report in meters; found in vessel documentation

- Number of crew: including passengers; excluding the observer
- Vessel contact details: satellite codes in phone numbers and vessel email address
- Vessel agents: If available, include country codes in phone numbers; include email address when it is available
- Safety Equipment
 - Flares – provide a number if in date
 - First aid and medical officer – direct where and who this is
 - Fire extinguishers – you are checking they haven't been used and not replaced. Broken seals or lower pressure on the gauges indicate use.
- Accommodation (Observer):
 - Single cabin or sharing, and comments
 - This is a basic check to see if accommodations are acceptable. Further details regarding accommodations will be recorded in the vessel's internal report.

If any of the minimum compulsory requirements do not comply with the Pre-Sea Safety Check and/or the observer believes their safety would be compromised by deploying on the vessel, the observer will inform the Consortium immediately - first email the coordinator the T3, R1 and follow up with a call.

The T3 should be completed in hard copy format, from the working/editing copy of the deployment pack provided. Complete the form T3 (found in Logbooks T1 to T5 folder) as a Word document; renaming the file in the following format:

ICCAT_RequestNo_VesselName_T3 / IOTC_RequestNo_VesselName_T3.

This should be emailed with the R1.

5.4 R1 Report – Observer Deployment Report:

The R1 Report summarizes certain essential details collected in the T1, T2, and T3 forms. This report must be completed and submitted to rop_reports@mrag.co.uk within 24 hours of boarding the CV. It must also be completed for boarding transfer vessels, another CV or crossing into another RFMO and the commencement of a new deployment. Ensure that all fields are complete as directed on the form.

To note:

- Deployment details:
 - Departure date and time - The date and time that the Observer began their travels from briefing (or home if briefed and the observer returned home).
 - Deployment method - method of embarkation (portside, launch, transfer vessel or cross over from a different RFMO)

- Area of Entry: provide the coordinates that the vessel crossed over and into which RFMO.
- Inspection Status:
 - Safety Inspection (Y/N)
 - Deployment Refusal (Y/N): Did captain refuse to accept observer on board or did observer refuse to deploy upon an assigned vessel?
 - Problems (Y/N): What were the issues with the T3 – use comments box for detail.
 - Form T3 Attached (Y/N): The Form T3 will accompany the R1 Report in the Pre-Sea reporting.

The R1 should be completed in hard copy format, from the working/editing copy of the deployment pack provided. Complete the form R1 (observer reporting forms) as a Word document; renaming the file in the following format:

ICCAT_RequestNo_VesselName_R1 / IOTC_RequestNo_VesselName_R1.

This should be emailed with the T3.

6 Mid-Deployment Forms and Reports

The mid-deployment forms and reports can be found in Appendix B and need to be completed periodically throughout an observer's deployment; they are outlined below.

6.1 Form T4 – Transshipment Details Form:

A T4 form must be completed for each transshipment. Only transshipments of fish on the high seas are to be recorded in this way. Non ICCAT / IOTC / CCSBT transshipments (cargo / bait and fuel transshipments (bunkering) at sea and in-port transshipments) should be summarised only in the final report. Data collected includes details of date, time, position and vessel identification. However, if the observer is onboard during an in-port transshipment, a copy of the TD can be requested from the captain to give a summary of what has been transhipped. The captain is not obliged to provide this and the observer should not monitor the transshipment itself.

The observer is required to identify the FV transshipping with the CV and the position of the transshipment. The total time of the transshipment will be recorded here along with the total amount of interruption time. Interruption time is classified as a break in the entire transshipment operation and should only be recorded for breaks of over 30 minutes. Note, a short break in the transshipment, for example while switching holds, does not constitute an interruption. Include in the comments when interruptions happened and for how long.

Breaks in observation: record any breaks or unobserved portion of the transshipment for T4(ii & iv). If a break is over 30 minutes, than a new T4(iv) will be used. As such an observer with multiple breaks over 30 minutes during a transshipment, will have multiple T4(iv) forms. Reasons for breaks should be recorded in the comments section of the T4 form.

The next part of the form (T4 (ii)) contains the totals of observer estimates by species, stock (ICCAT only) product code, numbers and weights. This should be completed at the end of the transshipment when the observer has time to tally their counts. Weights should be entered using the following formula:

$$\frac{\text{Declared Species (by product) Total Weight}}{\text{Declared Number of Individuals Transhipped}} = \text{Average Weight of individual} \times \text{Observed Counts} = \text{Observed Weight}$$

When a Declared Number of Individuals is not provided, it is recommended that observers use the below average weights for each species / product transhipped. All average weights are given in Kg.

Species	Product Code	Average Weight	Minimum Weight	Maximum Weight
Albacore	GG/RD/HO	12.5	6	30
Bigeye Tuna	GG/DR/HO	40	20	60
Dorado	DR/RD/HO	7.5	6	9
Escolar / Oilfish	RD/HO	8	7	9
Marlins				
<i>White Marlin</i>	DR/GG/HO	60	40	150
<i>Blue Marlin</i>	DR/GG/HO	80	60	150
<i>Black Marlin</i>	DR/GG/HO	80	60	150
<i>Striped Marlin</i>	DR/GG/HO	50	40	100
<i>Sailfish</i>	DR/GG/HO	40	20	80
<i>Swordfish</i>	DR/FL/HO	45	30	100
Narrow barred Spanish Mackerel		11	8	13
Sharks				
<i>Blue Shark</i>	RD/DR	35	30	45
<i>Mako Shark</i>	FL/HO/DR	45	30	65
<i>Shortfin Mako</i>	FL/DR/HO	40	30	55
Southern Bluefin	GG/DR/HO	45	20	100
Yellowfin Tuna	GG/DR/HO	30	25	50

In T4 (iii) there are three tables tallying the transhipped products. Data will be taken from the transshipment declaration, prior notification given by the FV, and separate recordings carried out by the CV. In the majority of transshipments, data will be taken from the transshipment declaration, in this case the observer should only complete the first table (Summary as per Declaration Form).

The final part of the form, T4 (iv), is used to record the tuna products transferred between vessels. The tunas are normally transferred using a crane on the CV, typically in strings of fish although a cargo nets, sacks and boxes are also occasionally used for non-tuna species or products such as shark fins or roe. The observer will need to estimate the numbers of fish and species composition of each load or string. The observer will refer to the species identification guides provided with the manual (Appendix C: IOTC and ICCAT Species guides) so that they become practiced at discerning between species. Guidance on how to complete the T4 and T5 is given in the boarding procedure below.

6.2 Form T5 – Boarding Report:

This form is to be completed with the T4 for every transshipment. It is used as a checklist of items to observe if the FV is compliant with RFMO regulations. Ensure this form is completed in full and signed by the fishing vessel captain, and signed and stamped by the

observer. Instruction on how to complete the T5 are provided under the boardings section below.

6.3 Report R2 – Observer 5-Day Report:

The R2 Report (refer Appendix B: Observer reporting forms) is a summary of the ROP transhipments that occurred during the 5-day reporting period. If a transhipment is in progress at the end of a reporting period then it will be included in the next R2. Observers will compile and send their R2 reports on the day after each period using the schedule below:

- Period A – 1st to 5th
- Period B – 6th to 10th
- Period C – 11th to 15th
- Period D – 16th to 20th
- Period E – 21st to 25th
- Period F – 26th to the end of the month

To complete an R2 Report:

1. Rename the report under the following format: ROP_Vessel_Observer_Month (numerical)_Period For example: ICCAT / IOTC_Tuna_Queen_SYoung_07_A
2. Enter the fields as outlined below.
3. Save the file when complete or as required – both to the computer and to a flash drive, to ensure no loss of data.
4. Send the report to the following email address: rop_reports@mrag.co.uk. It is important to send the R2s on time. If the e-mail is not working, fax a copy to +44 (0)20 7499 5388.

The following outlines the information to be entered into the R2:

- Permissible CV Complement – this is the total allowable number of persons the vessel is certified to carry. This should be consistent with the information recorded during the PSSC.
- Current CV Complement – this is a reflection of the number of persons onboard the vessel at the time of submission. Any changes to crew numbers should be reflected in the comments.
- Days Steaming – days during the five-day period underway/steaming.
- Days on Standby – days during the five-day period waiting for fishing vessels.
- Days Transhipping - If a transhipment occurs on a given day, then this will not be counted as Steaming / Standby days and instead as a transhipment day.
 - Record days in full.
- Transhipment Details
 - Transhipment Number: assigned by observer, will be chronological throughout trip.
 - Record the FVs RFMO number copied from the database record.
 - Record the FVs name copied from the database record.

- Record if any southern bluefin tuna are being transhipped and whether it was accompanied by a Catch Monitoring Form (CMF).
 - Date – of Transhipment, dd/mm/yyyy
 - Position – Record the start position in degrees, minutes and hundredths of minutes. Be sure to include whether it north or south.
- Embarkation Date – date observer boarded CV.
 - Embarkation Port – City or location observer boarded the vessel.
 - Disembarkation Date – date observer disembarks CV.
 - Embarkation Port – City or location observer disembarks the vessel
 - Return Date – Date observer returns to disembarkation port
 - Complete any comments.
 - This is an opportunity for the observer to report any non-compliances.
 - Complete the same information for reverse transhipments in the comments.
 - Comment on any changes to vessels schedules. This should be included in the body of the email sent to rop_reports@mrags.co.uk.
 - Comment on any changes to crew complement.

6.4 Photos and videos

Observers need to name and organise all photos in accordance naming convention. In addition, all photos will need to be appropriately tagged using Picasa photo software. The protocol to tag pictures using Picasa is outlined below. Detailed guidance is available in Appendix K: Tagging photos using Picasa.

- All pictures are tagged with the deployment request number and MRAG’s internal project code ZI0902 (ICCAT) / ZG2013 (IOTC);
- All pictures for each transhipment are tagged with the transhipment number and the vessel name. For non ROP transhipments tag them “Non-ROP1” and continue as such.
- Individual photos need to be tagged with a meaningful name. For required photographs the format to use is: Port / Starboard / Stern / VMS / Logbook / ATF / ATT / other (as appropriate). It is possible to have more than one picture with the same tag e.g. observers will have multiple pictures of the fishing logbook. In this case use a sequential number to differentiate.

Do not save poor quality pictures, accidental pictures, multiple pictures of the same subject or pictures of nice sunsets. Select the most representative pictures to meet the minimum requirements for each transhipment.

7 Transhipment operations

Observers will complete the following procedure for each transhipment. The transhipments will be numbered in chronological order (don't include non-ROP transhipments (in-port / inside of EEZ, baits and supplies)). If the observer takes a break of over 30 minutes (e.g. for food or sleep on exceptionally long transhipments) then a start a separate T4 IV and treat it as a new observation period.

1. Keep updated on the status of upcoming transhipments. Communicate with the captain and officers to determine when these will be. Not all vessels provide this information readily so remain prepared and well organised for a short notice transhipment operation taking place.
2. Prior to the transhipment (if given notice), check the vessel information from the observers database (this can be done retrospectively after completion of the transhipment if needed). Prefill the available information on vessel name, callsign, RFMO number, etc. from the database. Record the transhipment number (top right of the page), this will be chronological from the previous one. **Remember that only-ROP transhipments are to be observed. Non ROP transhipments are recorded as an Annex in the T4.**
3. While the FV is approaching and tying up verify the vessel name, IRCS and registration number (if marked on vessel). Take photographs of all markings and any other identifying features such as damage. Unless there is anything unusual restrict these to four photographs:
 - i. Whole vessel
 - ii. Bow
 - iii. Stern
 - iv. VMS antennae

4. Record latitude and longitude position at start and end of the transshipment in the T4.
 - a. For transshipments that occur near the equator make sure you record carefully whether it is north or south, while for transshipments in the Atlantic Ocean, make sure you record carefully whether it is East or West.
 - b. For transshipments that occur near EEZ boundaries make sure that the correct position is recorded on all data forms as transshipments within EEZs are a serious compliance issue.
 - c. Transshipment locations should be verified through a photograph of the GPS unit. This should include the minimum following information:
 - i. Deployment Number
 - ii. Transshipment Number
 - iii. Fishing Vessel Name
 - iv. Transshipment Start Date and Time (when they tie alongside)
 - v. Transshipment End Date and Time (when they separate – completed at the end)
5. Board the fishing vessel (see FV Boardings on how this is to be done) if it is safe to do so and complete the front page of T5 boarding report (See FV Boardings for instruction on how to do this). A number of photographs will need to be taken:
 - a. ATF
 - b. ATF + Language guide (in the language of the FV)
 - c. ATT (ICCAT only)
 - d. VMS unit
 - e. Logbook Front Cover
 - f. Logbook latest entry + last four pages.
6. Ask the captain of FV estimates of fish to be transhipped for T4 (iii). To be filled after the transshipment has finished.
7. Complete the back page of the T5, remark on any non-compliances and ask the captain to complete and sign section 6 and 7 of the back page.
8. Transfer back to your CV to begin observing the transshipment of fish. The observer will record this using the T4 IV.
 - a. The vessel will sometimes tranship cargo while you are conducting the boarding. This is okay. They will sometimes try to tranship fish before you have returned to the CV. If this is the case be insistent that they wait for you to get back before beginning the transshipment. The boarding should be completed in under 15 minutes.
9. Record the estimated number of fish by species and code, and, if a hook scale is used, weight of each string on T4(ii).
 - a. Roe and stomachs maybe transhipped in sacks.

- b. Shark fins maybe transhipped in rectangular bundles or sacks.
10. For partial fish products such as tuna roe, stomachs, belly meats or shark fins – use the general species group codes (i.e. TUN, SKH) given in General Data Form and Reporting Instructions. Summarise these types of products and record the estimated weights. If it is unclear what is in a particular sack get the winch operator to lower the net on to the deck so that the observer can check the contents.
 11. On completion of the transhipment record end time and position in the T4 (i). Take another picture of the GPS with completed date and time using the same note outlined above. Verify final transfer records from the FV and the CV for summary in the T4 (ii).
 12. In **all** cases of ROP transhipments the observer will sign and stamp the transhipment declaration. This will be prepared by the master of the CV to confirm that the transhipment was conducted and an observer was onboard.
 - a. Signing this does not mean that observer agrees or disagrees with the information in the declarations - it simply confirms that the transhipment has taken place while the observer was onboard. The observer can advise the captain of any errors in the TD. However, any discrepancies in the final version will be included in the final report. Any serious discrepancies may also be reported in the R2 or via InReach (if sensitive).
 - b. The observer may be asked to sign this before completion of the transhipment. This is again fine as the observer only indicates they were present.
 - c. The observer must receive a copy of the TD post transhipment. Either as an electronic scan or physical copy. The observer should photograph the TD after they have signed it.
 - d. The observer should not sign a blank TD.
 13. Reverse transhipments – record the details of any reverse transhipments in the same above format. Vessel boardings are required if transhipping between carrier vessel and fishing vessel. Not between carrier vessel and carrier vessel. Do not enter these into the database. Reverse transhipments will be entered at debriefing. Make comment in the observers notes and final report to be discussed at debriefing. Include why the reverse transhipment took place. Reverse transhipments should be reported in the comments of the R2.
 14. Post transhipment operations each day. The observer should:
 - a. Sum the total number of fish and weight for each species and product type at the bottom of the T4 (ii). Calculate an average weight (refer Weight Estimations: below). Summarise species, product code, number of fish and estimated weight in T4 (iii).

- b. Calculate the observer coverage for the transshipment.
- c. Complete any comments or notes regarding product transhipped, FV, etc.
- d. Note MARPOL and SOLAS violations, include comments in the database and final report (with photographs if possible and safe to do so)
- e. Record the transshipment number, FV name and RFMO number, date, position on the R2 for the current period (refer Report R2 – Observer 5-Day Report).
- f. Complete electronic copies of the T4 and T5 should be saved in the following format: ICCAT_RequestNo_VesselName_T4 / IOTC_RequestNo_VesselName_T4.
- g. Data should be entered from the T4 and T5 into the database. Follow the database guidance document for how to do this (Appendix M: Database Guidance and Data Entry).

8 FV Boardings

The following items are required to be inspected before and / or during a boarding of the FV, prior to the transshipment occurring, by the observer under ICCAT Recommendation 16-05 Annex 2 (6) and IOTC Resolution 18/06 Annex III (5) a) (refer Appendix D: ICCAT and IOTC Relevant Recommendation / Resolutions):

Before the vessel boarding

- I. Verify the vessel markings against the ICCAT Active Vessels List (AVL) / IOTC Record of Authorised Vessels (RAV).

During the boarding

- II. check the validity of the fishing vessel's authorisation to fish (ATF) tuna and tuna-like species and other species / sharks in the ICCAT Convention Area / IOTC area of competence;
- III. Inspect the fishing vessel's prior authorizations to tranship as sea from the flag CPC and if appropriate , the coastal state (ICCAT only);
- IV. check that the VMS is functioning and is tamper proof;
- V. examine the logbook, note the format, and verify entries / record the date of last entry;
- VI. check and note the total quantity of catch on board, and the quantity to be transferred to the carrier vessel; and
- VII. verify whether any of the catch on board resulted from transfers from other vessels, and check documentation on such transfers.

These boardings should only be carried out on those vessels transshipping tuna and tuna like species (i.e. not bait or supply only transfers). Observers do not have any authority to demand access to other documents or access to the hold of the FV. During the boarding the observer should fill in a boarding report (T5) a detailed explanation on how this is done is given below.

8.1 Boarding Vessels

Observers should only transfer to the FV when they consider that weather and sea conditions are safe enough, although the final decision on whether it is safe to perform a transfer rests with the Master of the CV. All transfers occur using the CV crane, normally on a crate surrounded by a cargo net.

The health and safety of the observer is paramount in this situation and if conditions are considered to be too dangerous, the observer should not cross over to the LSTLV. Safety gear (lifejacket, helmet and boots) is to be worn during the transfer, with the EPIRB and InReach Units stored in the observers bag.

In cases when it is not possible to transfer safely to the FV, the ATF, ATT and fishing logbook should be transferred to the CV via a handheld net for inspection, for verification.

During boardings, the observer should have available the T5 report and reference pack. In this will be a copy of the T5 in the Captain's language to ensure that the observer's requests are understood. In all cases, this language aid should be photographed alongside the vessels ATF. If you are unsure what nationality the Master of the FV is, liaise with the Captain of the CV before transferring.

8.1.1 Verifying Vessel Markings.

There is no clear protocol on how a vessel shall be marked, although the FAO Standard Specification for the Marking and Identification of Fishing Vessels is used as a guideline (refer Appendix F: Guidelines for Vessel and Gear Markings). However, at all times a vessel a vessel must be easily identifiable, without conflicting or misleading information. As such vessel markings should be clear and visible and consistent with information in the ICCAT AVL / IOTC RoV, and the vessel's ATF.

Box 1 ICCAT Recommendation 13-13 Requirements for vessel markings.

While there is no specific requirement for vessel markings within ICCAT, Paragraph 2 states 'Each CPC shall submit to the ICCAT Executive Secretary, the list of its LSFVs that are authorized to operate in the Convention area.....This list shall include the following information:

- Name of vessel, register number
- International radio call sign'

Box 2 IOTC Resolution 15/04 Requirements for vessel markings.

- Paragraph 14 'Each Contracting Party and Cooperating Non-Contracting Party with the IOTC shall ensure that its fishing vessels authorised to fish in the IOTC area of competence are marked in such a way that they can be really identified with generally accepted standards such as the FAO Standard Specification for the Marking and Identification of Fishing vessels.'

As such, in addition to examining compliance with ICCAT / IOTC CMMs during the boarding, the observer is also required to verify the vessel name and IRCS against those recorded in the relevant vessel register. Prior to boarding the vessel, the observer should note the vessel name and IRCS and confirm if it is the same as the RFMO vessel register. Note that there is no requirement to display the national registration number. However, if shown this must be consistent with both the information held in the ATF and the vessel register.

+ Verifying Vessel Markings		Marking on vessel	Same as RFMO record [1 - 4]*
Name	<input type="text"/>	<input type="text"/>	<input type="text"/>
<u>Callsign (IRCS)</u>	<input type="text"/>	<input type="text"/>	<input type="text"/>
*1 = Yes, clearly marked. 2 = Yes, markings unclear. 3 = No. 4 = Unknown			<input type="checkbox"/>

Enter 1, 2, 3, or 4 into the box next to the name and callsign. These are the same codes used for entering the information in the database.

- 1 the vessel markings are correct and clear to read.
- 2 the vessel markings are correct but not clear to read. This can mean they have been worn, partially worn, covered in dirt, rust algae and cannot be read.
- 3 the vessel markings are inconsistent with the vessel list.
- 4 the vessel markings are not present / not able to be verified.

8.1.2 Authorisation to fish and tranship

Under ICCAT 13-13 and IOTC Resolution 15/04 vessels are required to carry a valid authorisation to fish (ATF) on board at all times. In the case of ICCAT, vessels are also required to carry an authorization to tranship (ATT).

Box 3 ICCAT Recommendation 13-13 references related to ATFs.

Paragraph 5 c) The flag CPCs of the vessels shall:
...keep on board valid certificates of vessel registration and valid authorisation to fish and / or tranship;

Box 4 ICCAT Recommendation 12-06 references related to ATTs.

Paragraph 14 Transhipments by LSPLVs in waters under the jurisdiction of a CPC are subject to prior authorization from that CPC. An original or copy of the documentation of coastal State prior authorization must be retained on the vessel and made available to the ICCAT observer when requested.

Box 5 IOTC Resolution 15/04 references related to ATFs.

- Paragraph 7 c) ...keep on board valid certificates of vessel registration and valid authorisation to fish and / or tranship;
- Paragraph 13 a) i) [carry on board] ‘...licence, permit or authorisation to fish...’
- Paragraph 13 b) ‘verify above documents on a regular basis and at least every year.’
- Paragraph 13 c) ‘...modification...certified by the competent authority...’

The observer should confirm:

- the ATF is on board;
- that this matches the ATF flag state template (Refer Appendix G: Flag state ATFs for examples of different authorisations to fish);
- the ATF is valid and within date; and extends to the ocean the vessel is operating in.

- **In the case of ICCAT only**, check that the ATT is onboard; and,
- that the national registration number (NRN) is the same as that listed in the database.

1. Authorisation to Fish	
1a. Observer shown an ATF [Y/N/F**]: <input type="checkbox"/>	1b. ATF match Flag State template [Y/N] <input type="checkbox"/>
1c. Date of expiry: ___ / ___ / ___	1d. Area of operations: <input type="text"/>
1e. NRN same as RFMO record [Y/N]: <input type="checkbox"/>	1f. (ICCAT only) ATT on board [Y/N/F**]: <input type="checkbox"/>
**Faxed or emailed to CV after transshipment completed	

8.1.3 VMS

Vessels fishing for tuna and tuna like species in the ICCAT Convention and within the IOTC area of competence are required to have a VMS onboard.

Box 6 ICCAT Recommendation 14-09 references related to VMS.

Paragraph 1 ‘...shall implement a vessel monitoring system (VMS) for its commercial fishing vessels exceeding 24m length overall...’

Box 7 IOTC Resolution 15/03 references related to VMS.

Paragraph 1 ‘...shall adopt a satellite-based vessel monitoring system (VMS) for all vessels...’

Under the ROP, observer tasks under include checking that a VMS is functioning. However, in practice it is not possible for observers to check this. Instead observers need to check:

- for the presence of a VMS;
- if a power light is on (irrespective of colour); and
- verify the make and model of the VMS using the codes in Appendix D.

Please note that some models, such as the Thrane & Thrane TT3022D, do not come with an indoor unit as the unit is built into the antennae on the roof. As such it may be difficult to verify. Additionally, with the number of new units entering the market, any unidentified VMS units need photographs showing, make, design and model details. Refer to Appendix H: VMS units and codes for examples of different VMS units and relevant codes. Not all VMS units in the guidance document will be used with the photographed VMS antennae, be aware that some vessels will use different combinations.

2. VMS	
2a. VMS shown to observer [Y/N]:	<input type="checkbox"/> 2b. VMS power light on [Y/N/U]: <input type="checkbox"/>
2c. VMS make and model:	<input type="checkbox"/> (For codes see guide)

When taking photographs of VMS units ensure that the display lights on the VMS units are visible. If no display light is shown, the photo does not prove that the VMS was on.

8.1.4 Logbook

Fishing vessel logbooks are required to be either electronic or bound and are also required to contain all data filed as outlined in ICCAT Recommendation 03-13 and IOTC Resolution 15/01.

Box 8 ICCAT Recommendation 03-13 references related to logbook.

'All commercial fishing vessels over 24 m length overall shall keep a bound or electronic logbook recording the information required in the ICCAT Field Manual for Statistics and Sampling.'

Box 9 IOTC Resolution 15/01 references related to logbook.

Paragraph 3 'All vessels shall keep a bound paper or electronic logbook to record data that includes.... the information and data in the logbook set forth in **Annex I, II and III.**'
 Paragraph 4. 'Each flag CPC shall submit to the IOTC Executive Secretary...a template of its official logbooks...'

The observer should:

- verify the presence or absence of a fishing logbook;
- determine the type (paper / computer / none);
- ***In the case of IOTC deployments***, determine whether it matches the flag state template (refer Appendix I: Logbook templates);
- whether it is bound;
- whether it is consecutively numbered; and
- the date of last entry.

3. Logbook	
3a. Shown to observer [Y/N]:	<input type="checkbox"/> 3b. Type [<u>P</u> aper / <u>C</u> omputer / <u>N</u> one]: <input type="checkbox"/>
3c. (IOTC only) Matches Flag State template [Y/N/U]:	<input type="checkbox"/> 3d. Bound [Y/N/U]: <input type="checkbox"/>
3e. Pages numbered consecutively [Y/N/U]	<input type="checkbox"/> 3f. Date of last entry: ___ / ___ / ___

Observers should take a single clear photo of the most recent logbook page. In addition, observers are required to take five further pictures of the last entry into the logbook and the preceding four pages.

8.1.5 Catch on board

In addition to the above, the observer should also ascertain the total quantity of fish before and after transshipments and whether transshipments from other vessels had occurred. In the case of ICCAT, the observer should try and obtain specific information on the catch onboard by species and stock.

Box 10 ICCAT Recommendation 16-15 references related to verifying catch onboard before and after transshipment.

Annex 2, Paragraph 6 'The observer tasks shall be, in particular, to:'
c) 'Check and record the total quantity of catch on board by species and, if possible, by stock, and the quantities to be transhipped to the carrier vessel'; and
e) 'Verify whether any of the catch on board resulted from transfers from other vessels, and check the documentation on such transfers'.

Box 11 IOTC Resolution 14/06 references related to verifying catch onboard before and after transshipment.

Annex III, Paragraph 5 'The observer tasks shall be in particular to:'
a) ii 'check and note the total quantity of catch on board, and the quantity to be transferred to the carrier vessel'; and
a) iv 'verify whether any of the catch on board resulted from transfers from other vessels, and check documentation on such transfers'.

Note, as per above LSPLVs in ICCAT must now record species by stock if applicable as per Box 12 below and Appendix J: ICCAT stock boundaries.

Box 12 ICCAT species stocks and associated codes.

BFT – northern Bluefin tuna – *Thunnus thynnus*

- **BFT-E:** Eastern and Mediterranean management units
- **BFT-W:** Western stock

ALB – albacore – *Thunnus alalunga*

- **ALB-N:** Northern stock
- **ALB-S:** Southern stock
- **ALB-M:** Mediterranean stock

SWO – swordfish – *Xiphias gladius*

- **SWO-N:** Northern stock
- **SWO-S:** Southern stock

- **SWO-M: Mediterranean stock**
- BET – bigeye tuna – *Thunnus obesus***
 - All Atlantic
- YFT – yellowfin tuna – *Thunnus albacares***
 - All Atlantic
- SKJ – skipjack tuna – *Katsuwonus pelamis***
 - SKJ-E: Eastern stock
 - SKJ-W: Western stock
- SAI – Atlantic sailfish – *Istiophorus albicans***
 - SAI-E: Eastern stock
 - SAI-W: Western stock
- SPF – Longbill spearfish – *Tetrapturus pfluegeri***
 - SPF-E: Eastern stock
 - SPF-W: Western stock
- BUM – Atlantic blue marlin – *Makaira nigricans***
 - BUM-N: Northern stock
 - BUM-S: Southern stock
- WHM – Atlantic white marlin – *Tetrapturus albidus***
 - WHM-N: Northern stock
 - WHM-S: Southern stock
- All other ICCAT species (sharks, other billfishes, small tunas, others spp.) from 5 geographical areas.**
 - AT-NE
 - AT-NW
 - AT-SE
 - AT-SW
 - MED

The observer should obtain from the captain:

- the total catch onboard before transshipment;
- the total to be transhipped to the CV;
- the amount (if any) of tuna transhipped from other vessels; and
- the total after transshipment.

4. Catch on board			
4a. Total before transshipment:	<input type="text"/> t	4b. To be transhipped to CV:	<input type="text"/> t
4c. Transhipments from other vessels***	<input type="text"/> t	4d. Total after transshipment:	<input type="text"/> t
***If transhipments have come from other vessels, check authorization.			

During inspections, if the observer is able to communicate adequately with the FV Master, the observer should also get the species breakdown of the catch remaining on board.

Remember, observers do not have any authority to demand access to other documents or access to the hold of the FV.

8.1.6 Completion of boarding

Upon completion of the boarding, the observer should comment on any observations of possible non-compliance with the CMMs.

5. Observer comments		
5a No non-compliance was observed (Put an X through as appropriate)	Y	N
Following potential non-compliance(s) was / were observed:		
5b Vessel Markings (Put an X through as appropriate) Comment:	Y	N
5c Authorization to Fish / Tranship* (Put an X through as appropriate) Comment:	Y	N
5d VMS (Put an X through as appropriate) Comment:	Y	N
5e Fishing logbook (Put an X through as appropriate) Comment:	Y	N
5f Catch on board includes undocumented transhipments (Put an X through as appropriate) Comment:	Y	N
5g Other (Put an X through as appropriate) Comment:	Y	N

*ICCAT only

Finally, the observer should provide the LSTLV Captain with an opportunity to make any comments on the boarding report findings in their own language. The observer should then sign and stamp the form and ensure that the Captain countersigns. If it is practicable, make a copy of the completed boarding report form and pass this back to the LSTLV.

6. Comments from the LSPLV / LSTLV Captain

Dear Captain,

If you have any comments on this inspection or the recordings of this report, please feel free to express your opinion here in your first language (e.g. Japanese).

--

7. LSPLV / LSTLV Captain*

Print name:		Signed:		Date, time	__/__/__, __:__
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8. Observer

Print name:		Signed:		Date, time	__/__/__, __:__
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*The signature of the boarding report by the Captain of the LSPLV / LSTLV does not mean that the Captain accepts the content of the report but acknowledges that the boarding report was shown to the Captain.

8.1.7 Boarding photos

Photographs are to be taken of all of the articles listed above for verification. Photographs required before and during boardings are;

- The FV, its bow, stern and stack insignia (if present);
- Authorisation/licence to fish;
- VMS unit (and if required the outside aerial unit);
- A minimum of five most recent pages of the fishing logbook;
- Any other relevant documentation, for example prior transshipment declarations relevant to catch on board; and
- Any interesting features (such as shark fins or former names painted over but still visible, or other identifying characteristic).

Observers are required to record the number of photographs taken during a boarding. In order to easily sort and track pictures taken by observers, all relevant pictures taken on the cruise must be tagged using Picasa (refer Appendix K: Tagging photos using Picasa).

9 Mid-Deployment Observer Duties

9.1 Priority Mid-Deployment Duties:

The main purpose for deploying observers aboard transshipment (carrier) vessels is to track at sea transshipment operations between FVs and CVs as outlined in ICCAT Recommendation 16/15 and IOTC Resolution 16-06 (refer Appendix D: ICCAT and IOTC Relevant Recommendation / Resolutions). The list of essential duties for observers on board CVs operating in the assigned ROP Convention Area(s):

- 1) Record and verify identification information and other identifying characteristics of all transshipping FVs.
- 2) Record and verify the times and positions of all transshipments.
- 3) Sign transshipment declaration documentation on observed transshipments.
- 4) Record and verify the species and product types transhipped, estimating numbers and estimating and/or verifying weights.
- 5) Issue periodic reports upon all transshipments.

Though observers should be equipped and able to complete all mid-deployment duties, they should know their priorities well and not jeopardize the completion of higher priority duties for the sake of completing less-essential duties.

Each day an observer is onboard the vessel there are three main duties that will be completed daily:

- a) Take daily position with heading and speed (same time each day if possible)
- b) Determine the ETA for next stop and/or next transshipment
- c) Record in Daily Observer Log notes regarding the day's activities.

9.2 Observer Daily Log:

Regardless of whether or not transshipment operations occur, there are certain important tasks that observers will complete on a daily basis throughout their entire deployment. The observer daily log is a day-by-day record, maintained privately by each observer, in regards to all professional activities occurring among the course of the observer's deployment.

The following information will be recorded in the observer daily log:

- Position, course, and speed of CV, preferably taken at the same time each day (i.e. noon). position and date, can act as the header to each day's log.
- Estimated date of upcoming transshipments and other activities, including an ETA for the next port stop as the dates are made available or adjusted.
- Other (than fish transshipments) cargo transshipments (i.e. goods, fuel, crew).
- Potential violations, vessel problems, and interpersonal conflicts.
- Anything else of professional noteworthiness, such as:
 - Important correspondences with the contractor.

- Professional planning.
- Issues concerning job performance.
- Marine mammal, seabird, and other professional interest sightings.

The daily log will be considered a professional document. Always use detailed, appropriate, clear, and precise language when drafting entries. Observers do not need to maintain a hard copy of their observer daily log.

The observer daily log will be completed digitally as a Word document:

- Create log as a MS Word document.
- Enter header information, where xxx is the RFMO request number. The observer will enter their name and vessel name in format:
ICCAT / IOTCxxx Observer Daily Log: observer name; M/V vessel name;
- Save the file entitled in the following format: ICCAT / IOTCxxx – Daily Log, with ICCAT / IOTCxxx as the relevant RFMO request number.
- Enter the file name in the footer of the document.
- Save this running file with each entry.

Below are some examples of a typical entry in a Daily Log:

MM/DD/YY

Position: xx.xx N/S, xxx.xx E/W; Speed: x.x knots; Course: xx°xx

Flew from London to Singapore via Doha today. Upon arriving, was greeted at the Changi by the vessel agent, Henry from Trimarine group (number (xxx) xxxxxxxx). As it was late was taken to hotel to join the vessel the next day. Arranged to meet the agent at 09:00 the next morning at reception.

MM/DD/YY

Position: xx.xx N/S, xxx.xx E/W; Speed: x.x knots; Course: xx°xx

Steaming to the next scheduled transshipment, ETA on MM/DD/YY

MM/DD/YY

Position: xx.xx N/S, xxx.xx E/W; Speed: x.x knots; Course: xx°xx

The vessel bunkered with the LSPLV Tuna Queen. No fish was transhipped. Photos were taken of the LSPLV bow, stern and overall. IRCS and vessel name match that given in the ICCAT database. Records of this non-ROP transshipment will be provided in the annex of the final report.

MM/DD/YY

Position: xx.xx N/S, xxx.xx E/W; Speed: x.x knots; Course: xx°xx

1. Transshipments with the LSTLV Neptun No. 2. The vessel was boarded and compliance with IOTC CMMs was assessed. There were no issues. No SBT was transhipped. The amount transhipped was XXT with the amount estimated by the observer to be XXT. Refer T4 IOTC378T4_3.

9.3 Pre-Transshipment Planning:

The number of transshipments may vary greatly on trips. Transshipments are typically segmented, for instance vessel may have a long steam to a certain area where a series of transshipments will occur. The vessel will steam for a couple of days to a new location and take more transshipments. The vessel may continue this pattern throughout the deployment before steaming on to the port of disembarkation.

Prior to transshipment operations, there are certain actions to help plan for transshipments and ensure successful completion of mid-deployment duties:

1. Observer will visit the wheelhouse at least once per day to obtain location information and to liaise with vessel officers in regards to any updates in transshipment plans.
2. Once a transshipment is scheduled:
 - a. Record identification details the CV has on file for that vessel;
 - b. Verify FV is registered in ICCAT / IOTC by consulting the relevant vessel list and e-mail the Consortium if vessel not present. The Consortium will relay any recent updates to vessel list to observer; and
 - c. Check the boarding history of the FV in the observer database and make notes of any previous findings. Also make a note of previous VMS, ATF validity and logbook type recorded.
3. Keep a list (with schedule information) of all FVs the CV plans to tranship with, updating the list as plans change.
4. Fishing vessels may provide notification of species and weights to be transhipped. This can be useful when the observer is conducting observations of species to look out for. Most importantly, of when southern bluefin tuna is being transhipped.
5. Prepare all needed gear for deck work, ensuring that:
 - a. have all deck-use paperwork ready, with all known FV information completed beforehand;
 - b. have notes of previous boardings made and ready to reference if required;
 - c. All batteries are charged for digital camera;
 - d. Health and safety equipment ready and at hand; and,
 - e. Dress appropriately for the conditions at hand- sunscreen, sunglasses, floppy hat, and lots of water, or rain gear as conditions warrant.

9.4 Transshipping Safety and wellbeing:

When on deck, be keen to anticipate potential hazards, such as:

- Unforeseen factors necessitating the sudden separation of vessels.
- Cables under tension.
- Cargo or rigging moving about overhead.
- Strings of product dangerously swinging about in rough weather conditions.

- The bites of mooring lines.
- Nylon loops (used to string fish together) which can be slippery if stepped upon.

Stay out of the crew's way as much as possible, while maintaining the ability to signal them easily when need be. Map the best observation point(s) to conduct observations avoiding the direct sunlight and high traffic zones. Often a good location is under the cover of the mast house near the cargo hold to be loaded.

9.5 General notes on transshipment practices:

There are no general rules for how products are transhipped and there are many variables to consider. It is good practice to liaise with the CV crew and/or the FV vessel Captain prior to transshipment to get an idea of which species and approximate number of metric tons (by species) of product they intend to tranship. Find out how (hold to hold, deck to hold, etc) and where (which hold) they intend to conduct the operations. It is quite common for different species to be separated between the CV's holds and this information can be gathered prior to the start of the transshipment.

There are two main ways that product are hoisted over:

- All strings moved with CV equipment: hoisted directly out of the FV cargo hold, swung over, and then lowered into the cargo hold of the CV
- Strings/cargo net loaded on the deck of the FV with their equipment. Then, with CV equipment, hoisted, swung over, and lowered into the cargo hold of the CV.

Products are generally transhipped in strings, though cargo nets may be used throughout or just for a portion of operations. For instance, a mix of small fish, is often found towards the end of operations, may be hoisted over in nets because stringing together small fish may be too time consuming. Certain species, such as oilfish will always be transhipped in a cargo net. Products may be predominately separated by species and species groups throughout an entire transshipment. Generally, there is some mixing among species/species groups and the severity of mixing can vary greatly from one transshipment to another and even within one transshipment.

The per string average may vary greatly, but a normal number of fish per string ranges from 10 to 30, with sometimes more than 50-60 fish in a string. Additionally, the use of nets may significantly inhibit counts and identification. Where nets are used it is best to try and identify and count the fish as it is being removed from the FV hold and arranged on the net.

9.6 Species Identification and Tallying Estimations:

Species identification of frozen fish (of various product types) will always be limited as compared to freshly caught, pre-dressed fish. The variable nature by which product is transhipped from one transshipment operation to another and even within a single transshipment operation (as discussed above) can have significant influence on observers' methodology and in the ultimate effectiveness of successfully identifying and tallying transhipped product. Prior experience working with pelagic (tuna and/or swordfish) longline fisheries and increased transshipment observer experience will greatly help the observer's species identification and tallying of product.

Note: While the observer may be able to request that a string is lowered from time to time to more accurate estimate of species compositions, it is important that the observer does not adversely affect the transshipment operations.

Observers should not expect their species identification and tallying functions to be as accurate as with more ideal circumstances:

- Use best judgment and utilize all the tools available;
- Identify, minimize and take into account limiting factors that influence identification and tallying.
- Follow training on how to quickly identify and tally species.
- Maintain detailed records of all influences upon the accuracy of collected data, as well as any adjustments made to the observation methodology in order to account for such influences.

Observers will tally product by species and species groups. Products should be identified down to the most precise grouping (coding) where possible, however, regularly they will need to classify fish products under more general groupings (codes). See the selection of commonly used species group codes in the General Data Form and Report Instructions above (for tuna, sharks, billfish, and other unclassified fish species) that may be helpful.

There are multiple tools available for completing species identification and tallying duties:

- **Digital Camera:** photo and video footage of strings can help verify species identification and tally estimations
 - Especially useful for large and/or highly mixed strings
 - Pictures and video can be reviewed multiple times in between strings.
 - For further verification, retain footage to review on a computer after transshipment operations are complete.
 - Observers can save footage of pictures of product they have trouble identifying, to be later reviewed during debriefing.
- **Thumb Counter:** counters can be very useful for tallying transhipped products. This should be used for the main species in a string or net. A thumb counter will allow the observer to focus on different products and species on a mixed string.
- **Deck Forms:** It is recommended that the observers has other blank T4 forms on a clipboard for tallying, taking notes, and for particularly lengthy transshipments.

It is important that the observer accurately notes the processing code. The five main processing codes that the observer will encounter are LW/RD (whole), DR (partially processed, including, but not limited to head off or partially removed, gilled and gutted, tails removed), FL (completely dressed fish, parted into fillets), SF (shark fins) and OT (Any other processing, including but not limited to tuna roe, highly processed fish such as dried fish, fish loins, meat, oil). In cases where the observer is unable to determine the product being transhipped, the code OT should be used.

The observer should also be aware that processing codes can vary both between RFMOs, and between flag states within RFMOs. A list of the codes and associated descriptions used in the ROP, as well as alternative codes and descriptions that the observer may encounter, are shown in Table 1.

Some species/species groups may be transhipped as multiple product types. Be sure to record all product types for each species/species group recorded (per string and for “Observer Fraction” on the T4(ii)).

Table 1: ICCAT and IOTC product codes

ROP Product code	ROP Product type description	Other product codes used	Product type description
LW	Live weight	WHO (IOTC)	Fish frozen in whole state
		RWT (ICCAT)	The whole weight of an individual fish before it is processed.
		RND (IOTC)	Unprocessed
		RD (IOTC)	Rounded weight (fins may be off, though trunk not dressed/processed at all; whole)
DR	Dressed weight (gilled-and-gutted and/or headed and/or tailed and/or fins-off, etc.)	DWT (ICCAT).	Dressed weight (gilled, gutted, part or all of head off, fins off)
		GWT / (ICCAT)	Gilled and gutted (tails and fins off, head sometimes present)
		GGT (IOTC)	Gilled and gutted (tails and fins off, head sometimes present)
		HDD (IOTC)	Dressed carcasses with head and fins off, and caudal peduncles present.

ROP Product code	ROP Product type description	Other product codes used	Product type description
		PDD (IOTC)	Dressed carcasses with head and fins off, and caudal peduncles off.
GG	Gilled and gutted	GG (ICCAT)	Gilled and gutted
FL	Fillet (completely dressed fish, parted into fillets)	FIL (ICCAT)	
ST	Steak	ST	Tuna Steaks
SF	Shark fins (a partial product usually shipped in bundles)		
OT	Other (any other product, such as tuna roe, highly processed tuna products)		

Proportioning

The following tips are listed to assist observers with proportioning tasks associated with deriving weights from “declared” average weights:

1. For proportion only, it is acceptable to visually estimate relative average weights of the various species/species groups that fall under the assumed declaration.
2. For instance, observer tallies 10 opah (OPA) and 10 billfish (BIL) that are declared as “other” on Declaration. From estimations, the average weight of BIL is significantly larger than that of OPA. Use the given average weights for any species where an average weight cannot be calculated. In exception, if the observer feels the weight is significantly larger or smaller than that of the average transhipped then the observer can use the upper or lower limits given in section 6.1.
3. Certain products such as shark fins, tuna row, and tuna stomachs may come on board in bundles or sacks. Estimate the average weight of the bundles or sacks that these products are transhipped in. Then multiply the average weight by the number of bundles/sacks tallied to find their proportion among the “other” species.
4. Justify all proportioning with notes.

9.7 CCSBT Transhipment Program for transhipment of Southern Bluefin Tuna.

The CCSBT Catch Documentation Scheme (CDS), which started in January 1 2010, has had a minor impact on the work of transhipment observers for transhipments of SBT at sea. As per the CCSBT Resolution of the Implementation of a CCSBT Catch Documentation Scheme (*revised at the Twenty-First Annual meeting: 16 October 2014*) (Appendix L: CCSBT Resolution on Catch Documentation Scheme), all transhipments, landings of domestic product, exports, imports and re-exports of SBT must be accompanied by the appropriate CCSBT CDS Document. The CDS Resolution also requires that each SBT that is transhipped, landed as domestic product, exported, imported or re-exported must have a uniquely numbered tag attached to it.

There are a number of different CDS forms which depend on the type of operation being carried out. In the case of a transhipment at sea, the form is a Catch Monitoring Form (CMF). This same form is also in the found within the CDS resolution. The Catch Monitoring Form is made up of a Catch / Harvest section, an Intermediate Product Destination section, and a Final Product Destination Section. A copy of the

9.7.1 Verification of SBT Catch Monitoring Form

In the cases of transhipments at sea, the observer must enter his/her full name, signature and date (dd/mm/yyyy), as specified by the CCSBT Resolution on Establishing a Program for Transhipment by Large-Scale Fishing Vessels (*revised at the Twenty-First Annual meeting: 16 October 2014*), in the Intermediate Product Destination Section (refer Figure 1). Observers should take a photograph or photocopy of the CMF and CTFs after they have signed and stamped it.

Note, that in the case of transhipments, the CMF records the amount of SBT being transhipped, NOT any of the amount that may be remaining on board the FV.

• INTERMEDIATE PRODUCT DESTINATION SECTION - (only for transhipments and/or exports) - tick and complete required part(s)				
<input type="checkbox"/>	Transhipment Certification by Master of Fishing Vessel: I certify that the catch/harvest information is complete, true and correct to the best of my knowledge and belief.			
	Name	Date	Signature	
	Name of Receiving Vessel		Registration Number	Flag State/Fishing Entity
And / Or	Certification by Master of Receiving Vessel: I certify that the above information is complete, true and correct to the best of my knowledge and belief.			
	Name	Date	Signature	
	Signature of Observer (only for transhipment at sea):			
	Name	Date	Signature	
<input type="checkbox"/>	Export Point of Export*			Destination (State/Fishing Entity)
	City	State or Province	State/Fishing Entity	
	<small>* For transhipments on the high seas, enter the CCSBT Statistical Area instead of State/Fishing Entity and leave other fields blank.</small>			
	Certification by Exporter: I certify that the above information is complete, true and correct to the best of my knowledge and belief.			
	Name	Licence No. / Company Name	Date	Signature

Figure 1: Intermediate Product Destination Section of the CCSBT CMF.

Note, signing the form is obligatory, and only confirms the observer’s presence and that the completed sections (catch/harvest section and transhipment part of the intermediate product destination section) of the CMF document have been examined.

However:

- The observer’s transhipment report should record any discrepancies between the observed details and the details recorded on the CMF form (particularly discrepancies in weights or number of SBT, catching vessel details, transhipment vessel details, or dates);
- It is preferable for discrepancies to be sorted out at the time of transhipment, but this is up to the discretion of the observer and the perceived nature of the discrepancy (e.g. accidental mistake or otherwise);
- For discrepancies that cannot be sorted out at the time of transhipment, the CCSBT is investigating ways of providing early notification to flag States and Fishing Entities of such discrepancies so solutions may be found more easily. Currently, any discrepancies can be completed under the comments section on the R2 form, (the R2 form includes a field so the observer can record if a CMF was present – refer Report R2 – Observer 5-Day Report:).

9.7.2 Transhipments and SBT Tags

All whole SBT transhipped are required to have a uniquely numbered tag to be attached to it. Any transhipments where SBT are observed to be without tags should be recorded in the observer’s report.

The observer should determine whether tags were present and identify the serial number given on the tag. Observers are required to record all tag numbers of SBT transhipped and

verify this information with the CTF and CMF. Practicably, this may not be possible at a distance, and would significantly impact on transshipment operations. It is recommended that the observer should at least record a proportion of the tag numbers transhipped and ensure these fall within the tag numbers declared on the CMF and CTF.

This can be done by asking the winchman to lower a string of SBT to the carrier vessel deck. The observer can then take photographs of the tags up close and verify that a sampled number of tags fit within the range declared. Vessels can tranship 100 SBT or more than 1000 SBT in a single transshipment. It is therefore recommended that the observer sample up to 20 fish for 100 transhipped and more than 20 individuals for greater than 100 fish. Again, the number is determined by the observers judgement and the amount practicably sampleable.

Further information and example pictures are available in the guidance document under Appendix L: CCSBT Resolution on Catch Documentation Scheme.

9.8 Post-Transshipment Duties:

Observers will complete post-transshipment duties as soon as possible following the completion of transshipment operations. Below are the post-transshipment observer duties:

- Use photo, video, and/or voice-recorder media as needed for verifying any collected information, such as:
 - Vessel identification;
 - Species identification;
 - Tally figures; and
 - Potential violations including RFMO CMMs and MARPOL.
- Label and save media using proper file name format (i.e. photos, video) in a digital folder and complete Photo Log;
- Verify final transfer records from the FV and the CV ;
- Complete hard copy of the T4 form ;
- Enter data into electronic T4 report;
- Enter the data into the database; and,
- Enter transshipment information into the R2 report.

10 End-Deployment Reports

10.1 Form R4 – End of Trip Report

Observer will complete an R4 report for each deployment (refer Appendix B: Observer reporting forms and logbooks). A template is provided with headings, some narrative and instructions. Observers will use their daily log, forms, reports and database to add the required information. In order to give the captain an opportunity to comment on the report, an initial draft report will be submitted prior to disembarking vessel. Observer will emphasize the report is a draft only and the captain can submit any comments to the Consortium or the observer within five days of receiving it.

The observer must also submit a draft report during their debriefing session; this will be reviewed along with health and safety issues, conditions onboard and ease of performing observer duties. The Consortium will combine any comments from the master of the CV, edit the report and submit to the IOTC secretariat.

10.1.1 Guidelines for Completion

Use the electronic template when creating the cruise final report. The following general points will be considered when writing the report:

- The observer report is a means of presenting all work carried out by the observer in a clear and concise format. All information requested is essential and will be used for assessing vessel compliance.
- The report, together with the data set, also provides a standard format for evaluating observer performance.

- All final reports and data are submitted to the IOTC Secretariat, the report is the road map to the data set.
- It is essential that observers dedicate sufficient time and effort to both writing and editing R4 cruise reports. Report quality not only reflects upon the professionalism of the observers, but also upon the program.

The ROP requires that observers provide an opportunity for the Master of the vessel to contribute to or comment on the trip report. To enhance transparency, the Consortium recommends that as standard:

- A draft copy of the report will be provided to the Master prior to the Observer leaving the vessel.
- The observer will bring to the Masters attention the relevant section of the ROP relating to records/reports.
- The observer will respond to any (reasonable) request from the Master to include information in the report.
- When submitting report to the Master, observer will indicate that the report is a draft only and that some changes may be made by MRAG to the final report.
- The report will provide contact details of the Consortium with instructions that the Master must submit contributions to the report within 5 days.

10.1.2 Political Issues and Violations

If RFMO CMMs are contravened, accurately document any observations and include them in the table listing observations during the transshipments. Photographs of any potential infringements will also need to be included in this table. The observer will not state that the vessel was in breach of “rule xxxx”, but simply report factually the details of what occurred.

Items of a sensitive nature such as MARPOL violations, suspected fish laundering, safety concerns, etc. will be placed in an addendum to the report at this time. The addendum will not be a part of the main report given to the Master of the vessel. If an observer has questions regarding the sensitivity of a subject, please confirm with the Consortium before including in the main body of the report.

It is not the observer’s responsibility to provide any judgment of the vessel activity. The ICCAT / IOTC Secretariat will determine if further action is required. As such it is important that any such observations and reports are clear and concise and supported by objective evidence.

10.1.3 Technical Points

- a) Restrict the report to ROP tasks only; if in doubt include details in an annex.

- b) Write the report in third person, past tense. For example, “The observer measured” rather than “I measure”.
- c) Check the document with an English UK spell-checker.
- d) Ensure that spellings and names used are correct.
- e) Use the appropriate terminology for species, vessels etc.
- f) All scientific names used will be in italics, genus capitalized, species lower case, e.g. southern bluefin tuna (*Thunnus thynnus*).
- g) Common names, unless proper nouns (for example Indian Ocean), will all be written in lower case and the IOTC recognized scientific name will follow, when mentioned for the first time in the report. e.g. southern bluefin tuna (*Thunnus thynnus*)
- h) When referring to fish species, use the scientific name, when possible. If a scientific name is repeated, contract the genus to a single capitalized letter followed the species as usual e.g. *T. thynnus*.
- i) Ensure that values stored in the e-reports match those included in the report; compiling the report will allow a review of inputted data and check for typos or omissions made whilst at sea.
- j) Ensure that comas (,) are used to separate 1,000s and full stops (.) are used as decimal points
- k) Once complete, set the report aside for a day and then re-read it with a fresh perspective and a critical eye. If possible, ask someone to proof read it. Remember this is a report and flippant language is to be avoided.
- l) Do not manually change the weight units (tonnes or kg) used in database outputs. In most cases, weights will be in tonnes. Be aware that table 3 (comparison of vessel and observer figures) outputs are in kg for IOTC but tonnes for ICCAT. This reflects the preferences of the client.

10.2 Vessel-Internal Report

In an attempt to build a record for future observers, the Consortium is asking all observers to create a ‘How To Guide’ for each vessel. The guides will be provided to the subsequent observers on the vessel, who will update with any changes.

Please record the following items:

- Electrical outlet type;
- Communication facilities (fax, email);
- Scanner availability;
- Satellite phone;
- Use of USB drives/Attachments/Printing;
- Safety observations and concerns;
- Meals (times and observations);
- Vessel store and currency;
- Location of cabin;
- Toilet and shower facilities;
- Suggestions of things to bring (towels, bed sheets); and

- Other miscellaneous instructions / observations

11 Disembarkation

Upon completion of transshipment activities, observers will jointly notify their coordinator and the vessel's agent in the port of destination of the ETA in the port of disembarkation. The Consortium, liaising with the vessel agent, will provide hotel, connections and flight information. The observer should notify the consortium ahead of their arrival to port and keep the consortium updated with ETAs.

12 In Port Stays

The observer is welcome to enjoy an in-port stay, the vessel will sometimes stop in different ports along its route to resupply or conduct in-port transshipments. It is the privilege not the right for an observer to go ashore while on deployment. This is considered one of the observers highlights for the trip and will be encouraged where possible. However, it remains at the consortium and vessels discretion to do so.

Should the vessel wish to put the observer ashore, then it is upon the vessel to provide suitable accommodation and expenses occurred by the observer can be expensed to the consortium who will charge this back from the vessel operator. Should the observer wish to go ashore, then they will have to provide their own accommodation and cover their expenses. The observer will continue to be paid at the full sea day rate; expenses however will not be covered. It is both the obligation of the observer to remain in contact with the vessel and vessel agent daily, maintaining a constant readiness to reembark at short notice. More information covering roles and responsibilities is provided under the conditions of the MoU.

13 Debriefing

Upon return observers will be expected to visit the Consortium office for a debriefing session. Observers should have a first draft of their final reported, ready to submit to the observer coordinator . The observer should also highlight any issues or question marks in the report. This provides an opportunity for any outstanding matters in the report to be addressed. Observers will be expected to have the following completed prior to debriefing:

- R4-Final Report completed;
- All R1, R2, T1, T2, T3, T4 forms imputed into e-reports;
- All pictures correctly labelled and archived in the Picture Log;
- Daily Notes and Transshipment Declarations in order; and
- Gear cleaned, packed and ready to return.

Observers are to place all e-reports and files in the following file format, where ICCATxxx / IOTCxxx is the RFMO request number for the current cruise. An example folder structure is given on the USB at briefing and should be used for organising deployment outputs.

Appendix A: MoU

Appendix B: Observer reporting forms and logbooks

Appendix C: IOTC and ICCAT Species guides

Appendix D: ICCAT and IOTC Relevant Recommendation / Resolutions

Appendix E: PNC's Instructions and Forms (ICCAT only)

Appendix F: Guidelines for Vessel and Gear Markings

Appendix G: Flag state ATFs

Appendix H: VMS units and codes

Appendix I: Logbook templates

Appendix J: ICCAT stock boundaries

Appendix K: Photograph Guidance and Tagging photos using Picasa

Appendix L: CCSBT Resolution on Catch Documentation Scheme

Appendix M: Database Guidance and Data Entry