REGIONAL OBSERVER SCHEME – DRAFT PROGRAMME STANDARDS

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ABOUT THIS REVISION

This document takes into account additional late comments received from France OT.

PURPOSE

To provide the Commission with the final draft Regional Observer Scheme standards2024 for its consideration and prospective adoption.

BACKGROUND

In 2011 the IOTC agreed to the creation of a Regional Observer Scheme (ROS) to collect verified catch data and other scientific data related to the fisheries for tuna and tuna-like species in the IOTC Area through the implementation of national programmes (refer to IOTC Resolution 11/04 On a Regional Observer Scheme). In 2016, the IOTC adopted Resolution 16/04 On the implementation of a pilot project in view of promoting the Regional Observer Scheme of IOTC. This project would aim to enhance the implementation of the Resolution 11/04 on a Regional Observer Scheme and to raise the level of compliance to the implementation of Resolutions 15/01 and 15/02, respectively (on the recording of catch and effort data by fishing vessels; and on mandatory statistical reporting requirements).

Since 2011, a vast array of observer initiatives, with different training curricula, data collection methods and procedures have been developed across the Indian Ocean by a range of organisations. As a result, an assortment of data of varying quality are being collected and reported, and overall there has been a lack of conformity with IOTC mandatory data requirements. The Secretariat has received several requests for accreditation or recognition of national or sub-regional data collection programmes. However, there is currently no formal mechanism in place through which to do this, or a concrete and auditable set of standards against which programmes can be assessed.

The implementation of an observer training programme has to move forward

In October 2018, the EU provided funds (around USD 850,000) to develop and implement a comprehensive and effective training programme to support the implementation of the IOTC Regional Observer Scheme. This project is due for completion in March 2021 and needs the ROS standards to work from.

The ROS standards include a process to assess national observer programmes in terms of their compliance with IOTC standards. Extrabudgetary funding for this ongoing activity is currently available until the end of 2020; however, after this time, alternative funding will be required.

Draft standards required for the observer training programme have been developed and reviewed

A set of draft Programme Standards and Guidelines has been developed through the following process:
2018 March — draft standards developed by an independent consultant
2018 September — review of the standards by an IOTC Expert Review workshop
2018 November — review of the standards by the IOTC Working Party on Data collection and Statistics
2018 December — review of the standards by the IOTC Scientific Committee[1]

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[1] In its report, the Scientific Committee: *Noting concerns with the overlap between scientific, compliance and legal issues in relation to the draft programme standards, recommended that the Commission form an ad hoc technical committee representing the breadth of mandates to specifically address this issue to ensure the relevant expertise is available to discuss scientific and operational aspects of the draft Programme Standards and Guidelines to be presented to the SC and Compliance Committee before it is provided to the Commission for endorsement.*

Noting that the process being proposed by the Scientific Committee would delay the finalisation of the standards by a year, and the standards are needed urgently to meet the work plan committed to in EU contract supporting the ROS pilot project, the Secretariat, in order to expedite

2019 February — review of the standards by IOTC Members (via IOTC Circular 2019-08)
2019 May — deadline for comments from IOTC Members

The comments received from Members have been addressed in the standards and guidelines document provided in Appendix 1.

RECOMMENDATION/S
That the Commission:

 a) **NOTE** paper IOTC–2019–S23–10 which contains the final draft IOTC Regional Observer Scheme standards.

 b) **NOTE** the Commission may authorise national scientific observer programmes approved by other tuna-RFMOs.

 c) **CONSIDER** adopting the Regional Observer Scheme standards.

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proceedings, initiated what could be considered to be the 'ad hoc committee' consultation via Circular 2019-08 – where Members were asked to review the draft document and engage their national experts from science, compliance and legal as they saw fit.

APPENDIX 1.

IOTC REGIONAL OBSERVER SCHEME STANDARDS

Item Description	Standard Required
Observer coverage Proportion of fishing activities observed as determined by the Commission.	Observer coverage required is, at a minimum that specified by the Commission.
	ROS expectation on observer coverage
	CPCs are to endeavour that the minimum level of coverage is met and that the coverage is representative of the entire fleet so that there will be minimal bias in results from the extrapolation of observer data. CPCs should, to the extent possible, ensure that coverage is stratified across gear type, vessel size (≥24m and <24m), target species, area and season. There should also be adequate observer representation across all individual vessels over the long term. If the minimum level of coverage is not met by a flag CPC, any other CPC may, subject to the consent of the flag CPC who has not met its coverage, place an observer to fulfil required tasks until that flag CPC provides a replacement or the target coverage level is met. *This standard does not preclude the right of the coastal state to mandate the deployment of a national observer on vessels operating within their EEZ, regardless of the presence of an observer from another CPC.* CPCs shall provide to the Executive Secretary and the Scientific Committee annually a report of the number of vessels monitored and the coverage achieved by gear type.
Item Description	**Standard Required**
Authorisation process Method by which observer programmes will be assessed against IOTC requirements to obtain authorisation to become part of the ROS.	On request, the Commission may authorise observer programmes approved by CPCs to provide observer services for their flagged vessels. Furthermore, the Commission may authorise scientific observer programmes approved by other tRFMOs.
	ROS expectation on the Authorisation process

| | CPCs will supply the Secretariat with a list of their approved Observer Providers (national institutes and/or independent service providers) and will instruct providers to assist the Secretariat with the Authorisation process by providing the information required to evaluate the programme.

The Secretariat will establish a schedule of auditing to ensure programmes meet current requirements.

CPCs using international observers onboard vessels will provide the Secretariat with a MoU established for the provision of observer services.

Observer programmes will be validated and authorised by the Commission according to the agreed *ROS Minimum Standards and Guidelines.* Because the process of authorisation will need to be implemented gradually (according to a time scale agreed to by the Commission), observer programmes may continue operating as normal in the meantime while pending authorisation. |
|---|---|
| **Item Description**

Programme performance

Assurance that best practices are met and that standards are maintained after authorisation and continue to reflect ROS requirements. | **Standard Required** |
	CPCs have ongoing mechanisms to assess the performance of Observer Providers against agreed performance standards.
	ROS expectation on the Programme performance
	Observer Providers will be audited by the IOTC Secretariat against the performance criteria in the *ROS Minimum Standards and Guidelines* as the principal mechanism for assessing ongoing observer programme performance. Programmes will be subject to periodic review and evaluation based on a pre-agreed schedule with the CPC. The Commission will use this information to advise the CPC of its programme's participation within the ROS.
Item Description

IOTC observer registration

Procedure used to demonstrate that observers meet IOTC agreed requirements. | **Standard Required** |
| | CPCs may not deploy unregistered persons in a ROS Observer capacity. All registered observers will meet ROS expectations on IOTC observer registration. |
| | **ROS expectation on IOTC Observer registration** |
| | 1. Registration

The Secretariat will oversee the observer registration process. Following the submission of a request for observer registration by the CPC-approved Observer Provider, the Secretariat will allocate observers with an individual IOTC registration code that must be included on observer data submitted to the Secretariat. Registration will be limited to a time period determined by the validity of the observer's documentation. |

2. De-registration[2]

Should any of the observer's documentation expire and no renewal obtained the CPC should inform the Secretariat to deregister the observer.

3. Re-registration

Any observer who has been de-registered due to the lack of valid documentation can be re-registered by meeting the requirements in item 1.

Observer Providers should keep a record of documentation required to attest observers meet agreed requirements, including:

• Evidence of proficiency in literacy and numeric competency (holder of a Secondary School Certificate or equivalent)

• Valid passport

• Valid Certificate of Medical Fitness[3] (STCW or equivalent) issued by an authorised medical practitioner[4] .

• Valid STCW Basic Safety Training Certificate (or equivalent)

• Certificate of successful completion of a Basic Observer Training Course based on IOTC training curriculum.

• Document signed by the observer accepting the code of conduct.

Item Description	Standard Required
Code of Conduct Set of guiding principles relating to accepted behaviour and standards of conduct while working as an Observer.	CPCs will ensure that all registered observers sign a document agreeing to conform to a Code of Conduct approved by the Commission. CPCs will address any alleged breaches reported.
	ROS expectation on the Code of Conduct
	Compliance with the Code of Conduct shall be monitored by the Observer Provider and CPCs are responsible for ensuring reported breaches are investigated. • Based on the results of the investigation, the Observer Provider will make recommendations on any action to be taken. • The recommended action by the Observer Provider should be reported to the CPC who shall subsequently report to the Secretariat. • If an observer is removed following the investigation carried out by the Observer Provider, the observer must

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[2] Note that certain documents such as the Certificate of Medical Fitness and the Basic Safety Training Certificate are to be regularly renewed.

[3] Seafarers (observers included) are required to undergo medical examinations to reduce risks to other crew members and for the safe operation of the ship, as well as to safeguard their personal health and safety **Source spécifiée non valide.**. Medical certificates shall remain valid for a maximum period of two years unless the seafarer is under the age of 18, in which case the maximum period of validity shall be one year.

[4] The competent authority should maintain a list of recognized medical practitioners to conduct medical examinations of seafarers and issue medical certificates (STCW Code, section A-I/9, paragraph 4). See https://www.classnk.or.jp/hp/pdf/activities/statutory/mlc/flag/sgp/sc_no_13_of_2013annex_a.pdf .

also be officially de-registered with the IOTC Secretariat.

- The investigation will be conducted in a fair manner for all parties and include an appeal process.

Item Description	Standard Required
Observer trainer Individual responsible for the delivery of an/multiple observer training component/s.	CPCs will follow agreed regional standards for observer trainers.
	ROS expectation on Observer trainers
	Trainers may be internal to CPC observer programmes or may be specialists brought in from other programmes, organisations or supplied by training providers. Trainer skills, qualifications and experience should meet agreed regional best practice. These can be found under the *Guidelines for IOTC ROS*.

Item	Standard Required
Observer training policy Provides a foundation for ensuring standardised training which is of sufficient quality, comprehensive and kept up-to-date.	CPCs will ensure that training entities meet ROS expectations on the observer training policy.
	ROS expectation on the Observer training policy
	Education/ Entrance Qualifications for entry to observer training should meet IOTC minimum pre-requisites for the accreditation of observers. **Training** As a minimum, the IOTC Basic Observer Training curriculum (see *Guidelines for IOTC ROS)* should be used to ensure that observers have acquired required skills by the end of the training course. Training courses should be updated on a regular basis to ensure they remain consistent with the current decisions of the Commission. **Assessment** To successfully complete the Basic Observer Training course candidates should be subject to a competency based assessment and meet or exceed ROS minimum competency standards (listed under the Guidelines for IOTC ROS). **Certification** Observers that meet ROS minimum competency standards will be certified by the Observer Provider as fully trained in one or all of the gear types below and issued an individual training certificate inclusive of candidate assessment results per training module. a) Purse seine b) Longline c) Pole and Line d) Gillnet **Venues** Training should be conducted in suitable training facilities with appropriate equipment. Marine colleges are favourable venues for observer training but are not essential. Access to

fishing harbours, fishing vessels or fish landing sites would enhance the training.

Review and validation

The Secretariat can request a CPC to submit the records for review, including:

- list of trainers and CVs
- list of observer candidates and CVs
- training curriculum and methodologies
- implemented daily training schedule (per subject and lecture type)
- list of training materials (manuals, syllabus, sample lesson plans, quizzes, PPT presentations and other relevant material)
- details on assessments tools (exercises, practical tasks, written and/or oral assessment, and results)
- training manual

Observer Providers should keep a copy of all documentation for a minimum of 5 years for review and validation purposes.

Item	**Standard Required**
Observer competency Capacity to meet and maintain observer competency standards.	CPCs will ensure that Observer Providers have mechanisms to assess the performance of observers against agreed competency standards.
	ROS expectation on Observer competency
	Observer Providers shall routinely evaluate observer performance against agreed competency standards (listed under the *Guidelines for IOTC ROS*) by meeting the minimum standards for debriefing, adherence to the Code of Conduct, health requirements etc.

Item Description	**Standard Required**
Observer deployment and at-sea coordination The carrying out of functions required to embark / disembark observers, to establish and maintain communications with the observers and to provide them with all possible assistance during the deployment period.	CPCs shall use existing deployment and coordination procedures in place for their programmes. CPCs will develop these procedures based on the details below and make them available for review by the Commission.
	ROS expectation on observer deployment and coordination
	It is the responsibility of the CPC to deploy observers on its flagged fleet, or to provide consent to another CPC (via the establishment of a MoU) to place observers to fulfil required tasks until a replacement is provided. It is the responsibility of CPCs to ensure the Observer Provider has the necessary legal, administrative, safety (including at-sea and on land insurance) and financial means to provide observer services and the experienced/trained personnel to carry out observer deployment and coordination functions listed under *Guidelines for IOTC ROS*.

Item Description	Standard Required
Observer Coordinator(s)	The CPC will provide the IOTC Secretariat with the contact details of their Observer Coordinator/s.
Person(s) that coordinates observer operations, manages data collection and transmission, assures quality of information through debriefing and serves as the contact point for observer issues.	**ROS expectation on Observer coordination training**
	The Observer Coordinator shall be appropriately qualified, experienced in observer coordination matters or been trained to accomplish necessary functions based on ROS Observer Coordinator training standards, listed under the *Guidelines for IOTC ROS.*
Item Description	**Standard Required**
Observer briefing and debriefing	CPCs shall ensure that Observer Providers will implement a system for briefing and debriefing of observers.
Briefing of an observer is a specially arranged session with the observer and provider briefing personnel. Briefing is to ensure that the observer understand clearly the roles and duties that he/she is expected to carry out on a vessel before a trip.	**ROS expectation on the briefing and de-briefing of observers**
	Observer Providers shall implement a system for briefing and debriefing of observers that follows a consistent format and include ROS agreed standard briefing/debriefing procedures, detailed in *Guidelines for IOTC ROS*.
Debriefing of an observer, is a specially arranged session with the observer and the provider debriefing personnel to ensure that the data and information collected by an observer is checked for discrepancies and can be corrected before the information is used for analysis. It is also a period when the observer can report critical incidents for further attention.	Observer Providers shall:
	• Ensure that briefing is conducted prior to deployment and that debriefing is conducted as soon as possible within a pre-agreed timeframe following the end of each observer trip, after the observer leaves the vessel.
	• Ensure that rigorous briefing/de-briefing is carried out, covering observer data and reports as well as health and wellbeing.
	• Ensure that briefing and debriefing is conducted by a person who, preferably, has at-sea experience as an observer with the relevant gear type, understands how observer data is used by scientific personnel, recognises common errors made by observers, demonstrates strong interpersonal communication skills.
	• Where possible, allow briefers/debriefers to undertake training programmes designed to educate them in the techniques of interviewing observers and of debriefing observer collected information and material.
Item Description	**Standard Required**
Equipment and materials	CPCs shall ensure that Observers are provided with appropriate equipment, including safety equipment to carry out their duties on board a vessel in a competent and safe manner.
Includes all essential items that observers will require to meet their vessel and to carry out their duties on board a vessel in a competent and safe manner.	**ROS expectation on the equipment and materials of Observers**

	Observers will not board vessels until they have been fully equipped.
	The Observer Provider will be responsible for ensuring that equipment issued is in appropriate working order, the observer shall ensure equipment issued is well maintained and report all loss, failures or breakages of gear.
	A standard checklist of equipment and materials to be provided to observers, appropriate for the gear and climate, is detailed under the *Guidelines for IOTC ROS*.

Item Description	Standard Required
Manuals and data collection forms Manual is defined as publications that serve to provide observers with information to assist with the roles and duties they are expected to carry out, including instruction on the filling of data collection forms, prescribed data formats, units and codes. Data collection forms are paper and/or electronic forms that an observer will be required to complete while carrying out its duties.	CPCs may have and use their respective observer manual/ guidelines/ data collection forms. CPC data collection forms must include *inter alia* minimum data field requirements approved by the Commission. CPCs may use the observer manual/ guidelines/ data collection forms and tools approved by the Scientific Committee*.
	ROS expectation on manuals and data collection forms
	At a minimum, an observer will use the Commission's standard observer manual and data collection forms. (www.iotc.org/science/regional-observer-scheme-science).

Item Description	Standard Required
IOTC CMMs IOTC Secretariat publishes a "Compendium of active CMMs for the IOTC", available in electronic format on the IOTC Website (www.iotc.org/cmms). The compendium is updated annually and is to be given to observers before deployment.	Observer Providers shall ensure that observers are fully informed of the content of IOTC CMMs of relevance to the observer scheme, especially in relation to their roles and tasks in data collection and reporting.
	ROS expectation on IOTC CMMs
	Observer providers will develop a mechanism to keep observers informed about IOTC CMMs of relevance to the ROS and corresponding requirements. This mechanism must include at a minimum *inter alia*: • The issue of an updated compendium of IOTC CMMs to all observers on an annual basis. • The conducting of refresher training to routinely inform observers of amendments to CMMs[5]. • The inclusion of new amendments to CMMs to observer briefing/debriefing to ensure that observers fully understand the content especially in relation to their roles and tasks in monitoring the CMMs under the ROS. • *The allocation of a current copy of IOTC CMMs to*

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[5] i.e. CMMs full texts or extracts of CMMs that can be of interest to the observer work.

observers before their deployment.

Item Description	Standard Required
Observer communications Access and routine use of devices to contact the Observer Provider as well as training in the use of these communications devices and equipment.	CPCs will ensure that Observer Providers have a schedule for observers to routinely communicate any required information appropriately while deployed and that Observer Providers will train observers in the use of communications devices.
	ROS expectation on observer communications
	Observer Providers shall: • Establish a routine communication protocol with deployed observers including, but not restricted to, receiving observer deployment [embarkation] and status reports; • Ensure that observers are familiar with reporting and communications protocols before boarding a vessel; • When required, ask the vessel operator to have access to means of communications and provide assistance; Ensure access to approved two-way communication devices and train observers in their use.

Item Description	Standard Required
Safety-at-sea Procedures established to guarantee that observers are deployed on safe/seaworthy vessels, and that at-sea observer emergencies and reports on issues of safety (including instances of harassment, intimidation, or assault) are immediately and effectively handled.	CPCs will ensure that all programmes have a vessel safety check form containing a list of minimum safety requirements in line with those of the Commission (*Guidelines for IOTC ROS*). CPCs will ensure that an "**Emergency Action Plan" (EAP)** is in place to accommodate any reported observer emergency and that it is included in any MoU established for the deployment of international observers in the context of the IOTC ROS.
	ROS expectation on Safety-at-sea
	A Vessel Safety Check (VSC), or equivalent, is conducted before each boarding and vessel safety conditions surveyed against the list of minimum safety requirements. A VSC form is filled out by observer/observer provider prior to embarkation to ensure that vessel safety conditions meet minimum safety requirements and that there is adequate safety equipment to cater for the extra observer on board. Observers have the right to refuse the boarding if the VSC highlights that the vessel does not comply with expected standards or if they consider a particular vessel to be un-safe. An EAP is in place to accommodate any reported observer emergency and it's explained to observers and fully understood before observers depart on their trip.

The EAP includes, as a minimum, the following agreed safety-at-sea standard [procedures](#), detailed under *Guidelines for IOTC ROS*.

- **Communications protocol and appropriate contact information:** A communications protocol is established; designated personnel are assigned responsibility for maintaining a device capable of receiving a signal from the independent two-way satellite communication devices allocated to deployed observers.

- **Follow up responses:** A procedure to initiate contact with the observer, the vessel, and, if necessary, the appropriate enforcement authority of Flag CPC and relevant Coastal CPCs is established.

- **Remedial action:** Appropriate procedures for addressing issues related to the safety of observers, including violations against observers, are established. These must include clear actions to be taken in the event of various emergencies.

- **Completing the EAP protocols:** Appropriate measures for addressing violations made against observers are established. Incidents involving observer reporting of Interference Harassment, Intimidation must be resolved through a legally or nationally recognized procedure.

- **Reporting to the IOTC:** A procedure to report on incidents involving observers to the Secretariat is established.

Item Description	Standard Required
Insurance and Liability Observer health, safety and liability insurance.	CPCs will ensure that Observer Providers make health, safety and (where applicable) liability insurance available to observers before embarkation on an ROS observer trip.
	ROS expectation on Insurance and Liability for observers
	Observer Providers will have in place a system to ensure that: • National or regional health and safety insurance is available for all observers. • Observers are insured at all times during their employment. This includes time onboard a vessel, travel to and from the vessel, and other areas of observer employment i.e. "waiting time" etc. • Observers have regular health checks, covered by the Provider, to confirm they are fit to carry out work on a vessel that could be at sea for long periods.

Item Description	Standard Required
Dispute settlement Dispute occurs when two or more parties disagree over matters involving the roles and tasks of the observer, operations of the vessel,	CPCs will ensure that there will be a dispute resolution mechanism in place for resolving conflicts at-sea, and if not, one will be developed.
	ROS expectation on Dispute Settlements

or any other issue involving the observer and a second party onboard the vessel. Dispute settlement is conducted via the implementation of procedures to prevent the escalation of conflict, through mediation, facilitation, conciliation, and training. Dispute resolution may require the appointment of an appropriately-composed expert or technical panel.	The programme will have in place the following: • procedures for timely reporting of disputes for both the observer and the vessel operator; • mechanisms to enable the process to start as soon as possible following an event; • consultations process allowing all parties to make statements; • process to determine a resolution of the problem through mediation, facilitation and conciliation; • process to appoint an independent expert or technical panel if required to resolve the dispute.

Item	**Standard Required**
Data fields Minimum data fields for collection and reporting approved by the IOTC.	CPCs will ensure that the ROS *Minimum Standard Data Fields* are included in their data collection formats and that the mandatory data fields for reporting are submitted to the Secretariat.
	ROS expectation on data fields
	Observer schemes may continue to use their own formats to collect data as long as the data collected meet the ROS *Minimum Standard Data Fields*. It is advised that non-mandatory listed data fields are also collected and reported.

Item Description	**Standard Required**
Data management, processing and reporting and quality control Data management, processing, and reporting and quality control requirements approved by the IOTC.	CPCs shall ensure that: 1. Observers will collect, at a minimum, the ROS *Minimum Standard Data Fields* using IOTC standard codes; 2. Data is checked for inconsistencies, quality and accuracy prior to reporting to the IOTC Secretariat. 3. Data will be submitted in an approved electronic data reporting format to the IOTC Secretariat, using IOTC standard codes and units. 4. Data will be submitted to the IOTC Secretariat according to the time frame specified in Resolution 11/04, or any superseding Resolution. 5. Data will also be submitted to the authorities of the Coastal States of the EEZs in which the vessel fished according to the time frame specified in Resolution 11/04, or any superseding Resolution. 6. Data confidentiality requirements outlined in Resolution 12/02, *Data Confidentiality Policy and Procedures*, or any superseding Resolution, shall apply to all ROS data.
	ROS expectation on data management, processing, reporting and quality control
	Data collected on ROS trips will be sent to the Secretariat according to the time frame specified in Resolution 11/04, or

	any superseding Resolution. Data will be reported to the IOTC Secretariat in an approved electronic format, i.e., using:
	i. the IOTC e-data collection and reporting tool,
	ii. one of the IOTC-endorsed electronic data reporting templates or
	iii. direct exchange mechanisms to be developed for well-established electronic tools already adopted at sub-regional level (e.g. ObServe, SWIOFP).
	Flag CPCs and respective authorised Observer Providers should cooperate to ensure timely access to ROS data and provision of the ROS data to the Secretariat and the Coastal State authorities in which fishing has occurred.

Guidelines to assist the implementation of the IOTC Regional Observer Scheme standards

Guidelines are to be used by CPCs as a guide when developing or improving observer programmes / sub-regional observer schemes.

A. IOTC minimum pre-requisites for the registration of observers under the IOTC ROS:

1. Minimum age of 18 years

2. Physically capable of carrying out observer duties attested by a valid Certificate of Medical Fitness (STCW or equivalent) issued by an authorised medical practitioner.

3. Clear police record. History of strong socially acceptable ethical standards in the areas of honesty and public behaviour.

4. Evidence of proficiency in literacy and numeric competency in the languages of the national project (holder of a Secondary School Certificate or equivalent)

5. Valid passport

6. Valid STCW Basic Safety Training Certificate (or equivalent)

7. Certificate of successful completion of a Basic Observer Training Course based on IOTC training guidelines and curriculum.

8. Acceptance of the code of conduct.

B. Observer trainer minimum standards

Trainer skills, qualifications and experience should meet agreed minimum regional standards, as follows.

1. Skills

    − able to communicate training messages in clear and straight forward manner

    − capacity to communicate in the language of the students

    − technical expertise in their area of training

    − high personal credibility and integrity

2. Qualifications and Experience

    − a good understanding of the fishery and the management of that fishery

    − level of education similar or higher than the level of education required to access training, preferably with experience in fisheries science.

    − it is desirable that the trainer has a vocational training qualification

C. Basic observer training curriculum

1.	**Safety**	
Module	**Curriculum**	**Assessment criteria**
1.1. Personal Safety and Social Responsibilities (STCW compliant or equivalent); **COMPULSORY**	1.1.1. Comply with Emergency Procedures	− The incidents that may result in an emergency are listed. − Typical emergency response on fishing vessels is described. − The information available on a vessel muster list is stated. − The emergency muster and abandon ship signals are stated and the actions to be taken explained. − The correct use of personal safety equipment is explained. − The value of regular and meaningful on board emergency training is discussed. − The initial safety actions that should be taken on joining a new vessel are listed − The meaning of basic IMO safety symbols is stated.
	1.1.2. Knowledge and observation of safe working practices	− The importance of following safe work practices at all times is discussed. − Potential hazards associated with the vessel working environment are identified. − The need for personal protective clothing is understood. − The proper use of safety equipment for the protection of hearing, head, hands, feet, eyes and respiratory system is described. − The content and purpose of material safety data sheets is outlined. − Precautions and procedures required for entering enclosed spaces on a vessel are described.
	1.1.3. Contribute to effective human relationships on board ship	− The importance of maintaining good human and working relationships aboard ship is discussed. − Social responsibilities on board ship are listed. − Individual rights and obligations with respect to the vessel work place are discussed. − The dangers associated with drug and alcohol abuse at sea are described. − The basic principles for conflict resolution are understood.
	1.1.4. Contribute to effective communications on board ship	− The principles of, and barriers to, effective communication between individuals and teams within the ship is discussed. − The importance of the team effect onboard; the adverse effect poor human relations can have on shipboard safety and efficiency is explained.
	1.1.5. Understand and take necessary actions to control fatigue	− Effects of tiredness and extended periods of work are identified and options to mitigate sleep shortage are proposed.

	1.1.6.	Take precautions prevent pollution to marine environment	− The effects and impacts of operational or accidental pollution to the marine environment are explained. − Basic procedures to prevent pollution are described. − Regulations that cover pollution (MARPOL etc.) are discussed.
1.2. Personal Survival Techniques (STCW compliant or equivalent) **COMPULSORY FOR ALL GEARS**	1.2.1.	Emergency Situations	− The incidents that may result in an emergency are listed. − The emergency muster and abandon ship signals are stated and the actions to be taken explained. − The importance of water tight doors and escape routes explained. − The value of regular and meaningful on board emergency training is discussed.

	1.2.2.	Basic emergency actions	− Able to explain and describe (with diagrams if applicable) or practically demonstrate a knowledge of the procedures to be followed by the crew of a vessel in a man overboard situation.
			− Able to explain and describe and/or practically demonstrate a knowledge of
			  o The characteristics of a life jacket
			  o Correct stowage of a lifejacket
			  o The correct method of putting on a life jacket and how to enter the water wearing a life jacket
			− Able to explain and describe and/or practically demonstrate a knowledge of:
			  o The characteristics of a life buoy
			  o Correct stowage of a life buoy
			  o Buoyant line and self-igniting light that can be attached to a life buoy
			  o The correct use of a life buoy in an emergency
			− Able to explain and describe and/or practically demonstrate a knowledge of:
			  o The characteristics of an immersion suite
			  o Correct stowage of an immersion suite
			  o The correct method of putting on an immersion suite and how to care and store immersion suite

	1.2.3.	Abandon ship and sea survival techniques	− Able to explain and describe and/or practically demonstrate a knowledge of
			  o The important parts of a life raft
			  o Correct stowage of a life raft
			  o The workings of a hydrostatic release unit
			− Able to explain and describe and/or practically demonstrate a knowledge of
			  o Crew preparations to abandon the boat
			  o The procedures to launch a life raft
			  o The procedures to board a life raft
			  o The procedures to right a life raft
			− Able to explain and describe and/or practically demonstrate a knowledge of the procedures that should be adopted in
			  o Rescuing someone with the use of the rescue quoit

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o First entering the life raft
o Enhancing survival in the life raft
o Main dangers to cope with in sea survival are listed

− Able to explain and describe and/or practically demonstrate a knowledge of

o What hypothermia is and its symptoms
o How to protect against hypothermia
o How to treat hypothermia
o Minimising loss of body heat in the water

− Explain and describe and/or demonstrate how to

o Correct use of 3 common pyrotechnics
o Identify the correct pyrotechnic for use according to the situation described

− Able to explain and describe eight internationally recognised distress signals (to include at least one from each group – sight, sound, pyrotechnics, radio)
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<td>1.2.4. Emergency Radio Equipment</td>
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− Able to explain and describe basic principles of 121.5 and 406 EPIRBs
− Practically demonstrate how to correctly operate 121.5 and 406 EPIRBs
− Identify the actions required when an EPIRB is activated accidentally
− Practically demonstrate how to correctly operate a radio VHF and HF and send a distress message.
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<td rowspan="2">1.3. Observer Health and Safety practices onboard a vessel

COMPULSORY FOR ALL GEARS</td>
<td>1.3.1. Health issues that can be experienced onboard and personal first aid</td>
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− Procedures and practices to maintain work and personal hygiene at all times are explained.
− Effects of tiredness and extended periods of work are identified and options to mitigate sleep shortage are proposed.
− Challenges in cultural interactions in the work place are identified and strategies to mitigate are proposed.
− Basic health issues that can be experienced onboard are identified and solutions proposed.
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<td>1.3.2. Safe working practices onboard a vessel engaged in active fishing.</td>
<td>
− The importance of following safe work practices at all times is discussed.
− Potential hazards associated with a vessel engaged in active fishing are identified.
− The need for personal protective clothing is understood and tits proper use for the protection of hearing, head, hands, feet, eyes and respiratory system is described.
− Precautions and procedures required for entering enclosed spaces on a vessel are described.
− The need for the use of safety gear when working on deck is described and the gear detailed.
− The importance of having a working knowledge of the safety equipment found onboard a vessel is explained.
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| 1.3.3. | Safety protocols (including pre-safety inspections and at-sea transfers), emergency communication and contact information; | − The importance and procedure to undertake a pre-sea safety inspections and vessel safety tour is explained.
− The importance of regular communications is understood and procedures to follow in case of an emergency communication are expounded.
− Procedures to follow and potential dangers that may be encountered during personnel transfers from one vessel to another are described. |

2. Electronics

Module	Curriculum	Assessment criteria
2.1. Basic notions on navigation, navigation equipment and electronic fishing aids **COMPULSORY FOR ALL GEARS**	2.1.1. Navigation and positioning (including latitude/longitude; course and speed)	− Use and understand latitude and longitude to correctly plot a position on a chart − Position is obtained from a GPS or chart plotter and transferred to a chart correctly. − Vessel heading is obtained from a GPS, chart plotter or compass (gyro or magnetic) and transferred correctly on to a chart using the compass rose and a parallel ruler − Distinguish between True and Magnetic North with reference to the heading of the vessel provided by different navigational aids. − Use information provided to calculate a future position, estimated distance and time of arrival (ETA)
	2.1.2. Electronic navigation equipment usage and limitations (GPS; plotters; echo-sounders and sonar)	− Identify the functions of, and principal information provided by: GPS; chart plotter; gyro compass; magnetic compass; − Understands the dangers associated with misinterpreting information obtained from navigational aids.
	2.1.3. Principal functions of electronic fishing aids and the information they provide.	− Identify the functions of, and principal information provided by: sonar; echo sounder; net depth instruments; Doppler current meter; bird radar; SST meter; GPS buoys; echo sounding buoys; radio beacon buoys; and XBT (Bathythermograph)
2.2. Parameters of meteorology and oceanography relevant to scientific fisheries observers.	2.2.1. Understanding and recording: 1) wind speed & direction, 2) the Beaufort scale, 3) sea state (height & direction), 4) sea waves vs. swell and 5) sea surface temperature.	− Correctly identifies electronic fishing aid(s) used to obtain current direction and speed; − Correctly records current direction and speed using the right units (cardinal units or degrees / knots). − Identifies electronic fishing aid(s) used to obtain SST and records SST correctly. − Able to explain the difference between sea waves and swell. − Correctly identifies and records sea and swell height and direction using the right units (meters / cardinal units or degrees). − Identifies equipment used to obtain wind direction and speed; − Correctly identifies and records wind speed and direction using the right units (cardinal units or

Module	Curriculum		Assessment criteria
COMPULSORY FOR ALL GEARS			degrees / knots). − Correctly describe sea state, using the Beaufort wind scale to estimate wind speed.
2.3. Radio communication protocols (VHF, HF & Inmarsat) **COMPULSORY FOR ALL GEARS**	2.3.1.	Equipment communication and use (VHF, HF & Inmarsat)	− Identify the different communication equipment that can be present on a fishing vessel and its usage: Satellite phone, MF/HF transmitters, VHF transmitters, NAVTEX, Inmarsat.
	2.3.2.	Setting up a radio telephone to transmit and receive (VHF, HF & Inmarsat)	− Identify the emergency frequencies to be used with VHF, MF and HF radios.
	2.3.3.	Emergency messages (distress, urgency and safety messages)	− Explain how to set up and adjust a VHF radio to transmit and receive an emergency message.

3.	**Management**		
Module	**Curriculum**		**Assessment criteria**
3.1. Basic concepts of fisheries management **COMPULSORY FOR ALL GEARS**	3.1.1.	Basic concepts of fisheries management including target species; bycatch species; non-target species, retained catch, discarded catch and overfishing	− The following terminology used to classify fishing catch is explained: target species; bycatch species; non-target species, retained catch and discarded catch − The impacts of overfishing on target species are summarised − The impacts of overfishing on bycatch species are summarised
3.2. IOTC Agreement and CMMs relevant to	3.2.1.	IOTC organisational structure, function and responsibilities	− Understand IOTC organisational structure, functions responsibilities and process for the establishment and implementation of Resolutions. − IOTC role is discussed with reference to the regional fisheries scheme.

scientific observers **COMPULSORY FOR ALL GEARS**	3.2.2. IOTC CMMs relevant to scientific observers including ✓ recommended mitigation measures ✓ recommended good practices	− Be aware of Commission Conservation and Management Measures relevant to the work of scientific observers. − Demonstrate knowledge of Commission recommended mitigation measures to reduce the fishing impact on protected, endangered or threatened (PET), species that include seabirds, cetaceans, turtles and protected shark species. − Be aware of IOTC best practices for handling and safe release of non-target marine fauna (seabirds, marine mammals, turtles, sharks).
3.3. Role of fisheries observer programs in fisheries management **COMPULSORY FOR ALL GEARS**	3.3.1. Regarding high seas transhipments, conservation management measures, the regional register of vessels, and the terms and conditions of access agreements;	− Role of the fisheries observer is explained regarding high seas transhipments, conservation management measures and the regional register of vessels.
	3.3.2. The objectives of different categories of observers. *(Scientific-data collection / Compliance – monitoring / Fisheries –data collection + monitoring)*	− Observer categories are detailed and respective objectives explained.

4.	Vessel Operations	
Module	**Curriculum**	**Assessment criteria**
4.1. Pelagic longline **COMPULSORY FOR LL TRAINING**	4.1.1. Vessel Identification and Characteristics ✓ Nautical terminology ✓ Vessel structure ✓ Vessel identification and markings ✓ Working and observation areas ✓ Key personnel	− Understand basic nautical terminology and demonstrate knowledge of basic vessel structure. − Identify a vessel (from a photo or draw) using its marking (name, port of registration, registration number, call sign) − Demonstrate working knowledge of the structure of a pelagic longliner and possible different configurations. − Recognise (from photos or draws) working and observation areas on pelagic longliners with different configurations. − Detail rank and function of officers and crew of key importance to observer work.
	4.1.2. Fishing gear and related equipment, design and specifications	− Be acquainted with the different components of a pelagic longline. − Able to identify distinct longline systems based on mainline storage method. − Recognise (from photos or draws) fishing apparats used on a longliner.
	4.1.3. Fishing operations	− Knowledge of general procedures in longline fishing operations (setting, hauling, processing).
	4.1.4. Fisheries impacts and inter-actions ✓ Species of special interest that interact with the fisheries ✓ Depredation ✓ By-catch mitigation methods ✓ Code of good practice for the release of PETS	− Understand the impact of longline fishing on PET species and understand how different recommended mitigation measures are deployed to prevent un-wanted by-catch. − Be aware of inter-actions such as depredation and capable of identifying depredatory species by the type of mark left on target species. − Detail IOTC best practices for the handling and safe release of seabirds and marine turtles.
4.2. Tuna purse-seine **COMPULSORY FOR PS TRAINING**	4.2.1. Vessel Identification and Characteristics ✓ Key personnel ✓ Nautical terms ✓ Vessel structure ✓ Vessel identification and markings	− Understand basic nautical terminology and demonstrate knowledge of basic vessel structure. − Identify a vessel (from a photo or draw) using its marking (name, port of registration, registration number, call sign) − Demonstrate working knowledge of the structure of a tuna purse-seiner. − Recognise (from photos or draws) working and observation areas on tuna purse-seiners with different configurations. − Detail rank and function of officers and crew of key importance to observer work.

	4.2.2.	Fishing gear, design and specifications	− Be acquainted with the different components of the tuna purse-seine gear. − Able to identify distinct processing and storing methods used by tuna purse-seiners. − Recognise (from photos or draws) vessels and fishing apparats used by tuna purse-seiners.
	4.2.3.	Fish aggregating devices (FADs) ✓ drifting vs anchored FADs ✓ ecological vs non-ecological FADs	− Explain the difference between anchored and drifting FADs − Understand IOTC FAD definition and able to name at least 1 artificial (man-made) FAD and 3 natural floating objects. − Capable of distinguishing the different components of a man-made FAD and naming materials used in the construction of ecological FADs. − Able to explain the reasons for the usage of artificial FADs
	4.2.4.	Fishing operations	− Detail search and detection operations conducted by tuna purse-seiners (direct and indirect). − Knowledge of general procedures in purse-seine fishing operations (setting, circling, pursing, hauling, brailling and shifting).
	4.2.5.	Fisheries impacts and inter-actions ✓ Species of special interest that interact with the fisheries ✓ The FAD "problem" ✓ By-catch mitigation ✓ methods ✓ Code of good practice for the release of PETS	− Understand the impact of tuna purse-seine fishing on PET species, particularly the impact of FADs. − Be aware of recommended best practices to minimize or prevent un-wanted by-catch and/or by-catch mortality. − Detail IOTC best practices for the handling and safe release of marine turtles.
4.3. Pole and line **COMPULSORY FOR P&L TRAINING**	4.3.1.	Vessel Identification and Characteristics ✓ Key personnel ✓ Nautical terms ✓ Vessel structure ✓ Vessel identification and markings	− Understand basic nautical terminology and demonstrate knowledge of basic vessel structure. − Identify a vessel (from a photo or draw) using its marking (name, port of registration, registration number, call sign) − Demonstrate working knowledge of the structure of a pole and line vessel. − Recognise (from photos or draws) working and observation areas on a pole and line vessel. − Detail rank and function of officers and crew of key importance to observer work.
	4.3.2.	Fishing gear, design and specifications	− Be acquainted with the different components of the pole and line gear for tuna and bait fishing (if any). − Able to identify distinct processing and storing methods used. − Recognise (from photos or draws) fishing apparats used.

	4.3.3.	Fish aggregating devices (FADs) ✓ drifting vs anchored FADs ✓ ecological vs non-ecological FADs	− Explain the difference between anchored and drifting FADs − Understand IOTC FAD definition and able to name at least 1 artificial (man-made) FAD and 3 natural floating objects. − Capable of distinguishing the different components of a man-made FAD and naming materials used in the construction of ecological FADs. − Able to explain the reasons for the usage of FADs
	4.3.4.	Fishing operations including bait-fishing	− Detail search and detection operations conducted by pole and line vessels (direct and indirect). − Knowledge of procedures in pole and line bait fishing operations (setting, circling, pursing, hauling and brailling). − Knowledge of procedures in pole and line tuna fishing operations (chumming, fishing, processing).
	4.3.5.	Fisheries impacts and inter-actions ✓ Species of special interest that interact with the fisheries ✓ Bait fishing bycatch ✓ By-catch mitigation methods ✓ Code of good practice for the release of PETS	− Understand the impact of pole and line bait and tuna fishing on PET species, particularly the impact of FADs. − Be aware of recommended best practices to minimize or prevent un-wanted by-catch and/or by-catch mortality. − Detail IOTC best practices for the handling and safe release of marine turtles.
4.4. Gillnet **COMPULSORY FOR GN TRAINING**	4.4.1.	Vessel Identification and Characteristics ✓ Key personnel ✓ Nautical terms ✓ Vessel structure ✓ Vessel identification and markings	− Understand basic nautical terminology and demonstrate knowledge of basic vessel structure. − Identify a vessel (from a photo or draw) using its marking (name, port of registration, registration number, call sign) − Demonstrate working knowledge of the structure of an industrial pelagic gillnet vessel. − Recognise (from photos or draws) working and observation areas on an industrial gillnet vessel. − Detail rank and function of officers and crew of key importance to observer work.
	4.4.2.	Fishing gear, design and specifications	− Be acquainted with the different components and characteristics of the pelagic industrial gillnet gear (set, trammel and drift nets). − Recognise (from photos or draws) fishing apparats used.
	4.4.3.	Fishing operations	− Knowledge of procedures with the industrial pelagic gillnet fishing operations (setting and hauling). − Able to identify distinct processing and storing methods used.
	4.4.4.	Fisheries impacts and inter-actions	− Understand the impact of industrial pelagic gillnet fishing on PET species. − Be aware of recommended mitigation measures to minimize or prevent un-wanted by-catch and/or

	✓ Species of special interest that interact with the fisheries ✓ PETS bycatch and mortality ✓ By-catch mitigation ✓ methods ✓ Code of good practice for the release of PETS	by-catch mortality. − Detail IOTC best practices for the handling and safe release of sea-birds, marine turtles, marine mammals and sharks.

5. Species Identification

Module	Curriculum	Assessment criteria
5.1. Nomenclature and anatomical features **COMPULSORY FOR ALL GEARS**	5.1.1. Nomenclature for recording family, genus and species	− Understand the need of using nomenclature for recording family, genus and species and the danger of incorrect identification from using common names.
	5.1.2. Identify the anatomical and diagnostic features of ✓ Bony fish ✓ Cartilaginous fish (sharks and rays)	− Identify the anatomical differences between bony and cartilaginous fish. − Detail the basic external anatomical diagnostic features of bony fish used for species identification − Detail the basic external anatomical diagnostic features of cartilaginous fish (sharks and rays) used for species identification
	5.1.3. Identify PETs diagnostic features: ✓ Seabirds ✓ Sea mammals ✓ Marine turtles	− Detail the basic external anatomical diagnostic features used for the identification of marine turtles, seabirds and marine mammal species
5.2. Identify target and bycatch species encountered in the longline fishery using diagnostic features	5.2.1. Identify main IO adult tropical and neritic tuna species	− Adult tropical and neritic tuna species are recognized by means of their diagnostic anatomical features
	5.2.2. Identify IO billfish species	− Billfish species are recognized by means of their diagnostic anatomical features

COMPULSORY FOR LL FISHERY	5.2.3.	Identify most prevalent IO shark species	− IO shark species encountered in longline fishery are recognized by means of their diagnostic anatomical features
	5.2.4.	Identify most prevalent by-catch species	− The fish bycatch species encountered in longline fisheries are recognized by means of their diagnostic anatomical features
	5.2.5.	Use identification guides to correctly identify fish and PET species	− Demonstrate use of the species identification guides to correctly identify fish and PET species, common name, scientific name, and FAO Species Code
5.3. Identify target and bycatch species encountered in the purse-seine fishery using diagnostic features **COMPULSORY FOR PS FISHERY**	5.3.1.	Identify main IO adult tropical and neritic tuna species	− Adult tropical and neritic tuna species are recognized by means of their diagnostic anatomical features
	5.3.2.	Identify main IO juvenile tropical tuna species	− Juvenile yellowfin and bigeye tuna species are recognized by means of their diagnostic anatomical features (external and internal)
	5.3.3.	Identify IO billfish species	− Billfish species are recognized by means of their diagnostic anatomical features
	5.3.4.	Identify most prevalent IO shark species	− IO shark species encountered in tuna purse-seine fishery are recognized by means of their diagnostic anatomical features
	5.3.5.	Identify most prevalent by-catch species	− The fish bycatch species encountered in tuna purse-seine fisheries are recognized by means of their diagnostic anatomical features
	5.3.6.	Use identification guides to correctly identify fish and PET species	− Demonstrate use of the species identification guides to correctly identify fish and PET species, common name, scientific name, and FAO Species Code
5.4. Identify target and bycatch species encountered in the	5.4.1.	Identify main IO adult tropical and neritic tuna species	− Adult tropical and neritic tuna species are recognized by means of their diagnostic anatomical features

pole & line fishery using diagnostic features **COMPULSORY FOR P&L FISHERY**	5.4.2.	Identify main IO juvenile tropical tuna species	− Juvenile yellowfin and bigeye tuna species are recognized by means of their diagnostic anatomical features (external and internal)
	5.4.3.	Identify IO billfish species	− Billfish species are recognized by means of their diagnostic anatomical features
	5.4.4.	Identify most prevalent IO shark species	− IO shark species encountered in pole and line fishery are recognized by means of their diagnostic anatomical features
	5.4.5.	Identify most prevalent by-catch species	− The fish bycatch species encountered in pole and line fisheries are recognized by means of their diagnostic anatomical features. − The bait fish species encountered in pole and line fisheries are recognized by means of their diagnostic anatomical features
	5.4.6.	Use identification guides to correctly identify fish and PET species	− Demonstrate use of the species identification guides to correctly identify fish and PET species, common name, scientific name, and FAO Species Code
5.5. Identify shark and bycatch species encountered in the gillnet fishery using diagnostic features **COMPULSORY FOR GN FISHERY**	5.5.1.	Identify main IO adult tropical and neritic tuna species	− Adult tropical and neritic tuna species are recognized by means of their diagnostic anatomical features
	5.5.2.	Identify main IO juvenile tropical tuna species	− Juvenile yellowfin and bigeye tuna species are recognized by means of their diagnostic anatomical features (external and internal)
	5.5.3.	Identify IO billfish species	− Billfish species are recognized by means of their diagnostic anatomical features
	5.5.4.	Identify most prevalent IO shark species	− Main IO shark species encountered in gillnet fishery are recognized by means of their diagnostic anatomical features
	5.5.5.	Identify most prevalent by-catch species	− The main fish bycatch species encountered in gillnet fisheries are recognized by means of their diagnostic anatomical features
	5.5.6.	Use identification guides to correctly identify fish and PET species	− Demonstrate use of the species identification guides to correctly identify fish and PET species, common name, scientific name, and FAO Species Code
6. Observer Work			

Module	Curriculum	Assessment criteria
6.1. The Observer **COMPULSORY**	6.1.1. Observer duties, code of conduct and status	− Outlines the importance of maintain professional integrity, being impartial and following approved standard Code of Conduct, as detailed in IOTC ROS OM v1.2. − Description includes the status and duties of fisheries observers as provided for in IOTC Res 11/04. − Explain the importance of observer work, and the impact of collecting inadequate or falsified data.
	6.1.2. Procedures to follow when onboard ✓ Hierarchy ✓ Work and confidentiality ✓ Cultural awareness	− Describe protocols an observer should follow while onboard concerning hierarchy and presentation to avoid potential conflict with vessel captain and officers. − Outline the importance of respecting crew culture and customs to avoid potential conflict. − Description includes potential areas of conflict between fisheries observers and vessel owners/operators with reference to commercial sensitivity and information disclosure.
6.2. Sampling **COMPULSORY**	6.2.1. Sampling programs employed in regional Indian Ocean tuna fisheries 6.2.2. Fisheries observer roles and tasks in relation to regional sampling programs	− Demonstrate general knowledge of sampling programs in place regionally in the Indian Ocean Tuna fisheries and the roles of fisheries observers in relation to these sampling programs.
	6.2.3. Data collection tools, units, codes and formats ✓ Use, maintenance and calibration of sampling equipment ✓ Prescribed data forms, units and codes 6.2.4. Weights and measures ✓ Accurately measure and record species lengths and weights (tuna, billfish, sharks, rays, other fish, sea-	− Demonstrate the use, maintenance and calibration of sampling equipment; − Identify the method established by the regional observer scheme for measuring fish length and weight according to species type and anatomical features. − Accurately measure and weight fish using the method appropriate to species type − Fish length and weight measurements are recorded using the data format and codes established by the regional fisheries observer scheme.

	turtles and sea-birds)	
	6.2.5. Biological sampling ✓ Collect, preserve, store and record samples ✓ Photograph / preserve a species for ID	− Explain how to collect, preserve, store and record samples − Familiar with protocols for the photographing and preservation of an individual spp. for ID. − Able to store and record samples in accordance with specified procedures.
6.3. Longline onboard data collection and recording **COMPULSORY FOR LL GEAR**	6.3.1. Estimate weights, volumes and ratios ✓ total catch in set ✓ ratio of species in set ✓ amount of bycatch ✓ amount of discards ✓ catch retained on board ✓ vessel hold capacity	− Explicate the concepts of: set total catch; catch composition; bycatch; discards; and retained catch weight. − Calculate vessel hold capacity from information provided. − Correctly execute 3 exercises for the calculation of set total catch, bycatch, discards and retained catch.
	6.3.2. Mandatory data to be collected during longline fishing 6.3.3. Data gathering processes and priorities 6.3.4. Data recording procedures	− Correctly interpret at least 2 realistic written simulations of credible longline fishing scenarios and fill in national fisheries agencies and/or IOTC form templates with a minimum verified accuracy of 75%. − Correctly use and interpret supporting guidelines, species codes and identification resources for the completion of national fisheries agencies and/or IOTC form templates. − Correctly use prescribed units and codes for the completion of national fisheries agencies and/or IOTC form templates.
	6.3.5. Information to be gathered on interactions, the effectiveness of mitigation measures and good practices	− Recognize species of special interest and be aware of levels of vulnerability. − Familiar with species groups that are likely to interact with pelagic longline gear and with main mitigation methods and good practices for species handling and release recommended by the IOTC. − Correctly interpret and record a given simulated interaction with a species of special interest, the use and effectiveness of recommended mitigation measure.
	6.3.6. Cross-cheeking data with entries made in	− Recognise the need and importance of checking consistency between observer estimated data (e.g. catches) and entries made in the vessel logbook;

		vessel logbook and fulfilment of logbooks;	− Familiar with the vessel logbook contents and structure; − Describe the importance of assisting vessel officers with the correct filling of vessel logbook; − Correctly cross-check observer estimated data with logbook entries interpret and correct wrong or missing entries on a logbook given simulated logbook.
6.4. Purse-seine onboard data collection and recording **COMPULSORY FOR PS GEAR**	6.4.1.	Estimate weights, volumes and ratios ✓ total catch in set ✓ ratio of species in set ✓ amount of bycatch ✓ amount of discards ✓ catch retained on board ✓ vessel hold capacity	− Explicate the concepts of: set total catch; catch composition; bycatch; discards; and retained catch. − Explain methods to set estimate total catch weight. − Estimate total catch weight using brail volume and number. − Understand processes to estimate catch composition of an associated and of an un-associated tuna school. − Calculate vessel hold capacity from information provided. − Correctly execute 3 exercises for the calculation of set total catch, bycatch, discards and retained catch.

	6.4.2.
	
	6.4.3.
	
	6.4.4.
		Data to be collected during purse-seine fishing
		
		Data gathering processes and priorities
		Data recording procedures
			− Correctly interpret at least 2 realistic written simulations of credible purse-seine fishing scenarios and fill in national fisheries agencies and/or IOTC form templates with a minimum verified accuracy of 75%.
			  o PS fishing on a free school;
			  o PS equipped with a discharge opening at the lower deck fishing on an associated school;
			  o PS not equipped with a discharge opening at the lower deck fishing on an associated school;
			  o PS fishing on a free school and conducting shifting.
			− Correctly use and interpret supporting guidelines, species codes and identification resources for the completion of national fisheries agencies and/or IOTC form templates.
			− Correctly use prescribed units and codes for the completion of national fisheries agencies and/or IOTC form templates.

	6.4.5.	Information to be gathered on interactions, the effectiveness of mitigation measures and good practices	− Recognize species of special interest and be aware of levels of vulnerability. − Familiar with species groups that are likely to interact with tuna purse-seine gear and with main mitigation methods and good practices for species handling and release recommended by the IOTC. − Correctly interpret and record a given simulated interaction with a species of special interest, the use and effectiveness of recommended mitigation measure.

	6.4.6. Cross-cheeking data with entries made in vessel logbook and fulfilment of logbooks;	− Recognise the need and importance of checking consistency between observer estimated data (e.g. catches) and entries made in the vessel logbook; − Familiar with the vessel logbook contents and structure; − Describe the importance of assisting vessel officers with the correct filling of vessel logbook; − Correctly cross-check observer estimated data with logbook entries interpret and correct wrong or missing entries on a logbook given simulated logbook.
6.5. Pole and line onboard data collection and recording **COMPULSORY FOR P&L GEAR**	6.5.1. Estimate weights, volumes and ratios for tuna fishing ✓ total catch in set ✓ ratio of species in set ✓ amount of bycatch ✓ amount of discards ✓ catch retained on board ✓ vessel hold capacity	− Explicate the concepts of: set total catch; catch composition; bycatch; discards; and retained catch weight. − Calculate bait tanks and vessel hold capacity from information provided. − Correctly execute 3 exercises for the calculation of set total catch, bycatch, discards and retained catch.

	6.5.2. Data to be collected during pole and line fishing
	
	6.5.3. Data gathering processes and priorities
	
	6.5.4. Data recording procedures
		− Correctly interpret at least 2 realistic written simulations of credible pole and line fishing scenarios and fill in national fisheries agencies and/or IOTC form templates with a minimum verified accuracy of 75%.
		   o fishing on a free school;
		   o fishing on an associated school;
		   o fishing for bait;
		− Correctly use and interpret supporting guidelines, species codes and identification resources for the completion of national fisheries agencies and/or IOTC form templates.
		− Correctly use prescribed units and codes for the completion of national fisheries agencies and/or IOTC form templates.

	6.5.5. Information to be gathered on interactions, the effectiveness of mitigation measures and good practices	− Recognize species of special interest and be aware of levels of vulnerability. − Familiar with species groups that are likely to interact with pole and line gear and with main mitigation methods and good practices for species handling and release recommended by the IOTC. − Correctly interpret and record a given simulated interaction with a species of special interest, the use and effectiveness of recommended mitigation measure.
	6.5.6. Cross-cheeking data with entries made in	− Recognise the need and importance of checking consistency between observer estimated data (e.g. catches) and entries made in the vessel logbook;

		vessel logbook and fulfilment of logbooks	− Familiar with the vessel logbook contents and structure; − Describe the importance of assisting vessel officers with the correct filling of vessel logbook; − Correctly cross-check observer estimated data with logbook entries interpret and correct wrong or missing entries on a logbook given simulated logbook.
6.6. Gillnet data collection and recording **COMPULSORY FOR GN GEAR**	6.6.1.	Estimate weights, volumes and ratios ✓ total catch in set ✓ ratio of species in set ✓ amount of bycatch ✓ amount of discards ✓ catch retained on board ✓ vessel hold capacity	− Explicate the concepts of: set total catch; catch composition; bycatch; discards; and retained catch weight. − Calculate vessel hold capacity from information provided. − Correctly execute 3 exercises for the calculation of set total catch, bycatch, discards and retained catch.
	6.6.2. 6.6.3. 6.6.4.	Data to be collected during gillnet fishing Data gathering processes and priorities Data recording procedures	− Correctly interpret at least 2 realistic written simulations of credible pelagic gillnet fishing scenarios and fill in national fisheries agencies and/or IOTC form templates with a minimum verified accuracy of 75%. − Correctly use and interpret supporting guidelines, species codes and identification resources for the completion of national fisheries agencies and/or IOTC form templates. − Correctly use prescribed units and codes for the completion of national fisheries agencies and/or IOTC form templates.
	6.6.5.	Information to be gathered on interactions, the effectiveness of mitigation measures and good practices	− Recognize species of special interest and be aware of levels of vulnerability. − Familiar with species groups that are likely to interact with pelagic gillnet gear and with main mitigation methods and good practices for species handling and release recommended by the IOTC. − Correctly interpret and record a given simulated interaction with a species of special interest, the use and effectiveness of recommended mitigation measure.
	6.6.6.	Cross-cheeking data with entries made in vessel logbook and fulfilment of logbooks;	− Recognise the need and importance of checking consistency between observer estimated data (e.g. catches) and entries made in the vessel logbook; − Familiar with the vessel logbook contents and structure; − Describe the importance of assisting vessel officers with the correct filling of vessel logbook; − Correctly cross-check observer estimated data with logbook entries interpret and correct wrong or missing entries on a logbook given simulated logbook.
6.7. Vessel sighting and	6.7.1.	Information use for monitoring and	− Lists information usage for regional fisheries monitoring and management.

transhipment activities **COMPULSORY**		surveillance	
	6.7.2.	Information to be gathered by fisheries observers	− Understands the meaning and means for the collection of required information on vessels sightings. − Understands the meaning and means for the collection of required information on vessel transhipments.
	6.7.3.	Information recording	− Correctly interpret a given simulated vessel sighting and fill in national fisheries agencies and/or IOTC form templates with a minimum verified accuracy of 75%. − Correctly interpret a given simulated vessel transhipment and fill in national fisheries agencies and/or IOTC form templates with a minimum verified accuracy of 75%.
6.8. Electronic trip reports (format and contents) **COMPULSORY**	6.8.1.	Detailed daily journal	- Able to keep a sequential, easy to read and understandable daily journal during training.
	6.8.2.	IOTC Observer trip report template and reporting procedures	- Capable of using daily journal relevant entries and written simulations and filled report templates to prepare Observer Trip Report following IOTC report template and reporting procedures.
	6.8.3.	Observer trip report submission - timeline and circulation	- Demonstrate knowledge of timelines for the submission and circulation of observer trip reports.
6.9. Electronic data recording **OPTIONAL TRAINING**	6.9.1.	Instruction on electronic data bases to cover data capture from data sheets.	Demonstrate ability to capture data from data sheets into a database with an accuracy of at least 75%.

D. Observer competency standards

Observer competency should be standard throughout the IOTC ROS, independent of the organisation(s) in charge of training and managing CPC observers. The following list of basic observer competency standards ensures that observers have acquired / maintain the required competency level.

1. Understand the importance of personal physical and mental well-being to safety and morale and of maintaining effective communication and good working relationships on the vessel.

2. Able to comply with emergency procedures and to correctly use different types of life-saving appliances. Demonstrate knowledge of abandon ship procedures and sea survival techniques. Able to operate an EPIRB or equivalent.

3. Capable of identifying common health issues experienced onboard and fishing operation risks. Understand the importance of following safe working practices and wearing appropriate protective clothing and equipment as well as of following safety protocols and of being aware of emergency communication procedures.

4. Able to use vessel electronic equipment to fix a vessel position, to calculate vessel estimated position and time of arrival at a given point; and to collect parameters of meteorology and oceanography. Practical knowledge of the Beaufort scale.

5. Capable of using VHF/HF radios and send distress messages.

6. Understand the concept of target species; bycatch; non-target species, retained catch, discarded catch, overfishing, FAD, associated and free school, unfit for human consumption as defined by the IOTC.

7. Have satisfactory knowledge of the IOTC CMMs relevant to scientific observers;

8. Understand observer duties, code of conduct, status and procedures to follow onboard. Aware of the role & importance of the fisheries observer for the monitoring and management of tuna fisheries in the Indian Ocean.

9. Understands common nautical terminology. Recognises the basic layout of industrial tuna fishing vessels. Familiar with working and observation areas and common fishing operational scenarios for the relevant fisheries.

10. Familiar with the species of special interest that interact with industrial tuna fisheries, most common interactions and strategies to avoid and mitigate such interactions.

11. Capable of identifying and distinguishing between the main tuna species in their adult and juvenile forms and of using standard identification guides to identify species of billfish, sharks and other bycatch including marine turtles, seabirds and marine mammals.

12. Able to accurately measure and weigh fish and to collect biological samples according to IOTC ROS standard procedures.

13. Aware of IOTC ROS data gathering processes and priorities.

14. Capable of collecting and estimating catch weight, volumes and ratios according to ROS standard procedures. Conscious of the need to check consistency with entries made in the logbook and assist with filling a logbook.

15. Capable of collecting, formatting and accurately recording mandatory and recommended

information as prescribed under the scheme.

16. Familiar with IOTC data reporting requirements and timelines for submission.

E.   Observer Provider functions regarding observer deployment and coordination

1. Communicate to vessel operator /agents intended deployments sufficiently in advance and request a copy of the vessel safety certificate and P&I insurance cover[6] and arrange date and time of boarding. Provide the vessel operator with a checklist for obligatory bycatch mitigation equipment for information.

2. Advise the observer, in a timely manner, and place him/her on "Standby", to allow for observers to take care of personal matters and suitably prepare themselves.

3. Communicate to the observer agreed boarding port, date and time. Provide observer with emergency information relevant to the country or port of deployment.

4. Assist with the procurement of observer visas, entry permits, waivers and any travel documents required to transport the observer to the departure or arrival port of the vessel.

5. Organize all travel arrangements including air, bus or ferry schedules;

6. Provide observers with a formal briefing prior to deployment and facilitate a placement meeting between the vessel captain, observer and a 'placement officer'.

7. Manage issues of refusal of observers by captains and provide captains a mechanism where they may report on the conduct of observers.

8. Ensure that the vessel on which an observer is placed shall provide accommodation, including lodging, food and adequate sanitary facilities, equal to those of officers;

9. Confirm that vessel masters shall ensure that all necessary cooperation is extended to observers in order for them to carry out their duties safely including providing access, as required:

   a.   to the retained catch, and catch which is intended to be discarded;

   b.   to satellite navigation equipment (consultation only)

   c.   to radar display viewing screens when in use; (consultation only)

   d.   to electronic means of communication;

10. Establish and maintain communications with the observer by *inter alia* receiving and replying to observer "vessel pre-safety check", "deployment report" and "weekly observer status

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[6] By arrangement, observers may be included as part of the vessel crew list in order to benefit from vessel P&I insurance cover while on-board, if they are hold (i) a valid Certificate of Medical Fitness (STCW); (ii) an in-date Certificate for Survival Techniques and Occupational Health and Safety at Sea (STCW). Nonetheless, the observer programme will still need to provide observer insurance for travel to and from the vessel, "waiting time" etc. and their cover should be confirmed as there have been cases where observers included on the crew list have not received the required insurance.

reports"[78.]

11. Debrief the observer as soon as possible on their return to port.

12. Receive and revise final version of the electronic trip report and ensure that it meets IOTC ROS requirements.

13. Maintain regular contact with the observers after their return to provide technical support, personal support, and information on new developments, to ensure the observer is in good health after the trip, and to inform the observer of any future boardings or relevant issues arising from the completed trip.

14. Ensure that observers do not exceed two back-to-back trips on the same vessel.

F. Coordinator training

Coordinator training should include:

1. Background and processes to follow when deploying observers.

2. Determining observer program mandate and objectives

3. Strategic planning (guidance on initiating an observer programme)

    a. necessary institutional structure for managing a programme

    b. resourcing requirements

    c. legal requirements

    d. selecting of fleets and vessels based on program objectives

    e. accessing number of observers required to meet objectives (e.g. to reach IOTC minimum required coverage)

4. Observer recruitment and administration

5. Sensitizing and planning deployments with the fishing industry and vessel operators

    a. Allocation of observers to vessels

    b. Notification processes

    c. MoU with vessel operators

6. Mechanisms for coordination with observer programmes of other CPCs where shared observers may be required.

7. Health and Safety checks and pre-sea safety inspections process

8. Preparation of observer gear lists, sampling equipment and data forms

9. Preparation of trip instructions

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[7] Report should be sent/receive every Wednesday.

[8] A "vessel pre-safety report "and an observer "deployment report" and a "weekly observer status reports" were developed for reference. These can be found under the Guidelines for IOTC ROS.

10. Preparation of a summary of IOTC Resolutions of relevance to the observer scheme.

11. Observer briefing process

12. In-trip coordination including communications and observer reports (deployment & periodic) while at sea

13. Observer disembarkation, debriefing and data verification processes;

14. Observer trip reports

15. Data management, processing, quality control and reporting procedures to facilitate the review of the quality of data collected, data management and reporting to the IOTC.

Coordinator training Instructors should have:

1. an intimate knowledge of observer work, data collections and reporting;

2. experienced with the management and coordination of at-sea observers;

3. a good understanding of the fishery and the management of that fishery;

4. good communication skills that can give clear and understandable messages in a straight forward manner;

G. Briefing and debriefing procedures

Briefing procedures should include:

1. Providing the observer with travel itinerary and any necessary travel documents to enter the country and access the port where the vessel is docked. Including inter alia: contact name and number of vessel agents and owner.

2. Providing the observer with a communication protocol.

3. Instructing observer on specific data collection protocols and biological requirements for the trip and provide him/her with briefing notes;

4. Advising observer on reporting requirements.

5. Ensuring necessary health requirements/medications are met by the observer, issue safety equipment and work materials to fulfil observer tasks, including for the collection of biological samples.

6. Supplying current forms and workbooks in whatever format is used in the national programme, but ensuring that it complies with the ROS minimum data standards;

7. Verifying that the observer is prepared to travel and that he/she is in possession of all essential items required for a trip: passport, cash and/or credit card, mobile/cell phone, copy of the MoU (if any), copy of pre-sea safety check list and letter of introduction or order of mission.

8. If practical, briefing should include a placement meeting on board the vessels between the observer, the vessel captain and the briefer to ensure a common understanding of the duties of the observer and safe practices on board the vessel.

9. Providers may wish to have a briefing form that can be read out and given and/or signed by the captain and observer. Such briefing form should state observer status, roles and duties while onboard the vessel; Captain/Master and crew obligations towards the observer; as well

as any existing penalties concerning attempts to bribing, threatening, intimidation, assault and/or sexual harassment of an observer.

De-briefing procedures should include:

1. Collecting all issued equipment from the observer;

2. Collecting all data, images, and reports from the observer;

3. Conducting a preliminary review of observer data, checking if it meets IOTC ROS data requirements and running routine error checks. This will provide an opportunity for the observer to discuss and explain missing, unusual or unexpected data.

4. Debriefing of critical incidents which should be reported immediately to the relevant authorities.

5. *Observer providers should attempt to debrief all observer trips that they manage and build sufficient authorised debriefers among their observers to ensure debriefing is a quality routine of their observer operations (e.g. 1 debriefer : 5 observers)*

H. Health and Safety Equipment and Work Materials list

Fishing Gear Type	Equipment and Materials											
	Safety							Health				
	Two- way communication device[9]	EPIRB[10]	Immersion suit	PFD[11]	Strobe light	Signal mirror	Dry bag	Safety helmet	Deck working boots[12]	Waterproof clothing	Working gloves	Sun glasses
Longline	X	X	X	X	X	X	X	X	X	X	X	X
Purse-seine	X	--	--	X	X	X	X	X	X	--	X	X
Pole and Line (tropical & sub-tropical areas)	X	--	--	X	X	X	X	X	X	--	X	X
Pole and Line (temperate areas)	X	--	X	X	X	X	X	X	X	X	X	X
Gillnet	X	X	--	X	X	X	X	X	X	--	X	X

Fishing Gear Type	Equipment and Materials											
	Work											
	Calliper	Measuring Board (or hard tape)	Flexible tape	Scales	Waterproof slates	Knife	Sampling Equipment	Camera	Laptop computer	Data collection forms	Observer Manual	IOTC Spp. ID Guides
Longline	X	X	X	Only if observer is required to collect weight information in the context of a specific sampling program	X	X	X	X	Only if observer is required to input data while onboard	X	X	X
Purse-seine	X	X	X		X	X	X	X		X	X	X
Pole and Line	X	X	X		X	X	X	X		X	X	X
Gillnet	X	X	X		X	X	X	X	--	X	X	X

[9] Two way texting device (satellite messenger) or a satellite phone independent of the vessel communications systems.
[10] Personal Emergency Position Indicating Radio Beacon (406 MHz EPIRB, preferably with integral GPS navigation receiver).
[11] Personal Floatation Devices (abbreviated as PFD) include: life jacket, buoyancy aid and survival suit .A minimum safety requirement for the vessel will be to supply the observer with a SOLAS approved Life Jacket.
[12] Waterproof boots with steel-cap toe and ankle protection.

I. Emergency Action Plan (EAP)

CPC EAPs must include, as a minimum, the IOTC-ROS safety-at-sea standard procedures detailed below.

1) Communications protocol and appropriate contact information

The observer programme must establish a communications protocol and have a "Designated Officer/s" responsible for maintaining a device capable of receiving a signal from an independent two-way satellite communication device[13].

Communications protocol must include:

a) Routine reports

i) Deployment reports submitted within 24-hours after sailing confirms a line of communication between the observer and the Observer Provider;

ii) Weekly status reports allow for regular communications to be maintained and for the observer to communicate any safety problem (any instance of interference, harassment, intimidation, or assault)[14]).

b) Emergency communication procedures:

The observer programme must have an established procedure to initiate contact with the observer, the vessel, the vessel owner / operator and, if necessary, the appropriate enforcement authority of Flag CPC and relevant Coastal CPC.

c) 24 hr emergency contact

A 24 hr emergency service will need to be established. This service need not be in the "Fisheries Departments" and other services like police, patrol boat bases may be utilised. The observer programme nominate "Designated Officer/s" responsible for maintaining a device capable of receiving a signal from the approved independent two-way satellite communication device).

2) Follow up responses

The observer programme must establish a procedure to initiate contact with the observer, the vessel, and, if necessary, the appropriate enforcement authority of Flag CCMs and relevant Coastal CCMs.

3) Remedial action

CPCs must establish appropriated procedures for addressing issues related to the safety of observers including violations against observers. These measures must include clear actions that must be taken in the event of various emergencies including: observer illness, injury and death, observer missing at-sea or presumed fallen overboard; assault, intimidation, threatening and/or harassing of an observer.

Procedures must include at the very least the following actions:

d) In the event that an observer dies, is missing or presumed fallen overboard, the CPC to which the fishing vessel is flagged shall ensure that:

i) the fishing vessel immediately ceases all fishing operations;

ii) the fishing vessel 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 flag CPC to continue searching;

iii) the fishing vessel immediately notifies the flag CPC and the observer provider;

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[13] Two way texting satellite device or a satellite phone independent of the vessel communications systems.
[14] Communication codes describing problems to be agreed between observers and their coordinators.

iv) the fishing vessel immediately alerts other vessels in the vicinity by using all available means of communication;

v) the appropriate Maritime Rescue Coordination Centre is immediately notified and provided with a report on actions undertaken;

vi) the fishing vessel cooperates fully in any search and rescue operation whether or not the search is successful and after such search and rescue operation has been terminated, orders the vessel to the nearest port for further investigation, as agreed by the flag CPC and the observer provider;

vii) the fishing vessel provides the report to the observer provider and appropriate authorities on the incident; and

viii) the fishing vessel cooperates fully in any and all official investigations, and preserves any potential evidence and the personal effects and quarters of the deceased or missing observer;

ix) the fishing vessel ensures that, to the extent practicable, the body is well-preserved for the purposes of an autopsy and investigation.

e) *In the event that an observer suffers from a serious illness or injury that threatens his or her life and/or long-term health or safety, the CPC to which the fishing vessel is flagged shall ensure that:*

i) the fishing vessel immediately ceases fishing operations;

ii) the fishing vessel immediately notifies the flag CPC and the Observer Provider;

iii) the appropriate Maritime Rescue Coordination Centre is immediately notified and provided with a report on actions undertaken;

iv) the fishing vessel takes all reasonable actions to care for the observer and provides any medical treatment available and possible on board the vessel, and where appropriate seeks external medical advice;

v) the fishing vessel, where directed by the Observer Provider, if not already directed by the flag CPC, facilitates the disembarkation and transport of the observer to a medical facility equipped to provide the required care, as soon as practicable; and

vi) the fishing vessel cooperates fully in any and all official investigations into the cause of the illness or injury.

f) *In the event that there are reasonable grounds to believe an observer has been assaulted, intimidated, threatened, or harassed such that their health or safety is endangered and the observer or the observer provider indicates to the CPC to which the fishing vessel is flagged that they wish for the observer to be removed from the fishing vessel, the CPC to which the fishing vessel is flagged shall ensure that the fishing vessel:*

i) immediately takes action to preserve the safety of the observer and mitigate and resolve the situation on board;

ii) notifies the flag CPC and the Observer Provider of the situation, including the status and location of the observer, as soon as possible;

iii) facilitates the safe disembarkation of the observer in a manner and place, as agreed by the flag CPC and the Observer Provider, that facilitates access to any needed medical treatment; and

iv) cooperates fully in any and all official investigations into the incident.

g) *In the event that there are reasonable grounds to believe that an observer has been assaulted, intimidated,*

threatened, or harassed but neither the observer nor the observer provider requests that the observer be removed from the fishing vessel, the CPC to which the fishing vessel is flagged shall ensure that the fishing vessel:

i) takes action to preserve the safety of the observer and mitigate and resolve the situation on board as soon as possible;

ii) notifies the flag CPC and the Observer Provider of the situation as soon as possible; and

iii) cooperates fully in all official investigations into the incident.

h) After an observer has disembarked from a fishing vessel, the Observer Provider identifies—such as during the course of debriefing—a possible violation involving assault or harassment of the observer while on board the fishing vessel. The Observer Provider shall notify, in writing, the flag CPC, and the flag CPC shall:

i) investigate the event based on the information provided by the Observer Provider and take any appropriate action in response to the results of the investigation;

ii) cooperate fully in any investigation conducted by the Observer Provider, including providing the report to the Observer Provider and appropriate authorities of the incident; and

iii) notify the Observer Provider and the Director of the results of its investigation and any actions taken.

i) CPCs shall ensure that their Observer Providers:

i) immediately notify the flag CPC in the event that an observer dies, is missing or presumed fallen overboard in the course of observer duties;

ii) cooperate fully in any search and rescue operation;

iii) cooperate fully in any and all official investigations into any incident involving an observer;

iv) facilitate the disembarkation and replacement of an observer in a situation involving the serious illness or injury of that observer as soon as possible;

v) facilitate the disembarkation of an observer in any situation involving the assault, intimidation, threats to, or harassment of that observer to such an extent that the observer wishes to be removed from the vessel, as soon as possible; and

vi) provide the flag CPC with a copy of the observer report on alleged violations involving that Provider's observer upon request.

<u>The Observer Provider must establish appropriate measures</u> for addressing issues related to the safety of observers including violations against observers. These measures should cover:

a) Pre-boarding

i) Only observers trained to an international standard (STCW or equivalent) on Safety at Sea by a certified person, school, college or maritime authority, are permitted to carry out duties on board a vessel at sea.

ii) Only observers holding a valid Basic Safety Training Certificate (STCW or equivalent) are permitted to carry out duties on board a vessel at sea under the IOTC ROS.

iii) Only observers holding a valid Certificate of Medical Fitness (STCW or equivalent) issued by an authorised medical practitioner are permitted to carry out duties on board a vessel at sea under the IOTC ROS.

iv) Observers shall not board vessels until they have been fully equipped with at least the health and safety equipment detailed under the Guidelines for IOTC ROS. Safety equipment must be in a good working order and should be checked regularly.

v) Vessel safety conditions will be surveyed against minimum safety requirements. A Vessel Safety Check will be done before each boarding of an observer on a vessel and a vessel pre-sea safety checklist or form will be filled out by the provider/observer to ensure that vessel safety conditions meet minimum safety requirements and that there is adequate safety equipment to cater for the extra observer on board. The Commission has a guideline format and national formats should be similar or the same (see Guidelines for the IOTC ROS).

vi) Observers have the right to refuse the boarding if the Vessel Safety Check highlights that the vessel does not comply with expected standards or if they consider a particular vessel to be unsafe.

4) Completing the EAP protocols

CPCs must establish appropriate measures for addressing violations made against observers. Incidents involving observer reporting of interference, harassment or intimidation must be resolved through a legal or nationally recognized procedure.

5) Reporting to the IOTC

CPCs must have an established procedure to report incidents involving observers to the Secretariat.

J. **Vessel pre-sea safety checklist and vessel minimum safety requirements**

Pre-Sea Safety Inspection Checklist

Observer		Date		Signature	
Vessel Agent		Date		Signature	
Port / Position					

Vessel Details:

Vessel Name		
Captain Name/Fishing Master		
Call Sign		
Flag		
Size GRT		
LOA		
Vessels Compliment		
Vessel contact Number	Telephone	
	Fax	
	Inmarsat (A/C/M) & No.	
Vessel Owners / Charter's	Name	
	Telephone	
	Fax	
	Mobile	

Safety Equipment:

Safety Certificate In-date (Y/N)		Issuing Authority	
Flares: Location		If checked No. / Exp Date	
First Aid Materials: Location		Name of Medical Officer	

Life Rafts				
Type	Number	Capacity	Hydrostatic release *Y / N*	Date Next Service Due
Life Jackets				

Type Inflatable/Packed	Number on-board	Location Cabin /Muster Station/ Both	SOLAS Approved Yes/ No

Fire Extinguishers

Positioned in main corridor's (Y/N)		Charge seals intact (Y/N)	
Positioned on bridge (Y/N)		Charge seals intact (Y/N)	

Immersion Suits *(only required by vessels operation south of 30º S)*

Type	Number on-board	Location Cabin /Muster Station/ Both	SOLAS Approved Yes/ No

GMDSS

Radio Equipment	HF Operational yes or no	MF Operational yes or no	VHF Operational yes or no	INMARSAT Operational yes or no	NAVTEX Operational yes or no

EPIRB

Type / Manufacturer	Number of units on board	Location	Release method manual / float free

SART's

Type / Manufacturer	Number of units on board	Location	Release method manual / float free

Accommodation:

Vessel Emergency Evacuation and Muster Stations Lists – Displayed (Y/N)	
Cabin - Single or Sharing	

General Comments:

MINIMUM SAFETY REQUIREMENTS

The following items that will be checked as part of the "Pre-Sea Inspection" will be considered as the minimum compulsory requirements. Should any of these items not comply the Observer will not be permitted to embark on-board the vessel.

Safety Certificate (Safety Management Certificate)

The vessel must have on-board a current and valid Safety Certificate that does not expire for a period of at least four months from the date of embarkation of the observer. Check that including the observer on-board that the full complement does not exceed the limit for the number shown on the safety certificate.

Life Rafts

The Life rafts must have the capacity to accommodate the full crew compliment including the observer. Life Rafts must be within their serviceable date, which must cover the expected maximum duration of observer deployment. All Life Rafts must be fitted with a Hydrostatic Release mechanism.

Life Jackets

There must be a total number of life jackets on-board, readily available at the emergency muster stations to accommodate each of the compliment on-board the vessel.

K. Observer Deployment Report

To be submitted within 24-hours of the vessels departure from port

If a report is not received within 24 hours of the due date, contact vessel operator to send a message to the vessel to remind the observer of his/her obligation in this respect.

If a report is not received within a further 24 hours assumed that there is no means of formal communication with the vessel. Contact vessel operator to make arrangements either to establish these or to request the immediate return of the observer.

If no contact is established initiate emergency search and rescue operations.

Date		
Observer		
Vessel Name / Call sign		
Company		
Captain / Fishing Master		
Vessel Contact Details	Number	
	Email	

Deployment Details

Briefing Date	
Contract "Start Date"	
Flight No's *(Observers must retain their flight boarding passes)*	
Departure date from	
Departure time from	
Landing date at destination	
Landing time at destination	
Safety Inspection completed (yes /no)	
Boarding date	
Sailing Date	
Sailing Time	
Port of departure	
Comment	

L. Observer Status (or five days) Report

To be submitted every five days following the submission of the deployment report

If a report is not received within 24 hours of the due date, contact vessel operator to send a message to the vessel to remind the observer of his/her obligation in this respect.

If a report is not received within a further 24 hours assumed that there is no means of formal communication with the vessel. Contact vessel operator to make arrangements either to establish these or to request the immediate return of the observer.

If no contact is established initiate emergency search and rescue operations.

Vessel Name / Call sign	
Observer	
Date / Report Period	
Location at time of report	

No. sets sampled in period	

Number and / or weight per species retained or discarded *(Increase number rows as required)*		
Species	Retained	
	Released	
Number and / or weight per species sampled *(Increase number rows as required)*		
Species	Retained	
	Released	
Seabird Marine mammal interactions *(Give brief details)*		
IUU vessels sighted or detected *(Give details, date / time / position)*		
Lost gear recovered *(Give details)*		
General Comments *(comment on any items considered important for immediate attention)*		

M. Code of Conduct

Observers are required to conform to an internationally recognised code of conduct to become certified. This requires that:

1) Observers may not participate in any activity which would cause a reasonable person to question the impartiality or objectivity with which the Regional Observer Scheme is administered.

   - Observers may not have a direct financial interest in the observed fishery, other than the provision of observer services. This includes, but is not limited to, vessels or shore-side facilities involved in the catching or processing of the fishery products, companies selling supplies or services to those vessels or shore-side facilities or companies purchasing raw or processed products from these vessels or shore-side facilities. The interests of a spouse or minor child are considered those of the observer.
   - Observers may not solicit or accept, directly or indirectly, any gratuity, gift, favour, entertainment, loan or anything of monetary value from anyone who conducts activities that are regulated by IOTC, or who has interests that may be substantially affected by the performance or non-performance of the observers' official duties.
   - Observers may not solicit or accept employment as a crew member or an employee of the vessel in any fishery while employed as an observer.
   - Observers may not serve as observers on any vessel owned or operated by a person who previously employed the observer in any capacity.
   - A person may not serve as an observer in a fishery during the 3 consecutive months following the last day of his/her employment as a paid crew member or employee in that fishery.

2) Observers may not participate in any activity which could impair the observer's ability to perform his/her duties. This includes, but is not limited to:

- Engaging in drinking of alcoholic beverages while on duty
- Engaging in the use or distribution of illegal substances
- Becoming physically or emotionally involved with vessel personnel

3) Observers may not participate in any activity which could adversely affect the efficient accomplishment of the Scheme's mission.
   - Observers must refrain from engaging in any illegal actions according to the laws and regulations of the flag State that exercises jurisdiction over the vessel to which the observer is assigned.
   - Observers must avoid any behaviour that could adversely affect the confidence of the public in the integrity of observers, the IOTC Regional Observer Scheme or the IOTC.
   - Observers must record all scientific data accurately and honestly.
   - If the observer chooses to report any suspected violations of regulations relevant to conservation of marine resources or their environment that they observe, it must be done honestly.
   - Observers must preserve the confidentiality of the collected data and observations made on board the fishing vessels, in accordance with Resolution 12/02, and shall treat as confidential all information with respect to the fishing operations of the vessel on which they are deployed.

4) Observer involvement in vessel operations
   - Observers shall respect the hierarchy and general rules of behaviour which apply to all vessel personnel, provided such rules do not interfere with the duties of the observer under this scheme.
   - In all aspects involving vessel operations and safety at sea the observer will fall under the authority of the Captain.
   - Scientific observers will have no authority to advise or direct any of the vessel operational activities or have any authority over any of the vessel personnel.
   - Scientific observers should have access to all operational areas of the vessel necessary to complete their work including the bridge, navigation and communication equipment. However, the observer should attempt to secure co-operation with officers to ensure that their work does not interfere with normal fishing and operational activities.