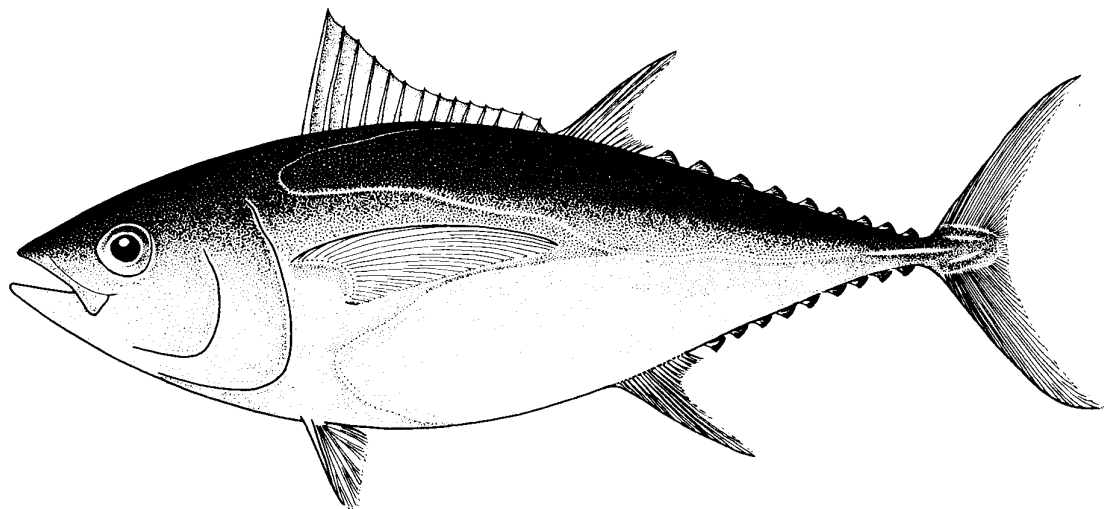


**Pacific Island Regional Fisheries Observer
(PIRFO) Debriefing and EM Reviewing
Policy
2020**



BACKGROUND

A regional debriefing policy was first developed for, reviewed, approved and recommended at the 6th Pacific Island Regional Fisheries Observer Coordinators' Workshop (ROCW) held in Honiara in January 2006. The policy was called the Western and Central Pacific Island Observer Programmes Regional Observer Debriefing Policy.

- ROCW-7 (2007) agreed to establish a Pacific Island Regional Fisheries Observer Certification Working Group and this group was tasked with PIRFO development quality control and to define the certification structure.
- First draft PIRFO training standards (January 2008) The standards include a PIRFO Certification and Training Policy Manual and PIRFO Framework that outlines the make-up of a Certification Management Committee (CMC), charged with overseeing the certification of observers, observer debriefers and observer trainers.
- PIRFO standards for fisheries observers were endorsed by FFC67 (2008) and hence adopted as the regional standards for FFC Members.
- PIRFO Report (Aug 2009) reviewed and revised the draft standards into the original PIRFO training standards framework.
- PIRFO Certification and Training Policy Manual produced for auditing institutions wishing to train PIRFO (August 2009).
 - 2010. First PIRFO Debriefing Workshop, Cairns, Australia
- FFC77 (2011) endorsed development and auditing accreditation standards for debriefers and trainers
- FFC81 (2012) endorsed continued development of competencies for observer debriefers and trainers and the initiation of competencies for assessors

RATIONALE

The importance of debriefing is that observers work on board the vessel in situ, but remotely and without direct supervision. Debriefing by a qualified expert at the end of an observer's trip is the principal quality assurance process to ensure that the data are complete, are collected following established protocols and are accurate. This utilises the written (or electronic) record of the observer, his memory and the skill of the debriefer to verify events recorded

PIRFO Observers collect operational and catch data on purse seine, long line and pole and line fishing vessels that target tuna in the Western and Central Pacific Ocean vessels. These data are used for the purposes of stock assessment, compliance monitoring and to assess the effectiveness of fisheries management initiatives. As such, it is critical that the data are accurate and that its accuracy can be guaranteed to third party users. To ensure consistency of the data collection; data collection protocols, the recording formats and training have become standardised across all PIRFO programmes of SPC/FFA's PICTs.

The key primary quality assurance procedure is debriefing of the observer; the role of a PIRFO Debriefing is to provide an independent assessment that the observer's data are true, accurate and were collected according to established protocols.

PIRFO Observer Programme Managers and Coordinators are responsible to ensure that data collected by their observers accomplishes the goals of their programme and is consistent with WCPFC obligations and data minimum standards. A consistent routine of debriefing their observers will facilitate their meeting this responsibility

As observer data is generally collected nationally but used regionally, a PIRFO debriefer policy applied by all national programmes ensures consistency of observer data across the region..

PURPOSE OF PIRFO DEBRIEFING POLICY

The purpose of the PIRFO Debriefing Policy is to:

- provide principles of debriefing;
- be a guide to the processes and rules for debriefing;
- set protocols for transparency, fairness, consistency, timeliness;
- identify training standards;
- provide a transparent, independent mechanism of oversight and audit of PIRFO debriefing to guarantee observer data to third parties (CMC) and
- NOT to provide Standard Operating Procedures – that's in the guide

OBJECTIVES OF DEBRIEFING

Debriefing provides a mechanism to:

- provide data quality assurance to third party users of the data;
- flag data that does not meet the specific quality requirements of data users;
- quickly report, and action if necessary, critical incidents that took place on the trip;
- give Observers timely direct feedback on how they can improve their data;
- give Observer Coordinators appraisal on their observers' performance;
- explore, through questioning, if additional information can be gathered about the trip;
- judge if the quality of the data has suffered through harassment of the observer;
- provide an index of performance for pay and promotion purposes;
- report if special consideration is necessary for future placements on the vessel and
- verify data forms' utility before distributing them to other agencies (FFA PNA, SPC, SPREP AND WCPFC.;

PIRFO Debriefing Policy

- Debriefing is the principal quality assurance process to verify the data of fisheries observers.
- Only certified PIRFO Debriefers will debrief PIRFO Observers.
- PIRFO Debriefers' performance should also be independently verified.
- Debriefing should be done for every observer trip is the goal of PIRFO observer programmes.

APPLICABILITY

- Participating PIRFO observer programmes may utilise this regional debriefing policy.
- The policy applies to **certified PIRFO Debriefers** conducting debriefing of PIRFO Observer trips.
- Debriefing standards will be established by the PIRFO Certification Management Committee (CMC).

PRINCIPLES OF DEBRIEFING

PIRFO Debriefing will be conducted according to the following principles:

- Validity
- Transparency
- Fairness
- Consistency
- Timeliness

DEFINITIONS

Validity

- PIRFO Debriefing protocols are followed and processes are applied by certified PIRFO debriefers.

Transparency

- Debriefing assessments are documented and available for the observer to review their mistakes
-
- Debriefing evaluations are recorded, stored and available for supervisors or PIRFO auditors.
-
- The Debriefing evaluation results shall be physically stored with, and included with the observer data in the database as a readily available quality assessment of the observer data for third party users of the data.

Fairness

- The standards of evaluation are applied to all observers, for each trip, with equity. Debriefing must be conducted without bias to the observer or their programme.

Consistency

- Debriefing Assessments and Evaluation processes are applied consistently by all debriefers in all programmes.

Timeliness

- The debriefing process is conducted within the agreed time from the end of the trip to ensure the observer's memory is still fresh. See Appendix 1.

PROTOCOLS

- Debriefing will follow the agreed PIRFO Debriefing standards and processes
- Debriefing shall be conducted by certified PIRFO Debriefers in good standing.
- Debriefing should be done face to face between observer and debriefer in an appropriate environment.

- Debriefing should be done within agreed timeframes from the end of a trip.
- PIRFO Debriefers will maintain currency of their certification.
- Debriefing should be conducted on every observer trip, where possible.
- An observer must be fully debriefed immediately after completing a first trip on a particular gear type.
- Where an observer takes back-to-back trips in a location where it is difficult to be fully debriefed between trips, debriefing should be done after two trips (or two months) with a worst case scenario of three trips made or three months before being fully debriefed.
- There should always be a pre-debriefing for every trip between such back to back trips.
- A Placement Briefing shall occur by an appropriate officer at the start of a trip.
- PIRFO governance, certification, review of debriefer standards, procedures and forms will be through the PIRFO CMC.
- PIRFO programmes should establish arrangements to have their observers debriefed by sister PIRFO agencies in foreign ports.
- PIRFO Observer programmes will ensure they have sufficient certified debriefers for the number of observers in the programme. An ideal ratio of debriefers to observers to is 1:5, with a minimum of 1:10.
- PIRFO Observer Programmes should ensure that adequate incentives are in place to maintain a corps of skilled debriefers.

PROCESSES

Pre-debriefing

PIRFO debriefing protocols involve a two-step process that may be carried out either separately or concurrently. The first step involves a **pre-debriefing** process this is to check on issues of observer welfare, safety and any incidents (such as listed on the GEN-3 form) that may require immediate attention from the Authority. This is also an opportunity to determine the forms are completed (except the Trip Report) and for the observer to report anything unusual or ask any questions regarding his duties. This is also the time for the observer and debriefer to schedule when the full debriefing will take place.

Observers should be aware that data and journals must be ready for review as soon as they reach port on completion of each trip, for pre-debriefing.

Full debriefing

The second step requires an observer to undergo face-to-face **full debriefing** to ensure data completeness and accuracy. This involves the debriefer to look in detail at all fields for all forms on all days of the trip and verify their accuracy.

The Debiefer shall use the current PIRFO Debriefing forms to record the data are correct, , are erroneous or are incomplete and whether they could be corrected.

The debriefer should use a pen to complete the Debriefing form, the Evaluation form and the Score sheet.

Coloured Pencils for Editing before, during and after debriefing

- The observer should use a **blue** pencil if they edit their own data after the trip is complete.
- The debriefer should use a **green** pencil if they edit the observer's data.
- Data-entry personnel should use a **red** pencil if they edit the data during data entry.

Debriefing Processes

Before debriefing (Observer is not present).

The observer's data forms are submitted and examined for incomplete fields and errors, which are circled with the appropriately coloured pencil as a reminder for the debriefing interview.

1. The Debriefer examines the forms for completeness and obvious errors, the written Trip Report and the Journal should be read and used to determine if the incomplete fields and errors may be corrected by the debriefer during the debriefing interview.
2. Incidents that are reported by the observer in GEN-3 should be cross referenced in the Journal and Trip Report with referenced page numbers checked.

During debriefing (The observer is present).

1. The debriefer should go through each field on each page of all forms in the workbook to assess the completeness (no blanks) and correctness (no obvious errors) of each field in each form.
2. If there are any incomplete fields or errors identified by the observer he should consult the observer and his journal to try to correct the field.
3. The debriefer records his assessment each field for completeness and correctness across the whole trip in the Debriefing Assessment form.
 - a) Only fields that are completed and free of errors in all pages may be assessed as 'Cc'
 - b) Fields that have some errors or are incomplete status, should only be given the 'R' recovered status if the debriefer can recover **all** occurrences.
 - c) Circle only one data quality code. If a field has examples of both errors and incomplete, use the data quality code of the most common and comment on the other in the Evaluation Form to the right of the codes.
 - d) If you have both types of mistake and can recover some of them but not all, use the 'Inc' or 'Er' for which the **unrecovered** code is most common – and note on any corrections beside the code.
 - e) Ensure you detail any consistent mistakes, problems etc. in the Debriefing form 'explanation box' for the observer to revise.
 - f) Provide feedback to the observer on errors, ensure these are explained as notes in the explanation box.

After debriefing (Observer is not present).

1. Transcribe the data codes from the Debriefing Assessment to the Evaluation form.
 - a) Note frequency of the error on the evaluation form beside the data codes
 - b) Note number of times it could be recovered.
 - c) Make a note of any X factor.
2. Then only those fields that were assessed as 'Cc' are awarded the appropriate marks on the Score sheet.
3. Provide feedback on the observer's performance to the Observer Manager/Coordinator

Placement BRIEFING

The WCPFC standard for accreditation of programmes under the ROP requires that there is a Placement Briefing of observers in place and documentation available.

- Briefings shall be facilitated by an authorised officer. This is expected to be either the Coordinator, a debriefer or a senior observer as nominated by the programme at the time of placement of an observer for an observer trip.
- If the observer is boarding in a foreign port, arrangements should be made with either the observer coordinator of the local programme in the port or an agent to facilitate the placement briefing and to then send the SUP-1 forms to the observer provider.
- Briefing procedures should follow a consistent format (use the SUP-1 forms).
- Briefings are done to ensure that both the captain and observer fully understand the role of the observer onboard the vessel, and reinforce the responsibilities of the captain, crew and observer while he is onboard (SUP-1 (pg. 1)).
- The SUP-1 (pg. 2) is a Vessel Safety Checklist to determine if the vessel is safe for the observer to board. It is required to be completed for each observer placement, and retained by the observer provider. See the section below.
- It is critical to ensure that a new observer should not be placed unless a proper Placement Briefing meeting can be arranged.
- The SUP-1 forms completed at the briefing should be retained by the observer provider including the vessel safety checklist (VSC).
- This is also a final check to ensure the observer has his necessary work equipment (workbooks callipers, safety gear etc.), and that he has met all personal needs, medical, financial etc.
- The briefing should also include instructions on locations of fire extinguishers, life saving devices, general safety equipment, emergency assembly points, locations for storing gear such as callipers, safe areas to work during operations, a briefing on use of electronic equipment in the bridge, licence checks etc., are also important at this time.

Vessel Safety Checklist (VSC)

Observer programmes accredited under the ROP are required to have a Vessel Safety Checklist (VSC), and that it be completed prior to an observer trip. The SUP-1 (page 2) form used by PIRFO programmes meets the requirement as a VSC and should be completed prior to each observer trip.

At the placement briefing the SUP-1 forms should be completed to determine if a vessel is safe for an observer to board. The observer has the right to refuse the boarding if the VSC highlights that the vessel does not comply with expected standards. The VSC allows the observer to document why they may choose not to board for safety reasons.

Observer Safety at Sea and Emergency Action Plan

To ensure observers will be assisted in an emergency situation, prior to boarding observers must be issued with

- An approved independent two-way communication satellite device; and
- a waterproof personal lifesaving beacon (PLB).

Noting that this may consist of a single device such as “Satellite Emergency Notification Device” or it may be a combination of an independent satellite-based system such as a Sat phone plus a portable lifesaving beacon (PLB).”

Currently the standard among PIRFO programmes is that observers are all issued with Delorme InReach which is a combined communication device and PLB.

All programmes accredited under the ROP need to have an “Emergency Action Plan” (EAP) in place to guide the programmes response to any reported observer emergencies, including interference, harassment, intimidation and other personal safety issue, or vessel emergency.

The Placement Briefer officer should ensure the observer is aware of the process he should use to contact the programme in an emergency and how it will be dealt with by the programme.

PIRFO DEBRIEFER CERTIFICATION

The PIRFO standard for the debriefing training and assessment is generic in structure. To be certified as a PIRFO Debriefer, the applicant must have completed the requirements of the qualification *PIROBS416 – Certificate 4 in Debriefing Operations (PIRFO)*. Noting that Debriefing certification is specific to a gear-type, based on the sea-time experience and past data quality of the observer. Observers can become debriefers for one or more gear-types but must be endorsed for each gear-type separately.

THE PIRFO CMC will provide oversight of Debriefing certifications.

Debriefing training pre-requisites

To apply for ‘debriefing training’ in a particular gear-type observers will need:

1. Minimum sea-time experience with that gear type as shown in the following table;

Gear type	(required sea-days)		
	1 st certification		2 nd and subsequent certifications
	as fully functional observer only	Days as an observer + other at sea experience	as fully functional observer
Purse seine	150 days	100+100	50 days
Longline	75 days	40+100	30 days
Pole-and-line	40 days	25+100	20 days

2. to have undertaken a minimum number of observer trips with that gear type from which near perfect data (under current PIRFO guidelines) has been compiled.

All gear types	(required near perfect trips)	
	1 st certification	2 nd and subsequent certifications
	3 trips on different vessels	1 trip

3. Nomination by their Observer Coordinator or senior staff. The nomination should indicate that
 - the observer has completed at least three trips on any gear type,
 - the programme supports his training and intends to use him as a debriefer once certified,
 - the personal attributes of the observer make him suitable to be an observer (good communication skills, honest, careful with detail and shows leadership with respect to mentoring other observers).

4. A second referee confirming that the applicant is suitable as a debriefer showing:
 - honesty,
 - good communication skills,
 - is meticulous with detail,
 - capable in mentoring observers.
 - This other referee could be an Observer Manager or Coordinator from another programme (perhaps regional programme) with which the observer has worked, an observer trainer, some other senior fisheries staff member with which the observer has worked, or similar person.

Once requirements 1-4 above are adequately met the applicant will be offered debriefer training when available.

Once all the requirements and training described previously have been completed and assessed satisfactorily successful applicants will be certified according to guidelines outlined in the PIRFO Framework. They will then be certified to debrief any PIRFO observer of the gear type for which they are certified.

Debriefer Certification Process

PIRFO Debriefer certification involves a three-part competency-based training programme to establish the necessary knowledge and skills to be a PIRFO debriefer. It combines a training workshop, followed by on the job mentoring and practical assessment, with a final written assessment. These sequential elements are known as Part A, Part B & Part C.

Part A Introduction to Debriefing Workshop

This workshop provides an overview of the PIRFO Debriefing process, describes the knowledge and skills required for the debriefer as well as instructions on protocols and tools used.

Part B – On the job experience

At the end of the Part A the candidate is issued with the Debriefer Assessment Record (DAR), this is a training logbook for the candidate to record his achievements in terms of the practical mentoring and assessment. The minimum requirements for this section are that the trainee Debriefer:

1. observes at least 2 debriefings conducted by a certified Debriefer;
2. conducts at least 3 debriefings under supervision of a Debriefer Mentor and Assessor, and when judged ready;
3. is assessed in a practical authentic debriefing of an observer by a certified Debriefer Mentor and Assessor and satisfies the checklist of required skills in the DAR;

4. provides written answers to the underpinning knowledge section in the DAR and be assessed by the Debriefing Mentor and Assessor.

Only when the trainee has satisfactorily completed the Part B requirements can they proceed to Part C.

Part C – Final Assessment

When all elements of the PIRFO DAR are satisfactorily completed the candidate may attend the Final Assessment Workshop.

Part C includes is a revision of the background knowledge from Part A, group discussions on the lessons learned from the on the job experience (Part B) and a written assessment.

Detail of the process for certification is in the Debriefing Assessment Record.

Maintenance of Certification

To maintain their vocational currency (certification) PIRFO debriefers should complete at least one debriefing each 12 month period of each gear- type to continue debriefing that gear-type. This ensures that they maintain their debriefing skills.

To maintain certification debriefers should do one observer trip per 24 month period on a vessel of each gear type that they wish to continue debriefing or refresher training. This ensures that they are aware of changes to forms or data collection protocols.

Decertification

Decertification of a debriefer by the PIRFO CMC will be initiated through notification by an observer programme for whom the Debriefing has been debriefing observers.

If an audit of evaluations shows inconsistencies with the PIRFO protocols or processes the auditor may recommend to the debriefers agency a need to consider decertification or retraining.

A PIRFO debriefer, upon formal notification, may be decertified by the PIRFO CMC and no longer eligible to debrief observers if they:

1. do not comply with the Principles of Debriefing, particularly with respect to Fairness, i.e. showing a positive or negative bias in evaluating the work of certain observers;
2. are shown to not follow PIRFO Debriefing protocols;
3. are shown to be inconsistent in their debriefing assessments and evaluations;,,
4. have not conducted a debriefing for a period of greater than 12 months;
5. do not undertake debriefer refresher training when it is offered in their region; or
6. have not undertaken a trip on the gear type that they debrief for more than 24 months.

Notes on de-certification

Decertification requires formal notification following a review of the circumstances involved with particular view to ensuring that effective debriefers are not unnecessarily removed from the debriefer pool.

PIRFO CMC will inform the requesting programme of the application for decertification, and the debriefer if a contact email is provided. If a debriefer is decertified they may appeal to have an independent review by the PIRFO CMC to re-evaluate their work, or the circumstances behind their decertification .

Recertification

A decertified PIRFO Debriefer may be recertified (*against the numbering for Decertification above*) by the PIRFO CMC when:

1. If unfair bias in debriefing is their reason for decertification, they should not be considered for recertification.
2. & 3. If not following protocols or processes or inconsistent or unsatisfactory performance, that they complete a full recertification process and complete all assessments.
4. If they have not conducted a debriefing within 12 months, they will be recertified upon conducting a debriefing under supervision and upon the recommendation of the debriefer assessor.
5. They satisfactorily complete refresher training when next carried out.
6. They may be recertified upon taking at least one observer trip on a vessel of each geartype and are debriefed with an excellent debriefer evaluation.

DEBRIEFER MENTOR AND ASSESSOR

Background

In 2012, the Eighty First Forum Fisheries Committee (FFC81) endorsed the development of PIRFO competencies for observer debriefers and trainers and the initiation of competencies for assessors

The PIRFO Debriefer endorsement unit 'Mentor and assess a trainee Debriefer' was developed and approved at the 3rd PIRFO Trainer & Assessors' Workshop at SPC, Noumea, New Caledonia from 1st – 12th November 2016. A recommendation for formal development of a qualification was approved at the 4th PIRFO Trainers Workshop (PIRFO TW4) held in Honiara, Solomon Islands, October 1st – 5th 2018.

SPC, FFA with the assistance of a consultant proceeded with development of an application for further regional recognition of PIRFO Debriefer Mentor and Assessor at a workshop held in Brisbane 24th & 25th June 2019.

The Pacific Board for Educational Quality accredited PIRFO Debriefer Mentor and Assessor as a micro-qualification at Level 4 of the Pacific Qualifications Framework on 29 May 2020.

Role

The role of the PIRFO Debriefer Mentor and Assessor is to provide the practical on the job training and assessment for PIRFO Debriefer trainees.

Their role involves:

1. Plan and mentor a trainee Debriefer in the '*Part B – On the job experience*' part of their training. This involves conducting the required debriefing observation and/or coaching the debriefing in the debriefing under supervision component of the training as well as conducting the assessments.
2. Assess the competence of the trainee Debriefer against all the performance criteria of the units in the qualification
3. Record and provide feedback from the assessment process to the trainee debriefer.

Certification of PIRFO Debriefing Mentor and Assessor

Certification should through a workshop session, combined with observation of practical mentoring and assessing of a trainee Debriefing. The practical application of the training should be an actual debriefing as a part of the Debriefing training and assessment programme or through simulated workplace environment

Prerequisites to admission

The prerequisites to admission for a Debriefing Mentor and Assessor training are:

- currently accredited as a PIRFO Debriefing;
- at least 5 actual debriefings conducted on each of the gear types for which they wish to be endorsed; and
- demonstrated accuracy and consistency in Debriefing evaluations of observers.

Training and Assessment

The training and assessment will cover the following areas:

A workshop to provide and assess the candidates with the *Required Knowledge*

- PIRFO debriefing system, including policies and procedures established by PIRFO
- PIRFO Debriefing Assessment Record and the Debriefing assessment process
- Principles of assessment and rules of evidence and how they are applied to the assessment process
- Different assessment methods, various types of evidence and resource requirements
- Assessment tools and their purpose, different types of tools and relevance of different tools for specific evidence-gathering

A practical demonstration by the candidate of the *Required skills*

1. **Plan a mentoring of a trainee Debriefing.**
2. Set up and conduct a debriefing under supervision of a trainee Debriefing.
3. Follow the PIRFO processes for assessing the abilities of a trainee Debriefing.
4. Communicate effectively to coach and advise the trainee Debriefing.
5. Assess, record, and provide feedback on the performance of the trainee Debriefing.
6. Determine the competence and readiness of the trainee Debriefing for assessment.

Delivery

- Assessors involved in the delivery must be a PIRFO Trainer and Assessor, with a Certificate 4 in Debriefing Operations (PIRFO) and a PIRFO Debriefing Mentor and Assessor.
- Delivery of the workshop session should be conducted by at least one suitably qualified PIRFO Trainer and Assessor for every 8 learners.
- The workplace on the job delivery while the candidate is mentoring and assessing a trainee Debriefing should be a one-to-one ratio. It may be delivered in a simulated workplace environment, where actual debriefings are unavailable

ELECTRONIC REPORTING DEBRIEFING (IFIMS & OLLO)

Electronic Reporting uses a tablet to store observer data rather than on paper forms. However, Observers using ER still need to be checked that they follow the same protocols for collecting data. While ER does allow for in-built data checks it is still important that the ER observer is debriefed to verify that the data are accurate and have been collected correctly according to PIRFO protocols.

Pre-debriefing is also an important process to check that there were no critical incidents that occurred onboard during the trip.

The Principles of Debriefing and Debriefing Protocols must be followed for ER Observer debriefing.

The observer, and his data should be debriefed as soon as possible after the trip. It is important that the debriefer questions the observer directly. Even if the data have been sent from a regional office the observer must be debriefed face to face. This can be by using a communications platform such as Messenger, Teams, Zoom or Skype. It is not possible to verify that the data are accurate, whether correct protocols have been followed or to answer questions the observer may have unless there is direct communication between observer and debriefer.

To debrief an ER Observer the debriefer should also be familiar and trained in the use of the ER system to enable editing.

ER Debriefing Process

The observer should be present, physically or electronically to respond to questions from the debriefer.

IFIMS and OLLO allow for pdfs to be examined on a screen or printed to facilitate examining the same data fields across the trip. Until appropriate electronic debriefing systems are in place it is most appropriate to use the PIRFO Debriefing Form and Evaluation forms for debriefing ER observers.

The Debriefing process currently will still use the PIRFO Debriefing forms and be submitted to SPC or the debriefing scores entered into TUFMAN2

ELECTRONIC MONITORING REVIEWER

ROLE of EM Reviewer

EM Data Review Centres involve EM Analysts interpreting a set of camera and sensor records from a vessel trip into data in an office environment. Interpretation of the records into data formats does require the EM Analyst's knowledge of fishing operations, species identification, regulations and interpretation skills such as using the software, interpreting lengths and observing incidents and unusual events so a quality assurance process is required to validate the data interpreted by the EM Analysts from records.

EM records are permanent and so can be reviewed by more than one Analyst or under supervision.

This environment also allows that reviewing of EM analyst's interpretations can occur periodically throughout the analysis of EM records or at the end of an analysis, and multiple readings of records.

The need for quality assurance but applied to a different method of data capture requires a different approach to quality assurance of EM data to that of debriefing of observers. The objective being to ensure that EM data is accurate, complete, formatted to comply with regional EM Data Process Standards and facilitates EM data to flow readily to national and regional database systems.

Rationale

The assumption of how to approach quality assurance of EM data captured is that EM is implemented complementarily among other monitoring tools where the strengths of each tool can be used to validate other tools. Standardising best practice for data quality assurance in an integrated data collection system will ensure robust data are available for use by scientists, compliance officers and managers.

Essentially this quality assurance assessment can be separated into two processes: **Verification and Validation**. We expand on proposed definitions of these processes below as the basis for developing EM Debriefing standards.

EM Verification: A process of evaluating the completeness and compliance of a collected data set against the required data fields, format, protocols, and normal range of expected results.

VERIFICATION TYPES

Independent human (although range checking algorithms should be developed to support this process) verification of data through a EM Reviewer checking:

- Completeness of data fields and formats
- Critical Incident assessment
- Truth of unusual events
- Technique of established protocols followed
- Logic pathways, interpretation of observed events.

EM VERIFICATION APPROACH

EM systems benefit the data verification and validation processes as video footage or sensor recording and GPS position recording give a permanent record that may be analysed or reviewed more than once.

The issue is that while EM provides for multiple analysis of the data, it does not allow first person interpretation of events. It appears best to use the strengths of EM to validate its weaknesses. So while there is not the observer Journal to refer to, the strength of EM are the 'permanent' recordings.

EM Validation:

A process to assess accuracy of a set of data using analogous but independently collected sources to substantiate the veracity of data and information.

EM VALIDATION PROCESSES

This is the process where the strengths of each monitoring tool are used as a cross checking of EM data with:

- On-board observer
- VMS
- Logsheet
- Unloadings
- Boarding or port inspections, and
- Automated AI analysis (e.g. positions with VMS).
- Other EM data sets for the same EM records

EM VALIDATION

Comparison with:

1. Fisheries Observer.

Observer collected data provides a directly comparative but independent validating tool for EM data.

2. Integrated Data

Integration of data collected by other systems such as VMS, port and boarding inspection, unloading, CDS, and any automated data collection (e.g. winch sensors) will facilitate and possible automate validation of EM (and other) data.

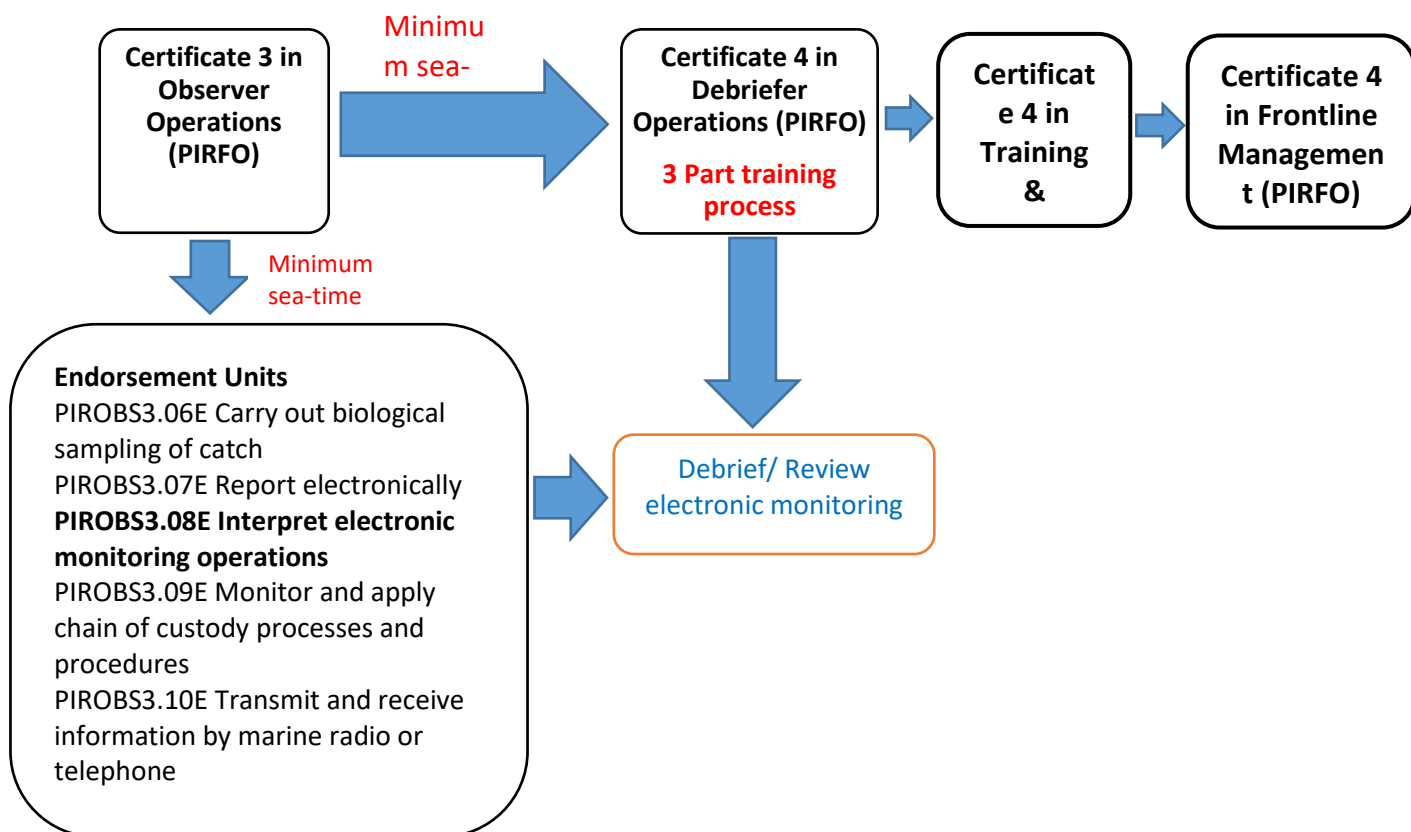
PROVIDING FEEDBACK TO EM ANALYSTS

Providing feedback to EM analysts on their performance is also an important ongoing training process. The EM verification review process described above would suit this. However this would also require the development of appropriate reports in the EM analysis systems. Examples of standard queries could be: number and types of trips analysed, number and species analysed, time metrics (time per set, time between receiving a storage device and completing analysis), reporting

compliance or unusual events. This meta-data should be generated from standardised data at the Data Review Centres trip level.

PIRFO Certification Development

The PIRFO competency-based accreditation framework includes **PIROBS3.08E Interpret electronic monitoring operations**, which is designed as a specialist endorsement PIRFO Observer skill set for experienced PIRFO Observers. A PIRFO Certificate 4 in Debriefer Operations qualification also requires PIRFO Observer qualification and minimum sea-days experience in the relevant gear type. There is currently no qualification for EM Reviewing, though there is a clear need. Its incorporation into the PIRFO framework would logically include both the *Debriefer Operations* qualification and *Interpret electronic monitoring operations* skill set as pre-requisites as well as a determined level of EM experience.



OBSERVER EXPERIENCE

The PIRFO Debriefer Policy requires observer debriefers to make at least one observer trip per year to ensure they maintain their skills. Similarly, EM Analysts and EM reviewers should have a similar regime of also doing observer trips to ensure they maintain their skills and are aware of technology or operational changes.

GENERAL COMMENTS

In considering the process of EM reviewing, factors that determine the level of review needed may include:

- The EM Analysts' experience e.g., number of trips as an EM Analyst, and as an observer sea days on specific gear type fishing vessels,
- individual EM Analyst diligence,
- computer literacy,
- length of trip to be viewed, i.e., a longline trip on a 'on ice' vessel (10-15 days at sea), a longline trip on a 'freezer' vessel (30 to 90 days at sea),
- IUU risk e.g. a purse seine trip during the FAD closure season.
- The Data Resource Centre's capacity and resources. This may even lead to some countries specialising in review or certain areas of review. This could include rapid analyses focusing on only tuna target species, analyses focusing only on compliance related events, etc.

WORKSHOP DERIVED PRIORITIES FOR EM REVIEWING

The workshop recommended the following priority areas for advancement:

- Regional EM Reviewing standards be developed as a priority
- Standardise an appropriate name and definition for the process ('EM Review?');
- EM reviewer training be incorporated into the PIRFO framework.

APPENDIX 1

WCPFC10 accepted the TCC9 recommendation that ROP data should be submitted to the Secretariat or SPC where possible within 100 days of the observer disembarking purse seine vessels and within 120 days of the observer disembarking longline vessels. (TCC9 para 160 and WCPFC10 para 220)

Timeliness

The following table serves as a guideline for data quality control (e.g. debriefing) and other preparations of observer data (e.g. scanning) for the timely submission to the SPC. Member countries should strive to work towards the recommended “IDEAL Deadline” requirement, acknowledging that resource problems currently restrict some countries to the more conservative “REALISTIC Deadline”.

Step	IDEAL Deadline (days since observer returned to port)	REALISTIC Deadline	Comments
1. Observer check-in after arrival (for post-arrival instructions)	2 HOURS	1 full day for some countries [Up to 10-14 days when need to return to home country].	Contractual obligation required Current situation may vary from programme to programme, but this is the recommendation Coordinator meets observer at dock in some countries Issue : landing in a foreign port and not having someone meet you, so need to wait until returning to home country, sometimes 10-14 days (e.g. Nauru).
2. Pre-debriefing	1-2 DAY		For example, GEN-3 primarily but also preliminary review of other data See procedures document for pre-debriefing Needs to consider <ul style="list-style-type: none"> i. Back-to-back trips without time to debrief ii. The observer will arrive in another country and will need pre-debriefing from another national observer programme. Need to take into account of delays in previous step. In some countries, pre-debriefing same day as arrival Need to advise observers doing back-to-back trips that pre-debriefing is essential and communicated (formalised in previous ROCWs)

Step	IDEAL Deadline (days since observer returned to port)	REALISTIC Deadline	Comments
3. Post-trip DATA QUALITY CONTROL			
a. Observer finishes TRIP REPORT	7 DAYS (PS) 14 DAYS (LL)	14 DAYS	Some countries insist on 7 DAYS Longline up to 14 days (policy in some countries)
b. Process and deadlines for finishing the DEBRIEFING	9-11 DAYS 16-23 DAYS (LL)		Using the standard debriefing procedures Depends on contracts, for e.g. some countries have a rest period before debriefing
c. DEBRIEFING is not available → deadline for Non-DEBRIEF Checking completed		Unless a firm schedule for debriefing occurs within a maximum of 30 days since the end of the trip	If debriefing does not CURRENTLY exist, then a non-debrief check will be required. The non-debrief check is likely to be undertaken by SPC once the data are submitted. The trip needs to be clearly identified as NOT DEBRIEFED. The basis for a non-debrief check needs to be discussed / developed / accepted... Issue: Observers holding on to data for successive trips. Consider alerts in the OPM system to identify when a non-debriefed trips need to be submitted. An issue is if the observer data are in another country or with the observer. Potentially undermines the purpose of the DEBRIEFING process and one group thought this step should be removed (not occur). For this reason, there is no IDEAL Deadline, since the desired/ideal situation is that this step does not exist.
4. Scanning TRIP data	30 DAYS		Instructions/Documentation for Best Practise scanning to be provided by SPC – Using the SLOPS v3.0 software Need to ensure the instructions for scanning and checking scanned data are followed.
5. Transmission of	50 DAYS		100 days for PS

Step	IDEAL Deadline (days since observer returned to port)	REALISTIC Deadline	Comments
SCANNED data to SPC			120 days for LL (recommended WCPFC deadline) Some countries have poor internet bandwidth and so having data on USB and DVDs hand-carried with delegates to regional meetings/workshops is the best method of sending the data in.
6. ARCHIVING/FILING Hard-copy and scanned data	50 DAYS		
7. SPC Review of data and follow-up with any issues (e.g. rescans, etc.)	60 DAYS		
8. Countries providing rescans of data as identified in 7. ...	65 DAYS		
9. Receiving processed data back from SPC			