
**Agreed Minimum Standards of the WCPFC EM Program Audit Questionnaire – Revised to
Include On-Screen Amendments**

22 June 2026

These agreed minimum standards are part of the Commission Audit process for the WCPFC Electronic Monitoring Program (EMP); questions related to the standards are asked during the audit process to determine if a program is fulfilling the required standard, or whether the program may need assistance to help achieve the required standards. The majority of the agreed minimum standards for the WCPFC EMP were generated and discussed during the *ERandEMIWG 9/TCC22/WCPFC23*.

To assist auditors in understanding the context of each program, it would be helpful for programs to provide a comprehensive, high-level description of their EM program. As appropriate, this description could include:

- program scope (e.g., covered vessels, fisheries, and program objectives);
- Operating model (e.g., regulatory or voluntary framework, roles of technology providers and service partners, and footage review procedures);
- Technology architecture (e.g., wireless versus hard-drive data transfer, cloud-based versus local storage, and the use of artificial intelligence or automated tools);
- Coverage and review rates; and Compliance, enforcement, and independence mechanisms (e.g., organizational separation of functions, conflict-of-interest safeguards, and measures to maintain the independence of data review and analysis processes).

Providing this information will help auditors better understand the design and implementation of each program and support a more effective and consistent assessment against the agreed minimum standards.

If the Secretariat finds a deficiency during the program audit regarding compliance with one or more of the minimum standards, the CCM or sub-regional program shall be contacted and notified of the deficiencies. The CCM or sub-regional program will work with the Secretariat to correct the deficiencies within 90 days or some other time frame determined by the Secretariat in consultation with CCM or sub-region program concerned.

All authorized EMPs and sub-regional programs will be reviewed every **X (TBD)** years in order to ensure they continue to meet the Commission's minimum standards. CCMs shall ensure EMPs and sub-regional programs are refined, as necessary, and within the agreed upon time frame, to meet any further standards adopted by the Commission.

This questionnaire includes questions that would be asked during an interview. If a question is not relevant to your program N/A should be placed in the comments area. If there are any further

questions or clarifications required, please contact the [WCPFC EMP Audit & Training Consultant]
PLACEHOLDER

Name of Person/s attending the interview/ filling out the questionnaire - Position- Name of Program- Name of Program --
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<u>Authorization Process</u> Authorization process is the standards required to obtain authorization to be part of the WCPFC EMP. The process of gaining authorization is to be carried out following an audit of the program to ensure that standards are in place or are being developed.	Standard Required The Secretariat will authorize national EM programs rather than individual vessels; this is consistent with the Convention text. <i>ERandEMIWG9/TCC22/WCPFC23.</i> WCPFC EMP expectation on the authorization process. CCMs seeking authorization to have their national EMP included in the Commission EMP shall submit an application to the Secretariat declaring that their EMP meets the minimum standards adopted by the Commission, along with supporting documentation demonstrating compliance with those standards. Relevant CCMs may also nominate sub-regional EMPs for inclusion in the Commission's EMP through this application process. All such programs will be required to: <ol style="list-style-type: none"> 1. Provide one Vessel Monitoring Plan for similar vessel types that share the same EM system configuration, with the English translation. 2. Sample of image stills or screenshots of video footage being annotated by EM data records analysts
1. Has the program supplied all of the deliverables above to the Secretariat? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Comment	
2. What process is in place to verify that all vessels participating in the EM program comply with the Commission's Minimum Technical Standards, including requirements for equipment, installation, and operational performance? Please provide examples or supporting documentation demonstrating how the CCM tracks, monitors, and manages participating vessels to ensure compliance with the Commission's Minimum Technical Standards. This may include procedures, vessel compliance	

CCM response:

Auditor's comment:

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<p><u>System Health Status</u></p> <p>The system needs self-monitoring capabilities to detect and report issues such as power failures, sensor malfunctions, camera outages, or tampering attempts. This information is often transmitted to the data review center, allowing managers to confirm the system is operational and the data is reliable.</p>	<p><u>System Health Status</u></p> <ul style="list-style-type: none"> a. The system SHOULD execute a system health test either automatically or when initiated by user and MUST provide a visual signal on the display that the system is operational (i.e., it should be obvious, simply by looking at the display, whether or not the system is working properly). b. The EM system MUST be able to generate a log file that allows an EM program to determine the operational health status of the system. The log file SHOULD include details of EM system processes, including, but not limited to: <ul style="list-style-type: none"> i. System power up ii. System shutdown planned iii. System shutdown unplanned (e.g., power cut) iv. Camera connectivity v. Camera recording start and stop times (planned) vi. Camera recording error vii. Available hard drive space viii. Sensor connectivity, if applicable ix. Sensor recording start and stop times (planned), if applicable x. Sensor recording error, if applicable xi. Activation and deactivation of recording triggers (e.g., vessel speed, drum rotation sensors, geofencing, and time scheduled), if applicable <p>System SHOULD undertake regular system health checks throughout the duration of the fishing trip at a frequency defined by the EM Program and MUST show malfunction alerts (errors and warnings) on the display of the user interface (Onboard User Interface) of the control centre.</p> <p>The EM system COULD be able to capture and store single frame images from each onboard camera on a regular basis (e.g., timed intervals, such as hourly, or on event triggers such as geofences) to show that cameras are operational, not obstructed, obscured, or displaced.</p>
<p>CCM response:</p> <p>Auditors' comment:</p>	

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CCM response: Auditor's comment:	
4. What controls are in place to ensure routine system testing and maintenance, mechanisms for detecting, reporting, and responding to system failures or interference? Please provide examples or supporting documentation demonstrating how the CCM tracks, monitors, and manages compliance with these requirements. This may include testing and maintenance schedules, inspection records, system performance reports, incident and failure logs, interference investigations, corrective action records, communication records, or other documented records that demonstrate ongoing verification, response, and compliance.	
CCM response: Auditor's comment:	
5. How does the program verify that the EM system generates and retains a log file that enables assessment of the system's operational health, and how the log file records, as applicable, system events including power-up, planned and unplanned shutdowns, camera and sensor connectivity status, recording start/stop times, recording errors, available hard drive space, and the activation/deactivation of recording triggers? Please provide examples or supporting documentation demonstrating how the CCM tracks, monitors, and verifies compliance with these requirements. This may include system specifications, log file samples, monitoring records, validation or inspection reports, corrective action records, or other documented records that demonstrate log file functionality, review, and ongoing compliance.	
CCM response: Auditor's comment:	
Item <u>Installation, Operation, and Service of onboard EM Systems</u>	General Description EM systems are installed by qualified technicians following manufacturer and program requirements, including camera placement for key activity areas, sensor integration, system calibration, and functionality testing to ensure proper operation and tamper resistance. During trips, EM systems record video, sensor, and positional data as configured. Operators must ensure systems are powered, unobstructed, and functioning, conduct basic checks, and report any malfunctions in line with program protocols.
	WCPFC EMP expectation on the Installation, Operation, and Service of onboard EM Systems:

<p><u>EM system Installation</u> The process of physically mounting cameras, GPS, and other sensors on a fishing vessel.</p> <p><u>Vessel Monitoring Plan</u> A document that details how fishing activities and the EM system will operate on a specific vessel.</p>	<p><u>EM system installation</u> CCMs SHOULD ensure that their EM Service Provider or their designated installer complies with the relevant EM standards. To this end, CCMs are encouraged to refer to Annex 1 (voluntary guidelines for EM system installation).</p> <p>The vessel owner or their designated representative:</p> <ol style="list-style-type: none"> MUST provide information describing the vessel configuration and systems to facilitate EM system installation. MUST make the vessel and appropriate personnel (such as engineers, fishing master, multilingual staff, etc.) available and provide the EM Service Provider unfettered access, including to the ship's power supply, to complete EM system installation. <p><u>Vessel Monitoring Plan</u></p> <ol style="list-style-type: none"> Vessel owner or EM Service Provider MUST complete a Vessel Monitoring Plan and submit it to the CCMs DRC for approval. A copy of the approved Vessel Monitoring Plan SHOULD be maintained aboard the vessel at all times during fishing operations. Vessel Monitoring Plans MUST be updated and submitted to the EM Program at a frequency determined by the EM Program and anytime changes are made to information or requirements outlined in the VMP (e.g., new vessel contact information, change in EM System configuration, change in catch handling guidelines). The Vessel Monitoring Plan: <ol style="list-style-type: none"> MUST include contact information for the EM Service Provider, vessel owner(s), and vessel operator(s), and base manager(s) (if applicable). MUST include general vessel information as specified in the EM data requirements. MUST include a diagram, description, and photo(s) of the vessel layout that identifies where key fishing activities will occur on the vessel (e.g., hauling, sorting, discarding) and COULD include measurements of all items, tools, or areas on the vessel that EM to support estimation of lengths of fish caught. A description of the EM setup: <ol style="list-style-type: none"> MUST include the number and location of cameras including images of their installation location and an image from camera's perspective, and include nighttime images, as appropriate, to demonstrate sufficient lighting. MUST include a description and image of the location of all other components of the installed EM system (e.g., geolocations system, EM control system, sensors, power supply). MUST include relevant details of system configuration settings, including:
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	<ul style="list-style-type: none"> • Camera configuration settings (e.g., frame rates, resolution, bitrate) • Sensor units and threshold values, if applicable • Data recording frequencies and/or sensor triggers for recording, if applicable • Software and Firmware versions • Spatial calibration settings, if applicable <p>v. MUST include any catch handling procedures required to ensure that EM Records allow collection of the data fields set out in the EM data requirements (e.g., handling in view of cameras, allowable discard locations). See Annex 2 for references to existing catch handling procedures.</p> <p>vi. MUST include vessel duty of care responsibilities to prevent system malfunctions and ensure effective operation of the system, such as:</p> <ul style="list-style-type: none"> • Verifying system functionality at the beginning and at regular intervals throughout the duration of each trip
<p>6. What systems and controls are in place to ensure that each vessel has a current and approved VMP, and how is compliance with this requirement verified and documented? Please provide examples or supporting documentation demonstrating how the CCM monitors and manages compliance with this requirement. This may include VMP approval records, version control and review procedures, vessel compliance registers, audit or inspection reports, compliance monitoring records, corrective action records, or other documented records that demonstrate that current and approved VMPs are maintained and verified for all participating vessels.</p>	
<p>CCM response: Auditor's comment:</p>	
<p>7. What processes, controls, and documented procedures are in place to ensure that updated Vessel Monitoring Plans (VMPs) are submitted to the EM Program whenever changes occur to vessel information, EM system configurations, operational practices, or other applicable program requirements? How are such changes identified, tracked, communicated, and verified to ensure that approved VMPs remain current and accurate?</p> <p>Please provide examples or supporting documentation demonstrating how the CCM monitors and manages compliance with this requirement. This may include change management procedures, VMP revision and approval records, notification and communication records, version control documentation, compliance monitoring reports, corrective action records, or other documented records that demonstrate updated VMPs are submitted, reviewed, and maintained when changes occur.</p>	
<p>CCM response: Auditor's comment:</p>	
Item	General Description

<p><u>Data Review Center</u> Analyzation of EM Records to generate EM Data.</p>	<p>The standard for the data review center (DRC) is an entity with access to supporting EM analysis software used by EM analysts to analyze EM Records and generate EM Data</p> <p>DRC</p>
<p>WCPFC Expectation on the analyzation of EM Records to generate EM Data</p>	

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<p><u>EM Analysis Software</u> The DRC EM analysis software to facilitate the generation of EM Data from EM Records.</p> <p><u>EM Analysis Workstations</u> DRC workstation(s) where EM Analysts will use EM analysis software to generate EM Data from EM Records.</p> <p><u>EM Analysts</u> Reviews video footage using EM software to generate EM Data from EM Records and data collected from onboard camera systems to verify fishing activities, species identification and ensure compliance with fishery regulations.</p> <p>Storage of EM records and EM data</p>	<p><u>EM Analysis Software</u> The EM analysis software:</p> <ol style="list-style-type: none"> MUST be compatible with the file types, data structures, syntax, and semantics of EM Records that will be analyzed with the software. MUST be able to produce EM Data into a format compatible (or that can easily made compatible) with agreed EM data requirements for incorporation into WCPFC databases. <p><u>EM Analysis Workstations</u></p> <ol style="list-style-type: none"> MUST have hardware and software, or cloud-based platforms that enable effective EM analysis MUST have reliable data transmission capabilities sufficient for efficient streaming or download/upload of data required for EM Records analysis, reporting of EM Data, and storage of EM Records. MUST have proper ergonomics that support analyst well-being, quality, and efficiency. MUST be designed to minimize the risks to commercially sensitive information. Records analysis, reporting of EM Data, and storage of EM Records. <p><u>The EM Analysts</u></p> <ol style="list-style-type: none"> The standard for qualification of an EM analyst is that analysts will be experienced in fishery matters and that CCMs will prepare qualifications for an EM analyst, available for review by the Secretariat. MUST complete an appropriate training program which covers materials including (but not limited to): species ID, basic fishing practices, and EM review processes). EM analysts MUST not be employees of a fishing company involved in the monitored fishery or have other direct conflicts of interest. <p>Storage of EM records and EM data EM records and associated EM data MUST be retained in accordance with any WCPFC audit requirements.</p>
<p>8. What EM software, hardware or cloud-based platforms are used to facilitate the generation of EM Data from EM Records, and how does it ensure compliance with the requirements outlined above. Please provide examples or supporting documentation demonstrating how the CCM verifies and documents compliance with these requirements. This may include system specifications, software validation or certification records, data format mapping documentation, interoperability testing results, integration reports, configuration settings, data export samples, or other documented records</p>	

that demonstrate software capability, compatibility, and successful data exchange with WCPFC systems.	
CCM response: Auditor's comment:	
<p>10. What processes, systems, and controls are in place to ensure that personnel complete an appropriate training program covering, at a minimum, species identification, basic fishing practices, and EM review processes?</p> <p>Please provide examples or supporting documentation describing how training completion and competency are verified and recorded. This may include training curricula, attendance or completion records, certification or competency assessments, refresher training schedules, training provider documentation, learning management system records, audit or evaluation reports, or other documented evidence demonstrating that training requirements are consistently met and maintained.</p>	
CCM response: Auditor's comment:	
<p>11. What policies, procedures, and controls are in place to ensure that EM analysts [are independent and] do not have employment relationships with fishing companies involved in the monitored fishery, nor any other direct conflicts of interest?</p> <p>Please provide examples or supporting documentation demonstrating how independence and conflict-of-interest requirements are identified, assessed, declared, and managed in practice. This may include conflict-of-interest policies, declarations of interest, HR or contractor screening procedures, independence attestations, review or approval processes, audit records, or other documented evidence demonstrating that EM analyst independence is maintained.]</p>	
CCM response: Auditor's comment:	
12. Place holder for EM records retention	
Comment	
Item	General Description

<u>EM Record Analysis</u>	<p>To ensure analysts are harmonized (i.e., applying the same standards and making consistent decisions), a minimum review program should include calibration, quality control, and documented decision criteria.</p> <p>WCPFC EMP Expectation on EM Record Annotation</p> <p><u>Analysis Protocols</u></p> <p>EM annotations should be carried out by an authorized, trained EM analyst</p> <ul style="list-style-type: none"> The EM reviewer should follow a standardized analysis guide or manual.
<p>Item</p> <p><u>Data Fields</u></p> <p>Data Fields and Minimum Data Standards are defined as Minimum Data Fields approved by the WCPFC for collection by national and sub-regional EMP programs.</p>	<p>Standard Required</p> <p>National and sub-regional EMPs will ensure the Commission minimum data standard fields are collected by the EM analyst conducting EM record annotation.</p> <p>WCPFC EMP expectation on the collection of EMP Data Minimum Standard</p> <p>All WCPFC EMP data is confidential and may not be distributed or given to any unauthorized organization or person without going through the Commission data access procedures and approval of the Executive Director of the WCPFC.</p>
<p>15. Does the program's data fields include all the Minimum Standards Data Fields required by the Commission? Please provide examples or supporting documentation demonstrating how the CCM ensures all minimum data standard fields are available. This could include data field configuration, data standards documentation and a sample of data output.</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/></p>	
<p>CCM response:</p> <p>Auditor's comment:</p>	
<p>16. If 'No' to the question above, describe the process or system in place to ensure the Commission Minimum Standard Data Fields are supplied?</p> <p style="text-align: right;">Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p>	

