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## **DRAFT TERMS OF REFERENCE FOR THE AD-HOC WORKING GROUP ON THE DEVELOPMENT OF ELECTRONIC MONITORING PROGRAMME STANDARDS (WGEMS)**

**PREPARED BY: IOTC WGEMS Chair and IOTC SECRETARIAT, 11 NOVEMBER 2021**

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### **PURPOSE**

To ensure that participants at the 1<sup>st</sup> Working Group on the Development of Electronic Monitoring Programme Standards (WGEMS) revise and adopt the Terms of Reference for the WGEMS taking into consideration the specific requests and guidance of the Scientific Committee and Commission.

### **BACKGROUND**

Electronic Monitoring Systems is a proven technology to collect fishery information, including when external circumstances prevent human observers from being deployed onboard, and complement human observers to address the data requirements under IOTC Resolution 11/04 On a Regional Observer Scheme. The IOTC Scientific Committee in 2020 (SC23) noted that EMS is a very promising tool for enhancing observer coverage and complement data collected by onboard observers.

The SC23 also acknowledged the importance of including all different stakeholders in the discussions around Electronic Monitoring Standards (i.e., scientists, EMS designers/vendors, fishermen, representatives from the industry) to improve its current approach and contribute to EM Programme Standards by providing technical advice on the operational aspects of their implementation, and foster the developments of new tools such as Artificial Intelligence (AI) subsystems for the identification of the most effective sampling strategies and to facilitate the analysis of the images.

Considering the steps taken for the definition and development of Electronic Monitoring Programme Standards, the SC23 also noted that these require additional contributions and development for their successful implementation at regional level. As such, the SC23 recommended that an ad-hoc, intersessional Working Group on the development of EM Programme Standards be constituted and physical or virtual workshops (depending on the circumstances) be held to further progress with the definition of EMS minimum standards as well as on the implementation of electronic monitoring projects by CPCs in support of the Regional Observer Scheme (ROS).

The Commission at its 25th meeting (June 2020) endorsed the recommendation of the Scientific Committee and created the ad-hoc working group on the Development of Electronic Monitoring Programme Standards (WGEMS). The IOTC Commission and Secretariat organized the first meeting in November 2021 to discuss the potential for electronic monitoring (EM) implementation for tuna fisheries in the IOTC and to develop a roadmap and next steps in progressing these initiatives.

However, the Commission had not adopted Terms of References for the ad-hoc Working Group on the development of Electronic Monitoring Programme Standards (WGEMS). The objective of this document is to present the draft Terms of References (TORs) for discussion to define the objectives, scope, participation, and responsibilities of the working group as well as expected outcomes to inform IOTC Commission's decisions on EM Programmes. These draft TORs may be subject to review or modification by the Commission.

## Draft TERMS OF REFERENCES FOR THE AD-HOC WORKING GROUP ON THE DEVELOPMENT OF ELECTRONIC MONITORING PROGRAMME STANDARDS (WGEMS)

### OBJECTIVES

To develop EM Program Standards (i.e. how the institutional structure and management of the program is organized) and EM Data Standards (i.e. the minimum data requirements to be collected and technical specifications and requirement of the EM system) to address the data requirements under IOTC Resolution 11/04 On a Regional Observer Scheme in support of the Convention objectives.

### SPECIFIC OBJECTIVES

- To draft EM Program Standards and EM Minimum Standards to address the data requirements under IOTC Resolution 11/04 On a Regional Observer Scheme in support of the Convention objectives as well as to monitor the implementation of the IOTC resolutions.
  - **For EM Program Standards:** objectives of the Programme, scope of the fleets, institutional structure and management of the programme, data collection and review coverage, roles and responsibilities of members, specifications and procedures, timeframes for implementation, accreditation of vendors, data confidentiality and access and use, coordination, observer training, cost and financial considerations, etc.
  - **For EM Minimum Standards:** minimum requirements for EM system and equipment, EM data collection and storage, EM data transfer logistics, EM data analysis and submission, EM maintenance and functioning, EM data validation and quality control, roles of EM users, etc.
- Develop and agree on Electronic Monitoring related terms definitions.
- Identify and assess areas where EM could strengthen current IOTC collection and reporting processes.
- Develop a roadmap and workplan to progressively implemented an EM Program for IOTC fisheries including, but not limited to, fleet specific cost benefit analyses and capacity building.
- Consider how to ensure the compatibility of the data collected by EM Programmes with other data currently collected through other programmes (VMS, etc...).
- Consider and review the best approach (e.g. through a Resolution) to implement the EM Programme in IOTC.
- Develop tools, innovative strategies and collaborative projects for collecting, handling, processing and analysing fishery-dependent data from electronic technologies; for example, through machine learning and artificial intelligence and seek the collaboration from academia in joint-initiatives to progress on the matter.
- Hold an expert workshop(s) to review the draft EM Program Standards and EM Data Standards for IOTC Commission consideration.

### FUNCTIONING

- The working group shall be open to all Commission Members, Cooperating non-members and observers and constituted preferably scientist, experts, EMS designers/vendors, fishermen, representatives from the industry, and, whenever possible, managers.
- The working group shall conduct its work electronically as well as by presential meeting(s), whenever possible, that should be annually or bi-annually organized.
- The working group shall consider existing and proposed EM Programme standards and EM minimum standards and formats in other regional bodies and tuna RFMOs.
- The working group shall collaborate and communicate with the EM working groups of other tuna RFMOs as well as take into account the Kobe III recommendations.
- The working group shall consider the impacts of EM technologies on the broader work of the Commission/Secretariat and look at ways to minimize data collection and management costs.

- The working group shall report to the WP on Data Collection and Statistics and the Scientific Committee, where its advice and recommendations shall be discussed and endorsed for Commission consideration,
- The working group could consult or seek advice from technical experts including EM vendors as necessary.
- The working group shall be supported by the Secretariat. In particular, the Secretariat shall provide technical advice and engage relevant stakeholders in providing input into the work of the working group.

#### **FUNCTIONING**

- The working group and its progress will be annually reviewed at the IOTC Scientific Committee.
- Consistent with outcomes from EM workshop, a phased in approach to the implementation of these technologies should be considered by the Commission as specified in the workplan described in document IOTC-2021-WPEMS01-11.