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IOTC-2022-VMSWG04-R[E]

Report of the Fourth Meeting of the Vessel Monitoring System Working Group

Held by video-conference, 25 January 2022

DISTRIBUTION:

Participants in the Meeting
IOTC CPCs
Chairperson IOTC
Chairperson IOTC Compliance Committee
Chairperson IOTC Scientific Committee

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HOW TO INTERPRET TERMINOLOGY CONTAINED IN THIS REPORT

The VMSWG04 Report has been written using the following terms and associated definitions so as to remove ambiguity surrounding how particular paragraphs should be interpreted.

Level 1: *From a subsidiary body of the Commission to the next level in the structure of the Commission:*

RECOMMENDED, RECOMMENDATION: Any conclusion or request for an action to be undertaken, from a subsidiary body of the Commission (Committee or Working Party), which is to be formally provided to the next level in the structure of the Commission for its consideration/endorsement (e.g. from a Working Party to the Scientific Committee; from a Committee to the Commission). The intention is that the higher body will consider the recommended action for endorsement under its own mandate, if the subsidiary body does not already have the required mandate. Ideally this should be task specific and contain a timeframe for completion.

Level 2: *From a subsidiary body of the Commission to a Contracting Party or Cooperating Non-Contracting Party (CPC), the IOTC Secretariat, or other body (not the Commission) to carry out a specified task:*

REQUESTED: This term should only be used by a subsidiary body of the Commission if it does not wish to have the request formally adopted/endorsed by the next level in the structure of the Commission. For example, if a Committee wishes to seek additional input from a CPC on a particular topic, but does not wish to formalize the request beyond the mandate of the Committee, it may request that a set action be undertaken. Ideally this should be task specific and contain a timeframe for the completion.

Level 3: *General terms to be used for consistency:*

AGREED: Any point of discussion from a meeting which the IOTC body considers to be an agreed course of action covered by its mandate, which has not already been dealt with under Level 1 or level 2 above; a general point of agreement among delegations/participants of a meeting which does not need to be considered/adopted by the next level in the Commission's structure.

NOTED/NOTING: Any point of discussion from a meeting which the IOTC body considers to be important enough to record in a meeting report for future reference.

Any other term: Any other term may be used in addition to the Level 3 terms to highlight to the reader of the IOTC report, the importance of the relevant paragraph. However, other terms used are considered for explanatory/informational purposes only and shall have no higher rating within the reporting terminology hierarchy than Level 3, described above (e.g. **CONSIDERED; URGED; ACKNOWLEDGED**).

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1. OPENING OF THE MEETING

1. The meeting was held online, via Zoom, on 25 January 2022.
2. The List of Participants is provided in [Appendix 1](#). A total of 16 participants (eight Member States and 2 observers) attended the meeting. The fourth meeting of the Vessel Monitoring System Working Group (VMSWG04) was chaired by Mr Stephen Ndegwa (Kenya).

2. INTRODUCTION OF MEMBERS

3. The Chair of the VMSWG04 **INVITED** participants to introduce themselves.

3. ADOPTION OF THE AGENDA

4. VMSWG04 **ADOPTED** the Agenda in [Appendix 2](#) without amendment.

4. UPDATE ON STATUS OF PROGRESS OF THE WORK PLAN

5. VMSWG04 **NOTED** paper [IOTC-2022-VMSWG04-02](#) on the Update on Status of Progress of the Work Plan.
6. VMSWG04 **NOTED** the hybrid option in Figure 1 for reporting VMS data to the IOTC Secretariat and **FURTHER NOTED** that each country will choose to report directly or indirectly.

5. COST IMPLICATIONS FOR CPCs ON THE AGREED FUNDING MODEL FOR THE IOTC VMS

7. VMSWG04 **NOTED** paper [IOTC-2022-VMSWG04-03](#) on the Cost Implications for CPCs on the Agreed Funding Model for the IOTC VMS.
8. VMSWG04 **NOTED** that these are the cost implications of direct reporting to the IOTC Secretariat, which is a maximum satellite airtime cost scenario.
9. VMSWG04 **NOTED** that the additional costs of indirect reporting would be borne by the flag State and **FURTHER NOTED** that costs would be lower with the indirect reporting.
10. VMSWG04 **NOTED** that those CPCs that already have VMS and Vessel Location Devices, would not necessarily have to install a VMS and new Vessel Location Devices and **FURTHER NOTED** that smaller vessels might not have VMS at present and would be more likely to have to buy a new Vessel Location Device.
11. VMSWG04 **NOTED** that where States are already receiving transmissions, greatly increased costs to the flag State would not be incurred and **FURTHER NOTED** that the costs of forwarding the information to the IOTC Secretariat would not necessarily be greatly in excess of that of their existing internet connections.
12. VMSWG04 **NOTED** that the incremental costs to flag States of forwarding information to the IOTC Secretariat can vary depending on the satellite communication provider and **FURTHER NOTED** that some systems would not charge extra for forwarding the position information to the IOTC Secretariat.
13. VMSWG04 **NOTED** that the present analysis was not asked to consider the costs of centralised software and its maintenance, which would be extra costs.
14. VMSWG04 **AGREED** that the cost estimates in their current limited form would not be forwarded to higher levels.

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15. VMSWG04 **RECALLED** that VMSWG03 had agreed that an analysis be carried out to determine the staffing, infrastructure, extra costs and data security that would be required.
 16. VMSWG04 **AGREED** that the IOTC Secretariat draft Terms of Reference to be circulated intersessionally.
 17. VMSWG04 **NOTED** that if the IOTC Secretariat cannot find extra budgetary funds for this study from existing sources, a proposal would have to go to the Standing Committee on Administration and Finance and the Commission.

6. CONSIDER IMPROVEMENTS THAT CAN BE MADE TO RESOLUTION 15/03, AND THEIR PRESENTATION OR CO-SPONSORSHIP BEFORE THE COMMISSION BY A CPC OR CPCS

18. VMSWG04 **RECALLED** Appendix 3 of the [IOTC-2021-VMSWG03 R](#) with the proposed revisions to Resolution 15/03.
19. VMSWG04 **AGREED** regarding new para 1 to include reference to the IOTC Agreement and to compliance with Conservation and Management Measures.
20. VMSWG04 **AGREED** to delete ex para 1 and **FURTHER AGREED** regarding para 2 (ex para 2) that VMS should cover all vessels of 12 metres in length overall and above, and listed in the IOTC Record of Authorised Vessels.
21. VMSWG04 **AGREED** regarding para 3 (ex para 2) to reduce the three-year period for full implementation of VMS to two years and **FURTHER AGREED** that after this date, vessels not equipped with VMS shall not be authorized to fish for tuna and tuna like species managed by the IOTC.
22. VMSWG04 **RECALLED** that Seychelles had agreed to provide clarification and what is meant by the term “antenna is blocked” and provide a proposal on the role of the IOTC Secretariat with respect to the handling of VMS data received, and **AGREED** Seychelles prepare guidelines for the registration, implementation and operation of VMS referred to in para 4 (ex para 4).
23. VMSWG04 **AGREED** that the IOTC Secretariat circulate the proposal on the role of the IOTC Secretariat and the guidelines for the registration, implementation and operation of VMS intersessionally for consideration at the next meeting of the VMSWG.
24. VMSWG04 **NOTED** that it was desirable to add speed and direction of vessel to para 5 (ex para 5), subject to further discussion.
25. VMSWG04 **AGREED** regarding para 7 (ex para 7) in principle to a frequency of two hours, but in view of cost implications it would be subject to further discussion and **FURTHER AGREED** to add reference to the information being provided directly to the IOTC Secretariat or through the FMC.
26. VMSWG04 **NOTED** that para 9 (ex para 8) should be reviewed in view of consistency with the International Commission for the Conservation of Atlantic Tunas’ VMS requirements and **FURTHER AGREED** that Japan provide an analysis in future.
27. VMSWG04 **AGREED** regarding subpara 9d (ex para 8) that the implementation of the provision on providing automated reports when the antenna is blocked be subject to a transition period.
28. VMSWG04 **AGREED** that new para 10 subpara b) on polling be subject to further discussion since it is a new requirement and **FURTHER AGREED** its implementation might be subject to a transition period.

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29. VMSWG04 **AGREED** regarding para 12 (ex para 10) that vessels not already subject to Resolution 15/03 be included and that manual reporting be allowed for a maximum of two years, subject to further discussion.
 30. VMSWG04 **AGREED** that para 13 (ex para 11) be qualified to refer to new para 3 on the delayed implementation.
 31. VMSWG04 **AGREED** regarding para 14 (ex para 12) that the IOTC Secretariat prepare a report every year on the performance and operations of the VMS prior to the Commission meeting and present it to the Compliance Committee.
 32. VMSWG04 **AGREED** regarding Annex 1 para B that CPCs shall require the elements indicated.
 33. VMSWG04 **AGREED** regarding Annex 1 para C that (i) flag States' consultation of port States on switching off when the vessel is in port and (ii) the period of being switched off, particularly for smaller vessels, both be subject to further discussion.
 34. VMSWG04 **AGREED** regarding Annex 1 para D that there be an upper limit to the period of malfunction and **FURTHER AGREED** that the duration would be subject to further discussion.
 35. VMSWG04 **AGREED** that consideration be given to those aspects of Annex 1 relating to malfunction (para E, para F and para G) be made into a separate annex.
 36. VMSWG04 **AGREED** to the revisions made in [Appendix 3](#), subject to further discussion in the next meeting of the VMSWG on those elements in square brackets and where indicated in the points above.
 37. VMSWG04 **AGREED** that it should aim to finalise a proposal on a revised Resolution 15/03 in 2023.
 38. VMSWG04 **NOTED** that in view of the substantive discussion required on the use of VMS data, it is premature to present a revised proposal for Resolution 15/03 to the Commission and consequently no discussion was held on its presentation or co-sponsorship.
 39. VMSWG04 **NOTED** that a progress report will be required for the next WPICMM and Compliance Committee meetings and **AGREED** that the IOTC Secretariat prepare the progress report with the elements agreed so far for presentation to the Compliance Committee and to the Commission.

7. DATE AND PLACE OF THE NEXT VMS WG MEETING(S)

40. VMSWG04 **AGREED** that the next meeting be held on 12 July 2022.

8. OTHER BUSINESS

41. There was no other business.

APPENDIX 1 LIST OF PARTICIPANTS

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APPENDIX 2
CONFIRMED AGENDA

AGENDA FOR THE FOURTH MEETING OF THE VMS WORKING GROUP

Date: 25 January 2022

Location: Virtual

Time: 11:00 – 15:00 Seychelles Time

Chair: Mr Stephen Ndegwa, **Vice Chair:** Mr Johnny Louys

1. Opening of the meeting (Chair).
2. Introduction of members (Members).
3. Adoption of the Agenda (Members).
4. Update on status of progress of the work plan (Chair/Secretariat)
5. Cost implications for CPCs on the agreed funding model for the IOTC VMS (Members).
6. Consider improvements that can be made to Resolution 15/03, and their presentation or co-sponsorship before the Commission by a CPC or CPCs (Members).
7. Date and place of the next VMS WG meeting(s) (Members).
8. Other business (Members).

APPENDIX 3

PROPOSED REVISION TO RESOLUTION 15/03¹

Preamble [Changes yet to be discussed and agreed]

1. [New paragraph] The objective of the VMS is to support the Commission in ensuring implementing the IOTC Agreement, promote CPCs compliance with CMMs and to ensure sustainable fisheries. By providing accurate and reliable information on the location and activities of the vessels fishing those stocks, a secure, web-based, near real-time, user-friendly VMS will reinforce the Monitoring, Control and Surveillance mechanisms of the Commission and will:
 - a) Improve monitoring, control and surveillance capabilities of CPCs to ensure compliance with the IOTC Conservation and Management Measures;
 - b) Enhance the cooperation and coordination on monitoring, control and surveillance mechanisms in the IOTC Area between coastal, flag and inspecting CPCs;
 - c) Increase transparency among CPCs and the IOTC Secretariat, and promote a level playing field on the control of fishing activities relating to IOTC regulated stocks;
 - d) Prevent, detect and deter illegal, unreported and unregulated (IUU) fishing;
 - e) Obtain accurate, reliable and easily usable positioning data to be used for scientific research and fisheries management.
2. Each Contracting Party and Cooperating Non-Contracting Party (CPC) shall adopt a satellite-based vessel monitoring system (VMS) for all vessels¹ flying its flag of 12 metres in length overall or above, and listed in the IOTC Record of Authorised Vessels.
3. [Ex para 2 of 15/03] Those CPCs currently without a VMS for any additional vessel now meeting the criteria for inclusion in the VMS obligation since Resolution 15/03 was superseded, as defined in paragraph 2 above, shall submit an implementation plan to the Compliance Committee in [date] that sets out a phased approach to full implementation of their national VMS obligation within a maximum of two years from the date of this Resolution becoming binding. After this date, vessels not equipped with VMS shall not be authorized to fish for tuna and tuna like species managed by the IOTC.
4. [Ex para 4 of 15/03] The Commission may establish guidelines for the registration, implementation and operation of VMS in the IOTC area of competence with a view to standardising VMS adopted by CPCs.
5. [Ex para 5 of 15/03] Information collected in respect of each vessel covered under paragraph 2, shall include:
 - a) the vessel identification;
 - b) the current geographical position of the vessel (longitude, latitude) with a position error which shall be less than 500 metres, at a confidence level of 99%;
 - c) [the speed and direction of the vessel]; and
 - d) the date and time (expressed in UTC) of the fixing of the said position of the

^{1 1} Amendments to the text of Resolution 15/03 agreed by the VMSWG03 are presented in red underlined font, whilst amendments proposed in the Options Paper and accepted by the VMSWG03 are presented only in red font. Amendments agreed by the VMSWG04 are presented in blue underlined font.

vessel.

6. [Ex para 6 of 15/03] Each CPC shall take the necessary measures to ensure that their land-based national Fisheries Monitoring Centre (FMC) receives through the VMS the information required in paragraph 5, and that the FMC is equipped with computer hardware and software enabling automatic data processing and electronic data transmission. Each CPC shall provide for backup and recovery procedures in case of system failures
7. [Ex para 7 of 15/03] Each CPC shall ensure that the information in paragraph 5 is transmitted to the IOTC Secretariat, either directly or through its FMC, at least once every [2 hours]. Each CPC shall ensure the masters of fishing vessels flying its flag ensure that the satellite tracking device(s) are at all times fully operational.
8. [New paragraph] Each CPC shall ensure that information is transmitted to the Secretariat, [in near real time] automatically, and that the information provided shall not be altered in any way. The information shall be provided either a) through the flag State FMC, or b) directly from the vessels.
9. [Ex para 8 of 15/03] Each CPC as a Flag State shall ensure that the vessel monitoring device(s) on board its vessels are tamper resistant, that is, are of a type and configuration that prevent the input or output of false positions, and that they are not capable of being over-ridden, whether manually, electronically or otherwise. To this end, the on-board satellite monitoring device must:
 - a) be located within a sealed unit;
 - b) be protected by official seals (or mechanisms) of a type that will indicate whether the unit has been accessed or tampered with;
 - c) be capable of providing specific automated reports when powered off or on; and
 - d) be capable to providing automated reports when the antenna is blocked
10. [New paragraph] In addition, each CPC as a flag State shall ensure that the vessel monitoring device(s) on board its vessels have the following capabilities:
 - a) be able to be programmed to provide automatic reports when the vessel enters or exits designated areas²; and
 - b) be able to be remotely prompted to provide position reports outside of regular reporting intervals [note - may be low priority if short reporting intervals are agreed].
11. [Ex para 9 of 15/03] The responsibilities concerning the satellite-tracking devices and requirements in case of technical failure or non-functioning of the satellite-tracking devices are established in **Annex I**.
12. [Ex para 10 of 15/03] Fishing vessels referred to in paragraph 2 and not already subject to Resolution 15/03, which are not yet equipped with VMS shall report to their FMC at least daily by email, facsimile, telex, telephone message or radio. This manual reporting shall be allowed for a maximum of [2] years from the date of this Resolution becoming binding, in accordance with paragraph 3. Such reports must include, inter alia, information required in paragraph 5 when transmitting the report, to their competent authorities, as well as:
 - a) the geographic position at the beginning of the fishing operation;

² VMSWG03 **AGREED** this should be made optional or revised.

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- b) the geographic position at the end of the fishing operation.
13. [Ex para 11 of 15/03] CPCs that [wish to use the delayed implementation of VMS referred in paragraph 3](#) shall report to the IOTC Secretariat (i) the systems and infrastructure and capabilities existing with respect to the implementation this Resolution, and (ii) the hindrances for implementation of such a system and (iii) requirements for implementation.
14. [Ex para 12 of 15/03] The IOTC Secretariat shall [prepare reports on the performance and operations of the VMS, including all details of potential CPC's compliance issues with the VMS prior to the meeting of the Commission and present it to the IOTC Compliance Committee. Based on these reports, the IOTC Compliance Committee will make recommendations to the Commission for improvements or modifications to the system, standards, specifications or procedures established to support the VMS.](#) Commission will discuss how best to proceed with future consideration of VMS to support its Conservation and Management Measures.
15. [Ex para 13 of 15/03] CPCs are encouraged to extend the application of this Resolution to their fishing vessels not provided for in paragraph [2](#) if they consider this to be appropriate to ensure the effectiveness of IOTC Conservation and Management Measures.
16. [Ex para 14 of 15/03] Resolution [15/03 On establishing a Vessel Monitoring System Programme](#) is superseded by this Resolution.

ANNEX I
RESPONSIBILITIES CONCERNING THE SATELLITE-TRACKING DEVICES
AND REQUIREMENTS IN CASE OF TECHNICAL FAILURE OR NON-
FUNCTIONING OF THE SATELLITE-TRACKING DEVICES

- A) In the event that a CPC has information to suspect that on-board vessel monitoring device(s) do not meet the requirements of paragraph 5, or have been tampered with, it shall immediately notify the IOTC Executive Secretary and the vessel's Flag State.
- B) CPCs shall require masters and owners/licensees of fishing vessels subject to VMS to-ensure that the vessel monitoring device(s) on board their vessels within the IOTC area of competence are at all times fully operational. Masters and owners/licensees shall in particular ensure that:
- a) VMS reports and messages are not altered in any way;
 - b) the antennae connected to the satellite monitoring device(s) are not obstructed in any way;
 - c) the power supply of the satellite monitoring device(s) is not interrupted in any way; and
 - d) the vessel monitoring device(s) are not removed from the vessel.
- C) [No change proposed – although port State consent should be considered in approval to turn VMS off] A vessel monitoring device shall be active within the IOTC area of competence. It may, however, be switched off when the fishing vessel is in port for a [period of more than one week], subject to prior notification to, and approval of, the Flag State provided that the first position report generated following the re-powering (activating) shows that the fishing vessel has not changed position compared to the last report. [In its consideration for giving approval the Flag State shall consult the Port State on any objections it might have and shall inform the IOTC Secretariat on any approval given.]
- D) In the event of a technical failure or non-operation of the satellite tracking device fitted on board a fishing vessel, the device shall be repaired or replaced within one month. After this period, the master of a fishing vessel is not authorised to commence a fishing trip with a defective satellite tracking device. [Furthermore, when a device stops functioning or has a technical failure during a fishing trip lasting more than one month, the repair or the replacement has to take place as soon as the vessel enters a port; the fishing vessel shall not be authorised to commence a fishing trip without the satellite tracking device having been repaired or replaced]³.
- E) In the event of a technical failure or non-functioning of the vessel monitoring device on board the fishing vessel, the master or the owner of the vessel, or their representative, shall communicate immediately to the FMC of the Flag State, and if the Flag State so desires also to the IOTC Secretariat, stating the time that the failure or the non-functioning was detected or notified in accordance with paragraph F of this Annex. In the event of a technical failure or non-functioning of the vessel monitoring device on board the fishing vessel, the master or the owner of the vessel, or their representative, shall also communicate to the FMC of the Flag State the

information required in paragraph 5 of the Resolution every four hours, by email, facsimile, telex, telephone message or radio.

- F) When the Flag State has not received for 12 hours data transmissions referred to in paragraphs 7 of the Resolution and E of this Annex, or has reasons to doubt the correctness of the data transmissions under paragraphs 7 of the Resolution and E of this Annex, it shall as soon as possible notify the master or the owner or the representative thereof, **and the manual reporting provisions in paragraph E shall commence immediately**. If this situation occurs more than two times within a period of one year in respect of a particular vessel, the Flag State of the vessel shall investigate the matter, including having an authorised official check the device in question, in order to establish whether the equipment has been tampered with. The outcome of this investigation shall be forwarded to the IOTC Secretariat within 30 days of its completion.
- G) [No change proposed – but more real-time arrangements will be required for the provision of manual reports to the Secretariat once option 3 is implemented] With regard to paragraphs E and F of this Annex, each CPC shall, as soon as possible but no later than two working days following detection or notification of technical failure or non-functioning of the vessel monitoring device on board the fishing vessel, forward the geographical positions of the vessel to the IOTC Secretariat, or shall ensure that these positions are forwarded to the IOTC Secretariat by the master or the owner of the vessel, or their representative.