
Progress of work of the Vessel Monitoring System (VMS) Working Group (WG)

PREPARED BY: IOTC SECRETARIAT¹, 28 JANUARY 2025

PURPOSE

To provide participants at the Working Party on the Implementation of Conservation and Management Measures (WPICMM) an update on the progress of work and plan of the Vessel Monitoring System (VMS) Working Group (WG).

BACKGROUND

The [CoC16](#) noted paper [IOTC-2019-WPICMM02-VMS Study](#), which provided options for strengthening the IOTC VMS and further noted paper [IOTC-2019-CoC16-05a](#), which summarised the work of the Steering Group, and subsequently recommended the formation of a VMS Working Group (VMSWG).

[IOTC-2019-CoC16-R](#) – (Para 109) recommended the establishment of a VMS Working Group, chaired by Mr Stephen Ndegwa (Kenya), to progress the work associated with strengthening the IOTC VMS, as per the ToR in Appendix 8 of [IOTC-2019-CoC16-R](#). This was subsequently endorsed by S23 ([IOTC-2019-S23-RE Rev1 FINAL](#)).

The VMS Working Group has held seven meetings and one special session:

- 1st meeting – 19 May 2021, [IOTC-2022-VMSWG01-R](#)
- 2nd meeting – 17 September 2021, [IOTC-2022-VMSWG02-R](#),
- 3rd Meeting – 13 December 2021, [IOTC-2022-VMSWG03-R](#)
- 4th Meeting – 25 January 2022, [IOTC-2022-VMSWG04-R](#)
- 5th Meeting – 27 September 2022, [IOTC-2022-VMSWG05-R](#)
- Special Session of the VMSWG – 16 November 2022, [IOTC-2022-VMSWGSS01-R](#)
- 6th Meeting – 14 February 2023, [IOTC-2023-VMSWG06 R Rev1](#)
- 7th Meeting – 26 September 2023, [IOTC-2023-VMSWG07 R](#)

The reports of the previous meetings of the VMS Working Group are available as resource documents through the above links.

An [eight meeting of the VMS WG](#) is scheduled for 10 February 2025. The meeting intended for 2024, has been postponed due to delays in securing funding to conduct work that would be crucial to inform on some of the objectives, which have an “ongoing status”.

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DISCUSSION

The Vessel Monitoring System Working Group (VMSWG) was established with the principal task of progressing the work to strengthen the IOTC VMS. The work plan of the VMS Working Group is guided by the responsibilities given in its ToRs.

The progress status of each responsibility outlined in the Terms of Reference (ToRs) of the VMSWG is presented below, based on discussions documented in the VMSWG meeting reports.

VMS Objectives

VMSWG03 (Para.7) **AGREED** to the following objectives:

The objective of the VMS is to support the Commission in ensuring sustainable fisheries of the stocks covered by the organization. By providing accurate and reliable information on the location and activities of the vessels fishing those stocks the 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.

Status

Concluded.

Preferred model for a future IOTC VMS, including hosting options

VMSWG01 (Para.10) **NOTED** that while several parties prefer Option 3, Partially Centralised, some parties have a strong preference for Option 2, Shared Decentralised. A solution would be to allow parties to choose which system to apply, as long as reporting resulted in being near real time and tamper-proof.

VMSWG01 (Para.11) **CONCLUDED** that this flexibility comprises a hybrid option and **RECOMMENDED** this option be considered by the Compliance Committee.

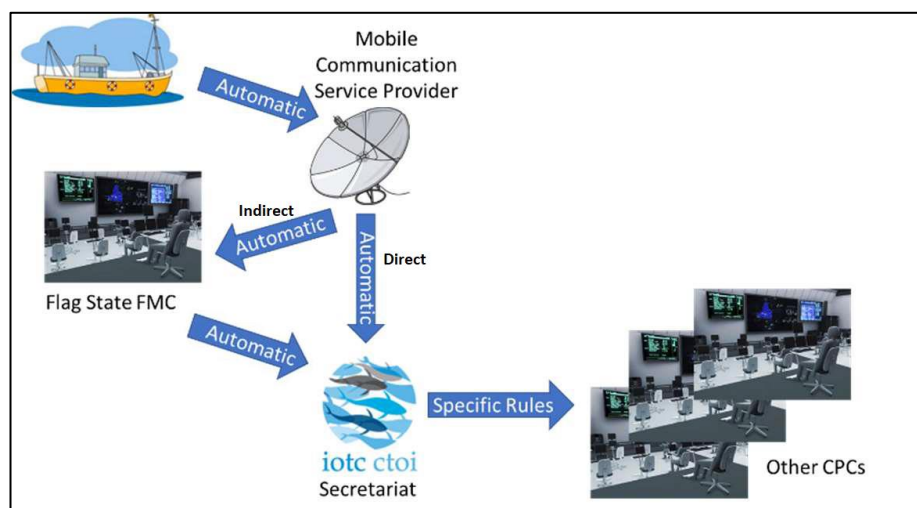


Figure 1. Adapted from *Options paper for strengthening the IOTC VMS, 2019*.

Status

Concluded. Figure 1, above, is a schematic representation of what the VMS Working Group had recommended for the Compliance Committee’s (CoC) consideration at its 18th Session in May/June 2021, but unfortunately the report was not adopted in time for the recommendation to be presented to the CoC18. However, it can be concluded that this represents the **AGREED** option, at the level of the VMS Working Group.

Scope and application of the VMS (e.g. vessel types and size, geographic scope)

VMSWG03 (Para.14) **AGREED** that the VMS should include all vessel types, including carrier, supply and support vessels.

VMSWG03 (Para.16) **AGREED** that non-CPC-flagged carrier vessels be requested to transmit VMS and if they fail to do so they can be excluded from the Record of Authorised Carrier Vessels.

VMSWG03 (Para.17) **AGREED** that all vessels above 12m length overall be the preferred option and included irrespective of whether they operate inside or outside the EEZ, and **FURTHER AGREED** that this may be achieved gradually by increasing VMS coverage from present requirements under Resolution 15/03, particularly for developing coastal States.

VMSWG03 (Para.18) **AGREED** that a buffer zone be set at 20nm from a coastal State’s EEZ or, as an alternative, reporting 24 hours prior to the entry to the EEZ.

Status

Concluded.

Method for ensuring real time or near real time position reporting (e.g. direct, indirect or simultaneous polling)

VMSWG02 (Para.19) **NOTED** paper [IOTC-2021-VMSWG02-03](#), prepared by Seychelles, assessing delays between vessels’ VMS reports and the receipt of same by the fisheries monitoring centre.

VMSWG02 (Para.21) **NOTED** that paper [IOTC-2021-VMSWG02-03](#) deduced that the risk of delays of more than 10 minutes from the time the position is fixed by the VLD, to the time the coastal State receives the data, via the vessel’s flag State FMC, is minimal.

VMSWG02 (Para.24) **NOTED** a presentation prepared by the EU that showed the model in use in the EU.

VMSWG02 (Para.25) **NOTED** that information goes first to the EU Commission’s central node for communication to third parties and **FURTHER NOTED** that the average time from the vessel to the final destination is between three and four minutes.

VMSWG02 (Para.26) **NOTED** that the delays presented by EU (which has a very high volume of messages) and Seychelles (that has VMS on vessels smaller than 24m) are comparable and not significant.

VMSWG02 (Para.27) **AGREED** that risk of tampering in the case of Option 2 Shared Decentralised is negligible.

Status

Concluded.

Develop possible funding models and options.

Of the RFMOs/RFBs directly consulted, most (and certainly all of the RFMOs) have chosen to fund their VMS through their normal budget. That is, CPCs contribute to the costs of the VMS through the general contributions' formula, rather than through any special arrangement for flag CPCs. This is likely to be the most appropriate funding avenue for IOTC, at least in the short term.

VMSWG03 **RECALLED** the analysis and three options presented in section 4.3.4 of the Options Paper ([IOTC-2019-WPICMM02-VMS Study](#)), namely (1) a simple increase in Commission budget, proportional to CPCs contributions, (2) a greater proportion of additional funds from flag CPCs and (3) some form of cost recovery from vessels.

VMSWG03 **RECALLED** the table on p33 of the Options Paper ([IOTC-2019-WPICMM02-VMS Study](#)), which presents three different total cost scenarios and **NOTED** that costs increase in accordance with the total number of vessels covered and with the frequency of VMS data transmission.

VMSWG03 **AGREED** that a simple increase in the Commission budget (Option 1) to finance the VMS was preferred, since it was the most equitable and practical option.

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.

Status

Ongoing. Further discussions would take place during 2025.

Consider improvements that can be made to Resolution 15/03.

VMSWG01 (Para.16) **AGREED** that changes to the Resolution should be decided at the Commission level not at the VMSWG.

VMSWG03 **NOTED** the proposed amendments in Attachment 2 in the Options Paper ([IOTC-2019-WPICMM02-VMS Study](#)), and **FURTHER NOTED** the proposals presented to VMSWG03 in the Proposed Draft VMS Objectives ([IOTC-2021VMSWG03-02](#)).

VMSWG03 **RECALLED** that any amendments to Resolution 15/03 should be submitted to the Commission by a CPC or co-sponsored by CPCs participating in the VMSWG.

The VMSWG05 (Para. 32) **NOTED** the VMS should cover all vessels of 12 metres in length overall and above, and **FURTHER NOTED** that the Resolution pertaining to the IOTC Record of Authorised Vessels will be required to be amended to extend its scope.

The VMSWG06 (Para. 43) **NOTED** that some CPCs have data confidentiality laws in force that restrict the sharing of VMS information to third parties.

The VMSWG07 (Para. 20) **NOTED** paper [IOTC-2023-VMSWG07-02](#) on proposed revisions to Resolution 15/03.

The VMSWG07 (Para. 21) **AGREED** to resume working on new amendments to Resolution 15/03, after the conclusion of the IOTC Pilot Project on VMS.

The CoC21 (para.34) **NOTED** that the VMSWG agreed to meet upon completion of the consultants' work and **FURTHER NOTED** that certain regulatory aspects could be handled in parallel to the proposed Pilot Project.

Status

Ongoing. Further discussions would take place during 2025.

Develop rules and procedures for the sharing, use and protection of VMS data.

Establish an expertise-based intersessional working group to develop rules and procedures for the sharing, use and protection of VMS data. (Referenced from *Options paper for strengthening the IOTC VMS, 2019*)

The VMSWG05 (Para. 11) **NOTED** presentation by the Seychelles ([IOTC-2022-VMSWG05-03](#)), on the role of IOTC Secretariat with respect to the handling of VMS data.

The VMSWG05 (Para. 12) **NOTED** two possible monitoring scenarios:

- a. Scenario 1, where active monitoring is conducted by CPCs and the IOTC Secretariat only monitors compliance with VMS Resolution. This scenario does not fully meet the objectives of the IOTC VMS.
- b. Scenario 2, where the IOTC Secretariat actively monitors compliance with the VMS Resolution and other IOTC Conservation and Management Measures. This scenario ensures the objectives of the IOTC VMS are met fully, but the cost implications are higher than Scenario 1.

The VMSWG05 (Para. 16) **RECALLED** [Resolution 12/02 on Data confidentiality policy and procedures](#), and **AGREED** that VMS data protection requirements could be included in the Resolution 12/02 or within the VMS Resolution itself.

The VMSWG05 (Para. 17) **AGREED** to a phased approach, starting by Scenario 1 and **FURTHER AGREED** that the gradual shift to Scenario 2 could be considered at a later stage.

The VMSWG05 (Para. 18) **AGREED** that rules to share VMS data for use for science purposes should be conditional to the consent of the flag State.

Status

Ongoing. The ongoing Pilot Project on VMS, would represent an opportunity to consider and test data collection, data policy, data security and confidentiality requirements, including legal, physical and procedural safeguards. Additionally, the Pilot will propose an information sharing agreement describing the protocols for sharing VMS data with the IOTC Secretariat and among CPCs

Technical cooperation between the Secretariats of the General Fisheries Commission for the Mediterranean and the IOTC on vessel monitoring system.

The VMSWG05 (Para. 27) **NOTED** the possibility of capitalizing on the work conducted by the GFCM to expedite the preparatory phase and procurement process for an IOTC regional VMS and **FURTHER NOTED** the potential use of the same service provider or partition of the system to host the IOTC regional VMS.

The VMSWG05 (Para. 28) **AGREED** to convene a special session of the VMSWG on 16 November 2022, with the aim of inviting the GFCM to present to the working group the GFCM experience and lessons learnt

The VMSWGSS01 (Para. 17) **NOTED** the candidate VMS solution would have to be assessed by relevant FAO divisions based on among others, FAO Admin Circular No. 2013/23 setting out the Organization's Policy on Confidentiality, a set of criteria designed to assess the risk of adopting cloud services, the Cloud Standards Customer Council Guide, procurement rules, and subsequent evaluation procedures and award of contract.

The VMSWGSS01 (Para. 18) **NOTED** information technology security provisions that include infrastructure protection, logical security, network protection, compliance commitments and security incident management procedures.

The VMSWGSS01 (Para. 24) **NOTED** the usefulness of GFCM having passed through the different FAO requirements regarding cloud computing security, technical specifications, confidentiality and procurement.

The VMSWGSS01 (Para. 30) **NOTED** that due to FAO's policy on double financing, where both systems overlap technically the IOTC might not have to incur the costs that GFCM will have already incurred, and **FURTHER NOTED** potential economies of scale.

The VMSWG06 (Para.21) **NOTED** that the GFCM's pilot project, ending in October 2023, has a limited life span, and **AGREED** that IOTC's involvement in the pilot project would have the merit to provide the necessary experience and information to inform the Commission on the future form of an IOTC VMS.

The CoC20 (Para.47) **NOTED** support for an IOTC Pilot Project, given that most IOTC CPCs are not parties to GFCM.

The CoC20 (Para.49) **RECOMMENDED** that the Commission (S27) endorse the CoC20 proposal that the IOTC Secretariat prepare a Terms of Reference for an IOTC Pilot Project on VMS, taking into consideration the experience of GFCM to date.

Status

Concluded.

Development and implementation of an IOTC Pilot Project on VMS

The VMSWG07 (Para.6) **NOTED** paper [IOTC-2023-VMSWG07-03](#) on the Terms of Reference for an IOTC Pilot Project on Vessel Monitoring System.

The VMSWG07 (Para.7) **NOTED** that the Terms of Reference described consist of two different phases, namely the design of the Pilot Project on VMS and the formulation of its implementation plan, and the subsequent implementation of the plan.

The VMSWG07 (Para.9) **NOTED** that the Terms of Reference has been designed to be implemented in its entirety, or partially, by either a consultant or a service provider and **FURTHER NOTED** that although a service provider can guarantee a greater level of consistency between the two phases described, the solution proposed by a service provider may be biased to suit their own technologies and may not include the best or most adequate solution.

The VMSWG07 (Para.10) **NOTED** that the recruitment of a service provider would be necessary for the implementation of the Pilot Project on VMS and **FURTHER NOTED** that this would need to be done through the FAO procurement procedures.

The VMSWG07 (Para.12) **NOTED** that should external funding not be available to fund Phase 2, a request for fund must be raised to the Commission following endorsements by the Compliance Committee and the Standing Committee on Administration and Finance.

The VMSWG07 (Para.13) **AGREED** to follow a two-phased approach where, in the initial phase a consultant would recruited to provide: i) a proposal, design and requirements of the IOTC VMS Pilot Project; and ii) an implementation plan for the IOTC VMS Pilot Project (including budget proposal).

The VMSWG07 (Para.14) **AGREED** to review the reports from the consultancy at the next meeting of the VMSWG, prior to the 2024 Compliance Committee meeting.

The VMSWG07 (Para.16) **AGREED** for the IOTC Secretariat to launch a call for CPCs to volunteer their participation in the implementation of the Pilot Project on VMS.

Status

Ongoing. The consultant for the Pilot Project on VMS was hired. A briefing meeting took place on 11 October 2024. Only 3 CPCs volunteered for the Pilot Project on VMS. Further discussions would take place during VMSWG08, in relation to the work of the consultant, which includes the formulation and design of a technical proposal for an IOTC Pilot Project ([IOTC-2025-VMS Pilot Project-01](#)) and its implementation plan ([IOTC-2025-VMS Pilot Project-02](#)).

Develop mechanism for the smooth transition of the existing to the new system, if required.

Status

Outstanding. To be considered during the 2025 meeting(s).

RECOMMENDATION/S

That the WPICMM08:

- 1) **NOTE** paper IOTC-2025-WPICMM08-09 on the Progress of work of the VMSWG.
- 2) **NOTE** the progress made by the VMSWG with respect to the IOTC Pilot Project on VMS.
- 3) **NOTE** the limited number of CPCs (3) who have volunteered to participate in the IOTC Pilot Project on VMS.