



CCSBT-CC/1910/08

Information Gaps in the CCSBT's Current VMS Arrangements - Update

1. Introduction

At the Thirteenth Meeting of the Compliance Committee (CC13) the Secretariat presented a paper (CCSBT-CC/1910/BGD01) which included:

- An update on the status of an IOTC¹ consultant's report on options for strengthening its Vessel Monitoring System (VMS), and
- A summary of information gaps in CCSBT's current VMS arrangements identified by the Secretariat which were grouped into two categories - technical information gaps and higher-level information gaps.

CC13 agreed that it should wait for the outcomes of the Indian Ocean Tuna Commission's (IOTC's) VMS consultancy and the WPICMM's² recommendations with respect to its VMS before considering changes to the CCSBT's VMS Resolution.

CC13 also agreed that a slightly expanded version of the Secretariat's current paper, taking into account the work done by IOTC, should be submitted to CC14 in October 2019.

In this paper:

- Section 2 notes the VMS action items in the current Compliance Action Plan (CAP) and provides a brief summary of the VMS information gaps identified at CC13;
- Section 3 reviews the outcomes (to date) of the IOTC's consideration of options to strengthen its VMS; and
- Section 4 invites Members to recommend whether to proceed with any VMS Resolution enhancements during 2020 and/or to propose action items to be included in the CCSBT's CAP for 2021 and beyond.

2. Background

Compliance Action Plan (CAP): VMS Action Items

In 2017 the Twelfth Meeting of the Compliance Committee (CC12)/CCSBT 24 agreed to merge the CCSBT's 2006 and 2008 VMS Resolutions to produce a consolidated, "[Resolution on the CCSBT Vessel Monitoring System \(VMS\)](#)". CC12 noted³ that this consolidation represented an interim step towards progressing the work to develop enhanced VMS arrangements scheduled in the CAP for the 2018 – 2020 period, i.e. items "4a)" and "4b)" which are:

2018:

4a) Identify information gaps where enhanced CCSBT VMS arrangements are necessary to strengthen CCSBT's existing Conservation and Management Measures, e.g. the ability to cross-reference VMS data against operational fishing data, including CDS and transshipment data, and

¹ Indian Ocean Tuna Commission

² IOTC's (Second) Working Party on the Implementation of Conservation and Management Measures

³ Refer to paragraph 63 of CC12's report

2019 and 2020:

4b) Determine and implement appropriate VMS arrangements to make available Members' VMS data to address information gaps identified in a), and review CCSBT's VMS Resolution(s) and revise accordingly.

The Secretariat's Review of Existing VMS Information Gaps (CC13)

In 2018, the Secretariat's paper to CC13 (CCSBT-CC/1910/BGD01) addressed action item 4a) of the CAP, and identified some existing VMS information gaps including:

- Technical gaps such as the current 4-hourly transmission frequency (increased transmission frequencies better enable determination of a vessel's fishing activity), no current requirement to transmit speed and course information, no current specification of the accuracy of geographical position information to be submitted or standard units for date/time information, and limited specification of tamper-proofing and ALC unit failure and appropriate backup requirements; and
- Higher level information gaps:
 - Member VMS data are not available to the Secretariat and only a small amount of generally high-level summary VMS information is submitted to the Secretariat annually resulting in limited ability to cross-check locational information from different data sources and/or to independently verify compliance with CCSBT's VMS Resolution;
 - No information received to date regarding authorised Carrier Vessels' compliance with the CCSBT's VMS Resolution; and
 - Limited sharing of VMS compliance information between the CCSBT Secretariat and other relevant RFMOs.

Further work still needs to be done to address action item 4b) of the CAP.

3. IOTC's Consideration of Options to Strengthen its VMS

During 2018 the Indian Ocean Tuna Commission (IOTC) contracted a consultant to produce a report on options for strengthening the IOTC VMS to provide an effective platform for the monitoring and controlling of IOTC fisheries.

The consultant's final report⁴ was first presented to the IOTC's 2nd Working Party on the Implementation of Conservation and Management Measure (WPICMM02) in February 2019. It described IOTC's current system as "completely decentralised", and presented four potential options for strengthening the IOTC VMS which were designated as:

- Option 1 - Cooperative decentralised;
- Option 2 - Shared decentralised;
- Option 3 - Partially centralised; and
- Option 4 - Completely centralised.

An extract from the consultant's report which provides a description and diagrammatic representation of these options is provided for Members' information at **Attachment A**.

The WPICMM02 recommended that IOTC's VMS Steering Group consider options 2 and 3 (and possible variations to option 3) as the basis for strengthening the IOTC VMS and continue its work, including a work plan and budget, and if necessary, a revision of the Resolution 15/03 for the consideration of IOTC's Sixteenth Compliance Committee (CoC16) in June 2019.

⁴ The report can be found [here](#)

IOTC's VMS Steering Group prepared paper IOTC-2019-CoC16-05a [E] which provided an assessment of VMS options 2 and 3 (and possible variations to option 3), and included recommendation that CoC16 establish a VMS Working Group to progress the work associated with strengthening the IOTC VMS according to a proposed workplan.

CoC16 considered the VMS Steering Group's paper and the meeting outcome was as follows:

- *“105. The CoC 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.*
- *106. The CoC NOTED that the options identified pose difficulties for some CPCs to implement at national level and, consequently, there was no agreement on pursuing any of the options.*
- *107. The CoC AGREED on the need to move forward on the strengthening of the IOTC VMS, however, the CoC NOTED that the current divergence of opinions needs to be overcome in order to achieve this.*
- *108. The CoC NOTED paper IOTC-2019-CoC16-05b, which provides the terms of reference for an intersessional Working Group to progress considerations and development of an IOTC vessel monitoring system.*
Recommendation
- *109. The CoC 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”*

The Terms of Reference (ToR) for the VMS Working Group mentioned in the fourth dot-point above are provided at **Attachment B** to this paper. This ToR specifies that the Working Group should undertake its work during the 2019 - 2020 and 2020 - 2021 IOTC intersessional periods and provide advice on items including:

- The preferred model for a future IOTC Commission VMS, and
- Improvements that can be made to the IOTC's VMS Resolution 15/03.

4. Potential Future Work on Enhancing CCSBT's VMS Arrangements

Members are requested to recommend whether any further work on enhancing the CCSBT's VMS arrangements, such as considering revisions to its VMS Resolution should be proposed during 2020 and/or whether action items should be proposed for inclusion within CCSBT's next CAP for 2021 and beyond.

Potential Technical Revisions to the Current VMS Resolution

The current ICCAT, IOTC, WCPFC and CCAMLR VMS Measures referred to in paragraph 1 of CCSBT's [VMS Resolution](#) all specify more comprehensive VMS technical requirements than those in paragraph 4 of the CCSBT's VMS Resolution, including for key items such as the accuracy of geographical positions, tamper-resistance and technical VMS failure requirements.

However, there are circumstances where the Secretariat understands that ICCAT's, IOTC's and/or WCPFC's VMS Measures may not apply⁵, and so by default, only the very broadly specified provisions in paragraph 4 of CCSBT's VMS Resolution would be required by the CCSBT.

⁵ CCAMLR is not discussed here since there has been no record of SBT fishing occurring within the CCAMLR Convention Area since 2005 and it is anticipated that this situation will continue. Note that CCAMLR's Conservation Measure 10-04 (2015) was replaced by Conservation Measure 10-04 (2018) in 2018.

For example:

- ICCAT's new Recommendation 18-10⁶ doesn't apply to CPC⁷ fishing vessels less than or equal to 15m length overall (LOA), and vessels less than or equal to 24m LOA (or 20m between perpendiculars) that are only authorised to fish within the CPC's Exclusive Economic Zone (EEZ);
- IOTC's Resolution 15/03 doesn't apply to CPC⁸ vessels less than 24m in length overall (LOA) that operate only within the CPC's own Exclusive Economic Zone (EEZ); and
- WCPFC's CMM 2014-02 may not apply to all CCM⁹ fishing vessels that fish for highly migratory fish stocks in CCM EEZs.

During CC12, both the Humane Society International (HSI) and the United States urged the CCSBT to consider specifying increased transmission frequencies. In addition, paragraph 60 of CC12's report noted a variety of simple enhancements to the CCSBT's VMS Resolution that would be desirable:

- 1) improved clarity of the requirements in the event of VMS failure,
- 2) transmitting speed and course, and
- 3) increasing the transmission frequency to enable better determination of a vessel's fishing activity.

There is an opportunity to revise and strengthen CCSBT's VMS Resolution, notably paragraph 4, by proposing appropriate technical improvements to address points 1) – 3) above for situations where other organisations' VMS measures may not be applicable. For example, consideration could be given to re-proposing a subset of the revisions that were initially proposed (but not agreed) in paper CCSBT-CC/1710/09. This work could be done during 2020 if requested.

Inclusion of Action Items in CCSBT's Compliance Action Plan for 2021 Onwards

CC14 could recommend proposing VMS action items to include in CCSBT's CAP for 2021 onwards – refer to paper CCSBT-CC/1910/11.

5. Recommendations

The Secretariat invites CC14 to:

- Note the summary of information gaps/potential information gaps identified in the CCSBT's current VMS arrangements summarised in section 2 of this paper;
- Note the update provided on IOTC's consideration of options to strengthen its VMS, including IOTC CoC 16's note that there was no agreement on pursuing any of the VMS options currently and its recommendation to establish a VMS Working Group;
- Note that both ICCAT's and CCAMLR's VMS Measures were revised during 2018;
- Recommend whether CCSBT should undertake any work on enhancing its VMS arrangements, including proposing potential revisions to its VMS Resolution during 2020; and
- Recommend any VMS enhancement action items to include in CCSBT's CAP for the period 2021 onwards as appropriate.

Prepared by the Secretariat

⁶ ICCAT's Recommendation 14-09 was repealed and replaced by ICCAT Recommendation 18-10 (Recommendation by ICCAT Concerning Minimum Standards for Vessel Monitoring Systems in the ICCAT Convention Area) which entered into force in June 2019

⁷ CPC (ICCAT): Contracting Party, Cooperating non-Contracting Party, Entity or Fishing Entity

⁸ CPC (IOTC): Contracting Party and Cooperating Non-Contracting Party

⁹ CCM (WCPFC): Commission Members, Cooperating Non-Members and participating Territories

Extract from Paper IOTC-2019-WPICMM02-VMS Study: Options Paper for Strengthening the IOTC Vessel Monitoring System

1. Cooperative decentralised – Similar in construct to a completely decentralised system, but with requirements for the flag State to share information with others in specific circumstances. For example, to share with:

- coastal States when vessels are located in their EEZ;
- port States when undertaking inspections; or
- the Commission Secretariat for specific purposes (such as monitoring any time/area closures and science).

Costs completely borne by flag State, but perhaps with minor costs to Secretariat to handle/use the data. ICCAT is an example of a cooperative decentralised system.

2. Shared decentralised – as per 1, but with automatic sharing of data from the CPC's FMC to the Commission Secretariat and specific rules in place for how and when other CPCs can access it and what they can use it for. Costs of monitoring vessels, data transmissions etc borne by flag State, Commission will incur costs for receiving, storing and disseminating data to be funded through Commission budget, noting that this would be relatively minor and could be achieved in a number of ways. NAFO is an example of a shared decentralised system.

3. Partially centralised – similar to 2, but with data to be sent directly to the Commission Secretariat by the VMS satellite service providers contracted by each CPC (not through the CPCs' FMCs). This involves a greater degree of prescription on the operative elements of the VMS than earlier options – for example, being a centralised system means that the data received needs to be consistent, necessitating more formal type approval of MTUs (as opposed to general guidance on capability). Cost structure similar to 2. WCPFC is an example of a partially centralised system – data for vessels covered by the FFA VMS is passed directly from the Mobile Communications Service Provider (MCSP) to the Secretariat without going through FFA¹.

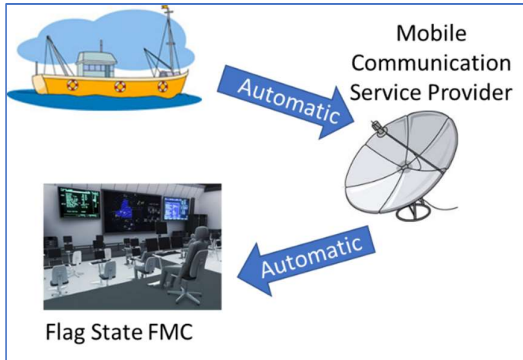
¹ The WCPFC system is actually a hybrid of both 3 and 4:

- partially centralised for vessels that are authorised to fish in FFA EEZs; and
- completely centralised for vessels only authorised to fish in WCPO high seas.

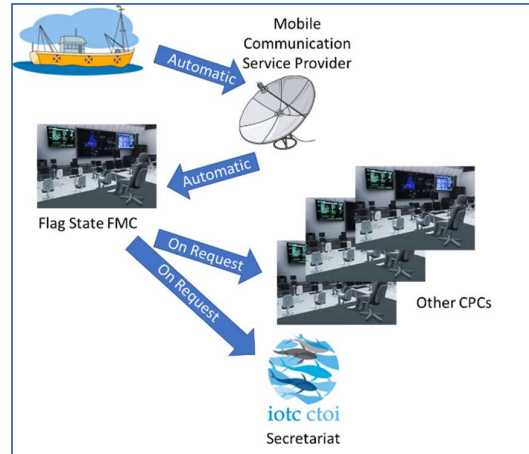
4. Completely centralised – The RFMO has complete autonomy over the system including direct administration of registration procedures, direct receipt of data from its own service providers and centralised control over data access, actions on failure etc (under rules agreed by the Commission). Costs completely borne by the Commission (although flag States may continue to incur costs if they choose to also maintain a national VMS). FFA is an example of a completely centralised system.

Figure 13 below shows a simplistic comparison of the four options and the status quo.

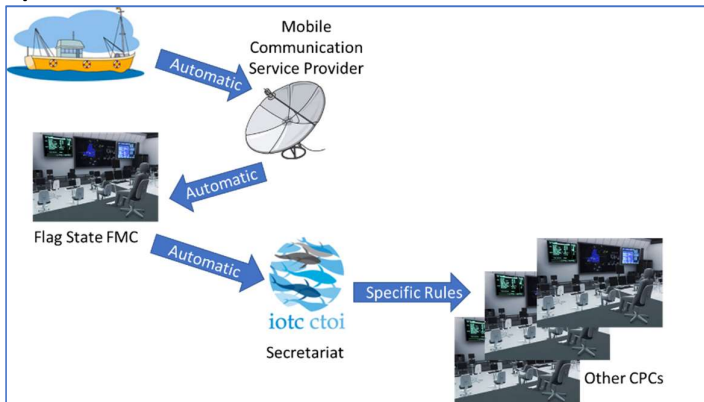
Status quo – Completely decentralised



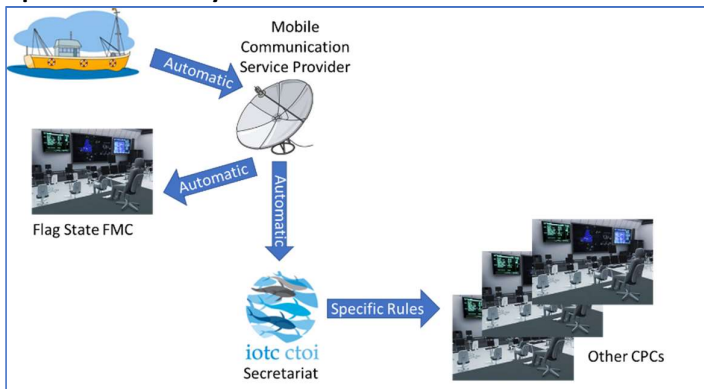
Option 1 – Cooperative decentralised



Option 2 – Shared decentralised



Option 3 – Partially centralised



Option 4 – Completely centralised

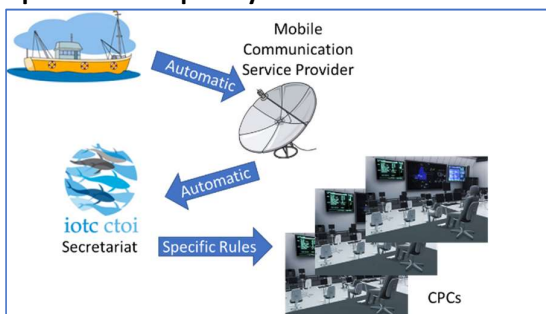


Figure 13 - Options

APPENDIX 8.
TERMS OF REFERENCE FOR AN IOTC VMS WORKING GROUP

Background

At the IOTC 20th annual session in 2016, the Commission agreed to Terms of Reference for an IOTC options paper for strengthening the IOTC VMS and appointed a Steering Group to oversee this work (IOTC-2016-S20-R, paragraphs 61-62, Appendix IXB). Following initial work by the Steering Group, Pontus Consulting was engaged to provide advice to the Commission on strengthening the IOTC VMS.

The consultant was asked to:

To provide the Commission with options for strengthening the IOTC VMS, such that the VMS provides an effective platform for the monitoring and controlling IOTC fisheries, consistent with the Commission's management regime. Specifically, in monitoring and controlling the activities of vessels authorized to operate in the IOTC Area of Competence. The establishment of a regional or Commission VMS should also be considered, taking into account the costs and benefits, the existing national VMS approaches as well as regulatory framework, technical, confidentiality and Secretariat staffing requirements.

The consultant's report was provided to the IOTC in February 2019. It was considered by the Working Party on the Implementation of Conservation and Management Measures in February 2019 and was presented, together with recommendations from the VMS Steering Group, to the Commission at its 23rd annual session in 2019.

These Terms of Reference provide a means to progress work on an IOTC VMS.

These Terms of Reference will be reviewed at IOTC24 to ensure their ongoing suitability.

Establishment of the Working Group on VMS

In order to progress consideration of options to strengthen the IOTC VMS, the Commission agreed to establish an expertise-based working group to undertake work during the 2019-2020 and 2020-2021 intersessional periods.

1. The VMS -WG is established as a working group of the IOTC under the Compliance Committee. The VMS-WG will be chaired by Mr Stephen Ndegwa (Kenya) and coordinated by the IOTC Secretariat.
2. The VMS-WG is open to all CPCs and interested observers. CPCs participating in the working group are encouraged to ensure that participants have sufficient technical expertise.
3. The VMS-WG may also invite experts, including from other intergovernmental organisations who are working on VMS matters, to provide advice to inform the VMS-WG's deliberations.
4. The VMS-WG will provide advice to the Standing Committee on Administration and Finance as the case requires.
5. The VMS-WG will aim to undertake its work electronically.
6. CPCs will notify the Secretariat of their representative(s) by no later than 31 July 2019.

Responsibilities

1. Further consider and provide advice on the consultant's report as required, as well as the VMS Steering Group's report.
2. Consider and provide advice on the following issues, such as:
 - Preferred model for a future IOTC Commission VMS, including hosting options
 - Scope and application of the VMS (e.g. vessel types and size, geographic scope)
 - Method for ensuring real time or near real time position reporting (e.g. direct, indirect or simultaneous polling)

3. Develop possible funding models and options.
4. Consider improvements that can be made to Resolution 15/03.
5. Develop rules and procedures for the sharing, use and protection of VMS data.
6. Develop mechanism for the smooth transition of the existing to the new system, if required.