



CCSBT-CC/1909/BGD 01
(Previously CCSBT-CC/1810/09)

Information Gaps in the CCSBT's Current VMS Arrangements

1. Introduction

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 noted¹ 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)" listed below.

The current Compliance Action Plan (CAP) includes an action item (4) for Members and the Secretariat to examine the CCSBT's current Vessel Monitoring System (VMS) arrangements between 2018 – 2020:

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

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.

This paper summarises information gaps/potential information gaps in the CCSBT's current VMS arrangements identified by the Secretariat so that these can be considered further during 2019 and 2020 as appropriate.

The Secretariat grouped the information gaps it identified into two categories:

- Technical information gaps, and
- Higher level, over-arching information gaps.

These are discussed in more detail in sections 3 and 4 below.

2. Other Relevant Work in Progress: VMS Consultancy Contracted by the IOTC

During 2018 the 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. Extracts from the terms of reference for this work are provided at **Attachment A**.

It was hoped that the CCSBT Secretariat could report back to Members on the results of this consultancy work, both to learn from its findings and potentially also avoid any duplication of effort. However, the IOTC Secretariat has advised that there was a delay in contracting the consultant and that therefore the final report will not be available until late January 2019. It will first be presented to the IOTC's Working Party on the Implementation of Conservation

¹ Refer to paragraph 63 of CC12's report

and Management Measure (WPICMM) in February 2019, and then subsequently to the IOTC's Compliance Committee/Commission along with any recommendations made by the WPICMM in approximately June 2019.

3. Current Technical Information Gaps/ Weaknesses

The current ICCAT, IOTC and WCPFC VMS Resolutions all specify more comprehensive VMS technical requirements than those in the CCSBT's VMS Resolution, including for items such as the accuracy of geographical positions, tamper-resistance and technical VMS failure requirements.

Paragraph 60 of CC12's report noted a variety of simple enhancements to the CCSBT's VMS Resolution that would be desirable, which were:

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

The Humane Society International (HSI) and the United States both urged the CCSBT to consider increased transmission frequencies.

The Secretariat proposed a number of potential technical improvements in its 2017 paper on VMS Resolution consolidation (paper CCSBT-CC/1710/09 - re-numbered as paper CCSBT-CC/1810/BGD 03 to CC13), however these were not agreed to at the time.

Taking into account paragraph 60 of CC12's report, paper CCSBT-CC/1810/BGD 03 and current ideas on VMS best practice, the Secretariat, in consultation with the Chair of the Compliance Committee, identified the following areas where enhanced technical requirements could be specified within the CCSBT's VMS Resolution to help close information gaps, and so strengthen CCSBT's existing Conservation and Management Measures (CMMs).

Current Technical Gaps/ Weaknesses Identified

- Current transmission frequency is specified as at least every 4 hours²
- an increased transmission frequency (for example 2-hourly) in near-real time would better enable determination of a vessel's fishing activity;
- Speed and course information are not required to be transmitted³
- separate transmission of speed and course information could be required or could perhaps be calculated if vessels are required to transmit positions more frequently;
- The accuracy of the geographical position information to be submitted is not specified
- in ICCAT's and IOTC's VMS Resolutions it is specified that any position errors should be less than 500m at a confidence level of 99%;
- No standard units are specified for the submission of date/ time information
- other RFMOs specify that date/time information should be expressed in UTC⁴;
- CCSBT's tamper-proofing requirements refer only to a sealed unit/ official seals
- these requirements could be specified more rigorously (e.g. such as those proposed in paper CCSBT-CC/1810/BGD 03 - para 3(iv) of its Attachment A) including perhaps a requirement for 'type approved' ALCs⁵;
- The requirements in the event of ALC unit failure and appropriate back-up arrangements are not as detailed as in other RFMOs' Resolutions

² Increased VMS reporting frequency is also a possible corrective action under the Corrective Actions Policy

³ Although speed and course might be able to be calculated sufficiently from transmission information especially if transmission frequency is increased to 2-hourly intervals or less

⁴ UTC is Coordinated Universal Time

⁵ Automatic Location Communicators

- additional requirements could be added to the Resolution such as those proposed in paper CCSBT-CC/1810/BGD 03 - para 3(v) and (vi) of its Attachment A;
- There are no two-way reporting requirements (*i.e.* between the management authority and the VMS unit)
 - two-way reporting is considered current best practice and would allow the ALC unit to be polled and the reporting rate adjusted by the management authority as required;
- There is no reference to any penalties for breaches of VMS arrangements
 - these could be considered as part of the CCSBT's VMS Resolution or under its Corrective Actions Policy.

4. Current Higher-Level Information Gaps

The Secretariat also identified the following higher-level VMS information gaps.

4.1 Limited Ability to Cross-check Locational Information/ Independently Verify VMS Technical Requirements

The CCSBT has no centralised VMS, and VMS information is collected and retained by Member flag States and not shared with the CCSBT Secretariat.

This means that:

1) There is limited ability for the Secretariat to independently cross-check and verify location information received from different data sources to ensure that there are no discrepancies or other concerns.

For example, if VMS positional data were submitted to the Secretariat, the following items could be cross-checked against the VMS data:

- Transshipment locations received on transshipment declarations and some CDS forms;
- Information and enquiries received from other RFMOs; and
- Any AIS⁶ positional information received by the Secretariat regarding potential suspicious SBT fishing activity.

2) There are limited opportunities to conduct independent checks to ensure that current technical requirements such as tamper-resistance specifications, 4-hourly transmission frequencies and manual transmission in the event of technical failures are being met. The CCSBT does receive some limited independent information about fishing vessel VMS units used from the IOTC's transshipment observer reports⁷. These reports may include comments on whether transshipping fishing vessel's VMS unit(s) appear to be turned on and functioning as required, as well as photographs of VMS units.

4.2 Lack of VMS Implementation Information from Carrier Vessels

Another important VMS information gap is that the Secretariat doesn't currently receive any reports on Carrier Vessels' implementation of CCSBT's VMS measure and so is unable to assess whether carrier vessels are complying with the measure.

Paragraph 7 of CCSBT's Transshipment Resolution requires that Carrier Vessels have a VMS operating according to the CCSBT's VMS Resolution:

"7. Carrier vessels authorised by Members and CNMs to conduct at-sea or in-port transshipments shall be required to have an operational Vessel Monitoring System (VMS) that is operating in accordance with all applicable CCSBT Resolutions and decisions, including the Resolution on the CCSBT Vessel Monitoring System (2017), and any successor Resolution, including any future revisions thereto."

⁶ Automatic Identification System

⁷ Although in the event of a draft IUU listing, it's possible that other sources of VMS information might be received

The first issue is that Carrier Vessels may be flagged to either Members or non-Members⁸ of the CCSBT, but non-Members cannot be required to (and do not) provide reports on compliance of their carrier vessels with CCSBT's Resolutions to the Secretariat.

Secondly, section II(1)(d) of the CCSBT's annual Compliance Committee (CC)/ Extended Commission (EC) template requires Members to report on the VMS operations of only their flagged authorised fishing vessels. The Secretariat recommends amending the CC/EC template text to specify that VMS summary information should be reported for both authorised fishing and carrier vessels. Paper CCSBT-CC/1810/16 proposes a relevant revision.

4.3 Lack of VMS Compliance Information Received from other RFMOs

Another information gap is that the CCSBT does not generally⁹ receive VMS compliance information relevant to its authorised vessels from the other RFMOs referred to in its VMS Resolution (*i.e.* from the IOTC, WCPFC, CCAMLR and ICCAT). It might be possible to develop targeted data sharing agreements with these RFMOs to facilitate the sharing of VMS compliance information where relevant to the CCSBT Secretariat.

5. Insufficient Information to Review the Implementation of the Current VMS Resolution

Paragraph 7 of the consolidated VMS Resolution notes that:

“7. With the assistance of the Secretariat, the Compliance Committee shall review and report to the Compliance Committee in 2018 or 2019 on the implementation of this Resolution”

The Secretariat has only two data resources which it can utilise to report on the implementation of the VMS Resolution which are:

- Member self-reported summary information on whether all fishing vessels involved in SBT fishing activity have complied with the requirements of the CCSBT's VMS Resolution provided in National Reports to the CC/EC¹⁰, and
- IOTC transshipment observer reports in cases where fishing vessels transship SBT at sea within the IOTC's Convention Area.

From these two very limited sources of information, and based on advice from Members, there currently appear to be no issues with regard to the implementation of the CCSBT's VMS Resolution¹¹. However, the Secretariat notes that it has not received any information on which to report back on Carrier Vessels' implementation of the Resolution.

6. Summary of Information Gaps Identified

A summary of the information gaps/ potential information gaps with the CCSBT's current VMS arrangements identified by the Secretariat to date are:

- Technical information gaps as described in section 3 of this paper;
- Higher level information gaps identified (section 4) include:
 - Members' VMS data are not currently available to the Secretariat and there is therefore limited ability to cross-check locational information from different

⁸ Many CCSBT authorised Carrier Vessels are flagged to non-Members – they need to be authorised by a current CCSBT Member

⁹ Except for in IOTC transshipment observer reports

¹⁰ Provided once per year in National Reports to the CC/EC – section II(1)(d) - VMS

¹¹ Although instances of VMS units appearing to be turned off have been reported in IOTC transshipment observer reports in the past

data sources and/or to independently verify that VMS technical requirements are being met;

- No information is received about Carrier Vessels' compliance with the CCSBT's VMS Resolution;
- Only a very small amount of VMS compliance information is shared with the CCSBT Secretariat by the other RFMOs referred to in the CCSBT's VMS Resolution; and
- The Secretariat currently receives only a small amount of VMS information each year, *e.g.* in National Reports to the CC/EC and IOTC transshipment observer reports, which it can use to independently verify compliance with respect to the CCSBT's VMS Resolution.

7. Conclusions and Recommendations

The Secretariat invites CC13 to:

- Note that the results of the VMS consultancy work undertaken for the IOTC will become available during 2019;
- Consider the information gaps/potential information gaps in the CCSBT's current VMS arrangements identified by the Secretariat in this paper;
- Recommend that the annual reporting template is updated to clarify that Members should report back on VMS implementation for both fishing and carrier vessels that are flagged to them; and
- Confirm the scope of technical and over-arching improvements that should be considered in the CCSBT's ongoing VMS work (including modifications to the VMS Resolution) scheduled in the CAP for the 2019 to 2020 period.

Prepared by the Secretariat

Extracts from the IOTC's, "Terms of Reference for the Provision of an Options Paper for Strengthening the IOTC Vessel Monitoring System (VMS)"

The technical focus of the consultancy let by the IOTC is as follows:

“Objective

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 authorised 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 reporting guidelines in the IOTC options paper envisaged that the consultant's final report would consist of 5 components, with the last 3 of those components (listed below) being of potential interest to the CCSBT:

3. *Review of the VMS approaches used in the region and in other RFMOs, with a particular focus on tuna RFMOs and/or in areas beyond national jurisdiction, providing at least the following information, at a regional level and for each IOTC Member States:*
 - a. *geographical areas and vessel types/sizes covered under current VMS mandates;*
 - b. *requirements to share information with other States/stakeholders, including reference to centralized VMS;*
 - c. *transmission intervals;*
 - d. *confidentiality rules;*
 - e. *rules to ensure quality of VMS data (i.e. type-approval of VMS units, and rules in case of VMS failure).*
4. *Outline possible options to strengthen the IOTC VMS, including but not limited to:*
 - a. *Defining the target fleet or fleets, area and jurisdiction of the VMS*
 - b. *Describing the types of information that could be collected by the VMS (e.g. vessel position, speed, course, catch, etc.)*
 - c. *Possible system architecture and, minimum standards and requirements, including on ensuring that VMS is operational all times, data reporting, rates of transmission, rules on polling, and data sharing*
 - d. *Responsibility for VMS data reporting, VMS system audits and management*
 - e. *Costs and benefits of the different VMS approaches*
 - f. *Technical issues. Is there justification to allow on/off switches to be connected to monitoring devices installed on board vessels, etc.*
 - g. *Analyse the main shortcomings of the current IOTC VMS guideline (IOTC Resolution 15/03) and make recommendations to resolve them*
 - h. *Legal considerations including discussion on how to address confidentiality considerations*
 - i. *Any other options that meet the objective of this study.*
5. *Make recommendations, based on the analysis undertaken, on the best option for the IOTC to strengthen its VMS programme, identify capacity needs of IOTC members, including any technical and management aspects, and measures that can contribute to build their capacity.*