



# Vessel Monitoring Systems

## What Is VMS?

A **vessel monitoring system (VMS)** is a satellite-based **observation system** that, at regular intervals, provides fisheries authorities data on the **location, course and speed of its fishing vessels**.

## Benefits of a VMS Program

VMS are integral to effective fisheries management. They enable monitoring, control and surveillance of the activities of vessels involved in the catch and transportation of fisheries resources. VMS also provide additional information to fisheries scientists and are important for estimating CPUE.

## How Does VMS Work?



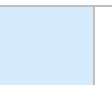
On-board transceiver units (automatic location communicators or ALCs) automatically transmit, via satellite, reports to a land based receiver stations. These reports can be either simultaneously transmitted, or re-reported, to flag State Fisheries Management Centres, coastal States and/or RFMO Secretariats.

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For comprehensive review of tuna RFMO **VMS** and the suggested best practices please refer to [ISSF Technical Report 2019-06](#).

The following tables show the **progress of each tuna RFMO** in implementing the recommended best practices.

### Color Coding Key

|   |  |   |  |   |  |
|---|--|---|--|---|--|
|  | Element(s) are consistent with the suggested best practices. |  | Some element(s) are present, but amendments or a change in procedure is needed to be consistent with best practices. |  | Element (s) are missing or inconsistent with best practices. |
|---|--|---|--|---|--|



# Assessment of Vessel Monitoring Systems by RFMO













## Recommended Best Practices

| RFMO | Design and Scope   |   |  |   | Data   |                       |   |   |                           | Use of Data and Confidentiality                     |  | ALCs and Procedures   |   |
|------|--|---|--|---|--|-----------------------|---|---|---------------------------|---|--|---|---|
|      | Simultaneous or immediate & automated re-reporting in "near real time" to the RFMO | Covers vessels of at least 20m LOA operating on the high seas or any vessel capable of operating outside its flag State EEZ   | Clarity on geographic coverage (EEZs, HS only, Coastal State opt-in) | Covers all vessel types engaged in fishing related activities, e.g., trans-shipment | Core data transmitted (e.g., vessel name, vessel ID, vessel position, date/time) | Data exchange formats | Reporting Frequency (every 2 hours or less) | Recipients (e.g., flag State FMC, coastal State where vessel operating, RFMO) | Two-way systems & polling | Available to RFMO scientists & compliance committee | Rules established to protect confidentiality of data | Minimum standards for ALC types established & Tamper-proof & operational at all times | Procedures established for inoperable or defective ALCs and alternative reporting means |
| IOTC |  | Vessels >24m fishing on the high seas for species covered by the IOTC & vessels <24m operating outside of its EEZ and fishing for species covered by the IOTC Agreement |  |   | Vessel name  |                       | <br>Every 4 hours                           | Flag State FMC only   |                           |   |  | Tamper-proof & operational at all times   |   |

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| RFMO | Design and Scope | Data | Use of Data and Confidentiality | ALCs and |
|------|------------------|------|---------------------------------|----------|
|------|------------------|------|---------------------------------|----------|

|             |  |  |  |   |  |                       |   |   |                           | Procedures  |  |   |   |
|-------------|--|--|--|---|--|-----------------------|---|---|---------------------------|---|--|---|---|
|             | Simultaneous or immediate & automated re-reporting in "near real time" to the RFMO | Covers vessels of at least 20m LOA operating on the high seas or any vessel capable of operating outside its flag State EEZ                                  | Clarity on geographic coverage (EEZs, HS only, Coastal State opt-in) | Covers all vessel types engaged in fishing related activities, e.g., trans-shipment | Core data transmitted (e.g., vessel name, vessel ID, vessel position, date/time) | Data exchange formats | Reporting Frequency (every 2 hours or less)   | Recipients (e.g., flag State FMC, coastal State where vessel operating, RFMO) | Two-way systems & polling | Available to RFMO scientists & compliance committee   | Rules established to protect confidentiality of data | Minimum standards for ALC types established & Tamper-proof & operational at all times | Procedures established for inoperable or defective ALCs and alternative reporting means |
| IATTC       |  | <br>24m or greater LOA   |  |   | Vessel Name  |                       | Every 4 hours for longliners & 2 hours for other  | Flag State FMC only   |                           |   |  | Tamper-proof & operational at all times   |   |
| ICCAT       | Only for Bluefin fisheries   | <br>20m between perpendiculars or 24 m LOA.<br><br>As of 1 Jan 2020, vessels >15m LOA authorized to fish in waters beyond the jurisdiction of its flag State |  |   |  |                       | <br>At least once every hour for PS and at least once every two hours for all other vessels | Flag State FMC and relevant coastal State(s)                                  |                           | Not consistent among ICCAT fisheries (tropical tunas vs. bluefin) / Data provided to Sect can be made available to SCRS, upon request. / Data 3 years old or more is provided to the SCRS for scientific purposes only for eastern Bluefin. / For the bluefin fishery, reports can be made available by Sect to CPCs engaged in operations under the ICCAT Scheme of Joint International inspection. For tropical tuna fisheries, CPCs are encouraged to share VMS data to support MSC activities |  |   |   |
| <b>RFMO</b> | <b>Design and Scope</b>  |  |  |   | <b>Data</b>  |                       |   |   |                           | <b>Use of Data and Confidentiality</b>  |  | <b>ALCs and</b>   |   |

|       |   |  |   |  |   |   |  |  |   | Procedures  |   |  |  |
|-------|---|--|---|--|---|---|--|--|---|---|---|--|--|
|       | <i>Simultaneous or immediate &amp; automated re-reporting in "near real time" to the RFMO</i> | <i>Covers vessels of at least 20m LOA operating on the high seas or any vessel capable of operating outside its flag State EEZ</i> | <i>Clarity on geographic coverage (EEZs, HS only, Coastal State opt-in)</i>       | <i>Covers all vessel types engaged in fishing related activities, e.g., trans-shipment</i> | <i>Core data transmitted (e.g., vessel name, vessel ID, vessel position, date/time)</i> | <i>Data exchange formats</i>  | <i>Reporting Frequency (every 2 hours or less)</i>   | <i>Recipients (e.g., flag State FMC, coastal State where vessel operating, RFMO)</i> | <i>Two-way systems &amp; polling</i>  | <i>Available to RFMO scientists &amp; compliance committee</i>                      | <i>Rules established to protect confidentiality of data</i>                         | <i>Minimum standards for ALC types established &amp; Tamper-proof &amp; operational at all times</i> | <i>Procedures established for inoperable or defective ALCs and alternative reporting means</i> |
| WCPFC |              |   |  |           |        |  | <p><i>Must be capable of transmitting data hourly.</i></p> <p><i>This standard can vary depending upon the fishery, applicable measures or for MCS purposes.</i></p> |   |  |  |  |                   |             |



**iss-foundation.org**

1440 G Street NW  
Washington D.C. 20005  
United States

Phone: + 1 703 226 8101  
E-mail: [info@iss-foundation.org](mailto:info@iss-foundation.org)

