

**4th Meeting of the Commission
Valdivia, Chile, 25 to 29 January 2016**

COMM04-WP-12

**VMS Recommendations, Tender (Annex A)
and Terms of Reference/Work plan (Annex B)**

VMS working Group

Recommendations to the Commission:

The informal VMS working group recommends that the Commission:

ADOPT the tender at Annex A.

request that the secretariat publish the tender on the SPRFMO website within four weeks of the conclusion of this Commission meeting,

encourage all Members and CNCs to participate in the work of the VMS-WG.

encourage all Members and CNCs to [for discussion – what is the best way to get our message out there that we are seeking tenders?]

agree to amend the VMS working group's Terms of Reference, which includes specific tasks for the 2016 intersessional period, as per Annex

Annex A (Version 5, 25 January 2016)

DRAFT Call for Proposals for a SPRFMO VMS by the Secretariat To be adopted by the Commission

1. Introduction

The South Pacific Regional Fisheries Management Organisation (SPRFMO) is inviting proposals for a VMS software solution that enables the SPRFMO Secretariat and other officials authorised by the Organisation to receive, administer and store VMS reports. The proposals should include a detailed description of the technical capabilities of the system and its user interface as well as cost estimates broken down by component.

The SPRFMO is in the process of developing its Vessel Monitoring System. The purpose of the SPRFMO Commission Vessel Monitoring System (VMS) will be to cost-effectively and continuously monitor the movements of fishing vessels that are fitted with an Automatic Location Communicator (ALC) authorized by flag States to fish in the SPRFMO Convention Area. For authorised vessels operating in the SPRFMO Convention Area, Article 27.1(a) of the SPRFMO Convention requires that the Commission establish appropriate cooperative procedures for *“the reporting of vessel movements and activities by a satellite vessel monitoring system that shall be designed to ensure the integrity and security of near real time transmissions, including through the possibility of direct and simultaneous transmission, to the Commission and flag State”*.

In 2014, 800 vessels had been authorised to fish and were included in the SPRFMO Record of Vessels and of these 323 vessels were actively operating in the SPRFMO Convention Area.

The current VMS standards and regulations are detailed in the SPRFMO Conservation and Management Measures (CMMs) 2.06 (Establishment of the Vessel Monitoring System in the SPRFMO Convention Area, APPENDIX 1) and 3.02 (Standards for the Collection, Reporting, Verification and Exchange of Data, relevant text in APPENDIX 2). The Commission is in the process of developing additional requirements, to define its system. Thus, the SPRFMO VMS software solution has to be flexible and easily adaptable to the Commission's future requirements and capable of managing the possible transmission of catch and other information via the VMS (depending on available technologies and VMS units operated by the SPRFMO Members and CNCPs).

Regarding the geographic area of application of a SPRFMO VMS, CMM 2.06 specifies under paragraph 1 that the SPRFMO Commission VMS shall have a buffer zone of 100 nautical miles outside the Convention Area (include link to map) as defined in Article 5 of the Convention. Also, paragraph 5 of the CMM 2.06, states that any Member or CNCP may request, for the Commission's consideration and approval, that waters under its national jurisdiction be included within the area covered by the Commission VMS.

Furthermore, the SPRFMO Commission has defined minimum standards for Automatic Location Communicators (ALCs) and is in the process of developing rules on ALC failure alternatives and measures to prevent tampering (see Appendix 1).

2. System Requirements

General remarks: All data must be stored in a secure and structured database and in a standardised format consistent with confidentiality provisions of the SPRFMO Data Standards CMM. The SPRFMO VMS application shall consist of a searchable database with a user-friendly interface and the ability to ingest by direct and indirect reporting of ALC-derived metadata for the visually display of information data on an a spatial interactive map-information system (GIS). The VMS reports and message types required by the SPRFMO will be reviewed annually by the Commission and therefore the SPRFMO VMS application must be able to deal with a number of different VMS report types not yet defined, as determined by the Commission in the future. Also, any suitable application must include the possibility of regular updates of and additions to the database components.

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Comentario [JF1]: Definition of VMS message types for SPRFMO would be good (suggestion by Australia). The Secretariat

The basic elements of the SPRFMO VMS application are:

1. Ability to automatically receive, compile and store electronic VMS reports (see APPENDIX 3) obtained
 - via HTTPS (~~html~~, ~~and~~ FTP, FLUX, emails or through other data exchange protocols as determined by the SPRFMO Commission) from national Fisheries Monitoring Centres (FMCs);
 - via different ~~Satellite Airtime Mobile Communications Service~~ Providers (MCSPs).
2. Ability to forward/send automatic and manual messages from the SPRFMO Secretariat to FMCs and/or individual vessels
 - ~~[to individual vessels to allow the SPRFMO Secretariat to poll a vessel, i.e. request additional position reports from an ALC at any time or/and set and change the frequency rate of a vessel's ALC.]~~
3. The SPRFMO Record of Vessels authorised to fish in the SPRFMO Area (see APPENDIX 4) which is managed and maintained by the SPRFMO Secretariat will be integrated into the VMS application (preferably via automatic feed) and act as the main reference dataset. Maintenance and continuous update of the integrated vessel record should be easy.
4. The possible future integration of other reference tables, e.g. fish species, fishing methods, vessel types, etc., and the ability of the Secretariat to update these as required.
5. The option to manually input reports and messages. Such data should be stored and displayed in a manner that distinguishes them from VMS data received through automatic transmission, and it should be possible to add a reference to the archived source of the manually added information.
6. Alerts: A warning system should be in place to alert the SPRFMO Secretariat if:
 - ~~The received reports and messages are not in accordance with the reporting requirements or other specified SPRFMO regulations.~~
 - Position reports are not being submitted at the intervals required or stop being submitted altogether.
 - Other defined events occur, e.g. movements across geo-coded areas, within area alert, overdue reports, ALC power on/off reports, [ALC manually opened], ~~antenna blocked~~ALC failure, {and transhipment mode¹.}
 - [Generate a report when an ALC fitted with a distress system vessels activates an alarm alert in the system for safety reasons. It should be possible to attach information describing the results of investigations conducted upon such alerts, e.g. the indicated cause such as loss of power or wrong data format].

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Comentario [JF2]: Australia: no

Comentario [JF3]: I hope this addition along the lines suggested by New Zealand might address Chile's and Australia's concerns?

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Comentario [JF4]: Deleted in response to Australia's comment. Actually, the subsequent bullets should cover all eventualities.

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Con formato: Sin Resaltar

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1. System and confidentiality requirements:

- The system must provide the secure and redundant storage of all VMS and related data (e.g. ALCs, vessel details, fishery reports).
- The modification of original data reports or data logs must be prohibited.
- The VMS software should allow the remote access of various users at different levels of authorisation.
- An annual report of any security issues/events
- System security audits by a third party at any time at the request of the Commission
- System security issues/events must be auditable by a third party at any time at the request of the Commission.

¹ Transhipment is deduced using other parameters, such as nearby vessels and speed.

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- ~~[Comprehensive data validation capabilities to enable the detection of errors and bugs; this should include a query to review and extract data, e.g. dubious position reports, e.g. too far apart in too short a time, or outside range, latency check of received ALCs from satellite airtime provider.]~~
 - The system must include comprehensive data validation capabilities to enable the detection of errors and bugs; this should include automated detection of dubious position reports, e.g. too far apart in too short a time, or outside range, and latency check of ALCs' positions from satellite airtime provider
7. A GIS (Geographic Information System) component for the visual display of VMS data immediately after being received. The ~~software solution~~ should independently determine a vessel's course (direction) and speed.
 8. A standard reporting system that allows user-defined queries of vessel movements and fishing activities, e.g. transshipments, entering an area closed to fishing (e.g. Marine Protected Area) ~~or Search and Rescue (SAR) events~~. The ~~searches queries~~ should be possible for a single vessel or groups of vessels (groups definable by users) and be definable by area, dates, trip length, flag state, fishing gear and alerts.
 9. The ~~user-Secretariat or VMS analyst~~ must be able to print, save and export (as csv format) the results of queries.
 10. The ~~application solution~~ should be compatible with existing SPRFMO Secretariat IT infrastructure. In particular, all VMS information should be exportable for storage and/or analysis in other software applications of the Secretariat.
 11. ~~It should be possible to~~ The solution must perform a historical analysis of VMS data including the display of movements of vessels over ~~time-time throughand, if possible,~~ through the animation of positions.
 12. ~~Implementation of all security, confidentiality and access requirements by the SPRFMO Secretariat as stipulated by the Commission (see APPENDIX 5).~~
- 13-12. _____ The SPRFMO VMS ~~application solution~~ must be fully supported by the supplier (see APPENDIX 6), in particular:
- ~~the installation of the VMS software solution~~, including training of staff and the provision of system documentation and user manuals;
 - ~~Must be operational 99.9% of the time to ensure low chance of system failure;~~
 - ~~comprehensive helpdesk services including defined response time and quality standards, and an agreed escalation plan in the event of critical failure.~~
 - ~~NZ?????software updates as required.~~

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3. Guidelines for the tender and conditions for the contract

Tenders are expected to contain a detailed description including itemized pricing for the development of the VMS ~~database applications solution~~, and the subsequent running of the ~~applications solution~~. All prices must be expressed in New Zealand dollars and exclusive of taxes. The tender should present alternative solutions, in particular regarding direct and indirect data transmission ~~as well as internal and external hosting~~. The tender should include the following:

- (a) System description and ~~solution~~ database table structures.
- (b) Development phase of the VMS ~~database applications solution~~ which specifically considers all specifications given above. It should be presented in the form of steps that are described in detail including time frames for completion of each individual step (in weeks). ~~Preference will be given to providers who are able to demonstrate their ability to meet the required capabilities.~~

- (c) Installation of the VMS database application at the SPRFMO Secretariat and specifications of all hardware and additional third party software necessary to run the VMS database application.
- (d) Provision of a Fabric Acceptance Test (FAT) to be performed at the company's venue before delivery
- (e) Provision of a Client Acceptance Test (CAT) to be performed at SPRFMO premises after installations and before acceptance by SPRFMO
- (f) Elaboration of user and maintenance manuals
- (g) Training of SPRFMO staff members in the use of the ~~software application~~ VMS solution.
- (h) Annual estimated costs and services (basic annual charges) for the routine running of the VMS ~~database applications~~ solution after the trial phase. The basic annual charges should include itemized services, e.g.
 - license fees (for the server and 3-work stations);
 - Satellite airtime and hosting costs
 - routine continuous monitoring of the system;
 - maintenance and repairs;
 - amount of included annual updates of database elements as specified by the SPRFMO
 - amount of included other software updates
 - customer support (specify hours, remote or onsite, manuals, technical assistance, etc.);
 - others
- (i) Cost listings for additional services not included in the basic annual charges such as
 - hourly costs for additional customer support ;
 - hourly costs for additional programming, updates and repairs;
 - annual percentage for costs of living adjustment;
- (j) Overhead costs have to be listed separately.
- ~~(k) The Service Level Agreement with SPRFMO for support, software maintenance and updates will be automatically renewed annually unless one of the parties withdraws or wishes to re-negotiate the terms of the contract at least three (3) months before the end of the contract.~~

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Close cooperation with the SPRFMO Secretariat during all phases of the VMS database application development and subsequent running is expected. ~~Future additional services, which may arise during the execution of the contract, will become the subject of separate agreements under the terms of the contract.~~

[Consideration will be given to costs, technical capabilities and development of the solution. Preference will be given to providers who are able to demonstrate their ability to meet the required capabilities].

The Company shall deliver a totally integrated system, complete with licenses, documentation, training, repair, maintenance, and support services. Licenses should include third party software license costs (e.g. database software, data extraction software, etc.). The contract shall be governed by and construed in accordance with New Zealand law and the company has to submit to the jurisdiction of the New Zealand courts.

[Refer to relevant CMMS \(2.06 and 3.02 and 2.05\)](#)

Section 4 -Information for the tenderer

Submission requirements

1. Proposals from interested service providers must be submitted, via email, to sprfmo@sprfmo.int (check) no later than 5pm New Zealand Standard Time, 29 April 2016.
2. The SPRFMO Secretariat will acknowledge receipt of all proposals received.

3. All proposals must be received in English and in a format compatible with Microsoft Office (eg Microsoft word, excel) and/or Adobe Reader (eg .pdf files).
4. All measurements must be in New Zealand units of measurements.
5. All proposals must identify a designated Contact Point (including a name, phone number and email address).
6. The SPRFMO Secretariat is not obliged to accept any proposals that do not meet these submission requirements.

Confidentiality

7. Tenderers should identify in their proposal any information which should be protected as confidential information under any contract between the tenderer and the SPRFMO Secretariat, including the reason for its confidentiality. If the tenderer fails to identify any information in the proposal, SPRFMO will consider that the respondent has no information which should be protected as confidential under the contract. SPRFMO reserves the right, at its discretion, to refuse the request to treat information as confidential. In this case, SPRFMO will notify the respondent in writing.

Conflict of interest

8. Tenderers must disclose in their proposals any potential or actual conflict of interest in the course of delivering this service, and must specify how the tenderer proposes to address this conflict of interest. This will not automatically exclude the tenderer from consideration; however, SPRFMO reserves the right to consider the potential or actual conflict in relation to the proposal before the final decision is made.

Late proposals

9. Proposals received after 29 April 2016 will be neither considered nor acknowledged by the SPRFMO Secretariat.

Modifications to Proposals

10. If a tenderer wishes to revise or modify any aspect of its submitted proposal, revisions must be in writing from the Contact Point, clearly identified and accompanied by a clear statement from the respondent about the action taken that the tenderer wishes SPRFMO to take with the original submission. All revisions must be submitted before the due date. If a proposal is received after the due date, the revisions (but not the whole proposal) will be disregarded.

Process and Evaluation Method

11. Tenders will be assessed by the Vessel Monitoring System Working Group VMS –WG established by the SPRFMO Commission [insert link to ToR?]. The SPRFMO Commission will, on advice from the VMS-WG, select a VMS provider at its 5th Annual Meeting in January 2017 unless otherwise decided.
12. The VMS-WG will evaluate proposals according to the following evaluation criteria [under development by Aus and NZ].
13. The VMS-WG may, at its discretion, may provide the opportunity for potential vendors to demonstrate their proposed VMS solution via 'live' web demonstration.
14. The VMS –WG may request additional information, via the SPRFMO Secretariat, from one or more tenderers to aid its assessment. Additional information must be received within three business days. Additional information received for this purpose will not be considered as late. Requests for additional information will be out in writing and sent to the Contact Officer from the SPRFMO Secretariat.

Contact with SPRFMO regarding the VMS tender process

15. The SPRFMO Secretariat is the designated liaison point between the SRPFMO Commission (including its VMS-WG) and any potential tenders.
16. All enquiries should be directed to sprfmo@sprfmo.int.
17. The SPRFMO Secretariat may respond to any enquiries received orally or in writing. In the case of specific technical enquiries, the Secretariat may first need to consult the VMS-WG before responding formally.
18. The SPRFMO Secretariat will not accept or respond to requests for information on the status and progress of the evaluation and selection progress. All respondents will be informed of the outcomes of their proposal at the conclusion of the process [for discussion – my view is not even those unsuccessful at shortlisting should be notified as we should not pre-empt a commission decision. In theory, the commission could select any provider even ones that are not shortlisted].

Selection

19. The successful tenderer will be notified following the 5th Annual Meeting of the SPRFMO Commission, commencing in January 2017.
20. The successful tenderer will be expected to enter into a contract with the SPRFMO Secretariat for the provision of VMS services.

Section 5 – Disclaimer

1. Tenderers are responsible for ensuring that:

 - a. They have examined this Call for Proposals and the requirements specified within
 - b. They have examined any information made available in respondents for the purpose of the proposal, including the relevant conservation and management measures referred to in this Call for Proposal
 - c. The proposal submitted is complete, accurate and realistic in terms of its delivery and cost.
2. Tenderers are responsible for all costs incurred in the preparation and lodgement of any proposals; and in respect of any discussions, negotiations, enquiries or any work undertaken by them after the proposal has been submitted. SPRFMO is not liable for any costs or compensation in relation to these matters, regardless of whether SPRFMO terminates, varies or suspends the Call for Proposals process; or takes any other option under this Call for Proposals.
3. Proposals are submitted on the basis that the tenderer acknowledges that:

 - a. It does not rely on any representation, letter, document or arrangement, whether oral or in writing, or other conduct as adding to or amending these conditions.
 - b. It does not rely upon any warranty or representation made by or on behalf of SPRFMO, except as expressly provided for in this Call for Proposals, but the tenderer has relied entirely upon its own enquiries and inspection in respect of the subject of its proposal.
4. SPRFMO will not accept responsibility for any misunderstanding arising from the failure by a respondent to comply with the requirements set out in this Call for Proposals, or arising from any ambiguity, discrepancy, inconsistency, error or omission contained in a proposal. [question – is SPRFMO the legal entity or the secretariat? Which entity does not accept responsible for misunderstanding etc...?]
5. Nothing in this Call for Proposals or any proposal submitted by a tenderer gives rise to contractual obligations between SPRFMO and the respondent.
6. Any proposal submitted becomes the property of SRPFMO for the purpose of this Call for Proposals process and will be made available for use by SPRFMO and its Members and Cooperating non-Contracting Parties for any purpose connected with the proposal process.

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7. Intellectual property owned by the respondent or third parties in material contained in the proposal does not pass to SPRFMO with physical property in the submitted documents. However, SPRFMO is granted an irrevocable, royalty free licence to use, reproduce and circulate any material contained in the proposal, or provided by the tenderer in response to this Call for Proposals, to the extent necessary to conduct the proposal process.
8. SPRFMO reserves the right to enter into negotiations or discussions with any one or more tenderers.

DRAFT

APPENDIX 1.

Conservation and Management Measure for the Establishment of the Vessel Monitoring System in the SPRFMO Convention Area (CMM 2.06)

The Commission of the South Pacific Regional Fisheries Management Organisation;

RECALLING the relevant provisions of the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean, in particular Articles 25 (1)(c) and 27 (1)(a);

NOTING the importance of the vessel monitoring system as a tool to effectively support the principles and measures for the conservation and management of fisheries resources within the Convention Area; ~~—~~

MINDFUL of the rights and obligations of Commission Members and Cooperating Non Contracting Parties (CNCs) in promoting the effective implementation of conservation and management measures adopted by the Commission;

FURTHER MINDFUL of the key principles upon which the vessel monitoring system is based, including the confidentiality and security of information handled by the system, and its efficiency, cost effectiveness and flexibility;

ADOPTS the following conservation measure to provide for the implementation of the SPRFMO Vessel Monitoring System (Commission VMS):

A SPRFMO COMMISSION VMS

- 1— ~~The system shall commence to be activated at a date to be decided by the Commission and shall cover the area of the Convention as defined in Article 5 of the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean and have a buffer zone of 100 nautical miles outside the Convention Area.~~

DEFINITIONS

- 2— For the purposes of interpreting and implementing these procedures, the following definitions shall apply:
- (a) “Convention” means the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean;
 - (b) “Convention Area” means the Area to which this Convention applies in accordance with Article 5 of the Convention;
 - (c) “Commission” means the Commission of the South Pacific Regional Fisheries Management Organisation established by Article 6 of the Convention;
 - (d) Automatic Satellite Position Device/Automatic location communicator (ALC) means a near real time satellite position fixing transceiver.

PURPOSE

- 3— ~~The purpose of the SPRFMO Commission Vessel Monitoring System (VMS) should be to cost effectively continuously monitor the movements of fishing vessels authorized by flag States to fish in the SPRFMO Convention Area in order, *inter alia*, to support the implementation of SPRFMO Conservation Measures.~~

APPLICABILITY

- 4— ~~The SPRFMO Commission VMS system shall apply to all fishing vessels as defined in Article 1, paragraph 1(h) of the Convention. The system shall be operating on a permanent basis.~~
- 5— ~~Any Member or CNCP may request, for the Commission's consideration and approval, that waters under its national jurisdiction be included within the area covered by the Commission VMS. Necessary expenses incurred in the inclusion of such area into the Commission VMS shall be borne by the Member or CNCP that made the request.~~

NATURE AND SPECIFICATION OF THE COMMISSION VMS

- 6— ~~The SPRFMO Commission VMS shall be developed and administered by the SPRFMO Secretariat under the guidance of the Commission.~~
- 7— ~~Data collected by the SPRFMO Commission VMS will be securely stored and used by the Members and CNCs to achieve compliance with Conservation and Management Measures (CMMs). VMS data may also be used by the Scientific Committee for analysis to support specific scientific advice requested by the Fisheries Commission for sound fisheries management decision-making in the Convention Area.~~
- 8— ~~In accordance with Articles 25 (1)(c) and 27 (1)(a) of the Convention, in establishing the VMS under this CMM, the Commission, after analysing costs, compliance objectives as well as technical and other factors, will determine whether vessels shall report VMS data automatically by one or more of the following means:~~
- (1) ~~To the Secretariat via their flag State's Fisheries Monitoring Centre (FMC)~~
 - (2) ~~[Directly to the Secretariat]; or~~
 - (3) ~~Simultaneously to both the Secretariat and via their flag State's FMC.~~

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- ~~9—The Commission shall develop rules and procedures for the operation of the SPRFMO Commission VMS taking into account the provisions of Annex 1, including, *inter alia*:~~
- ~~(a) vessel reporting, including the specifications of the data required, its format and reporting frequencies;~~
 - ~~(b) ALCs minimum standards, including automation standards and the specifications of the ALCs;~~
 - ~~(c) rules on polling;~~
 - ~~(d) ALC failure alternates;~~
 - ~~(e) cost recovery;~~
 - ~~(f) cost sharing;~~
 - ~~(g) measures to prevent tampering;~~
 - ~~(h) obligations and roles of fishing vessels, Members, CNCPs and the Commission Secretariat, and~~
 - ~~(i) Use and release of data for purposes within scope of the Convention.~~
- ~~10—Security standards of the SPRFMO Commission VMS data shall be developed by the Commission, consistent with confidentiality provisions of the Data Standards CMM 3.02.~~
- ~~11—All Member and CNCP fishing vessels required to report to the SPRFMO Commission VMS shall use a functioning ALC that complies with the Commission's minimum standards for ALCs.~~

MANUAL REPORTING

- ~~12—In the event of failure of automatic reporting, the Commission shall develop clear guidelines and templates for manual reporting.~~
- ~~13—In the event that the Secretariat has not, for 48 consecutive hours, received the relevant data transmissions, it will notify the Flag State.~~
- ~~14—After two years of implementation, the Commission shall conduct a review of the implementation of this CMM considering its efficiency and effectiveness and consider further improvements to the system as required.~~

Annex 1

Draft Minimum Standards for Automatic Location Communicators (ALCs) used in the Commission Vessel Monitoring System

- ~~1—The ALC shall automatically and independently of any intervention on the vessel communicate the following data:~~
- ~~(a) ALC static unique identifier;~~
 - ~~(b) the current geographical position (latitude and longitude) of the vessel;~~
 - ~~(c) the date and time (expressed in Coordinated Universal Time [UTC]) corresponding to the position of the vessel in paragraph 1 (b);~~
 - ~~(d) the course and speed of the vessel.~~
- ~~2—The data referred to in paragraphs 1 (b), (c) and (d) shall be obtained from a satellite based positioning system.~~
- ~~3—ALCs fitted to fishing vessels must be capable of transmitting data at an interval to be defined by the Commission.~~
- ~~4—The data referred to in paragraph 1 shall be received by the Commission within an interval determined by the Commission.~~
- ~~5—ALCs fitted to fishing vessels must be protected so as to preserve the security and integrity of data referred to in paragraph 1.~~
- ~~6—Storage of information within the ALC must be safe, secure and integrated under normal operating conditions.~~
- ~~7—The flag state shall ensure that its FMC receives VMS positions at least with the frequency adopted according to this CMM and shall be able to request the VMS information at a higher frequency. The FMC shall have the capacity of polling the information of each of its fishing vessels authorized in the SPRFMO Convention area.~~
- ~~8—It shall be prohibited to destroy, damage, render inoperative or otherwise interfere with the ALC unless the competent authorities of the Flag State have authorised its repair or replacement.~~
- ~~9—Any features built into the ALC or terminal software to assist with servicing shall not allow unauthorized access to any areas of the ALC that could potentially compromise the operation of the VMS.~~
- ~~10—ALCs shall be installed on vessels in accordance with their manufacturer's specifications and applicable standards.~~
- ~~11—Under normal satellite navigation operating conditions, positions derived from the data forwarded must be accurate to within 100 square metres.~~
- ~~12—The ALC and/or forwarding service provider must be able to support the ability for data to be sent to multiple independent destinations.~~
- ~~13—The satellite navigation decoder and transmitter shall be fully integrated and housed in the same tamper-proof physical enclosure.~~

APPENDIX 2.

Conservation and Management Measure on Standards for the Collection, Reporting, Verification and Exchange of Data (CMM 3.02), chapter 3. Vessel Monitoring Data

3 Vessel Monitoring System data

(a) Implementation of Vessel Monitoring Systems

Members and CNCPs are to develop, implement and improve systems to:

- (i) — Ensure that all of their vessels fishing in the Convention Area are fitted with fully operational automatic location communicator (ALC) reporting back to the flag state. [Flag States may allow the use of more than one ALC on board to be operated in case of failure].
- (ii) — Ensure that ALC on their vessels remain operational, and report in accordance with this standard, at all times and in all areas while operational in the Convention Area.
- (iii) — Maintain a record of all vessel position information reported while these vessels are operational in the Convention Area, such that this information may be used to document vessel activity in the Convention Area, and to validate fishing position information provided by those vessels.

(b) Frequency and Accuracy of VMS Position Reports

Members and CNCPs are to ensure that:

- (i) — VMS position reports are reported by each of their vessels:
 - at least once every 2 hours if fishing using benthic or benthopelagic trawling or if operating within 20nm of an EEZ boundary;
 - at least once every four hours in other circumstances*.
- (ii) — All VMS Position reports are made in accordance with the specification in paragraph (c) of this standard.
- (iii) — Under normal satellite navigation operating conditions, positions derived from the data reported are to be accurate to within 500m.

(c) Content of VMS Position Reports

Members and CNCPs are to ensure that all VMS Position Reports made by their vessels include at least the following information:

Category	Data Element	Remarks
Vessel registration	Static unique vessel identifier	For example, country code followed by national vessel registration number
Activity detail	Latitude	Position latitude (decimal degrees, to the nearest 0.01 degree)
Activity detail	Longitude	Position longitude (decimal degrees, to the nearest 0.01 degree)
Message detail	Date	Position date in UTC
Message detail	Time	Position time in UTC

APPENDIX 3. Types, content and format of VMS Reports

Note by the Secretariat: So far, the only VMS report defined by the SPRFMO is the position report (see CMM 3.02 [3]). The format of SPRFMO VMS data transmission (and storage) has yet to be determined (e.g. NAF, XML [FLUX], CSV). The SPRFMO VMS application must be able to include additional report types in future years as determined by the Commission, e.g. ENTRY and EXIT reports, various fishery reports related to catch and effort, transshipment, landings, etc.

Current provisions contained in CMM 2.06, Annex 1:

The ALC shall automatically and independently of any intervention on the vessel communicate the following data:

- ALC static unique identifier;
- the current geographical position (latitude and longitude) of the vessel, accurate to within a $\pm 100 \text{ m}^2$;
- the date and time (expressed in Universal Time Constant [UTC]) corresponding to the position of the vessel;
- the course and speed of the vessel.

~~APPENDIX 4. Conservation and Management Measure for the Establishment of the Commission Record of Vessels Authorised to Fish in the Convention Area (CMM 2.05)~~

~~The Commission of the South Pacific Regional Fisheries Management Organization,~~

~~RECALLING~~ Article 27 (1)(a) of the Convention regarding the establishment of appropriate procedures for effective monitoring, control and surveillance of fishing and to ensure compliance with this Convention and the conservation and management measures adopted by the Commission, including the establishment and maintenance of a Commission record of vessels authorised to fish in the Convention Area;

~~CONSIDERING~~ that according to Article 1 (1)(h) of the Convention, 'fishing vessel' means any vessel used or intended for fishing, including fish processing vessels, support ships, carrier vessels and any other vessel directly engaged in fishing operations;

~~TAKING INTO ACCOUNT~~ the provisions of Articles 23 and 25 of the Convention, regarding Data collection, compilation and exchange and Flag State duties;

~~ADOPTS~~ the following conservation and management measure in accordance with Articles 8 and 27 of the Convention:

- ~~1. The appropriate government authorities of Members and Cooperating Non-Contracting Parties (CNCP) shall only authorise fishing vessels flying their flag to fish in the Convention Area where they are able to exercise effectively their responsibilities in respect of such vessels under the Convention, including relevant conservation and management measures adopted by the Commission, and in accordance with relevant international law.~~
- ~~2. Each Member and CNCP will take into account the history of fishing vessels and operators with respect to their compliance (or non-compliance) with relevant conservation and management measures when considering whether or not to authorise a particular fishing vessel flying its flag to fish in the Convention Area. Members and CNCPs shall ensure that no authorisation to fish in the Convention Area is issued to a vessel included on any Regional Fisheries Management Organization illegal, unreported and unregulated (IUU) list.~~
- ~~3. Each Member or CNCP shall take necessary measures to ensure that vessels flying their flag and authorised to fish in the Convention Area have a sufficient level of ownership by citizens, residents or legal entities within its jurisdiction to allow enforcement action to be effectively taken against them.~~
- ~~4. Each Member and CNCP is to maintain a register of fishing vessels entitled to fly its flag and authorised to fish in the Convention Area.~~
- ~~5. Members and CNCPs are to collect and include for each vessel on its register of fishing vessels entitled to fly its flag and authorised to fish in the Convention area, the data described in Annex 1 of this Measure.~~
- ~~6. Members and CNCPs shall inform the Executive Secretary of the vessels flying their flag authorised to fish in the Convention Area at least 15 days previous to the first entry of such vessels in the Convention Area. In doing so, Members or CNCP shall provide the Executive Secretary the vessels details, as indicated in Annex 1 of this Measure.~~
- ~~7. Members and CNCP shall ensure that the data of the vessels flying their flag authorised to fish in the Convention Area is updated. Any modification regarding the vessel data shall be informed by the relevant Member or CNCP to the Executive Secretary within 15 days after such modification.~~
- ~~8. Members and CNCP shall inform the Executive Secretary when authorisations to fish in the Convention area are revoked, relinquished or otherwise no longer valid. This information shall be submitted immediately or in any case in no more than 3 days of the date of invalidity of the authorisation.~~
- ~~9. The Commission Record of Vessels shall include all the fishing vessels on Member's and CNCP's record authorised to fish in the Convention area, including the data submitted by Members and CNCPs according to Annex 1 of this Measure.~~
- ~~10. The Executive Secretary shall maintain the Commission Record of Vessels authorised to fish in the Convention Area. A summary of the Record of Vessels shall be publicly available at the SPRFMO website, according to the provision of paragraph 7 of CMM 2.02.~~
- ~~11. The Record of Vessels shall indicate which of the authorised vessels have been actively fishing for each year. To this end each Member and CNCP participating in fishing activities in the Convention shall notify the Executive Secretary of the vessels that are actively fishing or engaged in transshipment in the Convention Area. In the case of vessels involved in the *Trachurus murphyi* fishery, this information shall be submitted within 20 days of the end of each month. For vessels involved in other fisheries within the Convention area, this information shall be submitted on an annual basis, within 30 days of the end of the year. The Executive Secretary shall maintain lists of the vessels so notified and will make them available on the SPRFMO website.~~
- ~~12. When a previously authorised vessel is no longer authorised by the Member or CNCP to fish within the Convention area, such vessel shall not be deleted from the Record of Vessels, but labelled as "not currently authorised".~~
- ~~13. The Commission will revise this conservation and management measure at the latest in 2016 to consider amendments to this measure to improve its effectiveness and to take into account, among others, the developments of the FAO Global Record initiative as relevant.~~

Annex 1

Standard for vessel data

1. ~~Members and CNCP are to collect data on an un-aggregated (vessel by vessel) basis.~~
2. ~~The following fields of data are to be collected, included on Member's and CNCP's authorised vessel records, and informed to the Executive Secretary, pursuant to paragraph 6 and 7 of this measure.~~

- ~~(i) — Current vessel flag (using the codes indicated in Annex 2)~~
- ~~(ii) — Name of vessel~~
- ~~(iii) — Registration number~~
- ~~(iv) — International radio call sign (if any)~~
- ~~(v) — UVI (Unique Vessel Identifier)/IMO number (if issued)³~~
- ~~(vi) — Previous Names (if known)~~
- ~~(vii) — Port of registry~~
- ~~(viii) — Previous flag (if any, and using the codes indicated in Annex 2)~~
- ~~(ix) — Type of vessel (Use appropriate ISSCFV codes, Annex 11 of CMM 1.03)~~
- ~~(x) — Type of fishing method(s) (Use appropriate ISSCFG codes, Annex 10 of CMM 1.03)~~
- ~~(xi) — Length~~
- ~~(xii) — Length type e.g. "LOA", "LBP"~~
- ~~(xiii) — Gross Tonnage — GT (to be provided as the preferred unit of tonnage)~~
- ~~(xiv) — Gross Register Tonnage — GRT (to be provided if GT not available; may also be provided in addition to GT)~~
- ~~(xv) — Power of main engine(s) (kw)~~
- ~~(xvi) — Hold capacity (m³)~~
- ~~(xvii) — Freezer type (if applicable)~~
- ~~(xviii) — Number of freezers units (if applicable)~~
- ~~(xix) — Freezing capacity (if applicable)~~
- ~~(xx) — Vessel communication types and numbers (INMARSAT A, B and C numbers)~~
- ~~(xxi) — VMS system details (brand, model, features, firmware/software and identification)~~
- ~~(xxii) — Name of owner(s)~~
- ~~(xxiii) — Address of owner(s)~~
- ~~(xxiv) — Vessel authorisation start date~~
- ~~(xxv) — Vessel authorisation end date~~
- ~~(xxvi) — Good quality high resolution photograph of the vessel of appropriate brightness and contrast, no older than 5 years, which shall consist of:

 - ~~• one photograph not smaller than 12 x 7 cm showing the starboard side of the vessel displaying its full overall length and complete structural features;~~
 - ~~• one photograph not smaller than 12 x 7 cm showing the port side of the vessel displaying its full overall length and complete structural features;~~
 - ~~• one photograph not smaller than 12 x 7 cm showing the stern taken directly from astern~~~~

~~Each Member and CNCP shall, to the extent practicable, also provide to the Executive Secretary at the same time as submitting information in accordance with paragraph 2 of this Annex, the following additional information:~~

- ~~(i) — External markings (such as vessel name, registration number or international radio call sign)~~
- ~~(ii) — Types of fish processing lines (if applicable)~~
- ~~(iii) — When built~~
- ~~(iv) — Where built~~
- ~~(v) — Moulded depth~~
- ~~(vi) — Beam~~
- ~~(vii) — Electronic equipment on board (i.e., radio, echo sounder, radar, netsonda)~~
- ~~(viii) — Name of license owner(s) (if different from vessel owner)~~
- ~~(ix) — Address of license owner(s) (if different from vessel owner)~~

Comentario [JF5]: Australia suggests to include details of firmware/software. If the old/wrong software is used, it can cause issues for VMS reporting to the Secretariat ALC.

- (x) — Name of operator(s) (if different from vessel owner)
- (xi) — Address of operator(s) (if different from vessel owner)
- (xii) — Name of vessel master
- (xiii) — Nationality of vessel master
- (xiv) — Name of fishing master
- (xv) — Nationality

When Members and CNCPs provide the data indicated in paragraph 2 of this Annex, they will do so in accordance with the specifications and format prescribed in Annex 8 of CMM 3.02.

Australia	AUS	Italy	ITA
Austria	AUT	Korea	KOR
Belgium	BEL	Latvia	LVA
Belize	BLZ	Liberia	LBR
Bulgaria	BGR	Lithuania	LTU
Chile	CHL	Luxembourg	LUX
China	CHN	Malta	MLT
Colombia	COL	Netherlands	NLD
Cook Islands	COK	New Zealand	NZL
Croatia	HRV	Panama	PAN
Cuba	CUB	Peru	PER
Cyprus	CYP	Poland	POL
Czech Republic	CZE	Portugal	PRT
Denmark	DNK	Romania	ROU
Ecuador	ECU	Russian Federation	RUS
Estonia	EST	Slovakia	SVK
Faroe Islands	FRO	Slovenia	SVN
Finland	FIN	Spain	ESP
France	FRA	Sweden	SWE
Germany	DEU	Chinese Taipei	TWN
Greece	GRC	United Kingdom	GBR
Hungary	HUN	United States	USA
Ireland	IRL	Vanuatu	VUT

Con formato: Inglés (Nueva Zelanda)

Con formato: Inglés (Nueva Zelanda)

Con formato: Inglés (Nueva Zelanda)

APPENDIX 5. Security, Confidentiality and Access Requirements

Note by the Secretariat: *The current SPRFMO data security requirements are not very comprehensive (see below). Therefore, we have compiled the relevant points from Chile here. Also, for the information and convenience of the VMS Working Group we have prepared a document (EXAMPLES of Fishery Data (including VMS) Security Requirements imposed by other RFMOs: CCAMLR and NAFO) containing the data security protocols established by CCAMLR and NAFO. This document will be circulated together with the Draft call for proposals and be available on the SPRFMO VMS webpages.*

Points proposed by Chile:

- The system must provide the secure storage of all VMS and related data (e.g. ALCs, vessel details, fishery reports);
- The modification of original data reports or data logs must be prohibited
- The system must be capable of producing the following reports:
 - An annual report of any security issues/events
 - System security audits by a third party at any time at the request of the Commission
 - Comprehensive data validation capabilities to enable the detection of errors and bugs; this should include a query to review and extract data, e.g. dubious position reports, e.g. too far apart in too short a time, or outside range, latency check of received ALCs from satellite airtime provider;
- The VMS software should allow the remote access of various users at different levels of authorisation, in particular to:
 - Selected SPRFMO Secretariat staff members as administrative users
 - SPRFMO inspectors entitled to view (but not change or add) relevant information for all vessels in the SPRFMO Area
 - Flag States in order to track their own vessel(s)

From CMM 3,02, Chapter 6 (Maintenance of confidentiality). The Secretariat of the SPRFMO is to operate comprehensive and robust processes to maintain the confidentiality of the non-public domain data that Members and CNCPs provide to it. These processes will be based on the ISO/IEC 27002:2005 (updates ISO/IEC 17799:2005) international standard for the information security management (www.iso.org/iso/en/prods-services/popstds/informationsecurity.html). SPRFMO specific data security standards will be developed over time.

Annex B

Proposed Revisions to the Terms of reference for the South Pacific Regional Fisheries Management Organization Working Group on Vessel Monitoring Systems

Background

The Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean (the Convention) was adopted on 14 Nov 2009 and entered into force on 24 August 2012. The objective of the Convention is the long term conservation and sustainable use of fishery resources in the South Pacific Ocean and the protection of the marine ecosystems in which the resources exist.

At SPRFMO2, recalling the relevant provisions of the Convention, in particular Articles 25(1)(c) and 27(1)(a), the Commission adopted CMM2.06 on the Establishment of the Vessel Monitoring System in the SPRFMO Convention Area. CMM2.06 sets out a framework for establishing an SPRFMO Commission Vessel Monitoring System (or VMS). Paragraph 3 of CMM2.06 provides that the purpose of the SPRFMO VMS should be to cost effectively continuously monitor the movements of fishing vessels authorized by flag States to fish in the SPRFMO Convention Area in order, inter alia, to support the implementation of SPRFMO CMMs.

Paragraph 9 of CMM2.06 provides that particular considerations shall be taken into account when developing rules and procedures for the operation of the VMS, including the draft Minimum Standards for Automatic Location Communicators (ALCs) used in the Commission VMS (as set out in Annex I) and:

- a. vessel reporting, including the specifications of the data required, its format and reporting frequencies;
- b. Automatic Location Communicators (ALCs) minimum standards, including automation standards and the specifications of the ALCs;
- c. rules on polling;
- d. ALC failure alternates;
- e. cost recovery;
- f. cost sharing; and
- g. measures to prevent tampering.
- h. obligations and roles of fishing vessels, Members, CNCPs and the Secretariat, and
- i. use and release of data for purposes within the scope of the Convention.

Establishment and functions of the CTC Working Group on VMS

At SPRFMO2, the Compliance and Technical Committee (CTC) recommended to the Commission that an intersessional working group be created to develop rules and procedures for the operation of the SPRFMO VMS, in accordance with the considerations outlined at paragraph 9 of CMM 2.06. The CTC1 report was adopted by the Commission but this work has not yet commenced. The Commission agrees that the responsibilities of the VMS Working Group (VMS-WG) will be expanded to those set out below.

The VMS -WG's expanded mandate includes testing the market, and evaluate proposals from possible VMS providers for the three VMS options set out in paragraph 8 of CMM2.06 and make recommendations to the CT, the Finance and Administration Committee (FAC) and the Commission at its fifth meeting in 2017.

The VMS -WG will be chaired by the Chair of the Compliance and Technical Committee and coordinated by the SPRFMO Secretariat. The VMS-WG is open to all interested Members and CNCPs who may nominate one or more suitably qualified representatives for the VMS-WG. Interested Members and CNCPs will need to ensure that the VMS-WG has sufficient technical expertise as well as expertise in project and contract management. If agreed by the VMS-WG, the Group may also invite experts including from other intergovernmental organisations who are working on VMS matters, such as the Commission for the Conservation of Antarctic Marine Living Resources, and relevant RFMOs. The VMS-WG will undertake its work electronically but may meet, if necessary, immediately prior to the fourth meeting of the CTC in 2017.

Responsibilities

1. The VMS -WG will identify the specific requirements of the SPRFMO VMS that will give effect to the objectives and considerations outlined in the Convention, and paragraph 3 of CMM 2.06.
2. The VMS-WG will develop evaluation criteria for the acquisition and implementation of a SPRFMO VMS, taking into account the objectives and considerations outlined in the Convention, and paragraphs 3 and 9 of CMM 2.06. If considered desirable, the VMS-WG may draw from existing documents developed by other organizations to facilitate this work.
3. The VMS-WG will develop a Call for Proposals covering the three options outlined by the Secretariat in meeting paper CTC-02-34 for providing these VMS services on the basis of the evaluation criteria developed by the VMS-WG. If considered desirable, the VMS-WG may draw on existing documents developed by other organisations to facilitate this work.
- 3bis The SPRFMO Commission will approve the Call for Proposals.
4. The SPRFMO Secretariat will publish the approved Call for Proposals on the SPRFMO website (www.sprfmo.int) no later than four weeks following the conclusion of the 4th Annual Meeting of the SPRFMO Commission.
5. Proposals from interested service providers will be due back to the SPRFMO Secretariat no later than 5pm New Zealand Standard Time, 29 April 2016.
6. The SPRFMO Secretariat will acknowledge receipt of all submissions and is only obliged to accept submissions received in English and in a format compatible for Microsoft Office (eg Microsoft word, excel) and/or Adobe reader (eg .pdf files).
7. The SPRFMO Secretariat may respond to enquiries from interested providers that are of a general nature. The SPRFMO Secretariat shall seek advice from the VMS-WG before responding to enquiries of a specific or technical nature.
8. The SPRFMO Secretariat will circulate all proposals received to the VMS-WG no later than 2 May 2016. Each Member or CNCP participating on the VMS-WG will acknowledge receipt of these proposals.
9. The VMS-WG will evaluate the proposals received according to the evaluation criteria set out at Appendix 1 [under development by Australia + NZ (p.s thanks) and its capacity to meet the objectives in paragraph 3 of CMM 2.06. Each Member or CNCP participating on the VMS-WG shall submit its evaluation to the SPRFMO Secretariat by 16 June 2016.
10. The SPRFMO Secretariat shall prepare a summary of responses received and circulate this to the VMS-WG by 30 June 2016. *[for discussion – is two weeks sufficient? Perhaps three?]*
11. The VMS-WG shall provide a report to the CTC and the FAC, for further consideration by the Commission, outlining a technical and fiscal analysis of the three best options no later than 1 August 2016. The SPRFMO Commission will select the VMS provider during its 5th annual meeting and authorise the Secretariat to commence contract negotiations with the successful provider on the basis of parameters set by the Commission, unless otherwise decided by the Commission. *[for discussion – I have a question about the suitability of including language about the Commission and the Secretariat's role in the VMS-WG ToR. I think the process should be documented and agreed but question whether it needs to be described elsewhere?]*.
6. The VMS-WG will develop the rules and procedures for the SPRFMO VMS according to paragraph 9 of CMM2.06. This work is to be undertaken in the intersessional period between SPRFMO-4 and SPRFMO-5 in accordance with the work plan at Appendix 2 of these terms of reference.
7. These Terms of Reference will be reviewed at SPRFMO-5 to ensure their ongoing suitability.

VMS –WG
Intersessional work plan

- Undertake tender evaluation and provide report to CTC, FAC and the SPRFMO Commission in accordance with paragraphs 9 and 11 of the VMS-WG Terms of Reference.
- Develop measures to prevent tampering (*led by Australia*)
- Specify the format, type and content of VMS data transmission and storage (*lead by XX*)
- Security, confidentiality and access requirements (*lead by XX*)
- Manual reporting policy in case of ALC failure (*lead by XXX*)

DRAFT