

Step 1: Definition of Technical Requirements and VMS System componentes (software and hardware)

The aim of this step is to establish the technical elements of the VMS system, including operation and validation requirements. Chile suggests the group to consider the following elements:

1. Define how data is going to be received and stored in a standardized format via satellite from any MCSP from vessels operating within and outside the SPRFMO Convention Area.
2. Establish a system that is able to extract and store in a standardized format, date, vessel ID, time, position (latitude and longitude, DMS and/or decimal degrees format) and course and speed (nautical miles) for a vessel from any MCSP.
3. Capacity to process VMS data received in various email formats.
4. Recognize unique ALC identifiers recorded for a vessel.
5. Receive and introduce VMS data provided by manual reporting and display in a manner that distinguishes it from automatic reporting.
6. Display VMS data graphically in an accurate GIS interface and store vessel details including name, IMO number, call sign, flag, fishing gear, ALC type, latitude and long, speed and direction.
7. Capacity to store VMS data, ALC configurations and vessel details in a secure structured database including a query function in order to extract vessel metadata from the database.
8. Allow for the storage of other information sent and generated from various channels (e.g. catch and effort reporting, transshipment, among others).
9. Capacity to store VMS data and be able to display that data to conduct historical analysis, among others.
10. Allow the SPRFMO Secretariat to add new vessels and update vessel details.
11. Provide for a vessel to have multiple ALCs recorded and for a vessel receive data from one or more ALCs in use.
12. Allow the SPRFMO Secretariat to request a position report from an ALC at any time (poll a vessel), in addition to those position reports received via scheduled reporting.
13. Allow the SPRFMO Secretariat to set the frequency rate for a vessel's ALC and change these frequency rates when be necessary.
14. Able to set the frequency rate to display when the vessel is actually operating (fishing sets).
15. Allow the CCAMLR Secretariat to set-up a range of alerts in relation to vessel activities including movements across geo-coded areas, within area alert, overdue reports, power status position reports, ALC open, antenna blocked, and transshipment mode.

16.Allow for the creation of groups of vessels and allow for the simultaneous selection and tracking of all vessels in a particular group.

17.Allow for the searching and selection of vessels in various ways, such as: by vessel name, group, flag, fishing gear, fishing zone, last alert, alert over a range of dates, position type over a range of dates. This must include the ability to define a particular date range

18.Display VMS data graphically in an accurate GIS interface simultaneously for vessels selected.

19.Display VMS data graphically in an accurate GIS interface simultaneously for vessels in a particular area selected.

20.Display the movements of vessels over time in an accurate GIS interface.

21.Display the movements of vessels over time in an accurate GIS interface through the animation of positions (showing vessel position(s) relative to areas or other vessels over time).

22.Outputs:

- i. Provide the ability to print and save VMS data graphically in an accurate GIS interface
- ii. Export of VMS data in appropriate tabular format (Excel CSV) in order to render position reports in external geospatial software.

23. Provide a mechanism for monitoring specified events such as notifications for movements or transshipments, entering an MPA or closed fishery and a SAR event by:

- i. Providing an email
- ii. Providing an SMS

24.Prohibit the modification of original data reports or data logs.

25.Provide a comprehensive data audit function including a query to review and extract data such as latency check of received ALCs from satellite airtime provider. Therefore enabling ability to conduct internal fault finding etc.

26.Generate a report when vessels activate an alarm in the system for security reasons.

27.Generate reports for vessels that have not supplied data reports over a range of dates and times with the indication what was the possible cause of (power, POS, wrong data format).

28.Display VMS data in near-real time and have a high level of reliability.

29. With respect to user access, a minimum number of simultaneous users for the SPRFMO Secretariat should be defined and remote end-user access at discretion of SPRFMO Secretariat.

30.Provide different levels of authorized access to data according to the type of user.

31.Be scalable beyond the current user base requirements of the SPRFMO Secretariat.

32.Be able to provide security audits at any time at request of the Commission.

33.Capable of producing an annual report of any security issues/events.

34.Provide for individual vessel owners and Flag States to track their own vessel(s) using a secure web-based system administered by the SPRFMO Secretariat.

- 35. Be compatible with existing SPRFMO Secretariat IT infrastructure and support the internal procedures of the SPRFMO Secretariat
- 36. Integrate with other databases held at the SPRFMO Secretariat
- 37. Provide full support from the supplier of the VMS solution implementation, including training of staff, the provision of system and user documentation.
- 38. Provide Fabric Acceptance Test (FAT) to be performed at the tenders' venue before delivery
- 39. Provide Client Acceptance Test (CAT) to be performed at SPRFMO premises after installations and before acceptance by SPRFMO.
- 40. Enter into a Service Level Agreement with SPRFMO for ongoing support, software maintenance and updates that should be annually automatically renewable if none of the parties do not denounce or re-negotiate 3 months before the end date of the contract.
- 41. VMS provider Helpdesk services with response standards and escalation process & timelines specified.

Step 2: Design of technical and administrative basis to purchase a VMS system, based on requirements in step 1

Once step 1 is approved, the technical, economic and administrative basis must be designed for the invitation to tender. The suppliers must consider this document to make their offer. According to previous experiences, the design of the tender basis requires a minimum of 60 days.

Step 3: International Invitation to Tender.

The length of the call for tender procedure must not be under 90 days.

Step 4: Analysis of offer and submission of feasible system to the Commission.

The analysis of proposals must consider if the offers comply with the requirements set forth in step 1 and the costs of the system according to the ranges established by the Commission, among other considerations. As a result, the proposals shall be categorized on the basis of their compliance with the pre-established requirements. In this regard, the VMS working group shall submit the best proposals and advise the Commission on the basis of such categorizing in order to select the best offer.