

CTC-02-34

SPRFMO VMS by the Secretariat

At the Commission meeting in 2014, the Secretariat was requested to prepare a cost-benefit analysis of each of the VMS options set out in paragraph 8 of CMM 2.06 regarding the means by which vessels could be required to report VMS data automatically:

- (a) To the Secretariat via their flag State's Fisheries Monitoring Centre (FMC);
- (b) Directly to the Secretariat; or
- (c) Simultaneously to both the Secretariat and via their flag State's FMC.

General Remarks

To receive VMS reports the hardware requirements of the Secretariat will be minimal (a computer and internet connection) whereas development, licence fees and maintenance of the VMS software and additional competent staffing will incur substantive and continuous costs.

While in theory, a VMS system functions automatically without requiring human intervention, in practice, and in particular with an increasing number of participating vessels and FMCs, a high number of errors or irregularities requiring human attention can be expected on a regular (daily) basis. Therefore, competent staff will be required at the Secretariat to monitor the SPRFMO VMS for compliance purposes as well as to analyse and correct errors. This will entail frequent and direct communication with FMCs and/or the vessels, depending on the setup of the system.

In addition, the Secretariat is likely to be involved in compiling and summarising the raw data received through the system for the purpose of reporting to the SPRFMO and for scientific purposes as requested by the Commission. This work requires additional staff time that will remain constant under all three options.

The following comparison assumes that with each option:

- the Secretariat has the required hardware, software and appropriate level of trained staff members to administer the system; and
- the vessels are equipped with communication devices according to the standards prescribed by the SPRFMO (including GPS capability, computer and transmitter with antenna)

Cost-benefit analysis

Option (a): Vessels report to the Secretariat via their flag State's Fisheries Monitoring Centre (FMC):

Costs or disadvantages:

- The SPRFMO will depend on the collaboration of national FMCs to obtain full data sets and sort out any technical problems in a timely fashion.
- The option requires that all flag states whose vessels participate in the SPRFMO fisheries have an FMC.
- The option burdens FMCs that have vessels in the SPRFMO area with the administration of the VMS reports from their vessels including quality checks and communication with the vessels to sort out issues.
- FMCs will need to be setup to enable the forwarding of VMS reports to the Secretariat.

Benefits:

- Lower costs for the SPRFMO Secretariat; with the current number of active vessels in the SPRFMO area, one or two additional staff members at the Secretariat should be adequate to deal with the administration of the system. The SPRFMO Secretariat would be involved in the setup, testing and maintenance of communication channels with perhaps a dozen FMCs (and not with hundreds of vessels).
- In the case of errors and missing reports, the Secretariat would deal with a few national FMCs instead of individual vessels.
- This setup would make use of the already existing capabilities of the national FMCs to receive reports from their vessels which is cost-effective.
- The flag state responsibility for vessel compliance is more evident if the vessel reports are forwarded from the national FMCs and not directly from the vessels.

Option (b): Vessels report directly to the Secretariat

Costs or disadvantages:

- Much higher costs for the Secretariat than the first option as the burden of VMS administration would not be shared with FMCs and the Secretariat would be fully involved with:
 - the time-consuming initial set-up and testing of VMS reporting from each vessel entering the SPRFMO area; this would require at least one more additional staff member at current levels of fishing vessels in the SPRFMO area;
 - the Secretariat would depend on the collaboration of vessels as well as flag states to obtain full data sets and sort out any technical problems; each Member would have to designate a point of contact for issues related to the SPRFMO VMS (likely to be the national FMC);
 - communication channels in addition to VMS reporting would have to be set up for vessels (e.g. satellite radio/phone, email, etc.);
 - communications with hundreds of vessels most probably requiring additional linguistic abilities of Secretariat staff as not all captains will be fluent in English;

Benefits:

- Vessels from flag States without FMCs could participate in the SPRFMO fisheries.
- The SPRFMO VMS would be autonomous.
- FMCs would not have to be set-up to routinely send or receive VMS reports to/from the Secretariat (apart from assisting with the resolution of issues related to their vessels).

Option (c): Vessels report simultaneously to both the Secretariat and via their flag State's FMC.

Costs for communication via satellite appear to be relatively low; according to publicly available information, they are in the order of a few cents per position report. Also, reporting to two agencies should not require additional hardware on board vessels.

Costs or disadvantages:

- Much higher costs than the first option as the burden of VMS administration would not be shared with FMCs and the Secretariat would be fully involved with:
 - the time-consuming initial set-up and testing of communications with each vessel entering the SPRFMO area as well as with national FMCs; this would require at least one more additional staff member at current levels of fishing vessels in the SPRFMO area;
 - the Secretariat would receive double the information which will double the VMS administrative costs (quality check and error resolution) and considerably increase the time required for analysis and reporting;
 - the Secretariat would depend on the collaboration of vessels and flag states to obtain full data sets and sort out any technical problems; each Member would have to designate a point of contact for issues related to the SPRFMO VMS (this could be the national FMC);
 - communications with hundreds of vessels most probably requiring additional linguistic abilities of Secretariat staff as not all captains might speak English well enough;
- Flag States would require FMCs and national FMCs would have to administer VMS reports from the SPRFMO Area.
- Some additional costs for communicating VMS reports to two agencies (probably to be paid by the vessels)

Benefits:

- The SPRFMO VMS would be autonomous.
- Two data sets would be available for comparison.