

5th Compliance Committee of the Southern Indian Ocean Fisheries Agreement
(CC5)
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Proposal for a new Conservation and Management Measure for the
establishment of a SIOFA Vessel Monitoring System

Relates to agenda item: 4.2

Working paper Info paper

Delegation of the European Union

Abstract

This proposal follows on from the decision at MoP5 to develop a SIOFA Vessel Monitoring System (VMS) and the EU's proposals to MoP6 (MoP6-Prop06) and MoP7 (MoP-07-21) for a new CMM to put in place a comprehensive framework covering the key elements of the SIOFA VMS. This proposal aims to address the comments received from CCPs during and following those meetings and during the intersessional period since MoP7. The EU thanks those CCPs for their constructive engagement. Recognising the need for further technical discussions on certain aspects, the EU proposes to follow a phased approach, focusing in a first phase on the adoption of a CMM setting out the VMS model that should be implemented by SIOFA and other key requirements (e.g. definitions, objective, scope of application, data use and release, prevention of tampering, manual transmission, roles and responsibilities), to be followed in a second phase by the development of detailed Standards, Specifications and Procedures (SSPs) for data formats and transmission, data confidentiality and security requirements, etc. Compared to the EU's proposal to MoP7, the proposal therefore opts for a 'hybrid' VMS model and incorporates the key provisions from Annexes 2 to 4 into the body of the CMM, while leaving the development of SSPs for data formats and transmission, data confidentiality and security requirements to a later stage.

Recommendations

1. review and discuss the proposed CMM (enclosure 1), and to recommend its adoption to MoP8.
 2. review the proposed roadmap for the development of a SIOFA VMS (enclosure 2), in particular as regards the milestones for further technical work and the budgetary and staffing needs.
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***EU proposal for a Conservation and Management Measure
for the establishment of a SIOFA Vessel Monitoring System***

The Meeting of the Parties to the Southern Indian Ocean Fisheries Agreement:

RECALLING Article 6(1)(h) of the Southern Indian Ocean Fisheries Agreement (SIOFA) which requires the Meeting of the Parties to develop rules and procedures for the monitoring, control and surveillance of fishing activities in order to ensure compliance with conservation and management measures adopted by the Meeting of the Parties including, where appropriate, a system of verification incorporating vessel monitoring and observation of vessels operating in the Agreement Area;

MINDFUL of Article 18(3) of the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA) which outlines the duties of the flag State, including to take measures to ensure recording and timely reporting of vessel position, catch of target and non-target species, fishing effort and other relevant fisheries data, and to ensure the monitoring, control and surveillance of vessels, their fishing operations and related activities by, inter alia, the development and implementation of vessel monitoring systems;

FURTHER MINDFUL of the importance of international cooperation in the fight against illegal, unreported and unregulated (IUU) fishing, in particular through the exchange of information and effective monitoring, control and surveillance;

RECALLING Article 13 of the SIOFA Conservation and management measure for the Monitoring of Fisheries in the Agreement Area (CMM 2019/10) to develop specifications and propose rules and procedures for the establishment of a SIOFA Vessel Monitoring System;

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

***ADOPTS* the following Conservation and Management Measure (CMM) in accordance with Articles 4 and 6 of the Agreement:**

Definitions

1. The following definitions shall apply to this CMM:
 - a) “Automatic location communicator” (ALC) means a satellite-based on-board device that is capable of continuously, automatically and independently of any intervention of the vessel, transmitting VMS data;

- b) “Fisheries monitoring centre” (FMC) means the authority or agency of a Flag State responsible for managing the VMS for its flagged fishing vessels;
- c) “Vessel Monitoring System” (VMS) means a satellite-based monitoring system which, at regular intervals, provides VMS position reports;
- d) “SIOFA VMS” means the SIOFA Vessel Monitoring System established under this CMM;
- e) “Manual reporting” means the transmission via alternative means of the position reporting of a fishing vessel when an ALC fails to transmit VMS position reports;
- f) VMS position reports include:
 - i. the fishing vessel’s IMO number and SIOFA identifier;
 - ii. Flag of the fishing vessel;
 - iii. the current geographical position (latitude and longitude) of the vessel;
 - iv. the date and time (UTC) of the fixing of the position of the vessel;
 - v. the vessel’s speed; and
 - vi. the vessel’s course.

Objective

- 2. The main objective of the SIOFA VMS is to monitor in an automatic, continuous and cost-effective manner the movements and activity of fishing vessels operating in the Agreement Area to ensure compliance with SIOFA CMMs.

Application

- 3. The SIOFA VMS shall apply to all fishing vessels flying the flag of a Contracting Party, cooperating non-Contracting Party or participating fishing entity (CCP) that are entered onto the SIOFA Record of Authorised Vessels ~~while and~~ operating in the Agreement Area as defined in Article 3 of the Agreement.

Nature and specifications of the SIOFA VMS

- 4. The SIOFA VMS shall be administered by the SIOFA Secretariat under the guidance of the Meeting of the Parties.
- 5. Each CCP shall ensure that all fishing vessels flying their flag entered onto the SIOFA Record of Authorised Vessels, ~~authorised in accordance with Conservation Measure 2019/07 (Vessel Authorisation)~~ and operating in the Agreement Area, are fitted with an operational ALC that complies with the minimum standards for ALCs described in Annex 1.
- 6. Each CCP shall ensure that all fishing vessels flying their flag report VMS data automatically while they are operating in the Agreement Area either:
 - a) to the Secretariat via their FMC; or

- b) simultaneously to both the Secretariat and their FMC.
7. CCPs that choose to report under option (a) of paragraph 6 shall automatically forward VMS reports to the Secretariat without delay but not later than one hour after receipt at an interval not less frequent than hourly.
 8. The Meeting of the Parties shall establish VMS data format and transmission standards, specifications and procedures prior to the entry into operation of the SIOFA VMS.
 9. Each CCP shall ensure that their FMC can automatically receive and for those CCPs whose vessels transmit VMS data in accordance with paragraph 6 a), transmit VMS data from ALCs. Each CCP ~~and~~ shall provide backup and recovery procedures in case of system failures.
 10. Each CCP shall provide the Secretariat with the name, address, email, telephone and facsimile numbers of the relevant authorities of its FMC, and shall designate a VMS Point of Contact for the purposes of any communication regarding the SIOFA VMS (“VMS Point of Contact”). Each CCP shall notify the Secretariat of any changes to these details within 30 days after such changes take effect and the Secretariat shall promptly notify this information to the other CCPs and make it available on the non-public area of the SIOFA website.
 11. Each CCP shall ensure that in vessels flying their flag:
 - a) the ALC is not tampered with in any way;
 - b) VMS data are not altered in any way;
 - c) the antenna or antennae are connected to the ALC and not obstructed in any way;
 - d) the power supply of the ALC is not interrupted in any way; and
 - e) the ALC is not removed from the vessel except for the purpose set out in paragraph 15.
 12. ALCs are not required to transmit VMS data when the fishing vessel is in port for a period of more than one week, subject to prior notification to the Flag CCP and, if the Flag CCP requires, to the Secretariat. The Flag CCP shall ensure that
 - a) if the ALC stops transmitting VMS data while in port, the vessel remains in the same geographical position until the ALC on board starts transmitting VMS data again; and
 - b) the ALC is transmitting VMS data before the fishing vessel moves from the last geographic position transmitted by the vessel’s ALC in port.

Procedure for manual reporting

13. In the event of non-reception of four consecutive, expected programmed VMS positions, the Secretariat shall notify the CCP whose flag the vessel is flying. The Flag CCP shall immediately notify the vessel Master and direct the Master to provide it with manual reports of the vessel's position every four hours. The Flag CCP shall transmit this manual reporting to the Secretariat or require that the fishing vessel transmit this manual reporting to the Secretariat.
14. The Flag CCP shall ensure that the manual reports include at least the information referred to in paragraph 1(f)(i), (iii) and (iv). If automatic reporting to the SIOFA VMS has not been re-established within 60 days of the commencement of manual reporting, the Flag CCP shall order the vessel to cease fishing, stow all fishing gear and return immediately to port in order to undertake repairs or replacement.
15. Following a technical failure or non-functioning of the ~~satellite-tracking device~~ ALC, the Flag CCP shall ensure that the fishing vessel only leaves port once the ALC fitted on board is fully functioning to the satisfaction of the competent authorities of the Flag CCP. By derogation, the Flag CCP may authorise the fishing vessel to leave port with a non-functioning satellite-tracking device for its repair or replacement.
16. The Flag CCP shall ensure that the vessel recommences fishing in the Agreement Area only when the ALC has been confirmed as operational by its FMC. Four consecutive, programmed VMS positions must have been received by the FMC to confirm that the ALC is fully operational.

Measures to prevent tampering with ALCs

17. Each ~~CPP-CCP~~ shall ensure that the ALCs fitted on board vessels flying their flag are tamper resistant, that is, are of a type of and configuration that prevent the input or output of false positions, and that they are not capable of being over-ridden, whether manually, electronically or otherwise, in accordance with the minimum standards for ALCs set out in Annex 1.
18. ~~Each CCP #~~ shall ~~be prohibited~~ vessels flying their flag to destroy, damage, switch off, render inoperative or otherwise interfere with the ALC, unless their competent authorities ~~of the Flag CCP~~ have authorised its repair or replacement.
19. In the event that a CCP or the Secretariat obtains information that indicates an ALC on board a fishing vessel operating in the Agreement Area does not meet the requirements of Annex 1 or there is evidence that the ALC has been tampered with, it shall immediately notify the Secretariat, and the fishing vessel's Flag CCP which shall:
 - a) investigate the suspected breach of this measure as soon as possible; and

- b) depending on the outcome of the investigation, if necessary suspend the vessel from fishing until an ALC that meets the specifications outlined in Annex 1 is operational on board the vessel; and
- c) communicate actions taken to the Meeting of the Parties, including the outcome of the investigation within 30 days of its completion.

20. Nothing in this measure shall prevent a CCP from applying additional or more stringent measures to prevent tampering of ALCs on board vessels flying its flag.

Use and Release of VMS Data

21. All requests for access to VMS data must be made to the Secretariat by a VMS Point of Contact by electronic means using the appropriate template¹ at least 5 working days in advance of the intended use, except for the purposes of paragraph 22 c), and in accordance with the procedures set out in paragraphs 23 to 19.

22. Upon request of a CCP, the Secretariat shall only provide VMS data without the permission of the Flag CCP for the exclusive purposes of:

- a) planning for active surveillance operations and/or inspections at sea within 72 hours of the expected start of the operations;
- b) active surveillance operations and/or inspections at sea;
- c) supporting search and rescue activities undertaken by a competent Maritime Rescue Coordination Centre (MRCC) subject to the terms of an Arrangement between the Secretariat and the competent MRCC.

23. For the purpose of implementing paragraph 22 a) and b):

- a) Inspections at sea shall be undertaken in accordance with CMM 2019/14 (High Seas Boarding and Inspection Procedures), [including its paragraph 7](#);
- b) each CCP shall only make available ~~such~~ VMS data [relevant to the planned or active surveillance operations and/or inspections at sea](#) to ~~a Contracting Party Authorised Inspector~~ [the requesting CCP's inspectors](#), and any other government officials for whom it is deemed necessary to access the data;
- ~~c) VMS data relevant to the planned or active surveillance operations and/or inspections at sea shall be transmitted to the inspectors and government officials in charge of the operations referred to in paragraph 22 a) and b);~~

¹ The template shall be developed by the Secretariat and submitted to the Compliance Committee and the Meeting of the Parties for consideration.

~~e)c)~~ ~~Contracting Parties~~CCPs shall ensure that such inspectors and government officials keep the data confidential and only use the data for the purposes described in paragraph 22 a) and b);

~~e)d)~~ ~~Contracting Parties~~CCPs ~~may~~ shall be allowed to retain VMS data provided by the Secretariat for the purposes described in paragraph 22 a) and b) until ~~24-72~~ hours after the time that the active operation has concluded. Except in the circumstances outlined in paragraph 23 f), ~~Contracting Parties~~CCPs shall submit a written confirmation to the Secretariat of the deletion of the VMS data immediately after the ~~24-72~~ hours' period;

~~f)e)~~ ~~Contracting Parties' Authorised~~CCPs' inspectors and government officials authorities ~~may~~ shall be allowed to retain VMS data provided by the Secretariat for the purposes described in paragraph 22 a) and b) for longer than the periods specified in paragraph 23 e) only if it is part of an investigation, judicial or administrative proceeding of an alleged violation of the provisions of the Agreement, any CMMs or decisions adopted by the Meeting of the Parties, or domestic laws and regulations. ~~Contracting Parties~~CCPs shall inform the Secretariat of the purposes and expected timing of the additional period of data retention before the expiration of the initial period and the Secretariat shall promptly notify the concerned Flag CCP of the additional period.

24. For the purpose of paragraph 22 a), ~~Contracting Parties~~CCPs requesting VMS data shall provide the Secretariat the geographic area of the planned surveillance and/or inspection activity. In this case, the Secretariat shall provide the most recent available VMS data for the notified geographic area at a specified point in time no more than 48 hours prior to the commencement of each surveillance and/or inspection activity. In the event that the planned surveillance and/or inspection activity does not proceed, the ~~Contracting Party~~CCP shall notify the Secretariat and destroy the data, and confirm the data destruction to the Secretariat in writing, without delay. Regardless of whether the planned surveillance and/or inspection activity were conducted or not, the Secretariat shall notify the Flag CCP that the VMS data were provided to the ~~Contracting Party~~CCP no later than 7 working days after the VMS data provision, and, if applicable, that they have received confirmation that the data have been destroyed.

25. For the purpose of paragraph 22 b), the Secretariat shall provide VMS data from the previous 10 days, for vessels detected during the active surveillance and/or inspection activity, by a ~~Contracting Party~~CCP, and VMS data for all vessels within 100 n miles of the surveillance and/or inspection activity location. The Secretariat shall provide regular updates of VMS data to the ~~Contracting Party~~CCP for the duration of the active surveillance and/or inspection activity. ~~Contracting Parties~~CCPs conducting the

active surveillance and/or inspection activity shall provide the Secretariat and the VMS Point of Contact of the Flag CCP with a report including the name of the vessel or aircraft on active surveillance and/or inspection activity. This information shall be made available without undue delay after the surveillance and/or inspection activities are complete.

26. For the purpose of paragraph 22 c), upon the request of a CCP, the Secretariat shall provide VMS data without the permission of the Flag CCP for the purposes of supporting search and rescue activities undertaken by a competent MRCC subject to the arrangement between the Secretariat and the competent MRCC, including in relation to the provision of VMS data to the requesting [CPPCCP](#), and the protection and destruction of that data.
27. Other than the purposes set out in paragraph 22, the Secretariat shall only provide VMS data to a requesting CCP or to the SIOFA Scientific Committee and its subsidiary bodies where the VMS data relates to vessels flagged to CCPs that have provided prior written consent through their VMS Point of Contact for the data to be shared.
28. CCPs may request VMS data for their own flagged vessels from the Secretariat.

Closed areas and interim protected areas

29. If VMS data received by the Secretariat indicates the presence of a fishing vessel in closed areas, or of a fishing vessel excluding those using line and trap methods in an interim protected area, as defined in paragraph 44 and Annex 3 of CMM 2020/01 (Interim Management of Bottom Fishing), the Secretariat shall notify the Flag CCP. The Flag CCP shall investigate the matter and provide an explanation within 5 working days to the Secretariat. The explanation shall be provided by the Secretariat to the Compliance Committee for consideration at its next annual meeting.

Data security and confidentiality

30. All CCPs, the Secretariat, the SIOFA Scientific Committee and its subsidiary bodies, and any SIOFA VMS provider shall ensure the secure and confidential treatment of VMS data in their respective electronic data processing facilities, in particular where the processing involves transmission over a network.
31. The Meeting of the Parties shall adopt detailed data security and confidentiality provisions prior to the entry into operation of the SIOFA VMS and shall review the applicability and appropriateness of CMM 2016/03 (Data Confidentiality) to VMS data security, confidentiality, management and use.

Entry into operation

32. The SIOFA VMS shall enter into operation at a date to be determined by the Meeting of the Parties.

33. Upon entry into operation of the SIOFA VMS, paragraphs 4 to 13 of CMM 2019/10 (Monitoring) shall be superseded and replaced by this CMM.

Review

34. Following the entry into operation of the SIOFA VMS, the Secretariat shall report annually to the Meeting of the Parties on the implementation of, and compliance with, this conservation measure.

2. After two years of implementation, the Meeting of the Parties shall conduct a review of this CMM and consider improving it as appropriate.

Annex 1

Minimum standards for Automatic Location Communicators (ALCs) used in the SIOFA VMS

1. The Automatic Location Communicator (ALC) shall continuously, automatically and independently of any intervention by the fishing vessel, communicate VMS data referred to in paragraph 1(f) of this conservation measure.
2. The data referred to in paragraph 1(f) shall be obtained from a satellite-based positioning system.
3. ALCs fitted to fishing vessels must be capable of transmitting data referred to in paragraph 1(f) [recorded] at least every [fifteen minutes]/[hourly].
4. ALCs fitted to fishing vessels must be tamper-proof so as to preserve the security and integrity of data referred to in paragraph 1(f).
5. Storage of information within the ALC must be safe, secure and integrated within a single unit under normal operating conditions.
6. It must not be reasonably possible for anyone-unauthorised persons to alter any of the VMS data stored in the ALC, including the frequency of position reporting to the FMC.
7. Any features built into the ALC or terminal software to assist with servicing shall not allow unauthorised access to any areas of the ALC that could potentially compromise the operation of the VMS.
8. ALCs shall be installed on fishing vessels in accordance with the manufacturer's specifications and applicable standards.
9. Under normal satellite navigation operating conditions, positions derived from the data forwarded must be accurate to within 100 metres ($2 \times$ Distance Root Mean Squared; 2DRMS), i.e. 99 per cent of the positions must be within this range.

~~10. The ALC and/or forwarding service provider must be able to support the ability for data to be sent to multiple independent destinations.~~

~~11.10.~~ CCPS shall ensure that VMS position reports are reported automatically² by each of their vessels while operating in the Agreement Area:

- a) at least once every hour as provided for in paragraph 25 of CMM 2020/15 (Management of Demersal Stocks), and;
- b) at least once every two hours in other circumstances.

² In the event that the connection between the ALC and the satellite is temporarily unavailable, the data referred to in paragraph 1(f) of this Measure shall still be collected but shall instead be transmitted as soon as the satellite connection becomes available again.

12.11. The satellite navigation decoder and transmitter shall be fully integrated and housed in the same tamper-proof physical enclosure.

ROADMAP FOR DEVELOPMENT OF SIOFA VMS																									
Action	Actor	2021						2022						2023						2024					
		Month						Month						Month						Month					
		1-2	3-4	5-6	7-8	9-10	11-12	1-2	3-4	5-6	7-8	9-10	11-12	1-2	3-4	5-6	7-8	9-10	11-12	1-2	3-4	5-6	7-8	9-10	11-12
Adoption CMM + approval roadmap	CC5 & MoP8				Yellow																				
Recruitment VMS manager	Secretariat				Orange	Orange	Orange																		
Development of Standards, Specifications and Procedures (SSPs) for data formats, transmission, confidentiality & security	Secretariat + WG						Green	Green	Green																
Preparation call for tender (ToR)	Secretariat + WG						Green	Green	Green																
Adoption revised CMM (incl. SSPs), approval ToR + budget	CC6 & MoP9									Yellow															
Launch call for tender	Secretariat									Orange	Orange	Orange													
Evaluation offers & recommendation to CC6	Evaluation Panel												Blue	Blue	Blue										
Approval of selected service provider	CC7 & MoP10																Yellow								
Signature Contract with service provider	Secretariat																Orange	Orange							
VMS installation, staff training, testing	Secr./ Provider / CCPs																		Orange	Orange	Orange	Orange			
Final acceptance VMS system, adoption final CMM and go-live	CC8 & MoP11																						Yellow		