



SIOFA | APSOI

Southern Indian Ocean Fisheries Agreement  
*Accord relatif aux Pêches dans le Sud de l'Océan Indien*

**Report of the 10<sup>th</sup> Meeting of  
the Working Group to  
Support the Establishment of the  
Southern Indian Ocean Fisheries Agreement  
Vessel Monitoring System  
(VMSWG-10)**

Virtual

16 March 2026

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## **Agenda item 1 – Opening of Session**

1. The Chair, Ms Fiona Harford (European Union (EU)), opened the 10<sup>th</sup> Meeting of the Working Group (WG) to Support the Establishment of the Southern Indian Ocean Fisheries Agreement Vessel Monitoring System (SIOFA VMS; VMSWG-10) and welcomed the participants.
2. The list of meeting participants is included in Annex A.

## **Agenda item 2 – Administrative Arrangements**

### **a. Adoption of Agenda**

3. Japan requested to add an agenda item to discuss the possible amendment of Annex 2 of CMM 16 (2025) on Vessel Monitoring System. The VMS WG agreed to add this as a new agenda item 4.
4. The agenda was adopted as revised (Annex B).

### **b. Meeting Documents**

5. The Chair outlined the list of meeting documents as presented in VMSWG-10-ADM-02 (Annex C).

### **c. Appointment of rapporteurs**

6. The VMS WG agreed to appoint Mr Alexander Meyer (Urban Connections, Tokyo) as rapporteur.

## **Agenda item 3 – Consideration for the Use of the SIOFA VMS for the Automatic Submission of Entry and Exit Notification in the Agreement Area (cont.)**

7. The Compliance Officer, Mr Johnny Louys, presented a revised version of a discussion paper on exploring the feasibility of automating entry and exit notifications within the SIOFA Area using the forthcoming SIOFA VMS (VMSWG-10-01). The paper has been revised based on discussions at VMSWG-08 and VMSWG-09, as well as written feedback received following each meeting, and includes draft provisions to replace current paragraph 15 of CMM 10 (2023) (Monitoring).
8. The VMS WG noted that the reporting of information about “observer on board” could be reduced to once per entry/exit, rather than once at entry and then once again at exit. The VMS WG noted that it would be preferable for this information to be reported when the vessel enters (rather than when it exits) the Agreement Area.
9. Regarding the recommended amendments to CMMs, one CCP reiterated its preference to replace entry and exit notification with VMS position reports and its view that once the SIOFA VMS is in operation, paragraph 15 of CMM 10(2023) (Monitoring) could be deleted. This CCP noted that flag State responsibility over monitoring their vessels, including their entry into and exit from the Agreement Area, would still be maintained. Nevertheless, this CCP stated that, for the sake of consensus, it could agree to the draft amendments, while seeking further clarification regarding their rationale and how paragraph 15bis would be implemented in practice.
10. On the rationale, the VMS WG noted that the wording of the recommended amendments was intended to reconcile the different views among CCPs and that some CCPs considered it important to maintain specific language regarding the flag State’s obligation to monitor the activities of their vessels, including entry and exit from the Agreement Area. The VMS WG further noted that having provisions only for the use of VMS position reports for making entry and exit notification would be insufficient, as there could be a situation in

which a vessel with a defective automatic location communicator (ALC) enters the Agreement Area and is therefore not detected by the SIOFA VMS. In such a case, the recommended amendments would ensure the flag CCP would still have responsibility for notifying the Secretariat of the vessel's entry and exit from the Agreement Area.

11. Regarding the implementation of draft paragraph 15bis, the VMS WG noted that in the case of a CCP that submits its VMS position reports to the SIOFA VMS via the CCP's fisheries monitoring centre (FMC), the FMC would tag on the entry/exit notification to the VMS position report received from the vessel before forwarding the position report to the SIOFA VMS.
12. In response to a question regarding the required format for manual reporting of entry and exit notifications, the VMS WG noted that manual reporting could be done in the North Atlantic Format (NAF), the Fisheries Language for Universal Exchange (UN/FLUX), or via email in an appropriate format, as CMM 16 (2025) does not prescribe a specific format for the submission of manual reports, while both NAF and UN/FLUX data formats provide for their submission and require their identification as manual data upon submission.
13. The VMS WG revised the paper (Annex D), endorsed the recommendations contained in it, and agreed to forward it to the 10<sup>th</sup> meeting of the Compliance Committee (CC10) and the 13<sup>th</sup> Meeting of the Parties (MoP13) for their consideration and potential endorsement.
14. The VMS WG noted that at CC10 and MoP13, new information from the pilot phase, including the testing of the use of the SIOFA VMS for entry and exit notification, would likely also be available, and that the CC and the MoP could consider such information and the VMS WG's paper together.

#### **Agenda item 4 – Discussion on possible amendments to Annex 2 of CMM 16 (2025) on Vessel Monitoring System**

15. Japan proposed two amendments to Table 1: NAF message data elements in Annex 2 of CMM 16(2025) (VMS), notably adding International Maritime Organization (IMO) number to the data elements, adding a designation of "mandatory" or "optional" for each data element, in line with the approach taken for UN/FLUX in part B of Annex 2 of CMM 16(2025) (VMS), and designating the 'internal reference number' (IR) as optional in Table 1 of Annex 2 of CMM 16 (2025) and all other elements as mandatory in line with the approach taken for NAF in Annex 1 of the Standards, Specifications and Procedures (SSPs) for the SIOFA VMS.
16. One CCP suggested that IMO number should be designated as optional, explaining that many of its vessels do not have an IMO number. Another CCP suggested that "(where applicable)" could be an alternative designation to "optional".
17. The VMS WG noted that if IMO number were added to Annex 2 of CMM 16(2025) (VMS), it would also need to be added to Annex 1 of the SSPs.
18. The VMS WG noted that CCPs needed time for internal consultation on the proposed changes. The VMS WG requested that the Chair and the Secretariat prepare a paper outlining the proposed amendments and circulate it among CCPs for a written consultation. The VMS WG noted that if further discussion is needed following the written consultation, a meeting of the VMS WG could be convened before CC10 and MoP13.

#### **Agenda item 5 – Update on preparations for the SIOFA Vessel Monitoring System (VMS) Pilot Phase**

19. The Compliance Officer provided an update on preparations for the SIOFA VMS pilot phase. The VMS has been set up and is ready for use in the pilot phase. In the previous week, the service provider conducted a five-day onsite training course for the Secretariat on the use and administration of the VMS. The VMS has received live data from Australia

and the Cook Islands, which are sending data from their vessels to the SIOFA VMS and to their own FMCs simultaneously. Japan and Seychelles have completed the configuration for sending VMS position reports via NAF from the applicable vessels, but they have not yet transmitted any live data as their vessels are not currently in the Agreement Area. The EU is in the process of setting up the configuration for sending VMS position reports via FLUX. Once the SIOFA VMS receives enough data, the Secretariat will work with the service provider to determine how best to test the technical feasibility of using the SIOFA VMS for entry and exit notification. The purpose of the testing in the pilot phase is to identify and address any previously unforeseen issues, including technical issues and potential policy considerations.

20. The Compliance Officer encouraged other CCPs that are participating in the pilot phase to also share any information on their progress in setting up the necessary configurations.
21. Chinese Taipei informed the VMS WG that it is making progress, but that there are still some necessary administrative procedures and technical arrangements to be made. Chinese Taipei estimated that it may be able to start sending VMS position reports to the Secretariat from perhaps late March.
22. The VMS WG noted that the Secretariat will produce a paper on the implementation of the pilot phase and its results and will submit this to CC10 and MoP13.
23. The Compliance Officer encouraged CCPs to notify the Secretariat of their VMS points of contact and FMC information as soon as possible.
24. The Chair requested the Secretariat to send a reminder on this point to CCPs following the meeting.

### **Agenda item 6 – Close of Meeting**

25. The Chair noted that this would be the last meeting of the VMS WG prior to CC10 and MoP13, unless an additional meeting is required following the written consultation on the proposed amendments to Annex 2 of CMM 16(2025) (VMS).
26. The Chair noted that the revised paper on consideration of the use of the SIOFA VMS for the submission of entry and exit notifications, a paper on the proposed amendments to Annex 2 of CMM 16(2025) (VMS), and a paper on the implementation of the pilot phase of the SIOFA VMS are intended to be submitted to CC10 and MoP13, and that the CC and the MoP may consider this information when deciding on the entry into operation of the SIOFA VMS.
27. The meeting was closed at 8:25 a.m. UTC, 16 March 2026.
28. The report was adopted via correspondence on 17 April 2026.

## Annex A – List of meeting participants

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## **Annex B – Agenda of the 10<sup>th</sup> Meeting of the SIOFA Vessel Monitoring System Working Group - SIOFA VMS WG10**

- 1) Opening of Session
- 2) Administrative Arrangements
  - a) Adoption of Agenda
  - b) Meeting Documents
  - c) Appointment of rapporteurs
- 3) Consideration for the Use of the SIOFA VMS for the Automatic Submission of Entry and Exit Notification in the Agreement Area (cont.)
- 4) Discussion on possible amendments to Annex 2 of CMM 16 (2025) on Vessel Monitoring System
- 5) Update on preparations for the SIOFA Vessel Monitoring System (VMS) Pilot Phase
- 6) Close of Meeting

## Annex C – List of meeting documents

<b>List of Meeting Documents</b>		
Code	Document Title	Agenda Item
<b><i>Administration and Meeting organisation</i></b>		
VMSWG-10-ADM-01	Provisional Agenda	2. a.
VMSWG-10-ADM-02	List of Meeting Documents (This)	2. b.
VMSWG-10-ADM-03	Registration Template - VMSWG-10	N/A
<b><i>Working Papers</i></b>		
VMSWG-10-01	Rev2_Consideration of the use of the SIOFA VMS for the submission of entry and exit notifications	3

**Annex D - Consideration of the use of the SIOFA VMS for the submission of entry and exit notifications\_Rev3**

## Background

With the forthcoming entry into operation of the SIOFA Vessel Monitoring System (VMS), one of the opportunities identified by the SIOFA VMS Working Group and the Meeting of the Parties (MoP) is the implementation of an automated system to submit entry and exit notifications via VMS.

This paper takes into consideration comments and discussions from VMSWG-08 and VMSWG-09.

## Current requirements

Paragraph 15 of CMM 10 (2023) on Monitoring provides as follows:

*“CCPs shall require their vessels or relevant authorities to notify the Secretariat, by email or other means of communication, within 24 hours, in the format provided in Annex I, of each entry to or exit from the Agreement Area of vessels authorised to fish for species managed by SIOFA flying its flag, in accordance with CMM 07(2025) (Vessel Authorisation).”*

In addition, Annex I of CMM 10 (2023) on Monitoring requires that the notification contain the following information:

- **Vessel name** [Name of the vessel]
- **Vessel flag CCP** [CCP where the vessel is registered (3-alpha country code)]
- **IMO number** [IMO number of the vessel]
- **Registration number** [External registration number]
- **Radio call sign** [International radio call sign of the vessel]
- **Entry or exit** [“ENTRY” or “EXIT”; free-text message]
- **Latitude** [Position at the time of transmission (decimal degrees, to the nearest 0.01 degrees)]
- **Longitude** [Position at the time of transmission (decimal degrees, to the nearest 0.01 degrees)]
- **Date** [UTC date of transmission from the vessel (YYYY-MON-DD)]
- **Time** [UTC time of transmission from the vessel (hh:mm)]
- **Activity in the Agreement Area** (Intended activity on entry OR activity carried out prior to exit) [Fishing (FAO 3-alpha species code of targeted species), transiting, transshipping or transferring]
- **Observer on board** [“YES” or “NO”]
- **Heading (optional)** [Vessel heading when entering OR exiting the area (from 0° to 359°)]

Currently, all entry and exit notifications are being sent to the Secretariat via email, either in Word, Excel or PDF (mostly scanned) format. This requires the Secretariat to manually input these reports into a database before they can be processed and correlated with other fishing activity information.

SIOFA has observed a steady, exponential increase in entry and exit notifications submitted by CCPs, with the highest number being 2,404 reports received by the Secretariat in 2024 (see Figure 1). Given the direct correlation between authorised vessel numbers and reporting volume, it is expected that the number of reports will continue to rise as the authorised fleet



# Technical implementation

## *Geofencing*

Implementing an automated system would require an ALC to be able to detect when and where it is entering or exiting the Agreement Area, and when it does so, to be able to send all the mandatory information required by Annex 1 of CMM 10 (2023) on Monitoring.

The first functionality (i.e., detecting when a vessel enters or exits the Agreement Area) would require a vessel's ALC to be equipped with geofencing capabilities, allowing it to independently, constantly, and automatically monitor when and *where* the vessel enters or exits the Agreement Area.

An alternative to ALC-based geofencing is for the vessel's flag FMC to manage zone entry/exit detection directly by defining the Agreement Area in its FMC database. Under this approach, the FMC monitors incoming VMS positions and triggers alerts when a vessel crosses a pre-defined boundary.

However, this method is inherently less precise than ALC-based geofencing. This is because the standard SIOFA reporting interval for FMC-forwarded VMS data is typically limited to one position every two hours, whereas the ALC's position is updated at near-real-time refresh rates. As a result, FMC-based geofencing provides a lower-resolution data stream and therefore a less accurate basis for determining entry and exit events.

To achieve a level of accuracy closer to that of ALC-based geofencing, a higher reporting frequency would be required. A minimum interval of one hour would be necessary, with an ideal interval of approximately 30 minutes. Nevertheless, the lower reporting frequency associated with FMC-based geofencing may be acceptable, given that paragraph 15 of CMM 10 allows 24 hours for the submission of the entry/exit notification, making the current 2-hour reporting period generally adequate for this purpose.

A third potential approach for transmitting entry/exit notifications to the SIOFA Secretariat would be with an Electronic Reporting System (ERS). An ERS could enable vessels and/or FMCs to submit the notification to the Secretariat while being fully compliant with Annex 1 of CMM 10 (2023) on Monitoring. While this method would still require some level of manual input from the vessel to add information (e.g. "Entry/Exit", activity in the Agreement Area, presence of observer onboard) it would provide a more reliable and standardised means of submitting these notifications. Several ALCs currently in operation, including some models deployed on vessels authorised to operate in the SIOFA Agreement Area, incorporate ERS functionalities, enabling these vessels to transmit ERS messages without requiring any modifications or acquisition of new ALCs. However, this option is not currently feasible within SIOFA, as the Secretariat lacks the operational capacity to receive or process ERS messages and the introduction of this system is not currently foreseen. Furthermore, there are currently no CMMs that regulate the use of ERS within SIOFA. This option was therefore discarded by the VMSWG.

## Data Fields

Many ALC models currently in use by vessels operating in the Agreement Area are limited in the type of information they can transmit through standard VMS position reports, making compliance with Annex 1 of CMM 10 (2023) on Monitoring challenging. In most cases, these ALCs cannot include the following data fields within VMS position reports:

- Vessel Name
- Vessel flag CCP
- IMO Number
- Registration Number
- Radio Call Sign
- Entry or Exit
- Activity in the Agreement Area
- Observer onboard

Therefore, there could be significant data gaps in entry and exit notifications transmitted by these ALCs.

However, as the Vessel Name, Vessel flag CCP, IMO Number, Registration Number, and the Radio Call Sign should be available to the flag FMC and the SIOFA VMS, they can be automatically associated with the notifications upon receipt by the Flag FMC or the SIOFA VMS, provided that the entry and exit notifications includes the Unique Vessel Identifier (UVI) as defined by CMM 16 (2025) on Vessel Monitoring System, making the need for their actual submission via VMS redundant.

As regards the “entry/exit” data field, this information may be automatically determined by the FMC and/or the SIOFA VMS based on the vessel trajectory and other relevant parameters.

The remaining data fields, notably information on “activity in the Agreement Area” and the presence of an “observer onboard”, cannot be transmitted by ALCs in an automated manner. These data fields would therefore either have need to be removed from the list of required mandatory information (i.e. made optional or eliminated altogether) or, if maintained, they can be transmitted to the Secretariat via email with different means (e.g. e-mail), once upon entry into and/or exit from the Agreement Area. In addition, reporting of the “observer on board” data field could be limited to instances where an observer is embarked, thereby reducing the frequency of reporting. These changes, if agreed upon Changes to the data fields would require an additional amendments to Annex 1 of CMM 10 (2023) on Monitoring.

The VMS WG noted that if amendments are required to CMM 10 (2023), it would be important to retain the concept that flag CCPs are responsible for monitoring and controlling the activities of their flagged vessels in the Agreement Area.

## Policy considerations

To enable an automated system, the MoP must first ensure that the Agreement and existing CMMs permit the use of VMS for this purpose. Under the current provisions of CMM 10 (2023) on Monitoring, paragraph 15 may be reasonably interpreted as sufficiently broad to allow the use of VMS for transmitting entry and exit notifications, as it states:

*“CCPs shall require their vessels or relevant authorities to notify the Secretariat, by email or other means of communication, within 24 hours, in the format provided in Annex I, of each entry to or exit from the Agreement Area...”*

While the phrase “...or other means of communication...” is ultimately subject to the interpretation of the MoP, it may reasonably be construed to include VMS as an acceptable means of submitting the notification in an automated manner. [It may nevertheless be useful to explicitly refer to the use of VMS for entry/exit reporting, so as to](#)

[Should the MoP wish to make this interpretation explicit, paragraph 15 of CMM 10 \(2023\) could be amended as follows:](#)

*“CCPs shall require their vessels or relevant authorities to notify the Secretariat, by email or other means of communication [such as VMS], within 24 hours, in the format provided in Annex I, of each entry to or exit from the Agreement Area...”*

[The explicit inclusion of reference to “VMS” would](#) provide clarity and reassurance to CCPs that automated transmissions generated through VMS are formally recognised as an acceptable means of fulfilling entry and exit notification obligations.

[Further to the above, CMM 10 \(2023\) on Monitoring may also include language to clarify that entry and exit notifications received via VMS will satisfy the requirements of paragraph 15 in its entirety, therefore eliminating the need for CCPs to submit the current form in annex 1.](#)

## Recommendations and conclusions

### *Technical considerations*

Automated entry and exit reporting via VMS is technically feasible. ALC-based geofencing offers the highest degree of automation but depends on the capabilities of ALC models. As many ALCs deployed on [nm](#) board vessels that operate in the Agreement Area do not have geofencing capabilities, they would have to be replaced, leading to additional costs for operators and/or CCPs. Alternatively, CCPs could opt to adopt the FMC-based geofencing approach which would result in lower reporting frequencies and the risk of inaccurate detection at zone boundaries, although any resulting negative impact is likely to be negligible. On this basis, the VMS WG considers that CCPs should be able to choose either ALC or FMC-based geofencing depending on what best suits their situation and that of their fleet.

Regarding data fields, most can be automatically associated with the entry/exit notification, either via the flag FMC or the SIOFA VMS, or may be automatically determined by the flag FMC and/or the SIOFA VMS based on the vessel’s trajectory and other relevant parameters. The VMS WG considers that the loss of [some or all](#) the remaining data fields (activity in the Agreement Area, observer on board) would be offset by the increased efficiency and accuracy gained from using VMS for entry and exit reporting.

Considering the above [and to promote simplification](#), the VMS WG recommends that [the use of VMS be made mandatory for entry and exit reporting. To enable this, the VMS WG recommends that only the following data fields “Vessel Name”, “Vessel flag CCP”, “IMO Number”, “Registration Number” and “Radio Call Sign” be retained as mandatory, with the understanding that they will not necessarily be sent via the ALCs, but rather correlated and extrapolated automatically by the National FMC or SIOFA VMS, provided that these reports include replaced](#)

by the vessel's UVI as defined in paragraph 1 f) of CMM 16 (2025) on Vessel Monitoring System, while retaining the data field "Entry or Exit" as mandatory.\*

- Vessel Name
- Vessel flag CCP
- IMO Number
- Registration Number
- Radio Call Sign
- Entry or Exit

The VMS WG further recommends that ~~the CC/MoP consider whether CCPs should continue to require their vessels to~~ reporting of the data fields "activity in the Agreement Area" ~~be discontinued, except in cases where a vessel needs to provide its entry/exit reports via manual reporting for example in the event of an ALC malfunction.~~

~~As regards and reporting of information about "observer on board", which can only be transmitted by email, the VMS WG recommends that it be by other means than VMS, e.g. email. In this respect, the VMS WG notes that reporting of these two data fields could become either optional or reported only once upon [entry/exit] and that "observer on board" could be limited to instances where an observer is present on a vessel when it enters/exits the Agreement Area, thereby reducing the frequency of reporting.~~

#### *Amendments to CMMs*

~~If the recommendations above are accepted, Paragraph 15 of CMM 10 (2023) on Monitoring would need to be amended accordingly appears sufficiently broad to allow the use of VMS to fulfil entry and exit reporting requirements.~~

~~Specifically, paragraph 15 could be replaced by the following provisions:~~

*~~"15. Each CCP shall monitor the entry to and exit from the Agreement Area of fishing vessels flying its flag, and their activities while in the Agreement Area.~~*

*~~15bis. Each CCP shall require its fishing vessels or relevant authorities to notify the Secretariat of each entry to or exit from the Agreement Area of vessels authorised to fish for species managed by SIOFA flying their flag, through a specific entry and exit notification by means of VMS reporting, in accordance with the requirements of CMM 16 (2025) (Vessel Monitoring System).~~*

*~~15tris. In the event of a malfunctioning of the ALC on board a fishing vessel preventing the entry and exit notification by means of VMS reporting required under paragraph 15bis, the flag CCP shall require its fishing vessels or relevant authorities to provide the notification to the Secretariat, within 24 hours of the vessel's entry into or exit from the Agreement Area, via a manual report transmitted by email. The manual report shall include information on the activity of the vessel in the Agreement Area.~~*

*~~15quater. If a fishing vessel enters the Agreement Area with an observer on board, the flag CCP of the vessel shall require the vessel or its relevant authorities to notify the Secretariat by email, within 24 hours of the vessel's entry into the Agreement Area, of the presence of an observer on board the vessel."~~*

~~In addition, Annex I to CMM 10 (2023) would be deleted. The data formats would be replaced by those required under CMM 16 (2025).~~

Nonetheless, while it can reasonably be interpreted to encompass VMS as an “other means of communication,” it may be prudent for the MoP to affirm this interpretation explicitly, either via an amendment to the relevant provision(s) or the recording of this interpretation in the meeting report of the MoP. Otherwise, a relatively simple amendment expressly recognising VMS position reports as an authorised means of notification would strengthen certainty and provide CCPs with more precise guidance on the inclusion of VMS as a reporting method.

In addition, Annex 1 to GMM 10 (2023) on Monitoring to render reporting of data fields “activity in the agreement area” and “Observer onboard” as optional, and to specify that “Observer onboard” is reported only if an observer is present.

### *Testing*

The VMS WG further recommends that a targeted technical test is conducted once during the pilot phase of the SIOFA VMS becomes operational to confirm the technical feasibility of automating the submission of entry and exit notifications, identify any operational challenges, validate technical performance, assess potential policy implications, and evaluate whether any modifications or updates may be necessary for CCPs concerning the operations of their vessels and the functioning of their FMCs.