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

10th Meeting of the SIOFA Compliance Committee (CC10) and 13th Meeting of the Parties to SIOFA (MoP13)

Savoy Seychelles Resort & Spa, Beau Vallon, Seychelles, 1–3 July and 6–10 July 2026

CC-10-11 / MoP-13-11 [Rev2](#)

Potential Amendments to SIOFA CMMs and the Standards, Specifications and Procedures (SSPs) for the SIOFA VMS

The Chairperson of the SIOFA VMS Working Group

Meeting	Compliance Committee ✓ Meeting of the Parties ✓
Document type	Administrative Paper ☐ Proposal or Working Paper ✓ Information Paper ☐
Distribution	Public ✓ Restricted ¹ ☐ Closed session document ² ☐
Abstract	This paper presents the potential amendment to SIOFA CMMs and the SSPs for the SIOFA VMS, to ensure policy alignment between these CMMs and Policies, and the operational and technical aspect of the SIOFA VMS ahead of its anticipated entry into operation. Rev 1 and Rev 2 consider comments from CC10. Rev 1 changes are in Track Changes, Rev2 changes are in Track Changes and highlighted in yellow.

¹ Restricted documents may contain confidential information. Please do not distribute restricted documents in any form without the explicit permission of the SIOFA Secretariat and the data owner(s)/provider(s).

² Documents available only to members invited to closed sessions.

Recommendations

- That the Compliance Committee **note** the potential amendments and **recommends** their adoption by the Meeting of the Parties (MoP);
- That the Compliance Committee **consider** the proposal of one CCP to delete the entry ('ENT') and exit ('EXI') data reporting elements from NAF messages in Table 1 of Annex 2 to CMM 16 (2025) and Annex 1 to the SSPs, and **advise** the MoP as appropriate;
- That the MoP **consider** these amendments, together with the recommendations of the Compliance Committee, and **endorse** them as appropriate;

Consideration of the use of the SIOFA VMS for the submission of entry and exit notifications

Following up on the discussions from the 12th Meeting of the Parties to SIOFA, the SIOFA VMS Working Group assessed the feasibility of automating entry and exit notifications within the SIOFA Agreement Area using the forthcoming SIOFA Vessel Monitoring System (VMS). The SIOFA VMS Working Group reviewed current reporting obligations under CMM 10 (2023) on Monitoring³ and assessed the extent to which VMS-based transmissions could satisfy these requirements. The analysis examined the possible technical pathways and outlined the policy, operational, and data-related considerations associated with each.

The SIOFA VMS Working Group noted that the increasing volume of vessel entry and exit notifications within the SIOFA Agreement Area is placing growing administrative pressure on both CCPs and the Secretariat. Under current requirements, notifications are submitted manually via email and subsequently entered into databases, creating inefficiencies and error risks. As fleet sizes and reporting obligations expand, there is a clear need for a more streamlined and scalable approach to managing these notifications.

The introduction of the SIOFA VMS presents an opportunity to automate the submission of entry and exit notifications. Such an approach would enable vessels or authorities to transmit required information directly through VMS, reducing reliance on manual processes. While technical options exist to support this, some limitations remain regarding data transmission capabilities and the handling of certain information fields.

Therefore, the SIOFA VMS Working Group suggested several solutions to allow these notifications to be sent automatically through VMS, which include:

- Making the use of VMS for entry and exit reporting mandatory.
- Replacing redundant data fields required by CMM 10 (2023) on Monitoring with the Unique Vessel Identifier (UVI), as defined in CMM 16 (2025) on Vessel Monitoring System.⁴ These data fields would automatically be associated with the vessel by the SIOFA VMS.
- Discontinuing reporting of the data field “activity in the Agreement Area”, 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.
- Reporting of observers onboard shall be transmitted by email and be limited to instances where an observer is present onboard a vessel when it enters the Agreement Area, thereby reducing the frequency of reporting.

To enable an automated system, the SIOFA VMS Working Group noted that the MoP must first ensure that the Agreement and existing CMMs permit the use of VMS for entry/exit reporting. The SIOFA VMS Working Group noted that while the phrase “...or other means of communication...” in paragraph 15 of CMM 10 (2023) on Monitoring is ultimately subject to the interpretation of the MoP, it may reasonably be construed as including VMS as an acceptable means of submitting the notification in an automated manner. However, it may nevertheless be useful to explicitly refer to the use of VMS for entry/exit reporting, so as to provide clarity and reassurance to CCPs that

³ Conservation and Management Measure for the Monitoring of Fisheries in the Agreement Area (CMM 10 (2023) on Monitoring)

⁴ Conservation and Management Measure for the establishment of a SIOFA Vessel Monitoring System (CMM 16 (2025) on Vessel Monitoring System)

automated transmissions generated through VMS are formally recognised as an acceptable means of fulfilling entry and exit notification obligations. As such, the SIOFA VMS Working Group recommended that paragraph 15 of CMM 10 (2023) on Monitoring 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 or by email, 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, the SIOFA VMS Working Group recommended that Annex I to CMM 10 (2023) be deleted. However, the 10th Meeting of the Compliance Committee (CC10) agreed to maintain this annex to accommodate the new changes it has proposed.

Furthermore, the CC10 recommended that a footnote be added to Annex 2 of CMM 16 (2025) on Vessel Monitoring System, and Annex 1 of the SIOFA VMS SSPs on the column of the type of message Data Element reading “ENT and EXI shall be submitted in accordance with paragraph 15 bis. of CMM 10 (2023)”. The data formats would be replaced by those required under CMM 16 (2025).

The proposed changes are set out in Annex 1 to this document, which contains the amendments to paragraph 15 of CMM 10 (2023) on Monitoring, the updates to Annex 2 of CMM 16 (2025) on the Vessel Monitoring System (VMS), and the revisions to Annex 1 to the SIOFA VMS SSPs.

More detailed information about the SIOFA VMS Working Group discussions on this topic is available on the meeting pages of the 8th,⁵ 9th,⁶ and 10th⁷ Meetings of the SIOFA VMS Working Group.

⁵ <https://siofa.org/meetings/vmswg08>

⁶ <https://siofa.org/meetings/VMSWG09>

⁷ <https://siofa.org/meetings/cc/10th-meeting-siofa-vms-working-group-vmswg10>

Possible Amendments to the NAF Messages Data Elements in Annex 2 Of CMM 16 (2025) On Vessel Monitoring System and Annex 1 of the SIOFA VMS SSPs

At its 10th Meeting, the SIOFA VMS Working Group noted that the International Maritime Organization (IMO) number is not currently included in *Table 1: NAF message data elements* of Annex 2 to CMM 16 (2025). This is notwithstanding that CMM 16 (2025) recognises the IMO number as a Unique Vessel Identifier (UVI) for vessels transmitting VMS position reports via their FMC pursuant to paragraph 6(a) of the CMM. A similar omission is also observed in the Standards, Specifications, and Procedures for the SIOFA VMS (SSPs). As such the SIOFA VMS Working Group tasked the Secretariat to draft a discussion paper for it to consider prior to the 10th Meeting of the Compliance Committee and the 13th Meeting of the Parties to SIOFA, which was reviewed by the SIOFA VMS Working Group via correspondence.

Further to that consultation via correspondence, the SIOFA VMS Working Group recommended a number of amendments to Table 1 of Annex 2 of CMM 16 (2025) and Annex 1 of the SSPs and sought to clarify the applicability of the use of IMO Number in the NAF Messages Data Elements. The outcomes of those discussions are set out in *Discussion Paper on Possible Amendments to the NAF Messages Data Elements in Annex 2 of CMM 16 (2025), on Vessel Monitoring System, and Annex 1 of the SIOFA VMS SSPs*, available for reference on the SIOFA Website.⁸

[Annex 1](#) to this paper includes the proposed Amendments to the NAF Messages Data Elements in Annex 2 of CMM 16 (2025) on Vessel Monitoring System and Annex 1 of the SIOFA VMS SSPs.

As part of the consultation process for this paper, one CCP proposed deleting the entry ('ENT') and exit ('EXI') data reporting elements from NAF messages in Table 1 of Annex 2 to CMM 16 (2025) and Annex 1 to the SSPs. The proposed deletion has not been reflected in the amendments, as they are inconsistent with the recommendations and conclusions formulated by the SIOFA VMS Working Group in paper [VMSWG-09-01](#) on the use of the VMS for the automation of entry and exit reporting, which is also discussed in the previous section of this paper. Noting this, the SIOFA VMS WG further recommends that the Compliance Committee and the Meeting of the Parties consider the deletion proposed by one CCP of the entry ('ENT') and exit ('EXI') data reporting elements from NAF messages in Table 1 of Annex 2 of CMM 16 (2025) and Annex 1 of the SSPs.

⁸ <https://siofa.org/media/2825>.

~~Annex 1 Possible Amendments to the NAF Messages Data Elements in Annex 2 of CMM 16 (2025) on Vessel Monitoring System and Annex 1 of the SIOFA VMS SSPs.~~

~~This Annex presents the proposed amendments to the NAF message data elements in CMM 16 (2025) and the SSPs, as agreed by the SIOFA VMS Working Group. The proposed changes aim to clarify the inclusion and designation of key data elements, ensuring consistency across all measures and policy documents, and effectively addressing the gap identified above.~~

~~The amended table below shall replace Table 1 in Annex 2 of CMM 16 (2025) and the table in Annex 1 of the SSPs, reflecting the changes agreed by the SIOFA VMS WG.~~

~~In addition, minor changes are proposed to the introductory text that accompanies these tables. Furthermore, the footnote (*) in Annex 1 of the SSPs would become redundant and should therefore be removed.~~

~~CMM 16 (2025)~~

~~Annex 2-~~

~~Data formats for transmission of VMS position reports~~

~~A. North Atlantic Format (NAF)-~~

~~1. ——— VMS position reports sent in NAF format shall be transmitted using one of the following application layers (secured connection):-~~

~~i. Hypertext Transfer Protocol Secure (HTTPS);-~~

~~ii. File Transfer Protocol (FTP) with Transport Layer Security (TLS) (FTPS);-~~

~~iii. Email.-~~

~~2. ——— VMS position reports sent in NAF format shall contain, at minimum, the mandatory data elements in Table 1.-~~

~~Table 1: NAF message data elements~~

Data Element	Field Code	Definition	Contents
Start Record	SR	Defines the start of the message structure.	No Data
Address	AD	Indicates the destination. Provider and Secretariat to define code for SIOFA VMS	3-Alpha code
From	FR	3-alpha code describing the country which FMG is submitting the report.	3-Alpha code
Sequence Number	SQ	Message Sequence Number	0-999999
IMO Number	IM	IMO ship identification number ^{M3}	IMO ship identification number (
Internal Reference Number*	IR	Unique Number attributed by the flag state	3-Alpha code. 0-999999999
	TM		POS=position report, MAN=manual report;
Type of Message		Letter code of the type of message	ENT=entry report;
			EXT=exit report
Radio Call Sign (IRCS)	RC	Vessel detail: international radio call sign of the vessel ⁴	IRCS
Latitude (decimal)	LF	Latitude expressed in degrees and decimals (WGS-84)	+(-)DD.ddd
Longitude (decimal)	LG	Longitude expressed in degrees and decimals (WGS-84)	+(-)DD.ddd
Vessel Speed	SP	Speed of the vessel	Knots*10
Vessel Course	GO	Heading of the vessel in degrees	1-360
Flag State	FS	State of registration of the vessel	3-Alpha code
Date	DA	Date of reported event	YYYYMMDD
Time	TI	Time of reported event	HHMM
End of Record	ER	Indicates the end of the message/report	No Data

³ Where applicable, in accordance with footnote 2 of this CMM and with paragraph 2.d. of CMM 07(2025) (Vessel Authorisation).

~~⁴Where applicable, in accordance with footnote 2 of this CMM and with paragraph 2.c. of CMM 07(2025) (Vessel Authorisation).~~

~~***~~

~~Standards, Specifications and Procedures (SSPs) for the SIOFA VMS~~

~~Annex 1: Description of the North Atlantic Format (NAF)~~

~~Data Elements of NAF Messages~~

~~VMS position reports sent in All NAF Messages format sent to the SIOFA VMS shall contain, at minimum, the mandatory information required in data elements in the following table: paragraph 1.f) of CMM 16 (2025). The general structure and data elements are as below~~

Data Element	Field Code	Definition	Contents
Start Record	SR	Defines the start of the message structure.	No Data
Address	AD	Indicates the destination. Provider and Secretariat to define code for SIOFA VMS	3-Alpha code
From	FR	3-alpha code describing the country which FMG is submitting the report.	3-Alpha code
Sequence Number	SQ	Message Sequence Number	0-999999
IMO Number	IM	IMO ship identification number ^{M⁴}	IMO ship identification number
Internal Reference Number*	IR	Unique Number attributed by the flag state	3-Alpha code. 0-999999999
	TM		POS=position report, MAN=manual report;
Type of Message		Letter code of the type of message	ENT=entry report; EXT=exit report
Radio Call Sign (IRCS)	RC	Vessel detail: international radio call sign of the vessel ⁵	IRCS
Latitude (decimal)	LF	Latitude expressed in degrees and decimals (WGS-84)	+(-)DD.ddd
Longitude (decimal)	LG	Longitude expressed in degrees and decimals (WGS-84)	+(-)DD.ddd
Vessel Speed	SP	Speed of the vessel	Knots*10
Vessel Course	GO	Heading of the vessel in degrees	1-360
Flag State	FS	State of registration of the vessel	3-Alpha code
Date	DA	Date of reported event	YYYYMMDD
Time	TI	Time of reported event	HHMM
End of Record	ER	Indicates the end of the message/report	No Data

*Submission of IR is optional

³<https://www.naf-format.org/index.htm>

~~⁴Where applicable, in accordance with footnote 2 of CMM 16 (2025) and with paragraph 2.d. of CMM 07(2025) (Vessel Authorisation).~~

~~⁵Where applicable, in accordance with footnote 2 of this CMM and with paragraph 2.c. of CMM 07(2025) (Vessel Authorisation).~~

Structure of the position report

Each data transmission shall be structured as follows:

- ~~double slash (//) and the characters 'SR' indicate the start of a message,~~
- ~~a double slash (//) and field code indicate the start of a data element,~~
- ~~a single slash (/) separates the field code and the data,~~
- ~~pairs of data are separated by space,~~
- ~~the characters 'ER' and a double slash (//) indicate the end of a record.~~

Annex 1: Proposed changes to relevant CMMs to incorporate the Potential Amendments

CMM 10(2023)¹

Conservation and Management Measure for the Monitoring of Fisheries in the Agreement Area (Monitoring)

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

RECALLING Article 6(1)(h) of the Agreement calls of 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;

MINDFUL of Article 18(3)(e) 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 are 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;

NOTING Article 18(3)(f) and (h) of UNFSA relating to the regulation of transshipment on the high seas;

BEARING IN MIND that transshipment at sea is a common global practice, but that unregulated and unreported transshipment of catches of fishery resources, in particular on the high seas, contributes to distorted reporting of catches of such stocks and supports illegal, unreported and unregulated (IUU) fishing in the SIOFA Area of Application (the Agreement Area);

NOTING the Voluntary Guidelines for Transshipment endorsed by the Committee on Fisheries of the Food and Agriculture Organization of the United Nations (FAO) at its thirty-fifth session from 5 to 9 September 2022, which seek to assist States, regional fisheries management organizations (RFMOs), and other intergovernmental organizations by providing standards for developing their policies and regulations that govern transshipment, with a view to integrating these in their regulatory frameworks;

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

Scope

1. This CMM applies to all fishing vessels of Contracting Parties, cooperating non-Contracting Parties and participating fishing entities to the Agreement (CCP), engaged in fishing operations in the SIOFA Area of Application (Agreement Area) for fishery resources as defined in Article 1(f) of the Agreement.

Information on fishing activities

2. Each CCP shall ensure that its vessels maintain either an electronic fishing logbook or a bound fishing logbook containing the information relevant for their compliance with the data collection and submission requirements of CMM 02(2025) (Data Standards) with consecutively numbered pages.
3. Each CCP shall ensure:
 - a. that vessels flying its flag submit the fishing logbook data within 30 days of the completion

¹ CMM 10(2023) (Monitoring) supersedes CMM 2018/10 (Monitoring). Obsolete references have been updated by 2025 technical edits.

of a fishing trip in the Agreement Area to its competent authority;

- b. data referred to in sub-paragraph a. are submitted in accordance with CMM 02(2025) and maintained in accordance with CMM 03(2025) (Data Confidentiality); and
- c. the quantities of catch recorded on vessels flying its flag correspond to the quantities of catch kept on board.

4. Each CCP shall cooperate with any reasonable request from other CCPs for any information contained in the fishing logbooks from the preceding 12 months for the purposes of control.

Vessel Monitoring System (VMS)

- 5. Each CCP shall ensure that all fishing vessels flying its flag that are operating in the Agreement Area are fitted with an operational automatic location communicator (ALC) unit reporting back to its competent authority.
- 6. CCPs shall ensure that ALC units on vessels flying their flag remain operational at all times while in the Agreement Area.
- 7. CCPs shall develop, implement and improve systems to maintain a record of all vessel position information reported through VMS and logbooks, in relation to vessels flying their flags while these vessels are in the Agreement Area, such that this information may be used to document vessel activity in the Agreement Area, and to validate fishing position information provided by those vessels.
- 8. CCPs are encouraged to share VMS data where it is requested from another CCP in support of patrol or surveillance activities. Each CCP shall not use any information received in accordance with this paragraph for other purposes.
- 9. CCPs shall ensure that:

VMS position reports are transmitted at least once every 2 hours from each fishing vessel flying their flag and included in the SIOFA Record of Authorised Vessels, while operating in the Agreement Area;

- a. under normal satellite navigation operating conditions, positions derived from the data reported shall be accurate to within 100m;
- b. VMS position reports include at least the following information:

Category	Data	Remarks
Vessel information	Static unique	For example, FAO 3 alpha or 2 alpha, country code
		followed by national vessel registration number
Activity detail	Latitude	Position latitude (decimal degrees, to the nearest 0.01 degrees)
	Longitude	Position longitude (decimal degrees, to the nearest 0.01 degrees)

Category	Data	Remarks
Message	Date	Position date (UTC)
	Time	Position time (UTC)
	Speed	Vessel speed at time of position (knots)
	Course	Vessel course at time of position (degrees)

- c. its vessels do not enter the Agreement Area and commence operations with a defective ALC.

10. In the event of a technical failure or non-operation of the ALC fitted on board a vessel:

- a. the device shall be repaired or replaced within a month. After this period, the vessel shall not be authorised to begin a new trip with a defective ALC. If the trip is lasting more than one month, the repair or the replacement shall take place as soon as practicable after the vessel enters a port. If the ALC has not been repaired or replaced within 90 days, the CCP shall order the vessel to cease fishing, stow all fishing gear and return immediately to port in order to undertake repairs. The vessel shall not be authorised to begin a new trip without a ALC having been repaired or replaced;
- b. the master of the fishing vessel shall manually communicate to its Fisheries Monitoring Centre (FMC), at least every four hours, reports by other means of communication (such as email, facsimile, telex, telephone message or radio). Such reports must include, *inter alia*, information required in paragraph 8 b; and
- c. no transshipments at sea shall be authorized and initiated unless and until the reporting requirements and procedures established in sub-paragraph b are complied with.

11. Each CCP shall ensure that the ALCs fitted on board vessels flying its flag are tamper resistant, that is, are of a type 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. To this end, the ALC must:

- a. be located within a sealed unit; and
- b. be protected by official seals (or mechanisms) of a type that will indicate whether the unit has been accessed or tampered with.

12. Each flag CCP shall ensure that any VMS reports and messages transmitted to the Secretariat shall be in accordance with the data exchange format of CMM 02(2025) Annex C.

13. VMS reports transmitted pursuant to paragraph 12 shall not be treated as “public domain data” for the purposes of CMM 03(2025). The procedures for the safeguarding of records described in CMM 03(2025) shall similarly apply to all VMS data held by the Secretariat.

14. In order to cost-effectively and continuously monitor the movements of fishing vessels authorised by CCPs to fish in the Agreement Area and to, *inter alia*, support the implementation of SIOFA CMMs, the Meeting of the Parties shall at the latest by its ordinary meeting in 2020 develop specifications and proposed rules and procedures for the establishment of a SIOFA VMS for consideration by the Meeting of the Parties.

Entry- Exit reports

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 or by email, in accordance with the requirements of CMM 16 (2025) (Vessel Monitoring System), or by email, in the format provided in Annex 1.

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.

~~15. 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. 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).~~

Monitoring of at sea transshipments and transfers

16. For the purpose of this CMM, transshipment means the unloading of all or any fishery resources, including fishery products, on board a fishing vessel onto another vessel, without the fish being recorded as landed, as defined in the FAO Voluntary Guidelines for Transshipment.
17. Each CCP shall ensure that vessels flying its flag only undertake transshipments at sea of fishery resources if they have prior authorization from their competent authority.
18. Each CCP shall ensure that vessels flying its flag only undertake transshipments at sea of fishery resources, with other vessels included on the SIOFA Record of Authorised Vessels.
19. Each CCP shall ensure that vessels flying its flag do not undertake transshipments at sea of fishery resources with vessels included in the IUU vessel lists established by CCAMLR or any regional fisheries management organization.
20. Each CCP shall ensure, for each vessel flying its flag undertaking an at sea transshipment operation, that:
 - a. the vessel notifies its competent authority at least 7 days in advance of a 14-day period during which the at sea transshipment is scheduled to occur.
 - b. the vessel notifies its competent authority 24 hours in advance of the estimated time during which the at sea transshipment will occur.
 - c. the notifications referred to in sub-paragraphs a. and b include the relevant information available regarding the at sea transshipment in accordance with Transshipment Notification Annex II.
 - d. its competent authority transmits the notifications referred to in sub-paragraphs a. and b. to the Secretariat within 7 days.
 - e. an impartial and qualified observer is deployed on board every receiving vessel to monitor the transshipment.
Electronic monitoring can be implemented as an alternative or to complement the

deployment of human observers. CCPs that elect to use the electronic monitoring shall ensure that all relevant aspects are monitored effectively.

- f. the observer assigned to their vessel collect and record the information of each transshipment operation as indicated in the Transshipment Logsheet in Annex III.
- g. the master of the vessel provides the observer on board full access to all operational areas of the vessel necessary to complete their duties, including the fish holds, production areas, crew, nets or other gear, equipment, and any documents related with the catch retained onboard.
- h. the observer referred to sub-paragraphs e and f. provides a copy of the information collected as indicated in the Transshipment Logsheet to the competent authority of the observed vessel.
- i. its competent authority submits the observer data referred to in sub-paragraph f. to the Secretariat, no later than 15 days from debarkation of the observer.
- j. the vessel notifies all of the operational details to its competent authority, using the Transshipment Declaration in Annex IV, within 24 hours following the transshipment.
- k. its competent authority transmits the Transshipment Declaration referred to in sub- paragraph j. to the Secretariat within 30 days.
- l. where its competent authority authorizes the vessel operator to transmit the Transshipment Declaration referred to in sub-paragraph j. directly to the Secretariat, the vessel operator directs any requests for clarifications from the Secretariat to its competent authority.

21. Each CCP shall ensure, for each vessel flying its flag undertaking an at sea transfer operation of fuel, crew, gear or any other supplies, either as an unloading or receiving vessel, where one or both vessels has been involved or intends to undertake fishing for fishery resources in the Agreement Area during that trip, that:
- a. the vessel notifies its competent authority at least 24 hours in advance of the planned transfer.
 - b. the notifications include the relevant information available regarding the transfer in accordance with Transfer Notification Annex V.
 - c. the competent authority transmits the notification to the Secretariat without delay.
 - d. the vessel notifies all of the operational details to its competent authority, as specified in Transfer Declaration Annex VI, within 24 hours following the transfer.
22. The Secretariat shall make all information provided under paragraphs 20 and 21 available on the secure section of the SIOFA website as soon as possible.
23. Each CCP with a vessel flying its flag involved in a transshipment or transfer at sea shall take the appropriate measures to verify the accuracy of the information received in accordance with paragraphs 20 and 21 and take appropriate follow-up action in the event that an observer reports discrepancies in the data reported by the masters of the unloading or receiving vessels or in the event of possible non-compliance with SIOFA CMMs, including coordination with the Port State where the receiving vessel is to unload, if it considers that an inspection of the unload is necessary.
24. Each CCP with a vessel flying its flag that receives fishery resources at sea from more than one unloading vessel shall ensure that such receiving vessel:

- a. stores the fishery resources and related documentation from each unloading vessel separately, allowing to distinguish from which unloading vessel each part of the fishery resources on board comes, including through the use of canvas or nets to separate fishery resources on board and/or appropriate labelling for boxes.
 - b. maintains an up-to-date stowage plan and other documents showing the location and quantities of species received from each unloading vessel and retains these on board until the vessel has been unloaded completely.
 - c. makes available the information referred to in sub-paragraph b. to its competent authority and to the relevant port State when required.
25. Nothing in this measure shall prevent vessels from undertaking transshipments or transfers at sea in cases of force majeure or distress, in which case those vessels shall report their transshipment or transfer activities to their competent authorities and the Secretariat, as appropriate, in accordance with the relevant procedures and templates established in paragraphs 20 and 21, after the transshipment or transfer has been completed, including information on the circumstances giving rise to the force majeure or distress.

Monitoring of transshipments in ports

26. Each CCP shall ensure that a vessel flying its flag that is carrying fishery resources shall only transship in a port if it has prior authorisation from its competent authority and the port State.
27. Each CCP shall ensure that vessels flying its flag do not undertake transshipments in port of fishery resources with vessels included in the IUU vessel lists established by CCAMLR or any regional fisheries management organization.
28. For each transshipment of fishery resources in port, the competent authority of the CCP of the unloading vessel shall notify, at least 24 hours in advance, the following information to the competent authority of the port State and to the competent authority of the receiving vessel:
- a. the date, time and port of transshipment;
 - b. the name and flag of the unloading transshipping vessel;
 - c. the name and flag of the receiving vessel;
 - d. the weight of fishery resources (Kg) by species (FAO 3-alpha species code/group code/scientific name) to be transshipped.-
29. Where applicable, the competent authority of a CCP of a receiving vessel shall inform the competent authority of the port State of the quantities of fishery resources on board the vessel 24 hours before the transshipment and again 24 hours after the transshipment.
30. The CCP of the unloading vessel shall require that the vessel submits a Transshipment Declaration in accordance with the format set out in Annex IV to its competent authority, and that of the port State within 24 hours of the transshipment, and also provides a copy to the receiving vessel.
31. Where applicable, the competent authority of the CCP of a receiving vessel shall, 48 hours before a landing of the transshipped fishery resources, submit a copy of the received Transshipment Declaration to the competent authority of the port State where the landing takes place.
32. Each CCP with a vessel flying its flag involved in the transshipment in port shall take the appropriate measures to verify the accuracy of the information received in accordance with paragraphs 28 to 31 and take appropriate follow-up action in the event of discrepancies in the data reported by the masters of the unloading or receiving vessels or in the event of possible non-compliance with SIOFA CMMs.

Reporting of transshipments and at sea transfers

33. As part of its CCP Compliance Report under paragraph 12 of CMM 11(2020) (Compliance Monitoring Scheme), each CCP shall provide annually the following information, as applicable, to the Secretariat for consideration by the Compliance Committee in relation to each transshipment and at sea transfer by vessels flying its flag that took place during the previous calendar year in accordance with paragraphs 16 to 32:
- a. date, time and location of transshipment or transfer in accordance with the specifications in CMM 02(2025) (Data Standards);
 - b. names of vessels, flags and registration number/call sign of the transshipping vessel or transferring vessels;
 - c. tonnage of any fishery resources, including species/group name (FAO 3-alpha species code/group code/scientific name) transshipped;
 - d. type and description of transfers; and
 - e. any other relevant information.
34. The Secretariat shall report annually on the implementation of this CMM. As regards transshipments and at sea transfers, the report shall include information, aggregated at CCP level, about the number of events, locations, quantities of fishery resources (by species, product form and catch area) transshipped and transferred, which shall be made publicly available on the SIOFA website.
35. This CMM shall enter into force on 1 January 2024.

ANNEX I

REQUIREMENTS FOR VESSEL ENTRY AND EXIT NOTIFICATIONS BY EMAIL

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

ANNEX II

SIOFA TRANSSHIPMENT AT SEA PRIOR NOTIFICATION

The following information shall be provided to the competent authority/ies of the unloading and receiving vessels 7 days in advance of a 14 day window, and again 24 hours in advance of a transshipment at sea.

I. DETAILS OF THE NOTIFYING VESSEL	
Notifying vessel is UNLOADING / RECEIVING vessel (strike out as appropriate)	
II. DETAILS OF THE UNLOADING FISHING VESSEL	
Name of vessel	
Vessel flag CCP	<i>CCP where the vessel is registered (3–alpha country code)</i>
IMO number	
Registration number	<i>External registration number if available, or national registration number</i>
Radio call sign	<i>International radio call sign of the vessel</i>
Vessel owner and/or company information	<i>Name, complete address, email, phone number</i>
Vessel contact information (name, address, email and phone number)	<i>Master name, nationality, address, email, phone number</i>
III. DETAILS OF THE RECEIVING FISHING VESSEL	
Name of vessel	<i>Name of the vessel</i> Name of the vessel
Vessel flag CCP	<i>CCP where the vessel is registered (3–alpha country code)</i>
IMO number	<i>IMO number of the vessel</i>
Registration number	<i>External registration number if available, or national registration number</i>
Radio call sign	<i>International radio call sign of the vessel</i>
Vessel owner / company information	<i>Last name, name / complete address / email / fax/phone number</i>
Vessel contact information	<i>Master name / nationality / address / email / fax/phone number</i>
IV. DETAILS OF TRANSSHIPMENT	
Transshipment authorisation identifier, if any	<i>Transshipment authorisation identifier, if assigned</i>
Transshipment authorisation issued by	<i>Name and email of the competent authority</i>
Transshipment authorisation validity period	<i>Start and end date UTC of the transshipment authorisation (YYYY-MON-DDT)-(YYYY-MON-DDT)</i>
Estimated date of transshipment	<i>Predicted date UTC when the master intends to conduct the transshipment (YYYY-MON-DDT)</i>
Estimated start time of transshipment	<i>Predicted time UTC when the master intends to start the transshipment (hh:mm)</i>

Estimated end time of transshipment	<i>Predicted time UTC for the ending of transshipment (hh:mm)</i>
Estimated location of transshipment	<i>Estimated position where the master intends to conduct the transshipment expressed as latitude/longitude in decimal degrees, to the nearest 0.01 degrees</i>
<i>Fishery resources to be transshipped</i>	
Quantities to be transshipped - Species - Catch area - Weight - Product form	<i>FAO 3-alpha species code/group code/scientific name RFMO/A /geographical location / FAO Statistical Area Weight in Kilograms Preservation type and presentation type</i>
Number of units	<i>Boxes / packages</i>
Net weight of a unit	<i>Weight in Kilogram</i>

ANNEX III

SIOFA TRANSSHIPMENT AT SEA LOGSHEET

The following information shall be provided by the observer to the competent authority of the vessel

I. DETAILS OF THE OBSERVER	
Observer onboard the UNLOADING / RECEIVING vessel (strike out as appropriate)	
Observer name	
Observer nationality	
Observer competent authority	name, address, email and phone number
II. DETAILS OF THE UNLOADING FISHING VESSEL	
Name of vessel	
Registration number	<i>External registration number if available, or national registration number</i>
Radio call sign	<i>International radio call sign of the vessel</i>
Vessel flag CCP	<i>CCP where the vessel is registered (3-alpha country code)</i>
IMO number	
Master's name and nationality	
III. DETAILS OF THE RECEIVING FISHING VESSEL	
Name of vessel	
Registration number	<i>External registration number if available, or national registration number</i>
Radio call sign	<i>International radio call sign of the vessel</i>
Vessel flag CCP	<i>CCP where the vessel is registered (3-alpha country code)</i>
IMO number	
Master's name and nationality	
IV. DETAILS OF TRANSSHIPMENT	
Transshipment authorisation identifier, if any	
Transshipment authorisation issued by	<i>name and email of competent authority</i>
Transshipment authorisation validity period	<i>Start and end date UTC of the transshipment authorisation (YYYY-MON-DDT)-(YYYY-MON-DDT)</i>

Date of transshipment	<i>Date UTC when the transshipment was conducted (YYYY-MON-DDT)</i>
Start time of transshipment- (UTC)	<i>Time UTC when the transshipment started (hh:mm)</i>
End time of transshipment	<i>Time UTC when the transshipment ended (hh:mm)</i>
Location of transshipment	<i>Position where the transshipment was conducted, expressed as latitude/longitude in decimal degrees, to the nearest 0.01 degrees</i>
<i>Fishery resources transshipped</i>	
- Species - Catch area - Weight - Product form	<i>FAO 3-alpha species code/groupcode/scientific name</i> <i>RFMO/A /geographical location / FAO Statistical Area</i> <i>Weight in Kilograms</i> <i>Preservation type and presentation type</i>
Number of units	<i>Boxes / packages</i>
Net weight of a unit	<i>Weight in Kilogram</i>
V. SIGNATURE	
Observer's name and signature	
Remarks or observations, if any	

ANNEX IV
SIOFA TRANSSHIPMENT AT SEA/ IN PORT DECLARATION

In port <u>Y/N</u> (strike out as appropriate)		Name of port _____		Port State _____						
At Sea <u>Y/N</u> (strike out as appropriate)		Latitude/Longitude _____		(expressed in decimal degrees, to the nearest 0.01 degrees)						
Declaring vessel is UNLOADING or RECEIVING Vessel (strike out as appropriate)										
Name of declaring vessel:			Name of other vessel:							
IMO number of declaring vessel:			IMO number of other vessel:							
Radio Call sign of declaring vessel:			Radio Call sign of other vessel:							
External identification of declaring vessel:			External identification of other vessel:							
Flag CCP of declaring vessel:-			Flag of other vessel:							
Transshipment authorization identifier:										
Transshipment authorisation issued by (name and email of competent authority):										
Start of transshipment operation		day/month/year		from (time: hour/minutes, UTC)						
End of transshipment operation		day/month/year		to (time: hour/minutes, UTC)						
Declaring master's name & nationality:		Signature:		Date:						
TRANSSHIPPED FISHERY RESSOURCES										
Species (FAO 3-alpha species code/group code/scientific name and catch area(s)/RFMO/geographical location/FAO Statistical Area)	<u>Product form (preservation & presentation) 1:</u> _____			<u>Product form (preservation & presentation) 2:</u> _____			<u>Product form (preservation & presentation) 3:</u> _____			TOTAL Weight (Kg)
	No units:	Weight per unit:	Total weight:	No. units:	Weight per unit:	Total weight:	No. units:	Weight per unit:	Total weight:	

TOTAL										

FISHERY RESSOURCES REMAINING ON BOARD AFTER TRANSSHIPMENT										
Species (FAO 3-alpha species code/group code/scientific name and catch area(s)/RFMO/geographical location/FAO Statistical Area)	Product form (preservation & presentation) 1:			Product form (preservation & presentation) 2:			Product form (preservation & presentation) 3:			TOTAL Weight (Kg)
	No units:	Weight per unit:	Total weight:	No. units:	Weight per unit:	Total weight:	No. units:	Weight per unit:	Total weight:	
TOTAL										

ANNEX V

SIOFA TRANSFER AT SEA NOTIFICATION

The following Information shall be provided to the competent authority of the declaring vessel 24 hours in advance of a transfer at sea.

I. DETAILS OF THE DECLARING VESSEL	
Name of vessel	
Registration number	
Radio call sign	<i>International radio call sign of the vessel</i>
Vessel flag CCP	<i>CCP where the vessel is registered (3-alpha country code)</i>
IMO number	
Master's name and nationality	
II. DETAILS OF THE OTHER VESSEL	
Name of vessel	
Registration number	<i>External registration number if available, or national registration number</i>
Radio call sign	<i>International radio call sign of the vessel</i>
Vessel flag	<i>Vessel flag (3-alpha country code)</i>
IMO number	
Master's name and nationality	
III. DETAILS OF TRANSFER	
Estimated date of transfer	<i>Predicted date UTC when the master intends to conduct the transfer (YYYY-MON-DDT)</i>
Estimated time of transfer	<i>Predicted time UTC when the master intends to conduct the transshipment (hh:mm)</i>
Estimated location of transfer	<i>Estimated position where the master intends to conduct the transfer expressed as latitude/longitude in decimal degrees, to the nearest 0.01 degrees</i>

Type and quantity received_ - fuel - crew - gear - supplies - other	<i>Liters</i> <i>Number</i> <i>Number</i> <i>Kilograms, tonnes, units</i>
Type and quantity unloaded - fuel - crew - gear - supplies - other	<i>Liters</i> <i>Number</i> <i>Number</i> <i>Kilograms, tonnes, units</i>
<i>IV. SIGNATURE</i>	
Name of master	

ANNEX VI

SIOFA TRANSFER AT SEA DECLARATION

The following Information shall be provided to the competent authority of the declaring vessel within 24 hours following a transfer at sea.

I. DETAILS OF THE DECLARING VESSEL	
Name of vessel	
Registration number	<i>External registration number if available, or national registration number</i>
Radio call sign	<i>International radio call sign of the vessel</i>
Vessel flag CCP	<i>CCP where the vessel is registered (3-alpha country code)</i>
IMO number	
Master's name and nationality	
II. DETAILS OF THE OTHER VESSEL	
Name of vessel	
Registration number	<i>External registration number if available, or national registration number</i>
Radio call sign	<i>International radio call sign of the vessel</i>
Vessel flag	<i>Vessel flag (3-alpha country code)</i>
IMO number	
Master's name and nationality	
III. DETAILS OF TRANSFER	
Date of transfer	<i>Date UTC when transfer was conducted (YYYY-MON-DDT)</i>
Time of transfer	<i>Time UTC when the transfer was conducted (hh:mm)</i>
Location of transfer	<i>Position where the transfer was conducted, expressed as latitude/longitude in decimal degrees, to the nearest 0.01 degrees</i>

Type and quantity received - fuel - crew - gear - supplies - other	<i>Liters</i> <i>Number</i> <i>Number</i> <i>Kilograms, tonnes, units</i>
Type and quantity unloaded - fuel - crew - gear - supplies - other	<i>Liters</i> <i>Number</i> <i>Number</i> <i>Kilograms, tonnes, units</i>
IV. SIGNATURE	
Name of master	

Conservation and Management Measure for the establishment of a SIOFA Vessel Monitoring System (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 paragraph 14 of the SIOFA Conservation and management measure for the Monitoring of Fisheries in the Agreement Area (CMM 10(2023)) 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 position reports;
 - b) “Fisheries monitoring centre” (FMC) means the authority or agency of a Flag CCP 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 shall include at least the following data, which shall be considered confidential (i.e. non-public domain data):

- i. the fishing vessel's unique vessel identifier²;
- ii. the current geographical position (latitude and longitude) of the vessel;
- iii. the date and time (UTC) of the fixing of the position of the vessel;
- iv. the vessel's speed; and
- v. 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 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 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 referred to in paragraph 3 report VMS position reports automatically while they are operating in the Agreement Area either:
 - a) to the SIOFA VMS via their FMC; or
 - b) simultaneously to both the SIOFA VMS and their FMC.
7. CCPs that choose to report under option (a) of paragraph 6 shall automatically forward VMS position reports to the SIOFA VMS without delay but not later than one hour after receipt.
8. CCPs shall ensure that VMS position reports are reported automatically³ by each of their vessels while operating in the Agreement Area:
 - a) at least once every hour as provided for in paragraph 15 of CMM 15(2025) (Management of Demersal Stocks), and;

² The unique vessel identifier shall be the ALC Unique Identifier or, for vessels reporting pursuant to paragraph 6 a) of this Measure, the vessel's International Radio Call Sign (IRCS) or International Maritime Organisation (IMO) number.

³ 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.

- b) at least once every two hours in other circumstances.
- 9. VMS position reports, sent pursuant to paragraph 6. a. shall be transmitted to the SIOFA VMS using one of the data formats in Annex 2.
- 10. Each CCP shall ensure that their FMC can automatically receive and, for those CCPs whose vessels transmit VMS position reports in accordance with paragraph 6 a), transmit VMS position reports from ALCs. Each CCP shall provide backup and recovery procedures in case of system failures.
- 11. Each CCP shall provide the Secretariat with the name, address, email, and telephone number(s) 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.
- 12. Each CCP shall ensure that in vessels flying their flag:
 - a) the ALC is not tampered with in any way;
 - b) VMS position reports 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;
 - e) the ALC is not removed from the vessel except for the purpose set out in paragraph 15; and
 - f) the satellite navigation decoder and transmitter are fully integrated and housed in the same tamper-proof physical enclosure.

Procedure for manual reporting

- 13. In the event of non-reception of four consecutive, expected programmed VMS position reports by the SIOFA VMS, 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 every four hours of the vessel's position in accordance with the reporting frequency under paragraph 8. The Flag CCP shall ensure that this manual reporting is transmitted to the Secretariat, either by the flag CCP or by the fishing vessel, with a clear distinction between reports that are manual and those that are automatic.
- 14. The Flag CCP shall ensure that the manual reports include at least the information referred to in paragraph 1(f)(i), (ii) and (iii). 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 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 position reports must have been received by the FMC to confirm that the ALC is fully operational.
17. Notwithstanding paragraphs 13 to 16, where the Flag CCP confirms that the ALC on board the vessel is functioning normally, but the SIOFA VMS is not receiving the vessel's VMS position reports, the Secretariat shall immediately take steps to resolve any technical or other issue that is preventing the SIOFA VMS from receiving the VMS position reports. If the VMS position reports cannot be retrieved by the SIOFA VMS after the issue has been resolved, the Flag CCP shall send these VMS position reports to the Secretariat via manual reporting and provide the Secretariat with any assistance as may be necessary.

Measures to prevent tampering with ALCs

18. Each 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.
19. Each CCP shall prohibit vessels flying their flag to destroy, damage, switch off, render inoperative or otherwise interfere with the ALC.
20. 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.
21. 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 position reports

22. All requests for access to VMS position reports must be made to the Secretariat by a VMS Point of Contact by electronic means using the appropriate template⁴ at least 5 working

⁴ The template shall be developed by the Secretariat and submitted to the Compliance Committee and the Meeting of the Parties for consideration.

days in advance of the intended use, except for the purposes of paragraph 23 c), and in accordance with the procedures set out in paragraphs 24 to 29.

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

- a) planning for active surveillance operations and/or boarding and inspection at sea within 72 hours of the expected start of the operations in the Agreement Area;
- b) active surveillance operations and/or boarding and inspection at sea in the Agreement Area;
- 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. Such Arrangement shall be reported to the Meeting of the Parties.

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

- a) Boarding and inspection at sea shall be undertaken in accordance with CMM 14(2021) (High Seas Boarding and Inspection Procedures), including its paragraph 7;
- b) each CCP shall only make available VMS position reports relevant to the planned or active surveillance operations and/or boarding and inspection at sea in the Agreement Area to the requesting CCP's inspectors and any other government officials for whom it is deemed necessary to access the reports;
- c) CCPs shall ensure that such inspectors and government officials keep the VMS position reports confidential and only use the reports for the purposes described in paragraph 23 a) and b);
- d) CCPs shall be allowed to retain VMS position reports provided by the Secretariat for the purposes described in paragraph 23 a) and b) until 72 hours after the time that the active operation has concluded. Except in the circumstances outlined in paragraph 24 e), CCPs shall submit a written confirmation to the Secretariat of the deletion of the VMS position reports immediately after the 72 hours' period;
- e) CCPs' inspectors and government officials authorities shall be allowed to retain VMS position reports provided by the Secretariat for the purposes described in paragraph 23 a) and b) for longer than the periods specified in paragraph 24 d) 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. CCPs shall inform the Secretariat of the purposes and expected timing of the additional period of retention before the expiration of the initial period and the Secretariat shall promptly notify the concerned Flag CCP of the additional period. CCPs shall submit a written confirmation to the Secretariat of the deletion of the VMS position reports as soon as the purposes have been achieved or immediately after the additional period of retention has expired, whichever is earlier.

25. For the purpose of paragraph 23 a), CCPs requesting VMS position reports shall provide the Secretariat the geographic area of the planned surveillance and/or boarding and inspection activity. In this case, the Secretariat shall provide the most recent available VMS position reports for the notified geographic area at a specified point in time no more than 72 hours prior to the commencement of each surveillance and/or boarding and inspection activity. In the event that the planned surveillance and/or boarding and inspection activity does not proceed, the CCP shall notify the Secretariat, delete the VMS position reports, and confirm their deletion to the Secretariat in writing, without delay. Regardless of whether the planned surveillance and/or boarding and inspection activity were conducted or not, the Secretariat shall notify the Flag CCP that the VMS position reports were provided to the CCP no later than 7 days after the VMS position report provision, and, if applicable, that they have received confirmation that the reports have been deleted.
26. For the purpose of paragraph 23 b), the Secretariat shall provide VMS position reports from the previous 10 days, for vessels detected during the active surveillance and/or boarding and inspection activity by a CCP, and VMS position reports for all vessels within 300 n miles of the surveillance and/or boarding and inspection activity location. The Secretariat shall provide regular updates of VMS position reports to the CCP for the duration of the active surveillance and/or boarding and inspection activity. CCPs conducting the active surveillance and/or boarding and 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 boarding and inspection activity. This information shall be made available without undue delay after the surveillance and/or boarding and inspection activities are complete. The Secretariat shall notify the Flag CCP that the VMS position reports were provided to the CCP no later than 7 days after the active surveillance and/or boarding and inspection activity has ended, and, if applicable, that they have received confirmation that the reports have been deleted.
27. For the purpose of paragraph 23 c), upon the request of a CCP, the Secretariat shall provide VMS position reports 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 position reports to the requesting CCP, and the protection and deletion of those reports.
28. Other than the purposes set out in paragraph 23, the Secretariat shall only provide VMS position reports to a requesting CCP or to the SIOFA Scientific Committee and its Working Groups where the VMS position reports relate to vessels flagged to CCPs that have provided prior written consent through their VMS Point of Contact for the reports to be shared. Such VMS position reports shall be deleted as soon as they have served their intended purpose, and the deletion of the reports shall be confirmed to the Secretariat in writing without delay.
29. CCPs may request VMS position reports for their own flagged vessels from the Secretariat.

Closed areas and interim protected areas

30. If VMS position reports received by the Secretariat indicate the presence of a fishing vessel in a closed area, or of a fishing vessel excluding those using line and trap methods in an interim protected area, as defined in CMM 18(2025) (Benthic Fishery Closures), 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

31. All CCPs, the Secretariat, the SIOFA Scientific Committee and its Working Groups, and any SIOFA VMS service provider shall ensure the secure and confidential treatment of VMS data in their respective electronic data processing facilities in accordance with the requirements of CMM 02(2025) (Data Standards), CMM 03(2025) (Data Confidentiality) and Annex 3, in particular where the processing involves transmission over a network, including by using secure internet protocols to ensure secure communications and taking all necessary measures to protect VMS data against accidental or unlawful destruction, loss, alteration, unauthorised disclosure or access, and against all unauthorised forms of processing.

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 5 to 14 of CMM 10(2023) (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 CMM, including on the performance of the SIOFA VMS service provider.
35. After two years of implementation of the SIOFA VMS, 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 position reports referred to in paragraph 1(f) of this CMM.
2. The position reports 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 the position reports referred to in paragraph 1(f) recorded at least every fifteen minutes.
4. ALCs fitted to fishing vessels must be tamper-proof so as to preserve the security and integrity of the position reports 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 unauthorised persons to alter any of the VMS position reports 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 ($2 \times \text{Distance Root Mean Squared}$; 2DRMS) i.e., 99 per cent of the positions must be within this range.
10. The satellite navigation decoder and transmitter shall be fully integrated and housed in the same tamper-proof physical enclosure.

Annex 2
Data formats for transmission of VMS position reports

A. North Atlantic Format (NAF)

1. VMS position reports sent in NAF format shall be transmitted using one of the following application layers (secured connection):
 - (i) Hypertext Transfer Protocol Secure (HTTPS);
 - (ii) File Transfer Protocol (FTP) with Transport Layer Security (TLS) (FTPS);
 - (iii) Email.
2. VMS position reports sent in NAF format shall contain, at minimum, the [mandatory](#) data elements in Table 1.

Table 1: NAF message data elements

Data Element	Field Code	Definition	Mandatory / Optional	Contents
Start Record	SR	Defines the start of the message structure.	M	No Data
Address	AD	Indicates the destination. Provider and Secretariat to define code for SIOFA VMS	M	3-Alpha code
From	FR	3-alpha code describing the country which FMC is submitting the report.	M	3-Alpha code
Sequence Number	SQ	Message Sequence Number	M	0-999999
IMO Number	IM	IMO ship identification number	M ⁵	IMO ship identification number
Internal Reference Number*	IR	Unique Number attributed by the flag state	O	3-Alpha code. 0-999999999
Type of Message ⁶	TM	Letter code of the type of message	M	POS = position report, MAN = manual report, ENT = entry report, EXI = exit report
Radio Call Sign (IRCS)	RC	Vessel detail: international radio call sign of the vessel	M ⁷	IRCS
Latitude (decimal)	LT	Latitude expressed in degrees and decimals (WGS-84)	M	+(-)DD.ddd
Longitude (decimal)	LG	Longitude expressed in degrees and decimals (WGS-84)	M	+(-)DD.ddd
Vessel Speed	SP	Speed of the vessel	M	Knots * 10

⁵ Where applicable, in accordance with footnote 2 of this CMM and with paragraph 2.d. of CMM 07(2025) (Vessel Authorisation).

⁶ ENT and EXI shall be submitted in accordance with [paragraph 15bis. of CMM 10 \(2023\)](#)

⁷ Where applicable, in accordance with footnote 2 of this CMM and with paragraph 2.c. of CMM 07(2025) (Vessel Authorisation).

Vessel Course	CO	Heading of the vessel in degrees	M	1-360
Flag State	FS	State of registration of the vessel	M	3-Alpha code
Date	DA	Date of reported event	M	YYYYMMDD
Time	TI	Time of reported event	M	HHMM
End of Record	ER	Indicates the end of the message/report		No Data

3. VMS position reports sent in NAF format shall be structured as follows:

- (i) double slash (//) and the characters 'SR' indicate the start of a message;
- (ii) a double slash (//) and field code indicate the start of a data element;
- (iii) a single slash (/) separates the field code and the data;
- (iv) pairs of data are separated by a space;
- (v) the characters 'ER' and a double slash (//) indicate the end of a record.

B. Fisheries Language for Universal Exchange (UN/FLUX)

1. VMS position reports sent in UN/FLUX format shall contain, at minimum, the mandatory data elements in Table 2.

Table 2: UN/FLUX data elements

Data Element	Mandatory/ optional	Comments
Addressee	M	Message detail — Addressee Alpha-3 country code Note: Part of the FLUX TL envelope
From	M	Message detail — Sender Alpha-3 country code
Unique message identifier	M	UUID according to RFC 4122 defined by IETF
Date and time of transmission	M	Date and time when the message was created in UTC, using the format YYYY-MM-DDThh:mm:ss[.000000]Z ⁸
Flag State	M	Message detail – Flag of flag State, Alpha-3 country code
Type of message	M	Message detail – Type of message The following codes are to be used: ENTRY: first position recorded after entering the fishing zone) EXIT: first message recorded after leaving the fishing zone POS: positions transmitted while being in the fishing zone MANUAL: position transmitted manually

⁸ YYYY= year; MM= month, including leading 0 where month number is less than 10; DD= day of the month including leading 0 where day number is less than 10; T= the letter T to indicate the part of the time section; H24= hours of the day expressed with 2 digits using the 24-hour notation; Ml=minutes expressed as 2 digits; SS=seconds expressed as 2 digits; [.000000]= optionally fractions of seconds may be included, not including the brackets; Z= time zone, which must be Z (i.e. UTC).

Radio call sign	M	Vessel detail – Vessel international radio call sign (IRCS)
CCP internal reference number	O	Vessel detail – Unique CCP vessel identifier
Unique Vessel Identifier (UVI)	O	Vessel detail – IMO number
External registration number	O	Vessel detail – Number on side of vessel
Latitude	M	Vessel position detail – Position in degrees and decimal degrees DD.ddd (WGS-84) Positive coordinates for positions north of the Equator; Negative coordinates for positions south of the Equator.
Longitude	M	Vessel position detail – Position in degrees and decimals DD.ddd (WGS-84) Positive coordinates east of the Greenwich meridian; Negative coordinates west of the Greenwich meridian.
Course	M	Vessel course 360° scale
Speed	M	Vessel speed in knots
Date and time	M	Vessel position detail – date and time of recording of the position in UTC, using the format YYYY-MM-DDThh:mm:ss[.000000]Z ⁹

⁹ YYYY= year; MM= month, including leading 0 where month number is less than 10; DD= day of the month including leading 0 where day number is less than 10; T= the letter T to indicate the part of the time section; H24= hours of the day expressed with 2 digits using the 24-hour notation; Ml=minutes expressed as 2 digits; SS=seconds expressed as 2 digits; [.000000]= optionally fractions of seconds may be included, not including the brackets; Z= time zone, which must be Z (ie. UTC)

Annex 3
Data Confidentiality and Security Provisions

1. The following security measures shall be mandatory for the SIOFA VMS:
 - a. System Access Control: The Secretariat shall ensure that the system can withstand break-in attempts from unauthorised persons.
 - b. Authenticity and data access control: The Secretariat shall limit access of Secretariat staff to the data necessary for them to carry out their tasks via a flexible user identification and password mechanism.
 - c. Communication Security: VMS position reports shall be securely communicated.
 - d. Data Security: All VMS data received by the Secretariat shall be securely stored for a predetermined time and shall not be tampered with.
 - e. Security Procedures: The Secretariat shall implement an Information System Security Policy adopted by the Meeting of the Parties to ensure proper access to the system (hardware and software), system administration and maintenance, backup and general usage of the system.
2. The SIOFA VMS shall have the following mandatory access control features:
 - a. Stringent password and authentication system, attributed to each designated user. The user shall only have access to functions and data that they are designated to have access to.
 - b. All access to physical computer systems shall be controlled by the Secretariat.
 - c. The system shall automatically record all events for analysis and detection of potential security breaches.
 - d. Time-based access control: Access to the system can be specified in terms of times-of-day and days of the week that each user is allowed to log into the system.
 - e. Terminal access control: the system shall specify for each workstation which user(s) is/are allowed to access it.
3. Communication between CCPs, the SIOFA VMS Service Provider, and the Secretariat shall use secure internet protocols. The exchange of VMS position reports may also require the use of digital certificates that correctly identify and validate the party submitting the VMS position reports.
4. The Secretariat shall only provide VMS position reports to the email address specified by the requesting entity at the time the data is requested.
5. The Secretariat shall periodically review access to and the logs of the SIOFA VMS software and ensure the proper maintenance of system security.

Standards, Specifications and Procedures (SSPs) for the SIOFA VMS

SIOFA | APSOI

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



Southern Indian Ocean Fisheries Agreement (SIOFA)

13 Rue de Marseille

97420 Le Port

La Réunion

secretariat@siofa.org

<http://www.siofa.org>

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Background

Vessel Monitoring Systems (VMS) are satellite-based monitoring systems that enable flag States and regional fisheries management organisations (RFMOs) to track and monitor the activities of fishing vessels in a defined geographical area through the transmission of position data by fishing vessels at regular intervals. They are a cornerstone of monitoring control and surveillance (MCS) programmes at national and international levels and a key instrument in the fight against illegal, unreported and unregulated (IUU) fishing.

Article 6(1)(h) of the Southern Indian Ocean Fisheries Agreement (SIOFA) requires SIOFA to develop rules and procedures for the monitoring, control and surveillance of fishing activities to ensure compliance with SIOFA conservation and management measures (CMM), including a system of verification incorporating vessel monitoring and observation of vessels operating in the SIOFA Area. [CMM 10 \(2025\) \(Monitoring\)](#) also requires SIOFA to develop specifications and propose rules and procedures for establishing a SIOFA VMS. While flag Contracting Parties, Participating Fishing Entities and Cooperating non-Contracting Parties (collectively: CCPs) are required to track and monitor their vessels' activities using VMS, SIOFA does not currently operate a VMS system. In this respect, it is behind other RFMOs that have installed and operate a VMS.

To close this gap, the 10th Meeting of the Parties to the SIOFA (MoP10) adopted [CMM 16 \(2025\) \(Vessel Monitoring System\)](#) setting out the framework of the SIOFA VMS covering all critical aspects, including the scope of application, definitions, nature and specifications of the VMS, prevention of tampering and actions in case of suspected breach, use and release of VMS data requiring / not requiring the consent of CCPs, closed and interim protected areas, as well as data security and confidentiality. However, this framework needs to be further completed through the development of Standards, Specifications and Procedures (SSPs) as required by paragraph 9 of CMM 16 (2025) prior to the entry into operation of the SIOFA VMS.

Following intersessional work by the VMS-WG, the 11th Meeting of the Parties adopted these SSPs, and the 12th Meeting of the Parties revised them.

The SSPs assume that Cooperating Non-Contracting Parties (CNCs) will be treated similarly as CPs and PFEs, recalling that CNCs do not currently contribute to the budget, which may be impacted by the implementation of the SIOFA VMS.

For the purpose of this document, all terms used shall have the same meaning as those in CMM 16 (2025) unless otherwise specified.

1. Purpose

1. The purpose of these Standards, Specifications and Procedures (SSPs) is to complement measures established under CMM 16 (2025) so as to achieve the objectives of the CMM, which are 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 Conservation and Management Measures (CMMs).

2. Application

2. These SSPs shall apply to all fishing vessels flying the flag of a Contracting Party, Participating Fishing Entity or Cooperating non-Contracting Party (collectively CCPs), that are entered onto the SIOFA Record of Authorised Vessels (RAV) and operating within the Agreement Area (Area), as defined in Article 3 of the Agreement.
3. These SSPs do not prejudice the right of CCPs to apply additional or more stringent measures to vessels flying their flag.

3. General Provisions

4. For the purposes of these SSPs, the term “VMS data” shall refer to all data associated with the SIOFA VMS, including VMS position reports and Automatic location communicator (ALC) details.
5. CCPs shall:
 - a. For vessels entered onto the SIOFA Record of Authorized Vessels (RAV) prior to the entry into force of CMM 16 (2025), provide ALC details specified in paragraph 6 for each vessel registered on the SIOFA RAV by 31 December 2025 at the latest.
 - b. For vessels to be entered onto the SIOFA RAV after the entry into operation of the SIOFA VMS, provide ALC details specified in paragraph 6 at the time of the submission of information required by [CMM 07 \(2025\) \(Vessel Authorization\)](#).¹
6. CCPs shall provide the following ALC details:
 - a. Model and Brand
 - b. ALC Unique Identifier
 - c. Service Provider (Inmarsat/Iridium/ARGOS etc.)
7. For the purposes of CMM 16 (2025), the term Unique Vessel Identifier (UVI) shall have the following meaning:
 - a) For CCPs transmitting VMS position reports pursuant to paragraph 6 a), of CMM 16 (2025) the UVI shall be the International Radio Call Sign (IRCS), the International Maritime Organization (IMO) Number or the ALC Unique Identifier.
 - b) For CCPs transmitting VMS position reports pursuant to paragraph 6 b) of CMM 16 (2025) the UVI shall be the ALC Unique Identifier.

¹ Conservation and Management Measure for Vessel Authorisation and Notification to Fish.

4. Methods to ensure ALCs comply with SIOFA Standards

Explanatory Notes

Paragraph 12 of CMM 16 (2025) sets out the general standards by which ALCs are expected to be installed and operated. Paragraphs 18 and 19 expand on the requirements to have tamper-proof ALCs while also prohibiting the tampering of ALCs. The minimum standards for ALCs are further described in Annex 1 of CMM 16 (2025).

This section of the SSPs provides for the possibility of the MoP adopting a list of approved ALCs and clarifies that it is the responsibility of flag CCPs to ensure that ALCs installed on their vessels comply with SIOFA specifications and standards.

8. The MoP may adopt a list of approved ALCs to be used by vessels entered onto the SIOFA Record of Authorized Vessels (RAV), taking into account lists approved by existing regional and subregional VMS programs and by CCPs.
9. CCPs shall be responsible for ensuring that the ALCs on board vessels flying their flag and entered onto the SIOFA RAV meet the specifications and standards set out in paragraph 12 and Annex 1 of CMM 16 (2025). To this end, CCPs are encouraged to conduct periodic audits of a representative sample of ALCs. Any findings shall be reported as part of CCPs' annual compliance assessment reporting under paragraph 12 of CMM 11 (2020) (Compliance Monitoring Scheme).

5. Rules for Polling and Programming for Vessels Reporting to the Secretariat in accordance with Paragraph 6 b)

Explanatory Notes

Paragraph 6 b) of CMM 16 (2025) allows for simultaneously reporting VMS position reports automatically to the Secretariat. In this regard, there may be a need to interact with the ALCs to program its automatic reporting and to change its reporting frequency based on location (programming) and also to "query" an unscheduled position report (polling). It should be noted that while CMM 16 (2025) does not provide for polling of ALCs, it may be required during diagnosis when the good reception of position reports cannot be achieved. Other cases may be to stop the reporting temporarily or indefinitely based on scenarios, such as the deletion of the vessels from the SIOFA RAV, repairs, flagging and decommissioning of fishing vessels.

As such, these SSPs suggest procedures for the same.

10. CCPs shall ensure that the ALCs on board of vessels flying their flag are configured to comply with paragraph 8 of CMM 16 (2025) and, where applicable, shall send programming commands.

11. CCPs which opt for simultaneous reporting under paragraph 6. b) of CMM 16 (2025) shall ensure that their ALC service provider is capable of providing simultaneous reporting to multiple destinations (receivers) and shall bear the cost for reporting to their FMC and to the Secretariat as well as for programming command sending. The Secretariat (SIOFA VMS) shall receive the "simultaneously reporting" in accordance with the protocol provided by the CCP's service provider.

6. Responsibilities of the Secretariat

Explanatory Notes

These SSPs set out the responsibilities of the Secretariat in administering the SIOFA VMS.

12. The Secretariat shall:

- a. ensure that data, once received by the SIOFA VMS, are not altered, manipulated, copied or interfered with in any way, and that the data is only used in accordance with CMM 03 (2025), and with any such additional data security and confidentiality rules adopted by the Meeting of Parties for the purposes of the SIOFA VMS.
- b. provide a stable, reliable, fully maintained and supported SIOFA VMS that is in compliance with CMM 03 (2025), and any additional data security and confidentiality rules adopted by the Meeting of Parties.
- c. utilise the SIOFA VMS in a manner consistent with the Agreement, CMMs and these SSPs.
- d. compile and report annually to the MoP, through the Compliance Committee, an overview of potential issues identified by vessel and flag with regard to their compliance with CMM 2016 (2025) and these SSPs.
- e. monitor and report annually to the Compliance Committee on the implementation and performance of the SIOFA VMS and its application and, as necessary, make recommendations for improvements or modifications to the system and these SSPs established to support it.

7. Data format for data transmission

Explanatory Notes

Paragraph 6 a) of CMM 16 (2025) allows CCPs to choose to report VMS positions automatically to the Secretariat via their FMC. However, these provisions do not provide for the data format and standards that will allow these transfers to take place.

There are at least two globally accepted data formats for data exchange of fisheries information. These are the North Atlantic Format (NAF) and the Fisheries Language for Universal Exchange (UN/FLUX). NAF is recognised as an older format with some limitations, therefore there are ongoing efforts to improve NAF or develop new standards for the exchange of fisheries information altogether.

UN/FLUX is one such proposed standard that has already gained recognition by the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), with more states and regional organisations adopting its use for VMS data exchange, among others. The most significant advantage of UN/FLUX over NAF is its ability to cater to other data types, such as inspection reports, catch and effort reporting, etc. However, the uptake of UN/FLUX is still relatively low, and implementation may present challenges to the Secretariat and CCPs.

Noting the above, the SSPs recognise the two data formats and provide standards to enable CCPs to exchange data using those formats.

13. VMS position reports sent to the SIOFA VMS in accordance with paragraph 6 a) of CMM 16 (2025) shall be transferred using the following data formats;
 - a. The North Atlantic Format (NAF) (Annex 1)
 - or
 - b. Fisheries Language for Universal Exchange (UN/FLUX) (Annex 2)
14. VMS position reports sent using NAF shall follow the structure of NAF messages provided in Annex 1, and shall be transferred using one of the following application layers (secured connection):
 - a. Hypertext Transfer Protocol Secure (HTTPS)
 - b. File Transfer Protocol (FTP) with Transport Layer Security (TLS) (FTPS)
 - c. Email
15. VMS position reports sent using FLUX shall adhere to the specifications of the Flux P1000-1 (General Principles) and Flux P1000-7 (Vessel Position Domain), as described in Annex 2.²

² <https://unece.org/trade/uncefact/unflux>

8. Data Confidentiality and Security Provisions

Explanatory Notes

These SSPs covers the Confidentiality and Security procedures required to ensure the secure and confidential treatment of VMS data being exchanged between CCPs and the Secretariat.

16. CCPs and the Secretariat shall only use VMS data for the purposes specified in CMM 16 (2025).
17. The Secretariat shall maintain a database of the ALC details attributed to all vessels entered onto the SIOFA RAV. ALC details shall be confidential data (i.e. non public domain data) but shall be provided to CCPs' VMS points of contact upon request pursuant to paragraphs 23 to 28 of CMM 16 (2025).
18. The Secretariat shall only provide VMS position reports to the contact point designated pursuant to Paragraph 11 of CMM 16 (2025).
19. CCPs shall immediately delete VMS position reports received for the purposes set out in paragraph 28 of CMM 16 (2025) once the VMS position reports have served their intended purpose, and confirm their deletion to the Secretariat in writing without delay.
20. CCPs, the Secretariat, the SIOFA Scientific Committee and its Working Groups, and any SIOFA VMS service provider shall take all necessary measures to protect VMS data against accidental or unlawful destruction, loss, alteration, unauthorised disclosure or access, and against all unauthorised forms of processing.
21. The following security measures shall be mandatory for the SIOFA VMS:
 - a. System Access Control: The Secretariat shall ensure that the system can withstand break-in attempts from unauthorised persons.
 - b. Authenticity and data access control: The Secretariat shall ensure that the system is able to limit access of Secretariat staff only to the data necessary for them to carry out their tasks via a flexible user identification and password mechanism.
 - c. Communication Security: VMS position reports shall be securely communicated.
 - d. Data Security: All VMS data received by the Secretariat shall be securely stored for a predetermined time and shall not be tampered with.
 - e. Security Procedures: The Secretariat shall implement an Information System Security Policy adopted by the Meeting of the Parties to ensure proper access to the system (hardware and software), system administration and maintenance, backup and general usage of the system.
22. The system shall have the following mandatory access control features:
 - a. Stringent password and authentication system, attributed to each designated user. The user shall only have access to functions and data that they are designated to have access to;
 - b. All access to physical computer systems shall be controlled by the Secretariat;

- c. The system shall automatically record all events for analysis and detection of potential security breaches;
 - d. Time-based access control: Access to the system can be specified in terms of times-of-day and days of the week that each user is allowed to log into the system;
 - e. Terminal access control: the system shall specify for each workstation which user(s) are allowed to access it.
23. Communication between CCPs, the SIOFA VMS Service Provider, and the Secretariat shall use secure internet protocols. The exchange of VMS position reports may also require the use of digital certificates that correctly identify and validate the party submitting the VMS position reports.
24. The Secretariat shall periodically review access to and the logs of the VMS software and ensure the proper maintenance of system security.

Annex 1: Description of the North Atlantic Format (NAF)³

Data Elements of NAF Messages

VMS position reports sent in ~~All NAF Messages-format sent to the SIOFA VMS~~ shall contain, at minimum, mandatory data elements in the following table: the information required in paragraph 1.f) of CMM 16 (2025). ~~The general structure and data elements are as below~~

Data Element	Field Code	Definition	Mandatory / Optional	Contents
Start Record	SR	Defines the start of the message structure.	<u>M</u>	No Data
Address	AD	Indicates the destination. Provider and Secretariat to define code for SIOFA VMS	<u>M</u>	3-Alpha code
From	FR	3-alpha code describing the country which FMC is submitting the report.	<u>M</u>	3-Alpha code
Sequence Number	SQ	Message Sequence Number	<u>M</u>	0-999999
<u>IMO Number</u>	<u>IM</u>	<u>IMO ship identification number</u>	<u>M⁴</u>	<u>IMO ship identification number</u>
Internal Reference Number [*]	IR	Unique Number attributed by the flag state	<u>O</u>	3-Alpha code. 0-999999999
Type of Message ⁵	TM	Letter code of the type of message	<u>M</u>	POS = position report, MAN = manual report, ENT = entry report, EXI = exit report
Radio Call Sign (IRCS)	RC	Vessel detail: international radio call sign of the vessel	<u>M⁶</u>	IRCS
Latitude (decimal)	LT	Latitude expressed in degrees and decimals (WGS-84)	<u>M</u>	+(-)DD.ddd
Longitude (decimal)	LG	Longitude expressed in degrees and decimals (WGS-84)	<u>M</u>	+(-)DD.ddd
Vessel Speed	SP	Speed of the vessel	<u>M</u>	Knots * 10
Vessel Course	CO	Heading of the vessel in degrees	<u>M</u>	1-360
Flag State	FS	State of registration of the vessel.	<u>M</u>	3-Alpha code

³ <https://www.naf-format.org/index.htm>

^{*} Submission of IR is optional

⁴ Where applicable, in accordance with footnote 2 of CMM 16 (2025) and with paragraph 2.d. of CMM 07(2025) (Vessel Authorisation).

⁵ ENT and EXI shall be submitted in accordance with **paragraph 15 bis. of CMM 10 (2023)**

⁶ Where applicable, in accordance with footnote 2 of this CMM and with paragraph 2.c. of CMM 07(2025) (Vessel Authorisation).

Date	DA	Date of reported event	M	YYYYMMDD
Time	TI	Time of reported event	M	HHMM
End of Record	ER	Indicates the end of the message/report	M	No Data

Structure of the position report

Each data transmission shall be structured as follows:

- double slash (//) and the characters 'SR' indicate the start of a message,
- a double slash (//) and field code indicate the start of a data element,
- a single slash (/) separates the field code and the data,
- pairs of data are separated by space,
- the characters 'ER' and a double slash (//) indicate the end of a record.

Annex 2: Description of the Fisheries Language for Universal Exchange (UN/FLUX)

2 I: UN/FLUX format : mandatory data to be transmitted in position reports

Data	Mandatory/optional	Comments
Addressee	M	Message detail — Addressee Alpha-3 country code Note: Part of the FLUX TL envelope
From	M	Message detail — Sender Alpha-3 country code
Unique message identifier	M	UUID according to RFC 4122 defined by IETF
Date and time of transmission	M	Date and time when the message was created in UTC, using the format YYYY-MM-DDThh:mm:ss[.000000]Z ⁷
Flag State	M	Message detail – Flag of flag State, Alpha-3 country code
Type of message	M	Message detail – Type of message The following codes are to be used: ENTRY: first position recorded after entering the fishing zone) EXIT: first message recorded after leaving the fishing zone POS: positions transmitted while being in the fishing zone) MANUAL: position transmitted manually
Radio call sign	M	Vessel detail – Vessel international radio call sign (IRCS)
CCP internal reference number	O	Vessel detail – Unique CCP vessel identifier
Unique Vessel Identifier (UVI)	O	Vessel detail – IMO number

⁷ YYYY= year; MM= month, including leading 0 where month number is less than 10; DD= day of the month including leading 0 where day number is less than 10; T= the letter T to indicate the part of the time section; H24= hours of the day expressed with 2 digits using the 24-hour notation; MI=minutes expressed as 2 digits; SS=seconds expressed as 2 digits; [.000000]= optionally fractions of seconds may be included, not including the brackets; Z= time zone, which must be Z (i.e. UTC)

External registration number	O	Vessel detail – Number on side of vessel
Latitude	M	Vessel position detail – Position in degrees and decimal degrees DD.ddd (WGS-84) Positive coordinates for positions north of the Equator; Negative coordinates for positions south of the Equator.
Longitude	M	Vessel position detail – Position in degrees and decimals DD.ddd (WGS-84) Positive coordinates east of the Greenwich meridian; Negative coordinates west of the Greenwich meridian.
Course	M	Vessel course 360° scale
Speed	M	Vessel speed in knots
Date and time	M	Vessel position detail – date and time of recording of the position in UTC, using the format YYYY-MM-DDThh:mm:ss[.000000]Z ⁸

⁸ YYYY= year; MM= month, including leading 0 where month number is less than 10; DD= day of the month including leading 0 where day number is less than 10; T= the letter T to indicate the part of the time section; H24= hours of the day expressed with 2 digits using the 24-hour notation; MI=minutes expressed as 2 digits; SS=seconds expressed as 2 digits; [.000000]= optionally fractions of seconds may be included, not including the brackets; Z= time zone, which must be Z (ie. UTC)

2.II FLUX Vessel Position Implementation Document

1. INTRODUCTION

This document aims to describe the implementation of Vessel Position in the context of the SIOFA VMS. Submissions of reports will be done through the FLUX Transportation Layer.

2. REFERENCES

UN/CEFACT P1000 FLUX Standard v1.0 ²:

- FLUX BRS: P1000 – 1; General principles (version 2.1).
- FLUX BRS: P1000 – 7; Vessel Position domain (version 2.0).

UN/CEFACT FLUXVesselPositionMessage_4p0.xsd

3. SCOPE

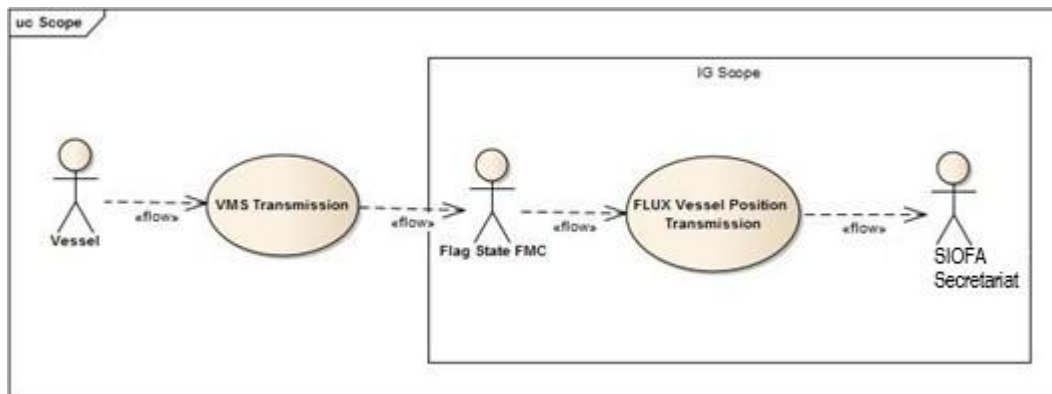


Figure 1: Implementing Guide Scope diagram

As shown on Figure 1, even if the message is provided by a Vessel, the scope of this document is limited to the transmission from a Flag CCP FMC, which has received the Vessel Position message, coming in most cases from aa ALC to the SIOFA Secretariat.

4. PROCEDURES

4.1. General principles

The following activity diagram describes the normal procedure defined for the submission of every Vessel Position Messages sent between the FMC of a Flag CCP to the SIOFA Secretariat:

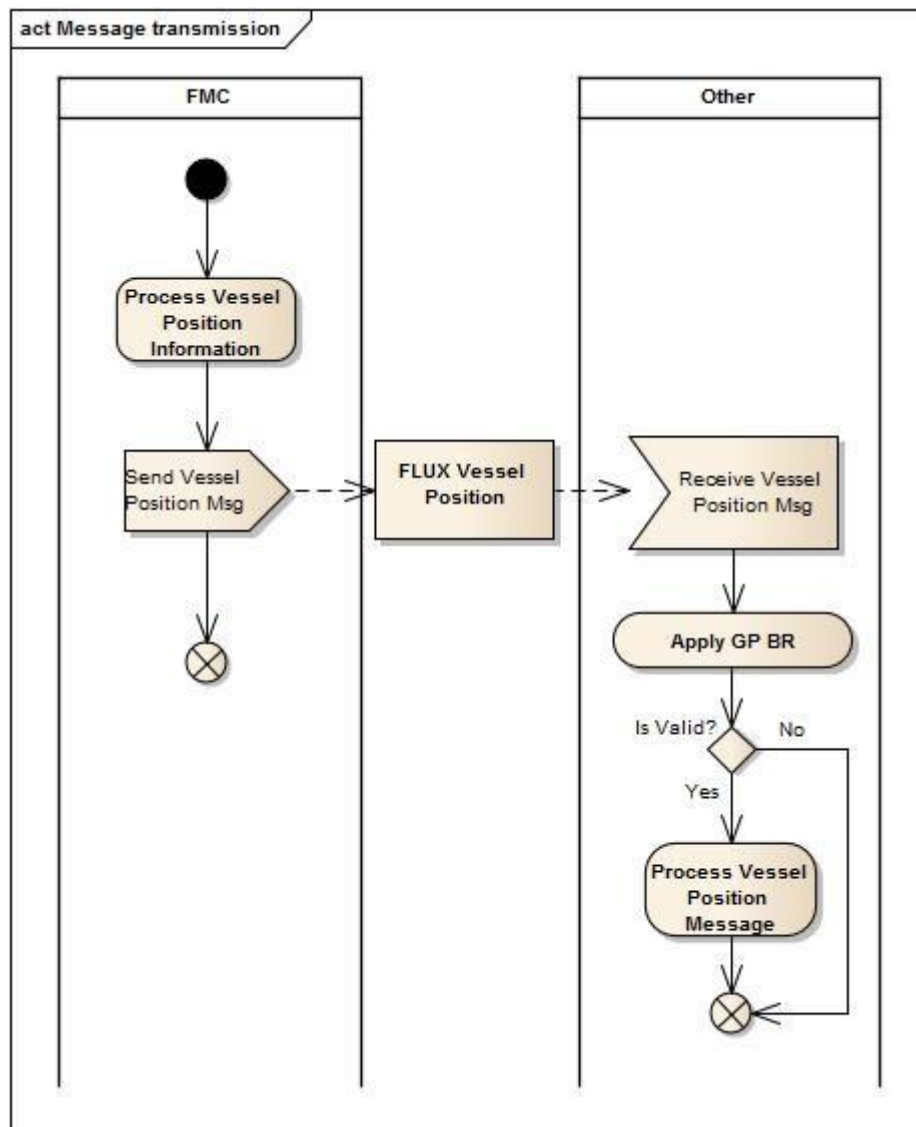


Figure 2: Message Transmission activity diagram

As shown in the diagram, Apply General Principles (GP) Business Rules (BR) is a validation process which does:

1. XML Validation level: Based on the definition in the XSD, the parser validates the structure and cardinality as well as compliance for mandatory elements of the XML provided.⁹

⁹ In general, only XSD element are defined as mandatory. Element attributes and facets remain optional.

Note: Comparing XML vs. XSD defined by the namespace can make the parser generating error having technical information when the basic information requested by General Principles is not correct.

2. Business Rules Validation level: a Business Rules Engine validates the content of XML according to the General Principles Business Rules definition.¹⁰

¹⁰ Some specific business rules of this domain can withdraw or overwrite the definition of FLUX General Principles

5. DATA MODEL (XSD) IMPLEMENTATION

The implementation of the Vessel Position Data Model applies the following general constraints at the level of XSD Element attributes:

- (1) For Code & Identifier DataType: *listID* or *schemeID* attribute must be provided if it is not specifically defined in the definition of the element;
- (2) For DateTime DataType: only *udt:DateTime* (of type *xsd:dateTime*) choice is used. The date and time must be expressed in UTC, unless explicitly mentioned otherwise. The format shall be *YYYY-MM-DDThh:mm:ss[.000000]Z*;¹¹

The following diagram describes the Vessel Position Data Model used for the implementation of transmission of *VesselPositionMessage*:

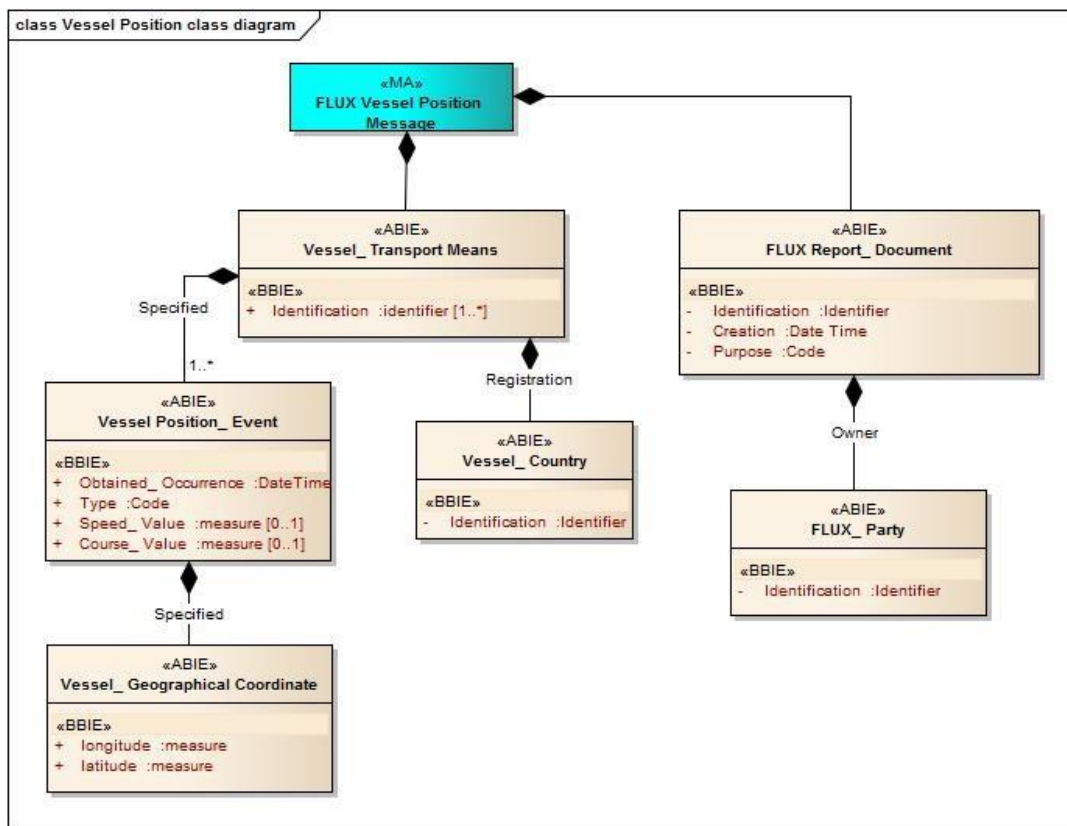


Figure 3: Vessel Position Message Data Model

¹¹ YYYY= year; MM= month, including leading 0 where month number is less than 10; DD= day of the month including leading 0 where day number is less than 10; T= the letter T to indicate the part of the time section; H24= hours of the day expressed with 2 digits using the 24-hour notation; M=minutes expressed as 2 digits; SS=seconds expressed as 2 digits; [.000000]= optionally fractions of seconds may be included up to 6 digits, not including the brackets; Z= time zone, which must be Z (ie. UTC)

The table below describes for each fields defined in the Data Model (XSD) the values that can be used:

Entity/Field Name	DataType	Cardinality		Description	Remarks
		Min	Max		
FLUX Report_Document		1	1	The document details for this FLUX vessel position message.	FLUX General Principles Entity
Identification	Identifier	1	1	The unique identification of the FLUX vessel position message	A UUID as defined in the RFC 4122
Creation	DateTime	1	1	The date, time, date time of the creation of the FLUX vessel position message.	A UTC date time. Must be according to the definition provided in 6(2)
Purpose	Code	1	1	The code specifying the purpose of this FLUX report document, such as original, cancellation or replace.	Attribute <i>listID</i> = FLUX_GP_PURPOSE Reference: EDIFACT Code List 1225 (qDT UN02000125 - Message Function_Code). <u>Restriction:</u> only value 9 is used in this context.
Owner. FLUX_Party	Assoc.	1	1	Entity used to provide information on an individual, a group, or a body having a role in a Fisheries Language for Universal eXchange (FLUX) business function. Party has a legal connotation in a business transaction.	FLUX General Principles Entity
Identification	Identifier	1	1	An identifier of this FLUX party.	Attribute <i>listID</i> = TERRITORY alpha-3 code of the country owning this report. e.g.: SWE

Entity/Field Name	DataType	Cardinality		Description	Remarks
		Min	Max		
Vessel_ Transport Means		1	1	Entity used to provide the identification and characteristic information of a ship or boat.	
Identification	Identifier	1	*	An identifier for this transport means vessel UVI, as defined by the SIOFA VMS SSPs,	Attribute <i>schemeID</i> must be provided with a value from list = FLUX_VESSEL_ID_TY PE
Registration. Vessel_ Country	Assoc.	1	1	The country of registration of this transport means vessel.	
Identification	Identifier	1	1	The identifier for this vessel country.	Use Code Countries code list in MDR. <i>listID</i> = TERRITORY alpha-3 code of the country where the vessel is registered (flag state).
Specified. Vessel	Assoc.	1	*	The general information of the VMS message.	More than one position can be provided.

Entity/Field Name	DataType	Cardinality		Description	Remarks
		Min	Max		
Position_ Event					
Obtained_ Occurrence	DateTime	1	1	The date and time when the position of the vessel was taken by the vessel's navigation equipment.	The UTC date time when the position was obtained by the vessel navigation equipment, transmitted by the VMS system on-board of the vessel. Must be according to the definition provided in 6(2)
Type	Code	1	1	The code specifying the type of vessel position event.	Attribute <i>listID</i> must be provided with a value from <i>list</i> = FLUX_VESSEL_POSITION_T Y PE Example of values are: "ENTRY","EXIT","POS","MANUAL".
Speed_ Value	Measure	0	1	The measure of speed of the vessel for this vessel position event.	Mandatory. In knots. Maximum 2 significant decimals. Optional in case the following conditions are all met: - TypeCode= EXIT - Message addressed to Third party or RFMO - The element is defined as optional in the agreement with the Third Party or RFMO
Course_ Value	Measure	0	1	The measure of course of the vessel for this vessel position event.	Mandatory. In degrees and decimal degrees. Maximum 2 significant decimals.

					Optional in case the following conditions are all met: - TypeCode= EXIT - Message addressed to
--	--	--	--	--	--

Entity/Field Name	DataType	Cardinality		Description	Remarks
		Min	Max		
					Third party or RFMO - The element is defined as optional in the agreement with the Third Party or RFMO
Specified. Vessel_Geographical Coordinate	Assoc.	1	1	The latitude and longitude of a specified place, by which a vessel's relative situation on the globe is known. The height above the sea level constitutes a third coordinate.	Geographical Coordinates Position of the vessel transmitted by the VMS system at Obtained DateTime. Altitude and System information are not used in context of this implementation.
Latitude	Measure	1	1	The measure of the latitude as an angular distance north or south from the Equator meridian to the meridian of a specific place for this vessel geographical coordinate.	Coordinate expressed in WGS84, decimal degree notation, using a precision of at least 3 and maximum 6 decimal positions. Positive coordinate refers to North of equator. Negative coordinate refers to South.
Longitude	Measure	1	1	The measure of the longitude as an angular distance east or west from the Greenwich meridian to the meridian of a specific place for this vessel geographical coordinate.	Coordinate expressed in WGS84, decimal degree notation, using a precision of at least 3 and maximum 6 decimal positions. Positive coordinate refers to East of Greenwich meridian. Negative coordinate refers to West.

6. XML EXAMPLES

```
<rsm:FLUXVesselPositionMessage
xsi:schemaLocation="urn:un:unece:uncefact:data:standard:FLUXVesselPositionMessage:4
FLUXVesselPositionMessage_4p0.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:rsm="urn:un:unece:uncefact:data:standard:FLUXVesselPositionMessage:4"
xmlns:ram="urn:un:unece:uncefact:data:standard:ReusableAggregateBusinessInformationEntity:18"
xmlns:udt="urn:un:unece:uncefact:data:standard:UnqualifiedDataType:18">
<rsm:FLUXReportDocument>
<ram:ID> c133b211-0b0e-4358-893c-7afb5437bd61</ram:ID>
<ram:CreationDateTime>
<udt:DateTime>2001-12-17T09:30:47.0Z</udt:DateTime>
</ram:CreationDateTime>
<ram:PurposeCode>9</ram:PurposeCode>
<ram:OwnerFLUXParty>
<ram:ID>SWE</ram:ID>
</ram:OwnerFLUXParty>
</rsm:FLUXReportDocument>

<rsm:VesselTransportMeans>
<ram:ID schemeID="CFR">SWE000007880</ram:ID>
<ram:ID schemeID="EXT_MARKING">S-381</ram:ID>
<ram:ID schemeID="IRCS">EI6207</ram:ID>
<ram:RegistrationVesselCountry>
<ram:ID>SWE</ram:ID>
</ram:RegistrationVesselCountry>

<ram:SpecifiedVesselPositionEvent>
<ram:ObtainedOccurrenceDateTime>
<udt:DateTime>2001-12-17T09:30:47.0Z </udt:DateTime>
</ram:ObtainedOccurrenceDateTime>
<ram:TypeCode>POS</ram:TypeCode>
<ram:SpeedValueMeasure>8.3</ram:SpeedValueMeasure>
<ram:CourseValueMeasure>50</ram:CourseValueMeasure>
<ram:SpecifiedVesselGeographicalCoordinate>
<ram:LatitudeMeasure>50.563</ram:LatitudeMeasure>
<ram:LongitudeMeasure>009.252</ram:LongitudeMeasure>
</ram:SpecifiedVesselGeographicalCoordinate>
</ram:SpecifiedVesselPositionEvent>
</rsm:VesselTransportMeans>
</rsm:FLUXVesselPositionMessage>
```

```

<rsm:FLUXVesselPositionMessage
xsi:schemaLocation="urn:un:unece:uncefact:data:standard:FLUXVesselPositionMessage:4
FLUXVesselPositionMessage_4p0.xsd" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:rsm="urn:un:unece:uncefact:data:standard:FLUXVesselPositionMessage:4"
xmlns:ram="urn:un:unece:uncefact:data:standard:ReusableAggregateBusinessInformationEntity:18"
xmlns:udt="urn:un:unece:uncefact:data:standard:UnqualifiedDataType:18">
<rsm:FLUXReportDocument>
<ram:ID> c133b211-0b0e-4358-893c-7afb5437bd61</ram:ID>
<ram:CreationDateTime>
<udt:DateTime>2018-12-17T11:31:47.0Z</udt:DateTime>
</ram:CreationDateTime>
<ram:PurposeCode>9</ram:PurposeCode>
<ram:OwnerFLUXParty>
<ram:ID>SWE</ram:ID>
</ram:OwnerFLUXParty>
</rsm:FLUXReportDocument>

<rsm:VesselTransportMeans>
<ram:ID schemeID="CFR">SWE000007880</ram:ID>
<ram:ID schemeID="EXT_MARKING">S-381</ram:ID>
<ram:ID schemeID="IRCS">EI6207</ram:ID>
<ram:RegistrationVesselCountry>
<ram:ID>SWE</ram:ID>
</ram:RegistrationVesselCountry>

<ram:SpecifiedVesselPositionEvent>
<ram:ObtainedOccurrenceDateTime>
<udt:DateTime>2018-12-17T09:30:47.0Z</udt:DateTime>
</ram:ObtainedOccurrenceDateTime>
<ram:TypeCode>POS</ram:TypeCode>
<ram:SpeedValueMeasure>8.3</ram:SpeedValueMeasure>
<ram:CourseValueMeasure>50</ram:CourseValueMeasure>
<ram:SpecifiedVesselGeographicalCoordinate>
<ram:LatitudeMeasure>50.563</ram:LatitudeMeasure>
<ram:LongitudeMeasure>009.252</ram:LongitudeMeasure>
</ram:SpecifiedVesselGeographicalCoordinate>
</ram:SpecifiedVesselPositionEvent>

<ram:SpecifiedVesselPositionEvent>
<ram:ObtainedOccurrenceDateTime>
<udt:DateTime>2018-12-17T11:30:47.0Z</udt:DateTime>
</ram:ObtainedOccurrenceDateTime>
<ram:TypeCode>POS</ram:TypeCode>
<ram:SpeedValueMeasure>8.3</ram:SpeedValueMeasure>
<ram:CourseValueMeasure>50</ram:CourseValueMeasure>
<ram:SpecifiedVesselGeographicalCoordinate>
<ram:LatitudeMeasure>50.123456</ram:LatitudeMeasure>
<ram:LongitudeMeasure>009.132</ram:LongitudeMeasure>
</ram:SpecifiedVesselGeographicalCoordinate>
</ram:SpecifiedVesselPositionEvent>

```

```
</rsm:VesselTransportMeans>  
</rsm:FLUXVesselPositionMessage>
```

7. CODE LISTS

Vessel Transport Means²

Description: the entity containing the details of the identification and characteristic information of a ship or boat.

Mult.	Business term	Rel.	Type	Description
0..n	Identification	Att	Identifier	An identifier for this transport means vessel, such as an identifier defined by the Food and Agriculture Organisation (FAO), the radio call sign, or an external marking.
0..1	Registration	Ass	Vessel_ Country Entity	The country of registration of this transport means vessel.
0..n	Specified	Ass	Vessel Position_ Event Entity	A position event specified for this vessel transport means.

Vessel Country¹²

Description: the entity containing the details of a country associated to a vessel.

Mult.	Business term	Rel.	Type	Description
1	Identification	Att	Identifier	The identifier for this vessel country.

Vessel Position Event

Description: The entity containing information obtained related to the position of a vessel.

Mult.	Business term	Rel.	Type	Description
1	Obtained_ Occurrence	Att	DateTime	The date and time when the position of the vessel was taken by the vessel's navigation equipment.
1	Type	Att	Code	The code specifying the type of vessel position event.

¹² For sake of clarity, the description of Vessel_ Transport Means; Vessel Country entities contains only the part that is necessary for this domain. The complete definition of such entities can be found in the Vessel domain document of the UN/FLUX standard.

0..1	Speed	Att	Measure	The measure of speed of the vessel for this vessel position event.
0..1	Activity_Type	Att	Code	The code specifying the type of activity, such as of the vessel or the crew, at this vessel position event.
1	Specified	Ass	Vessel_ Geographi cal Coordinates Entity	The set of geographical coordinates specified for this vessel position event.

Vessel_Geographical Coordinates

Description: The latitude and longitude of a specified place, by which its relative situation on the globe is known. The height above the sea level constitutes a third coordinate.

Mult.	Business term	Rel.	Type	Description
1	Latitude	Att	Measure	The measure of the latitude as an angular distance north or south from the Equator meridian to the meridian of a specific place for this vessel geographical coordinate.
1	Longitude	Att	Measure	The measure of the longitude as an angular distance east or west from the Greenwich meridian to the meridian of a specific place for this vessel geographical coordinate.
0..1	Altitude	Att	Measure	The measure of the altitude that reflects the vertical elevation of an object above a surface for this vessel geographical coordinate.
0..1	System	Att	Identifier	The identifier of the system used for measuring this specified geographical coordinate.

8. FLUX TL ENVELOPE PARAMETERS

The following FLUX TL parameters must be used for transmission of Vessel Position Messages.

Common name	FLUX TL Envelope Tag name	Value	Remark
Dataflow name	DF	urn:un:unece:uncefact:data:standard:FLUXVesselPositionMessage:4	

Timeout DateTime	TODT	DateTime (in UTC) of creation of the envelope + 60 minutes.	Value expressed as XSD DateTime in UTC. Must be according to the definition provided in 6(2).
Acknowledg e Receipt	AR	False	Note: a non-delivery message is always sent when the recipient cannot be reached and timeout (TODT) time has expired.