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SIOFA Vessel Monitoring System (VMS) End-Of-Pilot Evaluation

SIOFA Secretariat

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Abstract

This paper presents the results of the SIOFA Vessel Monitoring System (VMS) Pilot Phase and is intended to inform discussions on matters related to the implementation and entry into operation of the SIOFA VMS at the 10th Meeting of the Compliance Committee (CC10) and the 13th Meeting of the Parties to SIOFA (MoP13). It also fulfils the reporting obligation set out in the approved Pilot Phase Proposal, whereby the Secretariat is required to report the outcome of the Pilot Phase to the CC10 and MoP13.

The paper outlines the results of the pilot exercise, including observations relating to automated entry and exit notifications, system performance, and operational functionality. It also highlights considerations relating to CCPs, vessels, and Fisheries Monitoring Centres (FMCs) in relation to the SIOFA VMS.

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SIOFA VESSEL MONITORING SYSTEM (VMS)

END-OF-PILOT EVALUATION REPORT

Reporting Period: October 2025 – May 2026

Prepared for:

- Working Group to Support the Establishment of the SIOFA Vessel Monitoring System (SIOFA VMS Working Group)
- 10th Meeting of the SIOFA Compliance Committee (CC10)
- 13th Meeting of the Parties to SIOFA (MoP13)

Prepared by: SIOFA Secretariat

Executive Summary

This End-of-Pilot Evaluation Report provides a comprehensive evaluation of the Pilot Phase of the SIOFA Vessel Monitoring System (VMS), implemented pursuant to CMM 16 (2025) on Vessel Monitoring System, and the decision of the 12th Meeting of the Parties to undertake a pilot phase of the SIOFA VMS, prior to its entry into operation.

The scope of the pilot phase was further broadened by the Working Group to Support the Establishment of the Southern Indian Ocean Fisheries Agreement Vessel Monitoring System (SIOFA VMS Working Group) to confirm the technical feasibility of automating the submission of entry and exit notifications using the SIOFA VMS, identify any operational challenges, validate technical performance, assess potential policy implications, and evaluate whether any modifications or updates may be necessary for Contracting Parties, Participating Fishing Entities, and Cooperating Non-Contracting Parties (CCPs) concerning the operations of their vessels and the functioning of their Fisheries Monitoring Centres (FMCs).

This report also fulfils the reporting obligation set out in the approved Pilot Phase Proposal and provides an evidence-based readiness assessment.

The pilot phase was conducted over a six-month period to ensure operational readiness of both the Secretariat and participating CCPs prior to the formal entry into operation of the SIOFA VMS.

The pilot successfully:

- Commissioned and tested the VMS platform against agreed technical specifications;
- Verified transmission of VMS position reports under both reporting modalities provided under paragraph 6 of CMM 16 (2025);
- Assessed compatibility of reporting formats;
- Strengthened Secretariat operational capacity;
- Identified and mitigated technical and institutional risks; and
- Assessed infrastructure requirements for sustainable long-term operation.
- Assessed the feasibility of automating the submission of entry and exit notifications using the SIOFA VMS

Based on the outcomes of the pilot phase of the SIOFA VMS, the Secretariat concludes that the SIOFA VMS is operationally ready for its entry into operation, subject to endorsement of the 10th Meeting of the SIOFA Compliance Committee and the 13th Meeting of the Parties to SIOFA. However, participation was limited to a subset of CCPs. As such, continued attention will be required to ensure full preparedness across all CCPs as the system transitions into full operational deployment.

The pilot also concluded that automated entry and exit reporting under the SIOFA VMS is technically feasible, under certain conditions, as discussed in this report. Successful transmission and detection of entry and exit notifications were achieved via FLUX and NAF reports, as well as through ALCs capable of sending them.

Contents

Background

Following the adoption of a Conservation and Management Measure for the establishment of a SIOFA Vessel Monitoring System (CMM 16 (2025) on Vessel Monitoring System),[3] which established the legal and operational framework for the implementation of a SIOFA VMS, the 10th Meeting of the Parties to SIOFA (MoP10) agreed that a number of preparatory activities would need to be undertaken intersessionally in preparation for the entry into operation of the SIOFA VMS. This included numerous policy alignments and technical considerations to ensure a structured, risk-managed transition to the full deployment of the SIOFA VMS. This work was supported by the *Working Group to Support the Establishment of the Southern Indian Ocean Fisheries Agreement Vessel Monitoring System* (SIOFA VMS Working Group).

Following the satisfactory outcomes of these policies and technical considerations, the 12th Meeting of the Parties (MoP12) endorsed the recommendation of the SIOFA VMS Working Group to undertake a pilot phase for the SIOFA VMS prior to its entry into operation.

At its 7th Meeting, the SIOFA VMS Working Group revised and adopted a *Pilot Phase for the SIOFA Vessel Monitoring System* (Annex 1). The aim of the pilot phase was to test the technical and procedural aspects of the system, ensure compatibility with current CMMs and policies, ensure the readiness of CCPs and that of the Secretariat, to transmit and receive VMS position reports, respectively, and provide an opportunity to refine operational modalities for the receipt and processing of VMS position reports. It will also allow for the identification and resolution of operational challenges, therefore ensuring that the system is fit for purpose before its full entry into operation.

The objectives of the pilot phase were:

1. Commissioning and post-deployment testing of the SIOFA VMS
2. Facilitate CCPs' initial setup and successful transmission of VMS position reports to the SIOFA VMS
3. Verify compatibility of the various data formats expected by the SIOFA VMS, particularly for CCPs transmitting position reports pursuant to paragraph 6(b) of CMM 16 (2025) on Vessel Monitoring System (i.e. simultaneously by the vessel to its FMC and the Secretariat)
4. Identify any additional infrastructure requirements
5. Develop the Secretariat's technical and operational capacity to receive, manage, and analyse VMS position reports effectively
6. Develop the Secretariat's capacity to provide technical support to CCPs when the SIOFA VMS becomes fully operational
7. Identify and address any unforeseen technical, confidentiality, security, or policy risks prior to the entry into operation of the SIOFA VMS

Following the endorsement of the pilot phase proposal, the SIOFA VMS Working Group further broadened its scope to include a targeted test to confirm the technical feasibility of automating the

[3] The 10th Meeting of the Parties to SIOFA adopted Conservation and Management Measure for the establishment of a SIOFA Vessel Monitoring System (CMM 16 (2023) on Vessel Monitoring System) which was superseded by Conservation and Management Measure for the establishment of a SIOFA Vessel Monitoring System (CMM 16 (2025) on Vessel Monitoring System) in 2025.

submission of entry and exit notifications, identify any operational challenges, validate technical performance, assess potential policy implications, and evaluate whether any modifications or updates may be necessary for CCPs concerning the operations of their vessels and the functioning of their FMCs.

The pilot phase was agreed to be implemented over a period of six (6) months, commencing in January 2026 upon signature of the contract with the VMS service provider. However, activities undertaken prior to the pilot's start supported the necessary preparations for a timely and efficient commencement of the pilot phase. These preparations included procuring the SIOFA VMS Service and early engagement with CCPs to ensure maximum participation in the pilot phase, as well as ensuring the preparedness of participating CCPs.

The pilot phase was opened to all CCPs, with vessels on the SIOFA Record of Authorised Vessels (RAV) within the scope of paragraph 3 of CMM 16 (2025). Participation in the pilot phase was voluntary. The first VMS position reports were transmitted to the SIOFA VMS in March 2026. In April 2026, one CCP successfully transmitted backdated VMS position reports covering the period from February 2026 onward. As of May 2026, a total of nine (9) CCPs were participating in the pilot phase, with 64 vessels transmitting VMS position reports to the SIOFA VMS.

Participating CCPs transmitted data in accordance with both reporting modalities provided for under paragraph 6 of CMM 16 (2025), namely:

- transmission via their FMC; and
- simultaneous transmission to both the FMC and the Secretariat.

Activities, Outputs and Methodology

The activities and expected outputs of the pilot phase, as detailed in Section 3 of Annex 1, were implemented through the staged methodology outlined in Section 4 thereof. This approach ensured a structured and progressive validation of the SIOFA Vessel Monitoring System (VMS), from initial setup to full operational readiness.

Stage 1 – Preparation and Setup initiated the pilot by focusing on system commissioning, Secretariat readiness, and CCP onboarding. This was preceded by early engagement with CCPs to ensure maximum participation and preparedness on their end. The activities in Annex 1 related to system configuration, initial testing, development of guidance materials, and staff training were undertaken at this stage, resulting in a deployed VMS platform, trained personnel, and draft Standard Operating Procedures (SOPs).

Stage 2 – Connectivity and Format Verification operationalised the initial engagement with CCPs. Activities related to test data submissions and format validation were implemented to ensure that position reports could be transmitted and processed correctly. The corresponding outputs included successful test transmissions and the identification and resolution of any data format or transmission issues.

Stage 3 – Live Position Report Transmission Trials extended testing into real operational conditions. The activities described in Annex 1 concerning live data transmission, performance monitoring, and system validation were carried out to assess the completeness, timeliness, and reliability of VMS

data. Outputs at this stage included performance metrics, system verification against specifications, and observation logs capturing technical, security, and confidentiality considerations.

Stage 4 – Feedback focused on consolidating operational experience. Activities related to stakeholder feedback, additional training, and the refinement of procedures were undertaken to strengthen both the Secretariat's capacity and CCP support mechanisms. This stage delivered finalised SOPs and enhanced technical support readiness.

Stage 5 – Review and Reporting concluded the pilot phase by synthesising all findings. The activities related to analysis, risk identification, and reporting resulted in a comprehensive end-of-pilot report, including recommendations, identified infrastructure needs, and any associated budgetary implications, as reflected in Annex 1.

The status of the activities' implementation and the achievement of the corresponding outputs is provided in the subsequent sections of this document.

Monitoring and Evaluation

The pilot phase included a Monitoring and Evaluation (M&E) process to provide a systematic, evidence-based assessment of the implementation of the SIOFA VMS, including progress against the agreed objectives, activities, outputs, and performance indicators established in the Pilot Phase Proposal. The M&E process also aimed to identify operational, technical, and procedural issues encountered during the pilot phase, assess the overall readiness of the system prior to its entry into operation, and ensure that lessons learned during implementation could be used to further optimise the effectiveness, functionality, and long-term sustainability of the SIOFA VMS. The M&E Process was closely integrated with Stage 5 of the implementation process.

For the most part, the planned tasks and activities identified in the pilot phase were successfully completed during the implementation period, despite the ambitious delivery timeline.

The pilot achieved its principal objectives, including the successful establishment of operational VMS data transmissions between participating CCPs and the Secretariat, testing the core functionalities of the SIOFA VMS, assessing system confidentiality and security measures, and evaluating automated monitoring capabilities, such as entry and exit notifications. The majority of the planned outputs were also successfully achieved, demonstrating that the SIOFA VMS is broadly operational and capable of supporting the implementation requirements established under CMM 16 (2025).

Monitoring of the pilot phase was conducted through a combination of automated and manual processes. A significant proportion of the information used for monitoring and evaluation was generated directly by the SIOFA VMS through its built-in auditing, logging, and reporting capabilities, enabling the recording and extraction of data on system performance, user access, VMS transmissions, and operational activities. Additional information was collected through structured testing activities, technical assessments, operational observations, exchanges with participating CCPs, and manual incident tracking undertaken by the Secretariat throughout the pilot phase.

The evaluation of the pilot phase was undertaken against the criteria of effectiveness, efficiency, sustainability, and scalability. Overall, the pilot demonstrated positive outcomes against these

criteria. The system was effective in achieving its principal operational objectives, implementation activities were largely completed within the planned timeframe and available resources, and the pilot confirmed that the SIOFA VMS can support ongoing operational use. The pilot also demonstrated that broader implementation across CCPs is feasible, although the evaluation identified that minor refinements may still be necessary to achieve full operational capacity.

Table 1 provides an overview of the implementation of the Monitoring and Evaluation (M&E) framework established for the SIOFA VMS Pilot Phase, including progress against the agreed objectives, outputs, indicators, and verification measures.

Table 2 summarises the implementation status of the activities and tasks identified in the SIOFA VMS Pilot Phase Proposal, including progress against the planned deliverables and activities during the implementation period.

Table 1: Overview of the implementation of the Monitoring and Evaluation (M&E) framework established for the SIOFA VMS Pilot Phase

Objective	Output	Indicators	Means of Verification	Responsible	Result / Observation
Commissioning and post-deployment testing of the SIOFA VMS	• SIOFA VMS platform fully deployed and operating up to agreed specifications; • System test reports and issue tracking logs;	• Percentage of VMS system functions tested and verified as operational	• Acceptance Certificate or similar document	• SIOFA Secretariat • VMS Service Provider	Fully Completed. Acceptance certificate (CAT) documented.
Facilitate CCPs' initial setup and successful transmission of VMS position reports to the SIOFA VMS	• Successful VMS position reports received from pilot CCPs under the various expected scenarios	• Percentage of VMS position reports received successfully across all expected scenarios	• Technical test results	• SIOFA Secretariat • VMS Service Provider • CCPs	All reporting scenarios tested successfully, with results documented.
Verify compatibility of the various data formats expected by the SIOFA VMS, particularly for CCPs transmitting data pursuant to paragraph 6(b) of CMM 16 (2023) on Vessel Monitoring System	• List of format-specific issues, if any, resolved	• Number of format-specific data issues identified versus number resolved within pilot timeline	• Technical test results	• SIOFA Secretariat • VMS Service Provider • CCPs	All expected data formats for reports received from CCPs have been tested. Outcome documented in this report. One format-specific issue identified for a specific ALC. Test results to be documented

Objective	Output	Indicators	Means of Verification	Responsible	Result / Observation
					when appropriate
Identify any additional Infrastructure requirements	• Infrastructure needs included in the end-of-pilot evaluation report. • Additional costs, if any, are included in the draft 2027 budget	• Documented infrastructure requirements and recommendations in the End of pilot evaluation report (Yes/No) • Number and estimated value of additional cost items incorporated into the draft 2027 budget	• End of pilot evaluation report • Draft 2027 budget document with line items clearly indicating additional costs related to the project	• SIOFA Secretariat • VMS Service Provider	Infrastructure requirements included in this report (none required). Draft budget 2027 doesn't feature additional resources as none are required
Develop the Secretariat's technical and operational capacity to receive, manage, and analyze VMS position reports effectively	• Secretariat staff trained • SOPs developed	• Number of Secretariat staff trained • Standard Operating Procedures finalized	• Mission report/ Training Certificates • Finalized SoPs	• SIOFA Secretariat • VMS Service Provider	Training completed and documented, incl. training certificates
Develop the Secretariat's capacity to provide technical support to CCPs when the SIOFA VMS becomes fully operational	• Secretariat staff trained • SOPs developed	• Number of Secretariat staff trained • Standard Operating Procedures finalized	• Mission report/ Training Certificates • Finalized SoPs	• SIOFA Secretariat • VMS Service Provider	Training completed and documented, incl. training certificates

Objective	Output	Indicators	Means of Verification	Responsible	Result / Observation
Identify and address any unforeseen technical, confidentiality, security, or policy risks prior to the entry into operation of the SIOFA VMS	• Observation log capturing technical, confidentiality, security, and policy issues encountered during the pilot. • Formal risk report summarizing observed issues and proposed mitigation measures	• Observation log completed • Risk report finalized and included in the end of pilot evaluation report	• End of pilot evaluation report	• SIOFA Secretariat	Policy risks identified and presented to CC10 and MoP13 Risk report included in this report.

Table 2: Status of Implementation of Activities and Tasks under the SIOFA VMS Pilot Phase Proposal

Stage	TaskID	Task	Status of Delivery	Timeliness of Delivery	Remarks
Stage 1 – Preparation and Setup	1	Infrastructure modifications	Completed	On time	
	2	System acquisition & config	Completed	On time	
	3	Secretariat training	Completed	Late	Availability of Service Provider technicians, Training conducted in the 2nd week of March 2026
	4	Confirm CCP participation	Completed	On time	
	5	Provide guidelines to CCPs	Completed	On time	
Stage 2 – Connectivity & Format Verification	6	CCPs transmit initial test data	Completed	Late	System configuration took longer than anticipated
	7	Secretariat reviews reports	Completed	Late	Delayed reception of test data
	8	Resolve formatting/transmission errors.	Completed	Late	Delayed reception of test data
Stage 3 – Live Position Reports Transmission Trials	9	Selected vessels transmit data	In progress	On time	
	10	Verify completeness & accuracy.	In progress	Late	At the initial stage of data transmission, only a limited number of vessels (three) were transmitting VMS position reports; consequently, a meaningful assessment could not be undertaken according to schedule.
	11	Document performance metrics	In progress	Late	At the initial stage of data transmission, only a limited number of vessels (three) were transmitting VMS position reports; consequently, a meaningful assessment could not be undertaken according to schedule.
	12	Security & confidentiality checks	Completed	On time	
Stage 4 – Feedback	13	Collect feedback from CCPs	Not Completed	N/A	Time limitation did not allow conducting a survey with CCPs
	14	Final Secretariat training & SOPs	Not Completed[4]	Late	Scheduled for mid-June 2026.

[4] At the time of report drafting, May 2026. Final debriefs and finalization of SoP re-scheduled for Mid-June.

Stage	TaskID	Task	Status of Delivery	Timeliness of Delivery	Remarks
Stage 5 – Review & Reporting	15	Prepare consolidated end-of-pilot report	Completed	On time	
	16	Submit the report to WG, CC and MoP.	Completed (this report)	On time	

Implementation Process

Stage 1 – Preparation and Setup

Following MoP12's validation of the Terms of Reference (ToR) for the for the provision of a Vessel Monitoring System (VMS) for SIOFA, the procurement process was initiated for the acquisition of the VMS service in accordance with the recently adopted *High-Value Procurement Policy and Procedure for SIOFA.* This process resulted in the award of a contract to *Collecte Localisation Satellites* (CLS) to provide SIOFA with a SaaS-based VMS service for an initial 36-month period.

In parallel, the Secretariat engaged with CCPs to facilitate their participation in the pilot phase. This included collecting and verifying up-to-date information on the Automatic Location Communicators (ALCs) installed on vessels to support the effective implementation and testing of the VMS.

Following the procurement of the VMS, the service provider configured and deployed the system on its end to initiate the SaaS service. This included establishing the hosting environment, configuring data reception and processing functionalities, and provisioning secure remote access for the SIOFA Secretariat to use and manage the system. The set-up also included the import into the SIOFA VMS of relevant Geographic Information System (GIS) data to delineate the SIOFA Agreement Area and other areas subject to specific management regimes, as well as the integration of vessel data from the SIOFA RAV.

The Secretariat staff participated in a five-day training course at the SIOFA Headquarters, which included both administrative system training and operational training for system administrators and users, respectively. The training concluded with the Client Acceptance Test, as required by the ToR and the Service Contract, to validate that the system met the specified requirements prior to full operational use, which concluded that the VMS services were in full compliance with the ToR.

Stage 2 – Connectivity and Format Verification

Stage 2 commenced with system testing using simulated (dummy) data provided by the service provider. These tests were conducted using direct transmission and the North Atlantic Format (NAF) to verify end-to-end connectivity and confirm that the system could receive and process position reports across different transmission modalities.

This was followed by the transmission of live data from participating CCPs. Two CCPs provided data directly from their vessels, while additional transmissions were routed through the respective FMCs of CCPs using both NAF and the Fisheries Language for Universal Exchange (FLUX) reporting formats. The Secretariat reviewed all incoming reports to assess compliance with the prescribed data formats and reporting standards and worked in close coordination with CCPs and the service provider to address any identified issues.

The configuration of connections between FMCs took between one week and over a month, depending on each FMC's capacity and the responsiveness of their service providers. As such, timely preparation by the remaining CCPs will be important to ensure that all secure connections are fully established prior to mandatory entry into operation.

During this phase, two technical issues were encountered. The first related to an incorrect system configuration at an FMC, resulting in formatting inconsistencies, which were subsequently resolved in coordination with the concerned CCP. The second issue concerns a compatibility issue with data

received from a specific ALC type, which is under investigation and being addressed jointly by the service provider and the ALC manufacturer.

During this phase, batch reporting could not be fully tested due to the limited number of CCPs transmitting data to the SIOFA VMS. As such, this component will need to be revisited after the entry into operation of the SIOFA VMS.

Overall, this phase confirms that the VMS is robust in terms of connectivity and operational performance, while also identifying a limited number of areas requiring further refinement. It further confirmed that, from a technical standpoint, the systems used by participating CCPs are generally compatible with the SIOFA VMS and capable of transmitting data in compliance with CMM 16 (2025), except for a pending compatibility issue with one specific ALC type, which is still being resolved.

Stage 3 – Live Position Report Transmission Trials

Selected vessels transmitted operational position reports over an agreed period following the completion of system configuration. This phase was designed to assess the performance of the SIOFA VMS under real operational conditions, with a focus on the continuous transmission of vessel position data.

The Secretariat systematically verified the completeness, timeliness, and accuracy of all position reports received during the trial period. This included checks against expected reporting frequencies and validation of data consistency across transmissions. The objective was to confirm that the system was functioning as intended in an operational environment and that data flows were stable and reliable.

In terms of timeliness, the vast majority of VMS position reports received by the Secretariat were transmitted within the maximum one-hour delay requirement set out in paragraph 7 of CMM 16 (2025), with 97.75% of all reports meeting this standard. This reflects a generally high level of compliance with the prescribed reporting delay across participating CCPs during the pilot phase.

Overall, transmission delays ranged from 7 seconds to 9,378 seconds, with a global average delay of 521 seconds.

A more detailed examination of transmission performance by reporting modality indicates clear differences between transmission pathways. Importantly, only NAF-based reporting exceeded the 1-hour (3,600 seconds) threshold, with maximum recorded delays reaching 9,378 seconds. This indicates that instances of non-compliance with the maximum reporting interval were exclusively associated with NAF-mediated transmissions during the pilot phase. In contrast, both direct and FLUX-based transmissions remained within the one-hour requirement across all recorded observations.

For NAF transmissions, delays ranged from 223 to 9,378 seconds, with an average of 1,399 seconds, indicating higher latency and greater variability than other transmission modalities.

By comparison, direct transmissions demonstrated more stable, consistently low-latency performance, with delays ranging from 7 to 3,562 seconds and an average of 247 seconds. Notably, even the maximum observed delay for direct transmissions remained below the one-hour threshold.

FLUX-based transmissions exhibited the most stable performance profile overall, with delays ranging from 29 seconds to 1,034 seconds and an average delay of 119 seconds, all well within the required reporting window.

Overall, these findings suggest that transmission modality has a measurable influence on latency performance. In particular, NAF-based reporting appears to be the only pathway associated with exceedances of the one-hour requirement, while direct and FLUX transmissions consistently met the prescribed timeliness standard.

No data integrity issues or incorrect data were identified in the VMS position reports received by the Secretariat during the pilot phase. The data transmitted to the Secretariat, both directly and through CCP FMCs, were received intact, complete, and accurate, with all required fields correctly populated

and consistent with the applicable reporting specifications. This indicates that, beyond system performance, the end-to-end transmission chain in both scenarios functioned reliably, preserving data quality and integrity across all reporting modalities.

One isolated exception was identified in which a NAF message string contained incorrect vessel identification data. This issue is currently being addressed with the relevant flag CCP. Notwithstanding this discrepancy, the positional data remained valid and usable for monitoring purposes and therefore did not materially affect the dataset's overall integrity or utility. Overall, all data received during the trial period were complete, with no instances of missing or VMS position reports rejected due to integrity issues, except during ALC malfunctions.

A key component of this stage of the pilot phase was to assess the effectiveness of the VMS in operating in accordance with the confidentiality and data security provisions set out in Conservation and Management Measures for Data Confidentiality and Procedures for access and use of data (CMM 03 (2025) on Data Confidentiality) and the data confidentiality and security provisions of the Standards, Specifications and Procedures (SSPs) for the SIOFA VMS. It is noted that the majority of these confidentiality and security measures are inherently built into the system architecture, as required under the ToR, and therefore form part of the service contract for the provision of VMS services to SIOFA. The elements assessed are presented in Table 3 below.

Table 3. Evaluation of Compliance with Data Confidentiality and Security Requirements

CMM Provision / Policy Reference	Requirement/ Provision Assessed	Observations	Assessment Status
CMM 03 / Para. 3	Confidentiality of VMS data received by the Secretariat	All data received through the VMS can be accessed by Secretariat staff only, with restrictions as may be required by the Executive Secretary.	Compliant
CMM 03 / Para. 5 & SIOFA VMS SSPs / Para 20	Procedures for the safeguarding and securing of records	VMS data, including position reports, is accessible only to authorised personnel for the purposes of carrying out their official duties. The system may also apply access controls to define which fleets may be viewed and the applicable reporting period, including access limited to a specific calendar year or to broader historical time series data. All secretariat staff sign an attestation recognising the restrictions on the use and disclosure of the information upon taking on duties. VMS databases are encrypted to preclude access by unauthorized persons. On-premise backup system installed at Secretariat headquarters	Compliant. However, the attestation recognising the restrictions on the use and disclosure of the information upon taking of duties may need to be updated to *explicitly* include VMS data.
SIOFA VMS SSPs / Para 16	Use of VMS data	Secretariat use of VMS data and access policies that are compliant with SIOFA VMS SSPs and CMM 16.	Compliant

CMM Provision / Policy Reference	Requirement/ Provision Assessed	Observations	Assessment Status
SIOFA VMS SSPs / Para 17	Confidentiality of ALC details	Internal database and VMS ALC database cannot be accessed except by Secretariat staff and the VMS Service provider for the purpose of setting up the system. The service provider is also bound by these confidentiality clauses under the Service Agreement.	Compliant
SIOFA VMS SSPs / Para 18	VMS Position reports / VMS Contact Points	Secretariat has set up a registry of VMS Contact points.	Compliant
SIOFA VMS SSPs / Para 21	Mandatory Security Measures	The SIOFA VMS has functionalities to implement System Access Controls, Authenticity and data access controls, Communication Security & Data Security. The Secretariat is also drafting an Information System Security Policy for adoption by the Meeting of the Parties.	Compliant, noting the pending adoption of the ISSP
SIOFA VMS SSPs / Para 22	Access Control Features	VMS System has functionalities to comply with mandatory access control measures required by VMS SSPs. Further measures to be implemented as part of ISSP	Compliant
SIOFA VMS SSPs / Para 23	Secure Internet Communication protocols	All data exchanges between FMCs and service providers utilise secure protocols (HTTPS, FTPS) and digital certificates.	Compliant
SIOFA VMS SSPs / Para 24	Periodic review of the system and VMS data access, & proper maintenance of system security	VMS System has functionalities to log all system and data access.	Compliant

CMM Provision / Policy Reference	Requirement/ Provision Assessed	Observations	Assessment Status
		System security maintenance will be implemented as part of ISSP.	

The assessment of the SIOFA VMS against the confidentiality and data security provisions set out in CMM 03 (2025) on Data Confidentiality and the SIOFA VMS SSPs demonstrates a high level of compliance with the applicable requirements. Overall, the review confirmed that the key confidentiality, access control, communication security, and data protection measures required under the framework have either already been implemented within the system architecture or are in the process of being formalised through additional policy instruments.

With respect to confidentiality obligations, the assessment found that access to VMS data received by the Secretariat is appropriately restricted to authorised Secretariat staff. Similarly, the use of VMS data and access to ALC details are governed by controls consistent with the SIOFA VMS SSPs and the relevant CMM provisions, which are extended to the VMS service provider contractually through the Service Agreement's confidentiality provisions.

The review further confirmed that several technical and administrative safeguards are already embedded in the SIOFA VMS. These include encrypted VMS databases, secure internet communication protocols utilising HTTPS, FTPS, and digital certificates, as well as system functionalities that support access controls, authenticity verification, communication security, and data security. In addition, the system includes logging functionalities to record system and data access activities, thereby supporting auditability and oversight.

While Secretariat staff are already required to sign attestations recognising restrictions on the use and disclosure of confidential information upon assuming their duties, it was observed that these attestations may need to be updated to explicitly reference VMS data and associated confidentiality obligations. In addition, the adoption of the Information System Security Policy (ISSP) should further formalise and strengthen system security maintenance, access control procedures, and broader information security governance arrangements once it is adopted by the MoP.

Overall, the findings indicate that the SIOFA VMS should operate in a manner consistent with the confidentiality and data security provisions established under the relevant CMMs and the SIOFA VMS SSPs. While a small number of supporting policy and administrative measures are still under development or refinement, they do not detract from the overall conclusion that the system is currently compliant with the applicable requirements.

Stage 4 – Feedback

Due to time constraints during the pilot phase, the Secretariat was unable to conduct a formal survey of CCPs to systematically collect feedback on their experiences, challenges, and recommendations regarding participation in the SIOFA VMS pilot. Nevertheless, regular engagement with participating CCPs throughout the pilot provided useful informal feedback on the system's operational implementation and the connection process.

Overall, engagement with CCPs progressed relatively smoothly, and participating CCPs were generally able to establish the required data transmission arrangements with the Secretariat and the VMS service provider. However, the time required to establish operational connections varied considerably between CCPs. In some cases, connections were established within a relatively short period, while others required additional technical coordination, testing, or troubleshooting prior to successful implementation. Variations were also observed in the response times to technical queries and requests for clarification during the pilot phase.

The pilot phase also highlighted the importance of continued technical support, clear communication channels, and standardised procedures to facilitate efficient implementation across CCPs with differing technical capacities and institutional arrangements. Lessons learned during the pilot will assist the Secretariat in refining guidance materials, communication procedures, and operational workflows ahead of the entry into operation of the SIOFA VMS.

A final training and debriefing session between the Secretariat and the VMS service provider is expected to be conducted in mid-June 2026. The session is intended to consolidate lessons learned during the pilot phase, review operational and technical issues encountered, finalise relevant Standard Operating Procedures (SOPs), and identify any remaining actions required prior to the entry into operation of the SIOFA VMS.

Stage 5 – Review and Reporting

Stage 5 of the pilot phase required the Secretariat to prepare a consolidated report on the implementation of the SIOFA VMS pilot, including information on technical performance, operational implementation, identified risks, and any additional procedural or infrastructure considerations relevant to the system's entry into operation. Prior to drafting the present report, the Secretariat provided regular progress updates on the implementation of the pilot phase at the 8th, 9th, and 10th Meetings of the SIOFA VMS Working Group.

Data and information used in the preparation of this report were collected in accordance with the approved Pilot Phase Proposal. In addition to information manually compiled during the pilot phase, a significant proportion of operational and technical data was recorded and extracted directly from the VMS through its built-in auditing and logging functionalities. These system features facilitated the efficient monitoring, recording, and extraction of information relating to system performance, data transmissions, user access, and other operational metrics assessed during the pilot.

Testing of Automated Entry and Exit Notifications

In response to the request made by the 10th Meeting of the SIOFA VMS Working Group, a targeted technical assessment was carried out during the pilot phase of the SIOFA VMS to evaluate the feasibility of automating entry and exit notifications through the VMS. The tests were designed to confirm technical feasibility, identify operational challenges, validate system performance, assess policy implications, and determine whether updates may be needed for CCPs vessels and FMCs to enable automated entry and exit notification.

When validating the proposal for targeted testing, the Working Group reviewed several policy and technical matters pertinent to automated reporting. Notably, they identified the need for potential amendments or clarifications to CMM 10 (2023) on Monitoring, in order to explicitly permit and regulate the use of VMS for transmitting entry and exit notifications. The Working Group also highlighted technical factors influencing implementation, including differences in the capabilities of ALC models deployed across vessels. These disparities relate to geofencing functions and the ability to transmit specific data fields required under Annex I of CMM 10 (2023). The Working Group recognised that certain data fields required for manual entry and exit notifications are not automatically transmitted via current ALCs. As a result, they discussed possible adjustments to reporting requirements, including simplifying or removing manually reported information, whilst maintaining the principle that flag CCPs are responsible for monitoring and controlling their vessels within the Agreement Area. A key objective was to determine whether the Unique Vessel Identifier (UVI) could serve as a substitute for other identification data required by CMM 10 (2023) when vessels submit entry or exit notifications. The outcome of those discussions was documented in a paper on *Consideration of the use of the SIOFA VMS for the submission of entry and exit notifications*,[5] which was adopted by the 10th Meeting of the SIOFA VMS Working Group.

Testing Methods and Approaches

The pilot testing utilised multiple reporting strategies, including entry and exit notifications transmitted via NAF and FLUX reports, as well as direct notifications from ALCs equipped to send dedicated entry and exit messages. Additionally, the Secretariat independently determined vessel entry and exit from the Agreement Area based on vessel trajectory and positional data received through standard VMS reporting.

Assessments and Results

The tests confirmed that both NAF and FLUX mechanisms successfully transmitted entry and exit notifications to the SIOFA VMS, including relevant identifiers. Likewise, ALCs with notification capabilities reliably sent the required information during the pilot. This demonstrates the technical feasibility of supporting automated entry and exit reporting under these specific conditions.

The pilot further showed that the automatic detection of vessel entry and exit in cases where data was not being sent by NAF, FLUX, or an ALC capable of detecting and sending entry and exit, depends on the availability of VMS positional data both inside and outside the Agreement Area. Therefore, for vessels continuously reporting to the SIOFA VMS whilst outside the Agreement Area, boundary crossings and events were successfully detected using trajectory and positional information.

[5] https://siofa.org/meeting-file/meeting-documents/10th_meeting_of_the_siofa_vms_working_group_vmswg10/VMS%20Entry%20Exit%20Automation_Adopted.pdf

Detection in Managed Areas

The pilot also produced positive results in detecting vessel entry into managed zones within the Agreement Area, including those subject to specific conservation and management measures, such as the Benthic Fisheries Closure. As VMS position reports are available before a vessel enters or exits these zones, the system effectively detects boundary crossings and generates alerts based on trajectory and positional data.

Data Elements and Simplification of Notifications

The test confirmed that several data fields required under Annex I of CMM 10 (2023), including vessel name, flag CCP, IMO number, registration number, and radio call sign, do not need to be transmitted directly within the notification. These data are already available within FMCs and the SIOFA VMS and, therefore, can be automatically associated with the notification once the UVI is included. This significantly streamlines the automated notification process.

Conclusion

To conclude, the pilot testing demonstrated that automated entry and exit reporting through the SIOFA VMS is technically feasible and can operate in compliance with CMM 10 (2023) and CMM 16 (2025). Successful transmission and detection of entry and exit notifications were achieved through FLUX and NAF reports, as well as through ALCs capable of transmitting dedicated entry and exit notifications. The testing further confirmed that when reports include the UVI, relevant vessel information can be automatically associated by CCP FMCs or by the SIOFA VMS, reducing the need to manually transmit several existing data fields.

It was further demonstrated that, in the absence of the previously mentioned ideal conditions, automated detection based on vessel trajectory and positional data is possible when sufficient VMS data are available both within and outside the SIOFA Area.

Risk Management

The pilot phase incorporated a risk management framework designed to identify and monitor potential challenges that could affect the successful implementation of the SIOFA VMS pilot phase, and to support the development of appropriate mitigation measures to reduce their likelihood and/or potential impact. Risks were assessed based on their probability of occurrence and their potential implications for achieving project objectives, meeting implementation timelines, and the efficient use of available resources. The main risk categories considered during the pilot phase were technical, operational, and institutional. It should be noted that many of the risks identified during the pilot phase are also expected to remain relevant once the SIOFA VMS enters into operation. Accordingly, continuous monitoring and the application of appropriate mitigation measures may be required throughout the operational lifecycle of the SIOFA VMS.

Throughout the implementation period, mitigation measures were applied to the identified risks using both proactive and preventive approaches, depending on the nature and timing of each risk. Some of the policy-related risks identified were also addressed through the SIOFA VMS Working Group, for consideration by CC10 and subsequently by MoP13.

Overall, the implementation of the risk management approach helped keep the pilot phase on track and supported the timely identification and management of issues that arose during implementation. It also confirms that several of the risks identified during the planning phase did materialise to varying degrees during implementation; however, mitigation measures were generally effective in addressing them. In some cases, additional or adjusted mitigation actions were introduced in response to operational experience.

Importantly, no residual risks identified during the pilot phase are considered to present a barrier to the entry into operation of the SIOFA VMS, although a number of issues will require continued monitoring during the operational phase to ensure sustained system performance and reliability.

The risk matrix presented in the pilot phase proposal is reproduced below (Table 4), and updated to reflect actual implementation experience during the pilot phase. It now indicates which risks materialised, the mitigation measures that were applied in response, and an assessment of their effectiveness. Where relevant, the table also indicates whether additional or revised mitigation measures were introduced during implementation, as well as any residual risks that require continued attention after the entry into operation of the SIOFA VMS.

Table 4: Updated Risk Assessment and Mitigation Outcomes from the SIOFA VMS Pilot Phase

Risk	Occurrence	Impact Observed	Mitigation Applied	Effectiveness	Follow-up / Residual Risk
Technical incompatibilities between SIOFA VMS and CCP systems	Yes	Delayed integration of one ALC type.	Early engagement with CCP and the manufacturer of ACL to ensure timely integration before entry into operation of SIOFA VMS	Effective – however integration is still ongoing	Continued monitoring and engagement to ensure that all ALC types are supported by entry into operation of SIOFA VMS
Pilot phase incurs delays.	Some elements of the Pilot phase	Delays in implementation of a few planned activities	Readjustment of timelines of dependent activities	Effective	None
Policy misalignment (CMM, Confidentiality, and Security)	Yes	None	Review of CMMs and relevant policies to be presented to CC10 and MoP13	Effective – subject to the reviews being considered as amendments to the concerned CMM/ policies	Ensure that MoP takes up the proposed reviews as amendments to the relevant CMMs and policies
Limited participation in the voluntary pilot phase.	No – But a small number of vessels transmitted data	Minimum data to assess system performance	None	N/A	Outcome of the pilot may not have identified any potential issues associated with full-scale deployment

Risk	Occurrence	Impact Observed	Mitigation Applied	Effectiveness	Follow-up / Residual Risk
	to SIOFA VMS during pilot phase				
Change of personnel at the Secretariat or position reclassification and restructuring during the pilot phase	No	N/A	Maintain detailed documentation of the system and all staff trained to use and provide support to SIOFA VMS.	Effective	Continued training of all staff

Resource Utilization and Future Operational Needs

The implementation of the SIOFA VMS pilot phase was undertaken within the financial and operational resources allocated under the approved pilot phase proposal. Overall, the pilot phase did not identify any significant additional resource or infrastructure requirements that would prevent or substantially affect the entry into operation of the SIOFA VMS.

During the implementation period, the existing technical and operational arrangements established by the Secretariat and the VMS Service Provider were generally sufficient to support the deployment, testing, and operation of the system under pilot conditions. No major additional infrastructure investments were required during the pilot phase. The only additional hardware procured by the Secretariat in support of the pilot phase was a new computer workstation intended to provide operational access to and use of the SIOFA VMS platform and a Network Attached Storage for archiving VMS data.

The pilot phase also demonstrated that the current operational structure and available resources of the Secretariat are sufficient to support the entry into operation and initial operational management of the SIOFA VMS. This includes coordination with CCPs and the VMS Service Provider, management of operational activities, and the handling and monitoring of VMS position reports transmitted through the system. Based on the experience gained during implementation, the Secretariat does not anticipate that the entry into operation of the SIOFA VMS would create any immediate operational or resource constraints that would affect its ability to administer and support the system effectively.

Notwithstanding the above, it is recognised that resource requirements should continue to be monitored and reviewed as the SIOFA VMS evolves over time.

In particular, future operational considerations will require the continuous monitoring of:

- Secretariat staffing and operational workload;
- Technical support and training requirements;
- Cybersecurity and data protection measures;
- Potential increases in operational costs associated with an increase in active vessels in the Agreement Area and higher data transmission volumes.

While the current level of human resources has been demonstrated as sufficient during the pilot phase and for the initial entry into operation, it is acknowledged that future increases in the number of vessels reporting to the system, expanded monitoring requirements, or a significant rise in compliance-related workload may, over time, require the consideration of additional dedicated human resources. This would ensure the continued effective administration, monitoring, and technical support of the SIOFA VMS as operational demands evolve.

Conclusion

The SIOFA VMS pilot phase has demonstrated that the system is technically operational and that the Secretariat, supported by its current staffing and internal arrangements, is ready to support the entry into operation of the SIOFA VMS. The pilot implementation confirmed that existing internal capacities, including technical, operational, and coordination functions, are sufficient to manage routine system operations, such as engagement with the VMS Service Provider, coordination with CCPs, and monitoring and handling of VMS position reports.

It is concluded that automated entry and exit reporting through the SIOFA VMS is technically feasible and compliant with CMM 10 (2023) and CMM 16 (2025), although this capability has so far been demonstrated only for FLUX and NAF reports and compatible ALCs. The inclusion of the UVI enabled automated matching of vessel information, thereby reducing manual data-handling requirements, while trajectory-based detection was also shown to be feasible when sufficient positional data were available.

It should be noted that the pilot phase did not include participation from all CCPs, with 9 out of the 13 CCPs taking part in the pilot. As a result, while the system has been adequately tested under controlled conditions, the readiness of CCPs that did not participate in the pilot phase remains unverified.

A further consideration relates to a pending data compatibility issue identified with one ALC during the pilot phase. While this issue did not affect the overall operation of the system, it highlights a potential risk that similar compatibility challenges could arise when processing data from other ALC types that were not included in the pilot testing environment. Continued validation of data formats and transmission behaviour across a wider range of ALC devices will therefore be important during full operational deployment to ensure consistent system performance and data integrity.

At the Secretariat level, there is confidence that the current operational structure is sufficient to support the entry into operation of the SIOFA VMS without immediate additional resource requirements. Nevertheless, continued monitoring of operational workload, technical support demands, and compliance-related activities will be necessary.

Overall, the pilot phase provides a solid foundation for transitioning the SIOFA VMS into full operational status. The system is technically ready, and the Secretariat is operationally prepared. However, continued oversight will be essential for identifying and addressing any emerging capacity or technical issues as the system scales up to full participation.

----End of Report----

Annex 1: Pilot Phase for the SIOFA Vessel Monitoring System

Objectives of the Pilot Phase

The pilot phase of the SIOFA Vessel Monitoring System (VMS) aims to ensure CCPs and Secretariat readiness for the entry into operation of the SIOFA VMS, in particular as regards the transmission (CCPs) and receipt (Secretariat) of VMS position reports. In line with this aim, the objectives of the pilot phase are as follows:

1. Commissioning and post-deployment testing of the SIOFA VMS
2. Facilitate CCPs' initial setup and successful transmission of VMS position reports to the SIOFA VMS
3. Verify compatibility of the various data formats expected by the SIOFA VMS, particularly for CCPs transmitting position reports pursuant to paragraph 6(b) of CMM 16 (2023) on Vessel Monitoring System[1] (i.e. simultaneously by the vessel to its FMC and the Secretariat)
4. Identify any additional infrastructure requirements
5. Develop the Secretariat's technical and operational capacity to receive, manage, and analyze VMS position reports effectively
6. Develop the Secretariat's capacity to provide technical support to CCPs when the SIOFA VMS becomes fully operational
7. Identify and address any unforeseen technical, confidentiality, security, or policy risks prior to the entry into operation of the SIOFA VMS

Scope and duration of the Pilot Phase

The pilot phase will run for a period of six (6) months, followed by reporting to CC10 and MoP13. The scope of the pilot phase will align with the scope as defined by paragraph 3 of CMM 16 (2023) on Vessel Monitoring System.[2] The 13th Meeting of the Parties to SIOFA (MoP13) may extend the pilot phase if deemed necessary.

Participation of CCPs in the pilot phase is essential as it will ensure that individual CCPs are ready for the entry into operation of the SIOFA VMS, and that both reporting modalities specified in paragraph 6 of CMM 16 (2023) are effectively tested. Position reports provided during the pilot phase will not be used for compliance purposes.

Nevertheless, to minimize the burden of the pilot phase, CCPs may opt to include their entire fleet, or only a portion thereof, noting that once the SIOFA VMS enters into operation CCPs will have to ensure that all vessels flying their flag that are within the scope of paragraph 3 of CMM 16 (2023) must report

[1] Effective 3 October 2025, CMM 16 (2025) on Vessel Monitoring System supersedes CMM 16 (2025) on Vessel Monitoring System.
[2] "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."

VMS position reports automatically while they are operating in the Agreement to the Secretariat via their FMC or simultaneous to both their FMC and the Secretariat.

Activities and Outputs

Table 1: Pilot Phase Activities and Expected Outputs for the SIOFA VMS

Objectives	Activity(ies)	Expected Outputs
Commissioning and post-deployment testing of the SIOFA VMS	• Finalize system configuration and deployment; • Conduct functionality tests against the agreed technical specifications; • Document system performance and error logs and report to the service provider, with the aim of resolving them in accordance with agreed service delivery terms	• SIOFA VMS platform fully deployed and operating up to agreed specifications; • System test reports and issue tracking logs;
Facilitate CCPs' initial setup and successful transmission of VMS position reports to the SIOFA VMS	• Provide data submission guidelines (with the technical support of the service provider); • Test real-time and batch position reports submissions from CCPs	• Successful VMS position reports received from pilot CCPs under the various expected scenarios
Verify compatibility of the various data formats expected by the SIOFA VMS, particularly for CCPs transmitting data pursuant to paragraph 6(b) of CMM 16 (2023) on Vessel Monitoring System	• Comprehensive review of the processing capacity of the VMS system against VMS position reports received from CCPs	• List of format-specific issues, if any, resolved
Identify any additional infrastructure requirements	• Identify needs related to analytics, redundancy, confidentiality and security; • Draft procurement or upgrade plan, with estimated costs for approval by MoP13	• Infrastructure needs included in the end-of-pilot evaluation report. • Additional costs, if any, are included in the draft 2027 budget

Objectives	Activity(ies)	Expected Outputs
Develop the Secretariat's technical and operational capacity to receive, manage, and analyze VMS position reports effectively	• Train Secretariat staff on the use of the VMS interface; • Develop Standard Operating Procedures (SOPs) for position reports processing	• Secretariat staff trained • SOPs developed and validated
Develop the Secretariat's capacity to provide technical support to CCPs when the SIOFA VMS becomes fully operational	• Train Secretariat staff on providing technical support to CCPs, including basic troubleshooting of the system. • Develop SOPs for technical assistance and incident response	• Secretariat staff trained • SOPs developed and validated
Identify and address any unforeseen technical, confidentiality, security, or policy risks prior to the entry into operation of the SIOFA VMS	• Monitor and record issues during the VMS pilot phase • Develop and compile recommendations based on observed issues	• Observation log capturing technical, confidentiality, security, and policy issues encountered during the pilot. • Formal risk report summarizing observed issues and proposed mitigation measures

Methodology

The pilot phase will be implemented in a staged approach to ensure systematic testing, troubleshooting and readiness assessment before the SIOFA VMS enters into operation.

Stage 1 – Preparation and Setup

- Implement necessary internal infrastructure modifications in anticipation of the acquisition of the SIOFA VMS
- Complete Secretariat system acquisition and configuration in collaboration with the selected service provider.
- Conduct Secretariat trainings and relevant capacity building
- Confirm participation of CCPs and their selected vessels
- Provide CCPs with technical guidelines and configuration instructions for position report submission.

Stage 2 – Connectivity and Format Verification

- CCPs transmit initial test position reports (both real-time and batch submissions) to verify connectivity.
- Secretariat reviews incoming reports for compliance with required data formats and reporting standards
- Identify and resolve formatting or transmission errors in coordination with CCPs and the service provider.

Stage 3 – Live Position Report Transmission Trials

- Selected vessels transmit operational position reports over an agreed period to be determined by the VMS WG.
- Secretariat verifies completeness, timeliness, and accuracy of received position reports.
- Performance metrics (e.g., delivery time, success rate) documented for each CCP.
- Conduct security and confidentiality checks in line with agreed policies.

Stage 4 – Feedback

- Collect feedback from CCPs on their experience and challenges during the pilot.
- Conduct final Secretariat staff training and finalize Standard Operating Procedures (SOPs) for position report management and technical support.

Stage 5 – Review and Reporting

- Secretariat prepares a consolidated pilot report, including technical performance results, identified risks, and any additional infrastructure or procedural requirements.
- End-of-pilot report submitted to the VMS WG for review, with recommendations for adjustments before the operational launch, to be reviewed by CC10 and approved by the MoP13.

Table 2: Proposed Timelines for the Pilot Phase of the SIOFA VMS

Stage	TaskID	Task	Oct-25	Nov-25	Dec-25	Jan-26	Feb-26	Mar-26	Apr-26	May-26
Stage 1 – Preparation and Setup	1	Infrastructure modifications								
	2	System acquisition & config								
	3	Secretariat training								
	4	Confirm CCP participation								
	5	Provide guidelines to CCPs								
Stage 2 – Connectivity & Format Verification	6	CCPs transmit initial test data								
	7	Secretariat reviews reports								
	8	Resolve formatting/transmission errors.								
Stage 3 – Live Position Reports Transmission Trials	9	Selected vessels transmit data								
	10	Verify completeness & accuracy.								
	11	Document performance metrics								
	12	Security & confidentiality checks								
Stage 4 – Feedback	13	Collect feedback from CCPs								
	14	Final Secretariat training & SOPs								
Stage 5 – Review & Reporting	15	Prepare consolidated end-of-pilot report								
	16	Submit the report to WG and MoP.								

Roles and Coordination

The SIOFA Secretariat will be the lead implementor of the project, with the support of the selected Service provider and the participation of CCPs. The VMS WG will have oversight responsibility for the implementation of the project.

Within the Secretariat, the Compliance Officer will be the project manager for the pilot phase, supported by the Data Officer. He will have the responsibility for:

- Implementing the activities foreseen by this project proposal
- Informing the Executive Secretary of any administrative and budgetary matters that relate to the implementation of the project, and that may impact the outcome of the project
- Being the lead contact point between the Service Provider and the Secretariat. And
- Providing periodic updates on the progress of the pilot phase to the VMS WG, including via the WG Chair.

The Data Officer will support the Compliance Officer with matters relating to data management. A part-time IT officer will also provide relevant IT support throughout the process.

CCPs shall be responsible for the transmission of position reports from their FMC and/or vessels to the SIOFA VMS, including the necessary configurations required for their national VMS and/or ALCs deployed on vessels flying their flag. For this purpose, the Secretariat shall contact the VMS Point of Contact designated by the CCP pursuant to paragraph 11 of CMM 16 (2023).

The pilot phase of the VMS is not expected to incur any resource or financial requirements beyond those already covered by the grant supporting the establishment of the SIOFA VMS and the 2026 budget approved by MoP12.

Risk Management

This risk management aims to identify potential challenges that could hinder the successful implementation of the pilot phase of the SIOFA VMS and to propose mitigation measures that reduce their likelihood or impact. Risks have been assessed in terms of probability and potential consequences for project objectives, timelines, and resources. The key risk categories are *Technical risks, Operational risks* and *Institutional risks*.

Mitigation measures have been developed for each identified risk, prioritising proactive actions to prevent risks from occurring and contingency plans to address them if they arise. The Secretariat is responsible for monitoring risk trends and escalating critical issues to the SIOFA Working Group and Meeting of the Parties as appropriate.

This systematic approach will ensure that the VMS pilot phase remains on track, with identified risks addressed in a timely and coordinated manner, thereby increasing the likelihood of a smooth transition to full operational deployment.

The risks below are ranked from high to low, based on a risk matrix combining likelihood (probability) and potential impact. This approach will allow the Secretariat to prioritize resources and attention on the most

critical risks that could affect the successful implementation of the pilot phase of the SIOFA VMS, while ensuring that contingency measures are in place for lower-priority risks. By systematically assessing both the probability of occurrence and the severity of consequences, the Secretariat can focus on proactive mitigation and timely response, thereby increasing the likelihood of a smooth transition to full operational deployment.

Table 2: Identified Risks, Probability, Impact, Risk Priority, and Mitigation Measures for the SIOFA VMS Pilot Phase

Risk	Probability	Impact	Risk Priority	Mitigation
Technical incompatibilities between SIOFA VMS and CCP systems	Medium	High	High	Conduct compatibility checks during the pilot phase, and provide technical support to CCPs
Pilot phase incurs delays.	Medium	Low	Medium–High	Plan project timeline carefully, monitor progress regularly, and solicit MoP13 approval for delayed entry into operation if needed.
Policy misalignment (CMM, Confidentiality, and Security)	Low	Medium-High	Medium–High	Continuous review of CMMs, if necessary, identify any modifications required and flag them to propose changes to MoP13 in line with the ROP, and ensure the draft ISSP aligns with the VMS.
Limited participation in the voluntary pilot phase.	Medium	Medium	Medium-High	Engage CCPs early, provide clear guidance and benefits of participation, and offer technical support where possible. Secretariat to send a reminder for the submission of ALC details before the deadline. Send an email to inform the CCPs of the commencement of the pilot phase and further encourage the CCPs' participation in it.
Change of personnel at the Secretariat or position reclassification	Low	Medium	Low-Medium	Maintain detailed documentation and handover notes, and ensure cross-training of staff.

and restructuring
during the pilot phase

Monitoring and Evaluation

The purpose of the Monitoring and Evaluation (M&E) process is to provide a systematic and evidence-based approach to track the progress of the pilot phase of the VMS, assess whether its stated objectives are being achieved, assess performance against predefined output indicators, and identify areas for improvement. This will ensure that lessons learned during the pilot phase are applied to optimize the system's effectiveness, functionality, and readiness prior to the entry into operation of the SIOFA VMS. The M&E Report will provide the SIOFA VMS WG and the Meeting of the Parties with an evidence-based assessment of the SIOFA VMS's readiness prior to its entry into operation. It will be included as part of the end-of-pilot evaluation report.

Progress reporting will be conducted systematically to the VMS WG through its Chair. The Secretariat will provide periodic updates to the VMS WG Chair, with the frequency and format to be agreed upon between the Secretariat and the Chair. These updates will detail performance against objectives, highlight significant findings, and offer targeted recommendations. Upon conclusion of the pilot phase, an end-of-pilot evaluation report will be submitted, presenting an overall assessment of the system's readiness for full deployment, documenting lessons learned, and proposing an improvement plan to address any identified gaps.

Data Collection Methods

Data for the M&E will be gathered through a combination of automated and manual processes. The VMS platform will automatically generate system logs, providing continuous technical performance data. Structured test scenarios will produce formal test reports, ensuring that the system is assessed under controlled conditions. Feedback from CCPs and the Secretariat will also be collected, enabling qualitative input on user experience. In addition, a simple incident tracking spreadsheet will be maintained to log issues, resolutions, and response times throughout the pilot phase.

Evaluation Criteria

The pilot phase will be assessed against the following evaluation criteria:

- **Effectiveness** – the extent to which the pilot achieved its stated objectives.
- **Efficiency** – whether activities were delivered on schedule and within the allocated resources.
- **Sustainability** – the readiness of the system for ongoing operation and long-term support.
- **Scalability** – the feasibility of expanding the pilot to full-scale deployment across all CCPs, therefore allowing the entry into operation of the SIOFA VMS.

Table 3:M&E Framework Table

Objective	Output	Indicators	Means of Verification	Responsible
Commissioning and post-deployment testing of the SIOFA VMS	• SIOFA VMS platform fully deployed and operating up to agreed specifications; • System test reports and issue tracking logs;	• Percentage of VMS system functions tested and verified as operational	• Acceptance Certificate or similar document	• SIOFA Secretariat • VMS Service Provider
Facilitate CCPs' initial setup and successful transmission of VMS position reports to the SIOFA VMS	• Successful VMS position reports received from pilot CCPs under the various expected scenarios	• Percentage of VMS position reports received successfully across all expected scenarios	• Technical test results	• SIOFA Secretariat • VMS Service Provider • CCPs
Verify compatibility of the various data formats expected by the SIOFA VMS, particularly for CCPs transmitting data pursuant to paragraph 6(b) of CMM 16 (2023) on Vessel Monitoring System	• List of format-specific issues, if any, resolved	• Number of format-specific data issues identified versus number resolved within pilot timeline	• Technical test results	• SIOFA Secretariat • VMS Service Provider • CCPs
Identify any additional Infrastructure requirements	• Infrastructure needs included in the end-of-pilot evaluation report. • Additional costs, if any, are included in the draft 2027 budget	• Documented infrastructure requirements and recommendations in the End of pilot evaluation report (Yes/No) • Number and estimated value of additional cost items	• End of pilot evaluation report • Draft 2027 budget document with line items clearly indicating additional costs related to the project	• SIOFA Secretariat • VMS Service Provider

Objective	Output	Indicators	Means of Verification	Responsible
		incorporated into the draft 2027 budget		
Develop the Secretariat's technical and operational capacity to receive, manage, and analyze VMS position reports effectively	• Secretariat staff trained • SOPs developed	• Number of Secretariat staff trained • Standard Operating Procedures finalized	• Mission report/ Training Certificates • Finalized SoPs	• SIOFA Secretariat • VMS Service Provider
Develop the Secretariat's capacity to provide technical support to CCPs when the SIOFA VMS becomes fully operational	• Secretariat staff trained • SOPs developed	• Number of Secretariat staff trained • Standard Operating Procedures finalized	• Mission report/ Training Certificates • Finalized SoPs	• SIOFA Secretariat • VMS Service Provider
Identify and address any unforeseen technical, confidentiality, security, or policy risks prior to the entry into operation of the SIOFA VMS	• Observation log capturing technical, confidentiality, security, and policy issues encountered during the pilot. • Formal risk report summarizing observed issues and proposed mitigation measures	• Observation log completed • Risk report finalized and included in the end of pilot evaluation report	• End of pilot evaluation report	• SIOFA Secretariat

Conclusion

The pilot phase of the SIOFA VMS will ensure that both the Secretariat and participating CCPs are fully prepared for the system's entry into operation. Through systematic testing, monitoring, and evaluation, the pilot phase will verify technical functionality, data compatibility, and operational readiness while identifying and addressing any unforeseen technical, security, confidentiality, or policy issues. Regular reporting will ensure that lessons learned during the pilot phase inform the final operational procedures and support long-term sustainability.

The pilot phase will provide a controlled environment to validate system performance, strengthen institutional capacity, and ensure that the SIOFA VMS can be deployed reliably and efficiently. The findings and recommendations from this phase will form the basis for a smooth and fully informed transition to full operational deployment, enhancing compliance monitoring and contributing to the sustainable management of fisheries under SIOFA.