



International Civil Aviation Organization

NORTH-EASTERN AFI VSAT NETWORK (NAFISAT)

SUPERVISORY BOARD NINETEENTH MEETING (SBM/19)

(Mogadishu, Somalia, 15 -16 October 2024)

SUMMARY OF DISCUSSIONS

Prepared by the ICAO Eastern and Southern African Office and ATNS

Table of Contents

	Page
SUMMARY OF DISCUSSIONS	1
1. Introduction	1
2. Opening of the meeting	1
3. Election of the Chairperson	1
4. Secretariat.....	2
5. Attendance	2
6. Apologies/Absent	2
7. Adoption of the Agenda and Work Programme	2
8. Discussion of the Agenda Items	2
8.1. Operation, Maintenance and Performance of NAFISAT Network.	2
8.2. Network Upgrades and Future Developments of the NAFISAT VSAT.....	3
8.3. Financial Report (2023/2024), Management Accounts (2023/2024) and Budget..... Proposals (2025/2026)	4
8.4. Status of NAFISAT Network Data Collection.....	4
8.5. Financial Sustainability of the NAFISAT Network.....	5
9. Any other business	6
10. Date and Venue of the Next Meeting.....	6
11. Approval of Records of Meeting.....	6
12. Closure of Meeting	6

SUMMARY OF DISCUSSIONS

1. Introduction

1.1 The Nineteenth (19th) Meeting of the North-Eastern Africa-Indian Ocean (AFI) VSAT Network (NAFISAT) Supervisory Board (SVB-19) was held in Mogadishu, Somalia from 15 to 16 October 2024, at the kind invitation of the Federal Government of Somalia and the Somali Civil Aviation Authority (SCAA) in collaboration with ATNS, IATA and ICAO Secretariat.

2. Opening of the meeting

2.1. Mr. Ahmed Mo'allin Hassan, Director General (DG) of the Somali Civil Aviation Authority, opened the meeting and expressed his pleasure on behalf of both the Federal Government of Somalia and the Somali Civil Aviation Authority. He extended a special welcome to ICAO, ATNS, IATA and all Board members.

2.2. The DG recalled that the NAFISAT network was established and implemented in 2007 pursuant to Conclusion 13/15 of the AFI Planning and Implementation Regional Group (APIRG), to enhance aviation safety through elimination of voice communication deficiencies.

2.3. He stressed his appreciation for the role played by the NAFISAT Member States, the Service Providers (i.e., ATNS and IATA) in establishing this important VSAT network.

2.4. The DG further shared the Somali Civil Aviation Authority's journey through history from the civil war in Somalia in 1994 till the re-establishment of the services in Somalia in 2018 and the establishment of class A airspace in 2023 in collaboration with ICAO, IATA, ATNS, neighbouring countries and other stakeholders.

2.5. He supported the continuation of the VSAT network services till 2029 and beyond, as they are integral to aviation safety.

2.6. Finally, Mr. Ahmed Hassan highlighted the importance of the mutual cooperation among the NAFISAT Member States, IATA, ATNS and ICAO; and wished the meeting success in their deliberations.

3. Election of the Chairperson

3.1. Mr. Mohamed Abdirizak, Head of CNS, SCAA (Somali Civil Aviation Authority) was elected as Chair of the Nineteenth NAFISAT Supervisory Board Meeting (SVB-19). Mr. Erick Meli from Kenya Civil Aviation Authority (KCAA) co-chaired with him. The new Chair welcomed all participants to the meeting and thanked them for attending and confirming him as chair of the meeting.

4. Secretariat

4.1. Mr. Harvey Gabriel Lekamisy, Regional Officer, Communications, Navigation and Surveillance (CNS) from the ICAO Eastern and Southern African Office (ESAF), assumed the secretarial tasks of the Meeting in accordance with Article 6 of the NAFISAT Memorandum of Understanding (MoU). ATNS supported the editorial function of the minutes.

5. Attendance

5.1. Thirty-four (34) participants from Ten (10) of the fourteen (14) NAFISAT member States namely, Djibouti, Egypt, Kenya, Libya, Somalia, South Sudan, Sudan, Tanzania, Uganda and Yemen participated in the meeting. In addition, the NAFISAT Network Service Provider (ATNS and IATA) and ICAO ESAF Regional Office were also represented. List of participants is provided in **Appendix A** to this Summary of Discussions.

6. Apologies/Absent

6.1 Apologies were noted from Eritrea, Ethiopia, Saudi Arabia and Seychelles.

7. Adoption of the Agenda and Work Programme

7.1 Both the agenda and work programme were adopted by the meeting without any amendments. All the Working and Information Papers are accessible on the ICAO Public Website: <https://www.icao.int/ESAF/Pages/nafisat-svb-19-2024.aspx>

7.2. Yemen requested to present an Information Paper on the operation status of its terminal and related issues.

8. Discussion of the Agenda Items

8.1. Operation, Maintenance and Performance of NAFISAT Network

8.1.1. The meeting noted the successful maintenance of the system, which was achieved through the continuous training, commitment, and assistance of the member States. The operational performance and maintenance of the NAFISAT network for the period April 2023 to March 2024 was presented, including the report covering the availability of all services provided by the network, and these are measured against the agreed SLAs.

8.1.2. The meeting was informed that the successful maintenance of the VSAT network is made possible with the continuous commitment, assistance, and teamwork of the NAFISAT member States and their personnel. Skills obtained by all States' participants at the ATA training continues to prove to be fruitful to ensure that the reported faults are dealt with timeously. The VSAT training schedule is available, and members are advised to submit requests to ATNS to fill the slots available for the Financial Year 2024/2025.

8.1.3. The meeting noted that assistance is still required with the issuance of LOI's, VISAS, with emphasis on assistance with customs processes and site access permits required by some authorities. These factors remain a risk to quick on-site response and availability of spares.

8.1.4. The meeting was informed that external interference has been dealt with as reported during the previous Supervisory Board Meeting. 5G interference has been identified in most cases and as reported, ATNS implemented 5G filters to mitigate this interference. It is crucial that regulators are approached to enforce the protection of the VSAT registered frequencies. ATNS prioritised the roll out of 5G filters into the Network specifically to sites with interference. More discussion on the 5G interference will take place during the presentation of the future of the network.

8.1.5. The meeting reiterated that seamless operations, interoperability and interconnectivity between VSAT networks in the AFI Region remains crucial and ATNS remains committed to implement the best practices as recommended by ICAO. The NAFISAT and SADC VSAT II networks are fully integrated to ensure continuation of seamless operation by being fully interconnected and interoperable on the Satellite level 1. At present interconnectivity between AFISNET and NAFISAT is achieved on level 3 through baseband equipment and not on the satellite level 1 and recent engagements with ASECNA intends to address this issue.

8.1.6. The meeting noted that migration of AFTN service to AMHS has gained traction in the Financial Year 2022/2023 but unfortunately has come to a standstill. Although the capability is there on some end user systems, transition is still not done. Unfortunately, some of the members have not replaced systems to AMHS capability.

8.1.7. The meeting was informed that the central switch in Nairobi have been reported as problematic. Mauritius, Johannesburg, Ethiopia, Somalia, Uganda, and others have been reporting regular outages to the AMHS service via Nairobi. This issue has been escalated to the Kenya authorities as Nairobi is the main gateway between NAFISAT, SADC and other AFI regions. Kenya informed the meeting on their AMHS system upgrade and confirmed that the system itself operating seamlessly. The new Nairobi AMHS system will be fully operational by the end of January 2025.

8.1.8. IATA raised a concern that not all States have migrated from serial communication (AFTN) to IP based communication (AMHS) and requested States to prioritise the AMHS / IP based communication migration.

8.1.9. South Sudan expressed their appreciation to the NAFISAT network service provider for the installation / implementation of the new VSAT station, enabling Juba to connect with the neighbouring FIRs. Collaboration with ASECNA is ongoing to enable connectivity from Juba, N'Djamena, and Brazzaville.

8.1.10. The meeting noted the requirements of services between Somalia, Yemen, Seychelles, and India. The service network reiterated that these services can be implemented through the VPN solution after Bilateral Agreements have concluded between relevant States.

8.1.11. Member States agreed to assist with letters of invitation, site access and custom clearance for ensuring maintenance (preventative and corrective) to be conducted timeously. Member States were requested to ensure to submit Level 4 statistics to ATNS. All States noted that all NAFISAT faults to be reported to ATNS as per the Fault Reporting Procedure.

8.2. Network Upgrades and Future Developments of the NAFISAT VSAT

8.2.1. Under this agenda item, the meeting noted the progress made in the network upgrades and the strategies implemented to sustain the SADC/NAFISAT VSAT networks until 2029.

8.2.2. The meeting considered the proposed recommendations for further development, including the exploitation of new satellite technologies and IP-based infrastructure to meet future civil aviation requirements.

8.2.3. The meeting encouraged for continuous collaboration among stakeholders to ensure the seamless life extension and modernization of the networks.

8.2.4. The meeting noted that all necessary indoor / outdoor spares and support for the Network Life Extension have been identified, and a proposal has been finalized with the original equipment manufacturer.

8.2.5. Considering the network platform was established in 2007 and upgraded in 2016, and the integration of ATN backbone and tributary circuits for services such as AMHS, Voice-over-IP, CAD, SWIM, and other services, an exploration of new satellite and other available technologies. This includes alternative satellite constellations, High Throughput Satellites (HTS), and new modulation techniques like DVB-S2, and other available infrastructure like VPN, MPS to meet future civil aviation requirements.

8.2.6. Regarding the alternative technologies, the network service provider informed the meeting that research into new network infrastructure based on Internet Protocol (IP) is currently underway. This approach leverages commercial off-the-shelf (COTS) products, offering the potential to simplify deployment, reduce costs, and enhance interoperability with other IP-based systems.

8.2.7. This IP-based solution has already been implemented as an interim solution in Angola, Sudan, South Sudan, and Yemen.

8.2.8. The meeting discussed the NAFISAT network Post 2029 and agreed to the establishment of a Task Force, comprising five Member States (Egypt, Kenya, Sudan, Uganda, and Yemen) and the network service provider (ATNS / IATA) under the coordination of the Secretariat. The Task Force will be tasked with studying the future of network based on the available, current, and new technological trends. Given the timeframe of implementing the project of this magnitude, the Task Force will present the proposed solution to the next SBM for adoption and approval on the advancement of the network beyond 2029.

8.2.9. The coordination of the activities of the Task Force will be communicated through ICAO.

8.3. Financial Report (2023/2024), Management Accounts (2023/2024) and Budget Proposals (2025/2026)

8.3.1. ATNS presented the Audited NAFISAT Financial Statements for the period ended 31 March 2024, for which no exceptions were noted. These financial statements were prepared in accordance with the International Financial Reporting Standards (IFRS).

8.3.2. The meeting noted with appreciation the actual performance for the financial period ended March 2024.

8.3.3. ATNS presented the budget proposal for the period ending 31 March 2026 for approval by the Board, following the discussions and further clarifications on the information provided, the Budget 2025/2026 was approved by South Sudan and supported by the NAFISAT Supervisory Board.

8.4. Status of NAFISAT Network Data Collection

8.4.1. The network service provider reminded the meeting that the current NAFISAT billing data used for billing of the networks is at risk of being compromised due to the ICAO requirements for states to transition from AFTN (Serial Communication) to AMHS (IP based communication). The serial communication method was advantageous to the collection of data for the purposes of billing for FIR crossings on the NAFISAT network.

8.4.2. The ICAO requirement for states to transition from AFTN to AMHS is being coordinated and tracked in the AFI region through the ICAO APIRG (Africa-Indian Ocean Planning and Implementation Regional Group). States that have invested in AMHS capable infrastructure are now transitioning their AFTN links to IP based AMHS links.

8.4.3. The Network service provider reminded the meeting that the current NAFISAT MOU does not specify the data collection method for the purposes of billing on the network. This is a challenge, since without flight plan data, billing on the network cannot occur.

8.4.4. The meeting noted that without the Flight Plans data, billing on the network cannot occur. The network service provider presented two (2) viable solutions for billing data to be collected.

8.4.5. The meeting noted the submission and deliberated on the best option to ensure that continued financial sustainability the NAFISAT network by ensuring effective data collection methods and supported in the implementation of the proposed solution two (2).

8.4.6. The meeting agreed to the installation of data collectors at key node sites to facilitate the automatic collection of flight plan data.

8.5. Financial Sustainability of the NAFISAT Network

8.5.1. The Network Service Provider presented a Working Paper to demonstrate the challenges it faces in the collection of NAFISAT charges and cost recovery, and further suggested the mitigation to address these challenges.

8.5.2. The board resolved that:

8.5.2.1. Member States commit to regularly update their aeronautical publication in relation to the NAFISAT Network service.

8.5.2.2. Member States commit to submit any agreement(s) in place with any operator that is exempted from paying Air Navigation Service charges within their territories.

8.5.3. Member States commit to regularly update their aeronautical publication and submit a copy to ATNS for record keeping and presentation to the aircraft operators. Member States unable to comply with the publication of AIP, commit to assist the Service provider to apply the most suitable method of notifying airspace users in their States of the NAFISAT services provided.

8.5.4. Member States shall appoint Focal Points within the Finance and Aeronautical Information departments and submit their names and contact details to ATNS not later than **15 November 2024**.

9. Any other business

9.1. Yemen

9.1.1. Yemen presented to the meeting the successful reintroduction of Sana á to the NAFISAT network by implementing the interim using the VPN.

9.1.2. This was made possible by the configuration of the Off-The-Shelf device to enable voice and data communication services to neighbouring FIRs, i.e., Asmara, Jeddah, Addis, Djibouti, and Mogadishu.

9.1.3. The meeting noted that Yemen has incurred initial and ongoing costs to optimise the operation of the network.

9.1.4. Yemen expressed its readiness to upgrade the VSAT terminal as a priority in coordination with the service provider.

9.1.5. Yemen will be installing / implementing the AMHS equipment and has requested ATNS to support them in this project.

9.1.6. The meeting noted the ongoing challenges of Yemen, Seychelles, and Somalia in establishing the voice / data communication services with the India (Mumbai) link. The meeting requested ICAO to coordinate with APAC & MID to facilitate the exploration of a solution.

9.1.7. Yemen expressed their intention to sign the NAFISAT MOU.

9.2. Libya

9.2.1. Libya informed the meeting of their intention to implement a new terminal at a new location to reconnect Tripoli to Cairo, Port Sudan, N'Djamena, and Niamey.

9.2.2. Libya requested urgent assistance from the service provider with a similar interim solution as implemented in Yemen.

9.2.3. This interim solution will enable the initial coordination with the adjacent FIRs until such time the finalisation of Libyan internal processes for the establishment of the new VSAT terminal.

10. Date and Venue of the Next Meeting

10.1. The next meeting of the NAFISAT Supervisory Board (NAFISAT SBM/20) will be held in Uganda in 2025, the exact date to be provided by ICAO.

11. Approval of Records of Meeting

11.1. The records of the meeting as presented in the Summary of Discussions were proposed by Djibouti and seconded by Sudan, Somalia, Yemen, and IATA as a true reflection of the meeting.

12. Closure of Meeting

12.1. The Chairperson thanked the participants for their valuable contributions to the meeting over the past two days.

12.2. He further expressed his heartfelt gratitude for the presence of all in Somalia and commended Member States for the dedication and commitment towards the NAFISAT progress, as it is crucial for the sustainability of the network.

12.3. The Chairperson acknowledged the incredible work done by the network service providers in managing the interoperability of the network.

12.4. On behalf of the DG of the Somali CAA, the delegates were invited for a farewell dinner in the evening at 6pm.

12.5. The chairperson closed the 19th NAFISAT supervisory board meeting.

-END-



ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

NINETEENTH NAFISAT BOARD MEETING (SOMALIA, 14 – 15 OCTOBER 2024)

LIST OF ATTENDEES

COUNTRY/ ORGANIZATION	NO.	NAME	DESIGNATION-JOB TITLE/ TELEPHONE	EMAIL
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**Appendix A:
19th NAFISAT Board Meeting
List of participants**

2

COUNTRY/ ORGANIZATION	NO.	NAME	DESIGNATION-JOB TITLE/ TELEPHONE	EMAIL
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SOMALIA	10.	Mr. Ahmed Mo'allin Hassan	Director General Somali Civil Aviation Authority (SCAA) Mogadishu - Somalia +252 61 169 1845	ahmed.hassan@scaa.gov.so
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Appendix A:
19th NAFISAT Board Meeting
List of participants

4

COUNTRY/ ORGANIZATION	NO.	NAME	DESIGNATION-JOB TITLE/ TELEPHONE	EMAIL
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**Appendix A:
19th NAFISAT Board Meeting
List of participants**

5

COUNTRY/ ORGANIZATION	NO.	NAME	DESIGNATION-JOB TITLE/ TELEPHONE	EMAIL
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-END-