



INTERNATIONAL CIVIL AVIATION ORGANIZATION

First Meeting of the Africa - Indian Ocean Aviation System Planning and Implementation Group (AASPG/1)

Libreville, Gabon, 3 - 7 November 2025

Agenda Item 4: Implementation of air navigation goals, targets and indicators, including the priorities set in the Regional Air Navigation Plan

PROGRESS ON REGIONAL SPACE WEATHER CENTRE INTEGRATION TO SUPPORT GLOBAL CENTRES

(Presented by South Africa)

SUMMARY	
<p>This information paper highlights the progress made in terms of integrating the regional space weather center into ICAO's global framework to ensure that Africa is not left behind in the modernization of aviation. Amendment 82 to Annex 3 includes the enabling clause allowing the regional SWX Centre (SWXC) to support the global SWXCs in the provision of Space Weather Information Service (SWIS). In view of the above, the SWX-MOG working group has completed the integration process of the regional center into the global space weather information service and the center has been in-testing or shadow mode since August 2025 and will be fully integrated by the applicability date of amendment 82, which is the 27th of November 2025. This is in support of the Global Air Navigation Plan (Doc 9750) by delivering space weather services that meet performance-based navigation and CNS (Communication, Navigation, Surveillance) requirements</p> <p>Action by the Meeting:</p> <p>The meeting is invited to note the information in this paper on paragraph 3.1</p>	
<i>REFERENCE(S):</i>	<ul style="list-style-type: none"> ○ Amendment, 78, 81 and 82 to Annex 3 ○ Global Air Navigation Plan (Doc 9750) ○ Annex 15, PANS-ABC (Doc 8400), PANS-ATM (Doc 4444), PANS-MET (Doc 10157) ○ Manual on Space Weather Information in Support of International Air Navigation (Doc 10100)
<i>Strategic Objectives</i>	<p>A - Aviation Safety</p> <p>B - Air Navigation Capacity and Efficiency</p> <p>Related ASBU KPIs & B0 Modules: All applicable to AIM, and MET</p>

1. INTRODUCTION

- 1.1. ICAO Annex 3 – Meteorological Service for International Air Navigation – provides Standards and Recommended Practices (SARPs) governing the provision of Meteorological Information for International Air Navigation. As of 2018, the requirement for the provision of space weather services is included as part of global air navigation plans. These requirements have been incorporated into Annex 3, which now puts forward that measures of safety should include the ability of the operators and air navigation service providers (ANSPs) to effectively manage the risks of space weather impact on communications, navigation, and surveillance systems, as well as radiation exposure.
- 1.2. The Fifth meeting of the Meteorology Panel (METP/5) held in June 2021 deliberated on the proposed amendment 81 to ICAO Annex 3. The amendment addressed in this working paper concerns the responsibility of a Regional Space Weather Centre (SWXC), which would be to support the Global Space Weather Centres (SWXC) in their functions.
- 1.3. MOG/24-SWX/06 – Integration of the regional space weather centre into operational ICAO space weather information service to ensure that the required coordination between global and regional SWXCs and harmonization of space weather advisories; integration of the Regional SWXC into the global service.
- 1.4. This information paper provides updates in terms of the progress made in integrating the regional space weather centre fully into the global centres to effectively support the operational Space Weather Information Service.

2. DISCUSSION

- 2.1. ICAO designated space weather service providers have been supporting the aviation sector in compliance with Annex 3, amendment 78 by providing the space weather advisory information in the prescribed formats on a 24/7 basis since November 2019.
- 2.2. ICAO State Letter AN10/1-17/111 in announcing the designation of provider States of space weather information, also indicated that Regional Centres should be established no later than November 2022. Amendment 82 to ICAO Annex 3, as adopted by the Council in April 2025, clarified the role of the Regional Space Weather Center to that of a supporting role to the Global Space Weather Centers.
- 2.3. ICAO State Letter AN 10/1.1-25/24 dated 23 April 2025, which informed States of the adoption of Amendment 82 to Annex 3 — Meteorological Service for International Air Navigation with applicability date on 27 November 2025.
- 2.4. Amendment 82 to Annex 3 includes the enabling clause allowing the regional SWX Centre (SWXC) to support the global SWXCs in the SWX Information Service (SWIS). In view of the above the SWX-MOG working group has started with the integration process of the regional center into the global space weather information service. Currently the integration process is in the testing phase since August 2025 and will be fully integrated by the applicability date of amendment 82 which is the 27th of November 2025.
- 2.5. The regional centre's integration into ICAO's global framework ensures that Africa is not left behind in the modernization of aviation meteorology. It supports the Global Air Navigation Plan (GANP) by delivering space weather services that meet performance-based navigation and CNS (Communication, Navigation, Surveillance) requirements addressing

the issue pertaining to the region as model and data used will be the regional data.

- 2.6. With the expected addition of space weather information to the existing suite of meteorological information, as defined in ICAO Annex 3 – Meteorological Service for International Civil Aviation, there will be a need for operators and regulatory authorities to incorporate space weather in their national regulation, operational policies, and procedures. In addition to 2.5 the ANSPs within the AFI Region needs to ensure that their systems have allocated a communication header for space weather advisory message to be exchanged via the AFTN/AMHS circuit just like other OPMET information i.e. Volcanic Ash Advisory (VAA), Tropical Cyclone Advisory (TCA), and Significant weather-related messages (WS) are distributed via AFTN and incorporated into the SADIS system and included during the generation of a flight folder by the respective AMOs.

3. ACTION BY THE MEETING

- 3.1. The meeting is invited to note the information in this paper.