



Agenda Item 3: Report on activities, deliverables and implementation progress of the GT Interop and Subgroups

REGIONAL ACTIVITIES TO STRENGTHEN GNSS RESILIENCE

(Prepared by the Secretariat)

SUMMARY

This information paper presents activities conducted and planned during 2026 to strengthen the resilience of air navigation systems in the SAM Region in the event of degradation or unavailability of GNSS services. It reports on work related to Minimum Operational Networks (MON), identification, notification and management of radio-frequency interference affecting GNSS, contingency strategies, and the Radionavigation Systems Workshop for the NAM/CAR/SAM Regions planned for September 2026.

References:

- Regional Project RLA/06/901
- Annex 10 - Aeronautical Telecommunications
- CAR/SAM Air Navigation Plan
- Regional Meeting on Minimum Operational Networks (MON) and GNSS Resilience in the SAM Region, 13 to 17 July 2026
- Air Navigation Systems Workshop for the NAM/CAR/SAM Regions, 2 to 4 September 2026

1. Background

1.1 GNSS is a fundamental element of modern air navigation and supports a growing number of performance-based navigation (PBN) operations and applications.

1.2 The worldwide increase in radio-frequency interference events, including jamming and spoofing, has reinforced the need to assess the resilience of navigation systems and have contingency means and procedures available to maintain adequate levels of safety and service continuity.

1.3 In this context, Regional Project RLA/06/901 has been promoting regional activities for exchange of experience, assessment of Minimum Operational Networks (MON), analysis of alternative infrastructure and strengthening of mechanisms for managing GNSS interference.

2. Analysis

Minimum Operational Networks and GNSS resilience

2.1 The Regional Meeting on Minimum Operational Networks (MON) and GNSS Resilience in the SAM Region was held from 13 to 17 July 2026.

2.2 The activity addressed the growing dependence of air navigation services on GNSS and analysed strategies to maintain continuity of operations in scenarios involving degradation or temporary loss of these signals.

2.3 The work considered assessment of alternative infrastructure and procedures and the MON concept as a tool to support planning of resilient navigation capabilities.

GNSS interference

2.4 States continue to be encouraged to establish appropriate mechanisms to identify, report and manage GNSS interference events.

2.5 These mechanisms require coordination among civil aviation authorities, ANSPs, operators, national spectrum authorities and other bodies involved.

2.6 Consolidating information on location, duration, recurrence, characteristics and operational impact of events will improve regional understanding and support the definition of mitigation measures.

2.7 Timely exchange of information and use of available coordination mechanisms with ICAO and, where appropriate, the International Telecommunication Union (ITU) are also promoted.

NAM/CAR/SAM Air Navigation Systems Workshop

2.8 As a continuation of this work, the Air Navigation Systems Workshop for the NAM/CAR/SAM Regions is planned in Lima, Peru, from 2 to 4 September 2026.

2.9 The Workshop will provide a forum to continue analysing GNSS-related challenges, radio-frequency interference, navigation-system resilience and strategies available to ensure continuity of operations.

2.10 Workshop results will help guide subsequent regional activities and strengthen coordination among the NAM/CAR and SAM Regions on these matters.

Activities through the end of 2026

2.11 During the remainder of 2026, collection and exchange of information on events affecting GNSS will continue to be promoted, together with follow-up to actions arising from the MON/GNSS Meeting and the Radionavigation Workshop.

2.12 States will continue to receive support in assessing navigation capabilities and identifying contingency and resilience strategies appropriate to their operational needs.

2.13 Activities conducted during 2026 represent progress toward a regional approach to increasing the resilience of navigation services against GNSS degradation or unavailability.

2.14 Continuation of work on MON, interference management, reporting mechanisms and regional coordination will progressively strengthen States' capabilities and the resilience of the SAM Region air navigation infrastructure.

3. Suggested actions

3.1 The Meeting is invited to:

a) take note of the information presented on activities carried out and planned concerning GNSS resilience and Minimum Operational Networks (MON) in the SAM Region;

b) take note of progress achieved during the Regional Meeting on Minimum Operational Networks (MON) and GNSS Resilience, held from 13 to 17 July 2026;

- c) continue supporting collection and exchange of information on radio-frequency interference events affecting GNSS services, including jamming and spoofing;
- d) follow up work aimed at developing regional contingency guidance for degradation or loss of GNSS services and updating the regional inventory of conventional radio navigation aids;
- e) actively participate in regional activities planned during the remainder of 2026 related to radionavigation systems, GNSS resilience and interference management; and
- f) take note that the results of these activities will provide the basis for continuation of regional work on air-navigation resilience.

END