



REPORT OF
THE WORKSHOP ON ITU WORLD RADIOCOMMUNICATION CONFERENCE 2027
(WRC-27 WORKSHOP)

Lima, Peru, 31 August -01 September 2026

1. Introduction

1.1 The Workshop on ITU World Radiocommunication Conference 2027 (WRC-27 Workshop) was held at the South American (SAM) Regional Office of the ICAO in Lima, Peru, from 31 August to 1 September 2026. The workshop was organized in conjunction with the Twenty Third Working Group Meeting of the Frequency Spectrum Management Panel (FSMP-WG/23), held in Lima from 31 August to 11 September 2026.

1.2 The objective of the workshop was to provide the background and information to States/Administrations in preparing their delegations for the WRC-27, and address other spectrum issues of vital importance to the international aviation community.

2. Opening of the Meeting

2.1 Mr. Luis Fernando Fiallos Pazmiño, Regional Director of the SAM Office, officially opened the workshop and delivered welcoming remarks. He thanked the administrations and international organizations for their continued commitment to promoting and supporting the ICAO position for WRC-27 at the ITU. He highlighted the need for closer regional and national collaboration, underscored by the Assembly Resolution A42-7, and stronger technical capacity to safeguard aviation spectrum, mitigate persistent interference issues, and ensure that the CAR, NAM and SAM Regions are well prepared and effectively represented in the regional and global WRC-27 preparatory processes.

2.2 Mr. Javier Vittor, Regional Officer CNS of the SAM Office, welcomed the participants and expressed his appreciation to the members of the Frequency Spectrum Management Panel (FSMP) who had kindly accepted roles as presenters and contributed their expertise in support of the workshop.

2.3 Mr. Andrew Roy, Chairperson of FSMP, delivered a welcome address to the participants and expressed his appreciation to the ICAO SAM Regional Office for hosting the workshop. He highlighted the objectives of the workshop and stressed the importance of ensuring the availability of adequate aeronautical spectrum resources free from harmful interference to support the safe and efficient operation of international civil aviation.

2.4 Ms. Mie Utsunomiya, Technical Officer (CNS), ICAO Headquarters, served as Secretary of the workshop. She was assisted by Mr. Javier Vittor, Regional Officer CNS of the SAM Office, and Ms. Mayda Ávila, Regional Officer CNS of the NACC Office.

3. Agenda of the Workshop

3.1 The draft Agenda items of the workshop attached to the letter of invitation were adopted by the workshop without change.

- 1) Introduction
- 2) WRC-27: Agenda items of major concerns for the aviation community and action plans to be implemented at the national and regional levels
- 3) Regional preparations for WRC-27
- 4) Radio Altimeter and 5G issues
- 5) Issue of GNSS Interference
- 6) Frequency management in NAM/CAR/SAM regions: current practices and new challenges
- 7) Any other business

4. Organization, Working arrangement, Language and Documentation

4.1 The workshop met in a single session and was conducted in English and Spanish, with simultaneous interpretation provided. However, most documents and the final report were published in English only.

5. Agenda

5.1 Agenda Item 1: Introduction

5.1.1 Under this agenda, following topics were reviewed and discussed.

Presentation Title	Presenter
ITU/WRC process, and preparation for future WRCs	Secretariat
An overview of all aviation relevant agenda items to be addressed by WRC-27	Mr. Andrew Roy, ASRI FSMP chairperson,
ITU Preparatory process towards WRC-27	Nikolai Vassiliev, ITU

5.2 Agenda Item 2: WRC-27: Aviation related topics and action plans to be implemented at the national and regional levels

5.2.1 The workshop received a number of presentations as follows, on the important WRC-27 agenda items relevant to aviation.

Presentation Title	Presenter
WRC-27 Agenda Item 1.5 – limiting non-GSO	Mr. Christian Fleury, France
WRC-27 Agenda Item 1.7 – IMT/Radio altimeter Radio Altimeter	Mr. Andrew Roy, ASRI
WRC-27 Agenda Item 1.9 – AM(OR)S	Mr. Christian Fleury, France
WRC-27 Agenda Item 1.11 – Space-to-Space links	Mr. Damon Ladson, USA
WRC-27 Agenda Item 1.12 – MSS	Mr. Damon Ladson, USA
WRC-27 Agenda Item 1.13 – Space based IMT	Mr. Abed Ferr, Canada
WRC-27 Agenda Item 1.15 – Lunar communications	Mr. Chris Tourigny, USA
WRC-27 Agenda Item 1.16 – Radio Quiet Zones	Mr. Christian Fleury, France
WRC-27 Agenda Item 1.17 – Space Weather Sensors	Mr. Chris Tourigny, USA
WRC-27 Agenda Item 1.18 – Unwanted emission above 76 GHz	Mr. Katsuyuki Arakawa, Japan
WRC-27 Agenda Item 1.19 – Sea surface in RA band	Mr. Andrew Roy, ASRI
WRC-27 Agenda Item 4 – Res 676 (WRC-23)	Mr. Laurent Azoulai, ICCAIA
WRC-27 Agenda Item 9.1 – UAS C2 Link	Mr. Guillaume Novella, France
WRC-27 Agenda Item 9.2 – GMDSS	Mr. Damon Ladson, USA
WRC-27 Agenda Item 10 – Future Agenda Items and WRC Planning	Mr. Guillaume Novella, France

5.2.2 Noting serious concerns from different participants on the progress of WRC-27 Agenda item 1.7 and its relevant ITU-R studies related to the radio altimeter, the States/Administrations were urged to follow ICAO Assembly Resolution A42-7 to strongly support both the ICAO frequency spectrum strategy and position at WRCs. Especially recognizing one of the methods of this agenda item related to 4.4-4.8 GHz now includes all regions of potential identification, including NAM/CAR/SAM regions, the

States/Administrations in NAM/CAR/SAM were encouraged to communicate with radio regulatory authorities for ensuring, to the maximum extent possible, that the ICAO position was accounted for in the development of national and regional positions. It was also strongly recommended that delegations to regional conferences, ITU study groups and WRCs include experts from their civil aviation authorities and other civil aviation stakeholders who are fully prepared to represent aviation interests.

5.2.3 From an operational perspective, the WRC-27 agenda items require sustained attention by civil aviation authorities because several studies concern frequency bands used by, or adjacent to, safety-of-life aeronautical systems. In particular, Agenda Item 1.7 may affect the radio-altimeter environment around 4.2-4.4 GHz; Agenda Items 1.11, 1.12 and 9.2 require protection of aeronautical mobile-satellite (R) service (AMS(R)S) communications and, where applicable, adjacent GNSS/RNSS reception;. States should therefore ensure that aviation safety assessments and ICAO protection criteria are reflected in national spectrum positions before regional preparatory meetings and WRC-27.

5.2.4 The workshop emphasized that spectrum decisions taken outside the aviation sector can have direct consequences for aircraft equipage, airport operations, CNS availability and contingency capacity. States should establish an internal process to review WRC proposals jointly among the civil aviation authority, ANSP, national spectrum regulator, aircraft operators and other affected aviation stakeholders, and should provide technically qualified aviation experts to national delegations participating in CITEL, ITU-R study groups and WRC-27.

5.3 Agenda Item 3: Regional preparations for WRC-27

5.3.1 Under this agenda, following topic was reviewed and discussed.

Presentation Title	Presenter
CITEL-WRC-Prep-Overview-for-ICAO-Workshop-2026-LIMA-31-Aug-2026_v2.pdf	Mr. Vahe A. Yaghdjian, Brazil
Preparation-for-WRC27-workshop-APT-Update-Lima-2026.pdf	Mr. Katsuyuki Arakawa, Japan
Workshop_CEPT-position-WRC-27.pdf	Mr. Maarten Loopstra, Netherlands

5.3.2 The Workshop highlighted the importance of continued coordination between ICAO and the relevant regional telecommunication organizations throughout the WRC-27 preparatory cycle, and encouraged States/Administrations to ensure that aviation requirements and the ICAO Position are appropriately reflected in the development of regional WRC-27 positions.

5.4 Agenda Item 4: Radio Altimeter and 5G issues

5.4.1 Under this agenda, following topic was reviewed and discussed.

Presentation Title	Presenter
Workshop-Presentation_Radio-Altimeter_5G_Lima-2026.pdf	Mr. Andrew Roy, ASRI

5.4.2 Concerns on the potential interference from 5G to radio altimeter were raised under this agenda and following topics were reviewed and discussed.

5.4.3 The workshop noted that the radio-altimeter band 4.2-4.4 GHz supports safety-critical functions during approach, landing and low-altitude operations. Existing radio altimeters were generally designed before the current adjacent-band 5G environment, and many units have not been modified to provide enhanced rejection of adjacent-band interference. New RTCA/EUROCAE minimum operational performance standards (MOPs) are expected in 2027; however, large-scale deployment of newly designed equipment is not expected until the 2030s. Consequently, regulatory and operational mitigations will remain necessary during the transition period.

5.4.4 States planning or expanding IMT/5G operations in bands adjacent to the radio-altimeter band should require early coordination between the telecommunications regulator and aviation authorities. Such coordination should include compatibility assessments, appropriate emission limits and antenna characteristics, consideration of airport protection/coordination areas, identification of affected aircraft fleets, and a process for operational advisories or restrictions when required. National decisions should avoid assuming that mitigations developed for one frequency range or one State are automatically applicable to other bands, aircraft types or regional operating environments.

5.5 Agenda Item 5: Issue of GNSS Interference

5.5.1 Under this agenda, following topics were reviewed and discussed.

Presentation Title	Presenter
Workshop-WRC27-Presentation-GNSS-Interference.pdf	Mr. Laurent Azoulai, ICCAIA
Workshop-Presentation_GNSS-RFI.pdf	Mr. Mathieu Hussong, France

5.5.2 Through the presentations, the workshop was informed of the increasing number of observed GNSS interference incidents worldwide and the resulting implications for the safety and security of air navigation. Participants expressed serious concerns regarding the growing impact of GNSS interference on the integrity of air navigation systems. States and Administrations were encouraged to closely monitor these developments and adopt a comprehensive, well-coordinated approach to address this pressing issue.

5.5.3 GNSS radio-frequency interference may propagate beyond the navigation function itself. Jamming can deny GNSS service, while spoofing can create misleading position or time information. Operational consequences may include degraded or misleading FMS/RNP navigation, map shifts, false or unavailable TAWS/GPWS functions, loss or corruption of ADS-B, degradation or loss of CPDLC/ADS-C and other datalink functions, incorrect aircraft time references, and impacts on SATCOM and emergency-location functions. Some effects may persist after the aircraft has left the interference area.

5.5.4 States were therefore encouraged to incorporate GNSS RFI into national and regional contingency planning. This should include mechanisms for timely pilot/ATC reporting and regional situational awareness; procedures for detection, notification and operational response to jamming and spoofing; coordination among aviation, spectrum, security and defence authorities; and maintenance of sufficient conventional navigation infrastructure as part of a Minimum Operational Network (MON) to preserve safety and adequate airspace capacity during GNSS disruptions. States should also review the compatibility of aircraft minimum equipment assumptions with the navigation infrastructure available during GNSS contingencies.

5.6 Agenda Item 6: Frequency management in NAM/CAR and SAM

5.6.1 Under this agenda item, the following topics were reviewed and discussed.

Presentation Title	Presenter
Frequency-Management-NAMCAR-region-EN-v2.pdf	Mr. Daniel Castañeda, Mr. Rodolfo Rosales and Mr. Elvis Collado (Frequencies Management Task Force for NAM/CAR Region)
Workshop_Aeronautical-frequency-management-in-the-SAM-Region_v2.pdf	Mr. Javier Vittor, ICAO SAM Office
Relevant ICAO provisions	Mie Utsunomiya, ICAO HQ

5.6.2 The NAM/CAR review of frequency records for 38 States and Territories identified operational frequencies not registered in the regional database, discrepancies between AIP information and actual operations, obsolete or unused assignments, inconsistent service classifications and site identification, and limitations in available AOC-frequency information. These deficiencies can delay compatibility analyses and new assignments, increase the risk of frequency conflicts, and reduce confidence in the regional planning database.

5.6.3 The workshop considered frequency management to be an enabling function for CNS safety, continuity and resilience rather than only an administrative activity. States should formally designate an aeronautical frequency-management focal point with an alternate; maintain a permanent coordination mechanism among the civil aviation authority, ANSP and national spectrum regulator; manage the complete assignment life cycle from request through AIP publication and eventual cessation; and periodically reconcile national AIPs, operational records and ICAO Frequency Finder data. Training should cover Annex 10, Volume V, Doc 9718, Frequency Finder, compatibility analysis and regional coordination procedures. Particular attention should also be given to timely cross-border coordination of frequency assignments between neighbouring States.

5.7 Agenda Item 7: Any other business

5.7.1 Noting the ongoing progress of related studies, and recognizing that updates to the ICAO position may emerge, the workshop was informed that an additional remote workshop/webinar is planned for Q1 2027 to review and understand these developments.

5.7.2 The workshop concluded with expressions of appreciation to all participants from Member States, Administrations, and Organizations for their valuable contributions and active engagement in support of preparations for WRC-27.

6. Conclusions and Recommendations

6.1 Based on the technical presentations and regional discussions, the workshop identified the following actions for States/Administrations to protect the continuity, safety and resilience of international civil aviation operations:

- a) Establish a national aviation spectrum coordination mechanism, led by or formally involving the civil aviation authority, with participation from the ANSP, national spectrum regulator, operators, and relevant CNS technical experts.
- b) Ensure that national and regional preparatory positions are aligned with the ICAO Frequency Spectrum Strategy, the ICAO Position for WRC-27, and Assembly Resolution A42-7.
- c) Encourage active participation by qualified aviation representatives in CITELE and other regional telecommunication groups, ITU-R study groups, and national WRC-27 delegations to promote and safeguard aviation spectrum interests.
- d) Protect safety-critical radio-altimeter operations in 4.2-4.4 GHz by coordinating any adjacent-band IMT/5G authorization with aviation authorities before licensing or deployment and by establishing technically justified national mitigation measures where required.
- e) Improve aeronautical frequency-data quality by reconciling operational use, AIP publications and ICAO Frequency Finder records; promptly remove obsolete assignments; apply ICAO compatibility criteria before introducing new or modified frequencies; and strengthen timely cross-border coordination between neighbouring States..
- f) Formally designate State/ANSP frequency-management focal points and alternates and provide recurrent training in Annex 10, Volume V, Doc 9718, Frequency Finder, interference management and WRC/ITU processes.
- g) participate in the planned ICAO follow-up workshop/webinar in Q1 2027 so that national positions and operational mitigations can be updated as WRC-27 studies mature.
