



**Twenty-first Meeting of the CAR/SAM Regional Planning and Implementation Group
 (GREPECAS/21)**

Santo Domingo, Dominican Republic, 15 to 17 November 2023

Agenda Item 3: Global and Regional Developments

3.4 Preparation for the ICAO Fourteenth Air Navigation Conference (AN-Conf/14)

BRAZILIAN PROPOSAL FOR CITEL MEETING ON WRC-23 AGENDA ITEM 10 TOPIC 2.9

(Presented by Brazil)

EXECUTIVE SUMMARY	
<p>This document is the contribution of Brazil on preliminary agenda item 2.9 for the 2027 World Radiocommunication Conference (WRC-27), which was submitted at the 42nd CITEL PCC.II meeting held on August 28th and September 1st.</p>	
Action:	As indicated in Section 4
<i>Strategic objectives:</i>	<ul style="list-style-type: none"> • To protect the spectrum used by long-range primary route radars of the aeronautical radionavigation service (ARNS) used in Air Traffic Control (ATC). • To align with the long-term strategic plan for aeronautical surveillance systems, in accordance with ICAO Handbook 9718.
<i>References:</i>	<ul style="list-style-type: none"> • ICAO Position for the ITU WRC-23 – 19 July 2023. • ICAO DOC 9718 – Handbook on Radio Frequency Spectrum Requirements for Civil Aviation, Chapter 8. • ITU-R Resolution 250 (WRC-19). • ITU- R Radio Regulation edition of 2020 — Article 5, frequency allocations. • Working Document Towards a Preliminary Draft New Report ITU-R M.[RADAR1300].

1. Introduction

1.1 ITU-R Resolution 812 (WRC-19) contains the preliminary agenda for WRC-27 and the Agenda Item 10, topic 2.9 is: “to consider possible additional spectrum allocations to the mobile service in the frequency band 1 300-1 350 MHz to facilitate the future development of mobile-service applications, in accordance with Resolution 250 (WRC-19).”

1.2 On a global basis, the band 1 300-1 350 MHz (and in many countries also the band 1 215-1 300 MHz) is extensively used for primary surveillance radars, for both en-route and terminal surveillance tasks, mainly providing long-range independent non-cooperative airspace surveillance for air traffic control and national defense.

1.3 Although Resolution 250 (WRC-19) establishes that the sharing and compatibility studies in the frequency band 1 300- 1 350 MHz should ensure protection of existing services to which the band is allocated on a primary basis, the studies performed to date have not shown any potential compatibility with the systems operating in this band, therefore there is a significant concern of a new WRC-27 agenda item considering a new mobile service allocation to the 1 300- 1 350 MHz frequency band that could cause harmful interference to these incumbent radar systems and has the potential to harm the public safety.

1.4 The proposal was presented by Brazil in the last CITEL meeting and was supported by other 06 administrations, elevating the document to the status of Inter-American Proposal (IAP) for WRC-23, that is, it will be the official position of the CITEL region (Americas) in the WRC -23.

2. Analysis

2.1 Resolution 250 (WRC-19) call for “Studies on possible allocations to the land mobile service (excluding IMT) in the frequency band 1 300-1 350 MHz for use by administrations for the future development of terrestrial mobile-service applications.”

2.2 The frequency band 1 300-1 350 MHz is allocated to the radiolocation service (RLS), the aeronautical radionavigation service (ARNS) and the radionavigation-satellite service (E-s)(RNSS) on a primary basis, in all three Regions.

2.3 Several studies under WRC-15 Agenda Item 1.1 dealing with International Mobile Telecommunication (IMT) and the same incumbent radar systems have been carried out with respect to the frequency band 1 300-1 400 MHz. All the studies show, based on the parameters provided by the relevant working parties, that within the same geographical area co-frequency operation of mobile broadband systems and radar is not feasible. As a result, globally harmonized usage of the 1 300-1 400 MHz frequency range or a portion thereof by the mobile service for the implementation of IMT may not be possible.

2.4 It should also be noted that even the studies which concluded that it is feasible to introduce IMT systems in the 1 300-1 400 MHz frequency band require modification of the IMT and radar equipment. Such studies also suggest frequency segmentation in accordance with Recommendation ITU-R SM.1132 which may involve replanning radar systems as necessary to remove radars from a portion of the frequency range to provide sufficient spectrum to accommodate the IMT channel, in addition to the frequency offset. Any consideration of radar replanning must consider that some administrations make use of radars that operate across the frequency range between 1 300-1 400 MHz.

2.5 The ICAO Spectrum Strategy for long-term aeronautical surveillance systems (Handbook 9718 chapter 8, 8-10) establishes the continuous availability of the frequency band 1 215-1 350 MHz, which is allocated to the radionavigation and aeronautical radionavigation service, for use by primary surveillance radar on a global basis.

2.6 Taking into account the potential risks for aviation, DECEA proposed the suppression of the preliminary WRC-27 Agenda Item 2.9 (more information in the attached file).

3. Conclusions

3.1 While Resolution 250 (WRC-19) resolves to conduct sharing and compatibility studies to ensure protection of existing services to which the frequency band is allocated on a primary basis, the studies performed to date have not shown any potential for compatibility with the systems operated in this band. Furthermore, studies under WRC-15 Agenda Item 1.1 with IMT and the same incumbent radar systems demonstrated that co-frequency sharing was not possible. Therefore, there is significant concern of a new WRC-27 Agenda Item considering a new land mobile service allocation to the 1 300-1 350 MHz frequency band that could provoke harmful interference to these incumbent radar systems and has the potential to harm the public safety.

4. Suggested action

4.1 The Meeting is invited to:

- a. Note the proposal of this working paper and consider it in coordination with the telecommunication regulators of your administrations to support CITELE position for this agenda item during the WRC-23.
- b. Support the consolidated position of aeronautical WRC-23 agenda items summarized in table 1, approved in the last CITELE PCCII meeting held in August 2023, resulting in several IAP that will be sent to the ITU-R and will represent the official position of CITELE in WRC-23 discussions.
- c. Participate in discussions during WRC-23 on non-aeronautical Agenda Items 1.1, 1.2, 1.3, 1.4, 1.10, 1.11, 1.13, 1.15, 1.16, 1.17, 4, 8, and 9.1 topics a and b, and 10 that could potentially affect aviation use of spectrum.

Table 1- CITELE Interamerican Proposals (IAP) for WRC-23 aeronautical issues

DOC	AGENDA ITEM	IAP	SUPPORT	TOTAL
120r3	1.6	- ADD DRAFT NEW RESOLUTION [A16] (WRC-23) - ADD 43 – 43.XX - SUP RESOLUTION 772 (WRC-19)	BRA, BAH, CAN, GTM, MEX, PRG, TRD, URG USA, CLM	10
147r3	1.7	- 75.2-137.175 MHz - MOD ARTICLE 5 - Frequency Allocations - ADD 5A17, 5B17, 5C17 - MOD APPENDIX 5 OF RR – ANNEX 1 - SUP RESOLUTION 248	BRA, CAN, MEX, TRD, URG, USA, GTM, BAH, CLM	9
121r2	1.9	- ADD APPENDIX 27 - 27/18A - MOD APPENDIX 27 - 27/18A.1 - MOD APPENDIX 27 - 27/57 - MOD APPENDIX 27 - 27/57 1.2 - MOD APPENDIX 27 - 27/58 1.2.1 - MOD APPENDIX 27 -27/60 2.1 - SUP RESOLUTION 429	BRA, BAH, BLZ, CAN, CLM, GTM, MEX, PRG, TRD, URG, USA	11
149r1	1.10	- NOC ARTICLE 5 Frequency Allocations - 15,4 - 15,7 GHz - NOC ARTICLE 5 Frequency Allocations - 22-22.21 GHz - SUP RESOLUTION 430	BRA, BAH, CAN, JMC, MEX, USA, CLM, URG, PRG	9
139r3	10 WBHF	- ADD NEW RES [AI WRC-27] - ADD NEW RES [WBHF]	ARG, BRA, BAH, BLZ, CAN, CHL, CLM, EQA, JAM, GRD, GTM, KNA, MEX, PRG, URG, USA	16
151r1	10 – topic 2.9 NO MS 1.3 GHz	- DD NEW RES [AI WRC-27] - SUP RESOLUTION 250	BRA, BLZ, CAN, EQA, PRG, URG	6