



Regional Commonwealth in the Field of Communications (RCC)

PRELIMINARY POSITION OF THE RCC ADMINISTRATIONS ON AGENDA ITEMS OF THE WORLD RADIOCOMMUNICATION CONFERENCE 2023

(version of September 4, 2020)

Administrations of the countries of the Regional Commonwealth in the field of Communications (RCC),

recognizing the need

- to improve regulation and increase efficiency of radio spectrum and satellite orbits;
- to establish conditions for the development of radiocommunications and introduction of new radio technologies;
- to maintain the balance of interests between existing and new allocations to different radiocommunication services;
- to take into account technical and economic opportunities in the development of radiocommunications within the ITU Member State;
- to strengthen regional and international cooperation in the development of radiocommunication equipment and systems,

developed

the following position on agenda items for the 2023 World Radiocommunication Conference (WRC-23):

1.1 to consider, based on the results of the ITU- R studies, possible measures to address, in the frequency band 4 800-4 990 MHz, protection of stations of the aeronautical and maritime mobile services located in international airspace and waters from other stations located within national territories, and to review the pfd criteria in No. 5.441B in accordance with Resolution 223 (Rev.WRC-19);

The RCC Administrations consider that there is no need to apply the pfd limits to protect stations of the aeronautical and maritime mobile services located in international airspace and waters (i.e., outside national territories), and operating in the frequency band 4 800–4 990 MHz.

1.2 to consider identification of the frequency bands 3 300-3 400 MHz, 3 600-3 800 MHz, 6 425-7 025 MHz, 7 025-7 125 MHz and 10.0-10.5 GHz for International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution 245 (WRC-19);

Frequency band 3300–3400 MHz

For Region 1. The RCC Administrations are in favour of protection of radiolocation service in the frequency band 3 300-3 400 MHz, as well as the protection of EESS (active) in the frequency band

3 100-3 300 MHz in case of the inclusion of any Region 1 countries into the footnotes 5.429, 5.429A, 5.429B, 5.429C, 5.429D, 5.429E or 5.429F of Radio Regulations Article 5. Protection of stations in radiolocation service and EESS (active) shall be ensured based on the results of ITU-R studies carried out in preparation for the WRC-15 (Report ITU-R M.2481).

For Region 2. The RCC Administrations are in favour of protection of radiolocation service of Region 1 in the frequency band 3300-3400 MHz as well as protection of EESS (active) in the frequency band 3 100-3 300 MHz in case of the identification of the band 3 300-3 400 MHz for IMT in Region 2 taking into account results of the studies carried out by ITU-R in preparation for WRC-23.

3600–3800 MHz in Region 2

The RCC Administrations, in case of the identification of this frequency band for IMT in Region 2, consider it necessary to adopt such RR provisions which provide protection to FSS and FS in Region 1. Protection shall be provided based on the results of the studies carried out by ITU-R in preparation for WRC-07, WRC-12 and WRC-15 (Report ITU-R F.2328, Report ITU-R M.2109, Report ITU-R S.2199, Report ITU-R S.2368 and Report ITU-R M.2111).

6425–6525 MHz (Region 1)

The RCC Administrations are in favour of the protection for a fixed satellite service.

6525–7025 MHz (Region 1)

The RCC Administrations are in favour of the identification of all or part of the frequency band 6 525–7 025 MHz for IMT systems, taking into account the results of the compatibility studies. Identifying all or part of the frequency band 6525–7025 MHz for IMT systems shall not impose additional regulatory and/or technical constraints on stations of services having primary allocations in this frequency band.

7025–7100 MHz globally

The RCC Administrations are in favour of the identification of the frequency band 7 025–7 100 MHz for IMT systems, taking into account the results of the compatibility studies between IMT systems and satellite receiving stations of FSS, EESS (passive) and SOS. Identifying all or part of the frequency band 7025–7100 MHz for IMT systems shall not impose additional regulatory and/or technical constraints on stations of services having primary allocations in this frequency band.

7100–7125 MHz globally

The RCC Administrations are in favour of the protection of incumbent radio services in the same and adjacent frequency bands (including space stations in SOS and EESS (passive)) from interference based on the results of compatibility studies. Identifying all or part of the frequency band 7 100–7 125 MHz for IMT systems shall not impose additional regulatory and/or technical constraints on stations of EESS (passive) and SOS.

10.0 –10.5 GHz in Region 2

The RCC Administrations are in favour of the protection of services for which the frequency band 10–10.5 GHz is allocated within Region 1, as well as the protection of EESS (passive) in the frequency band 10.6-10.7 GHz. Identifying all or part of the frequency band 10.0–10.5 GHz for IMT systems shall not impose additional regulatory and/or technical constraints on stations of other services operating in accordance with RR in the same and adjacent frequency bands.

1.3 to consider primary allocation of the band 3 600-3 800 MHz to mobile service within Region 1 and take appropriate regulatory actions, in accordance with Resolution 246 (WRC-19);

The RCC Administrations, in resolving the issue of upgrading the secondary allocation to the mobile service in the frequency band 3600–3800 MHz to primary one within Region 1, are in favour of the protection of FSS (space-to-Earth), FS and other services operating in the frequency band 3 600-3 800 MHz and in adjacent frequency bands, without imposing undue constraints on these services

and their further development, taking into account the existing results of the compatibility studies with FSS in the frequency band 3400–4200 MHz (Reports ITU-R S.2368, ITU-R M.2109 and M.2111) as well as the results of studying the issue of the protection of FSS (space-to-Earth), FS and other services during the current ITU-R study cycle.

1.4 to consider, in accordance with Resolution 247 (WRC-19), the use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level;

The RCC Administrations consider it necessary to identify the possibility of using HIBS in the frequency bands referred to in Resolution 247 (WRC-19), taking into account the protection requirements for incumbent services, in these and adjacent frequency bands, based on the result of compatibility studies carried out by ITU-R.

1.5 to review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470-694 MHz in Region 1 on the basis of the review in accordance with Resolution 235 (WRC-15);

The position is under development.

1.6 to consider, in accordance with Resolution 772 (WRC-19), regulatory provisions to facilitate radiocommunications for sub-orbital vehicles;

The position is under development.

1.7 to consider a new aeronautical mobile-satellite (R) service (AMS(R)S) allocation in accordance with Resolution 428 (WRC-19) for both the Earth-to-space and space-to-Earth directions of aeronautical VHF communications in all or part of the frequency band 117.975-137 MHz, while preventing any undue constraints on existing VHF systems operating in the AM(R)S, the ARNS, and in adjacent frequency bands;

The RCC Administrations do not oppose the new allocation of all or part of the frequency band 117.975-137 MHz to aeronautical mobile-satellite (R) service on the primary basis to develop aeronautical VHF communications systems for both Earth-to-space and space-to-Earth directions provided that unacceptable constraints shall not be imposed on existing VHF systems operating in AM(R)S, ARNS and systems operating in adjacent frequency bands.

1.8 to consider, on the basis of ITU-R studies in accordance with Resolution 171 (WRC-19), appropriate regulatory actions, with a view to reviewing and, if necessary, revising Resolution 155 (Rev.WRC-19) and No. 5.484B to accommodate the use of fixed-satellite service (FSS) networks by control and non-payload communications of unmanned aircraft systems;

The position is under development.

1.9 to review Appendix 27 of the Radio Regulations and consider appropriate regulatory actions and updates based on ITU-R studies, in order to accommodate digital technologies for commercial aviation safety-of-life applications in existing HF bands allocated to the aeronautical mobile (route) service and ensure coexistence of current HF systems alongside modernized HF systems, in accordance with Resolution 429 (WRC-19);

The RCC Administrations do not oppose modifications to RR Appendix 27 to introduce digital technologies for commercial AM(R)S safety-of-life applications in HF bands allocated to the aeronautical mobile (route) service provided that coexistence of current and modernized HF systems could be met.

1.10 to conduct studies on spectrum needs, coexistence with radiocommunication services and regulatory measures for possible new allocations for the aeronautical mobile service for the use of

non-safety aeronautical mobile applications, in accordance with Resolution 430 (WRC-19);

The RCC Administrations consider that, when possible new allocations to aeronautical mobile service in the frequency band 15.4 – 15.7 GHz as well as possible remove of constraints for the use of the frequency band 22 – 22.21 GHz by aeronautical mobile service, it is necessary to:

- provide protection of primary services in the band and adjacent frequency bands;
- define unwanted emissions' limits for station of aeronautical mobile service in the frequency bands 15.35-15.4 GHz and 22.21-22.5 GHz to protect EESS (passive) and radio astronomy service.

1.11 to consider possible regulatory actions to support the modernization of the Global Maritime Distress and Safety System and the implementation of e-navigation, in accordance with Resolution 361 (Rev.WRC-19);

The position is under development.

1.12 to conduct, and complete in time for WRC-23, studies for a possible new secondary allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz, taking into account the protection of incumbent services, including in adjacent bands, in accordance with Resolution 656 (Rev.WRC-19)

The RCC Administrations support studies for a possible new secondary allocation to the Earth exploration-satellite (active) service within the range of frequencies around 45 MHz.

1.13 to consider a possible upgrade of the allocation of the frequency band 14.8-15.35 GHz to the space research service, in accordance with Resolution 661 (WRC-19)

The RCC Administrations are in favour of upgrading the allocation of the frequency band 14.8-15.35 GHz to the space research service while protecting FS and MS in this frequency band, as well as protecting of passive services in the adjacent frequency band 15,35-15,4 GHz, taking into account results of the compatibility and sharing studies. Upgrading of the allocation of the frequency band 14.8-15.35 GHz to the space research service should not impose constraints on the incumbent FS and MS systems in the frequency band 14.8-15.35 GHz.

1.14 to review and consider possible adjustments of the existing or possible new primary frequency allocations to EESS (passive) in the frequency range 231.5-252 GHz, to ensure alignment with more up-to-date remote-sensing observation requirements, in accordance with Resolution 662 (WRC-19)

The RCC Administrations support the development of sharing conditions for EESS (passive) systems with existing as well as future systems of active services in the frequency band 231.5-252 GHz and in the adjacent frequency bands on the basis of compatibility studies.

1.15 to harmonize the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with GSO FSS space stations in the fixed-satellite service globally, in accordance with Resolution 172 (WRC-19);

The RCC Administrations support the studies of methods for sharing and guarantee compatibility between earth stations on aircraft and vessels communicating with GSO space stations in the FSS in the frequency band 12.75-13.25 GHz (Earth-to-space) and incumbent and future stations of services in this frequency band as well as services in adjacent frequency bands (i.e. EESS (active) in the frequency band 13.25–13.75 GHz), to ensure protection of, and not impose undue constraints on those services and their future development, taking into account the provisions of Appendix 30B.

The RCC Administrations are in favour of the development of technical requirements and regulatory provisions for ESIMs on aircraft and vessels for the harmonized operation of such earth stations communicating with GSO space stations in the FSS in the frequency band 12.75-13.25 GHz (Earth-

to-space), while ensuring in this and adjacent bands protection to the existing services, taking into account the provisions of Appendix **30B**.

The RCC Administrations are in favour of the need to ensure protection to allotments in the Plan and assignments in the List of RR Appendix **30B** in accordance with criteria provided in Annex 4 to Appendix **30B**, when considering the possibility of using earth stations in motion on aircraft and vessels communicating with GSO space stations in the FSS in the frequency band 12.75-13.25 GHz (Earth-to-space), and such use of the frequency band 12.75-13.25 GHz (Earth-to-space) by the earth stations on aircraft and vessels shall not result in any constraints or changes in the existing allotments/assignments in the Plan/List and shall not adversely affect the criteria in Annex 4, including cumulative effect of multiple earth stations on aircraft and vessels.

The RCC Administrations consider that ESIMs on aircraft and vessels shall operate in the frequency band 12.75-13.25 GHz (Earth-to-space) within the envelope of the earth station's characteristics of the satellite network and also within the agreements reached by administrations under §§ 6.5, 6.6 and 6.16 of Article 6, Appendix **30B**.

*1.16 to study and develop technical, operational and regulatory measures, as appropriate, to facilitate the use of the frequency bands 17.7-18.6 GHz and 18.8-19.3 GHz and 19.7-20.2 GHz (space-to-Earth) and 27.5-29.1 GHz and 29.5-30 GHz (Earth-to-space) by non-GSO FSS earth stations in motion, while ensuring due protection of existing services in those frequency bands, in accordance with Resolution **173 (WRC-19)***

The RCC Administrations support sharing and compatibility studies between earth stations in motion (ESIMs) planned for operation in non-GSO FSS in the frequency bands 17.7–18.6 GHz, 18.8–19.3 GHz and 19.7–20.2 GHz (space-to-Earth), and 27.5–29.1 GHz and 29.5–30 GHz (Earth-to-space), or parts thereof, and stations of services operating in accordance with RR in bands above as well as adjacent bands.

The RCC Administrations are in favour of the development of regulatory provisions and technical requirements for aeronautical and maritime ESIMs in non-GSO FSS in order to ensure protection of, and not impose additional constraints on, satellite GSO networks and other services, including terrestrial services, in those frequency bands and in adjacent bands, including passive services. To accomplish this development, ITU-R should produce appropriate methodologies and procedures stipulated in *considering further* of Resolution **173 (WRC-19)**.

The RCC Administrations consider that ESIMs could be used in non-GSO FSS systems, if only the following conditions are met:

- the technical and operational measures and the regulatory provisions to be established based on the results of ITU-R studies while not affecting the RR provisions related to the protection of GSO networks from non-GSO FSS systems;

- characteristics of ESIMs in non-GSO FSS network should be within the envelope of characteristics of typical earth stations of the non-GSO FSS network initially published and recorded in the BR IFIC after appropriate coordination procedure;

- ESIMs in non-GSO FSS systems should not be used for safety-of-life applications;

- when operating ESIMs in non-GSO FSS, special measures shall be envisaged to exclude unauthorized use of ESIMs on the territory of States that have not granted relevant authorizations (licenses).

*1.17 to determine and carry out, on the basis of the ITU-R studies in accordance with Resolution **773 (WRC-19)**, the appropriate regulatory actions for the provision of inter-satellite links in specific frequency bands, or portions thereof, by adding an inter-satellite service allocation where appropriate*

The RCC Administrations consider that the use of inter-satellite links in the frequency bands 11.7-12.7 GHz, 18.1-18.6 GHz, 18.8-20.2 GHz, and 27.5-30 GHz may impose severe constraints on the use of the existing and future systems/networks of FSS, *inter alia*, over the national territories.

The RCC Administrations support the studies of technical and operational characteristics, including spectrum requirements, off-axis e.i.r.p. values and out-of-band emission limits, for inter-satellite links in the frequency bands 11.7-12.7 GHz, 18.1-18.6 GHz, 18.8-20.2 GHz and 27.5-30 GHz.

The RCC Administrations support the sharing and compatibility studies between inter-satellite links in the frequency bands 11.7-12.7 GHz, 18.1-18.6 GHz, 18.8-20.2 GHz and 27.5-30 GHz, and existing and future stations of the FSS and other existing services allocated in same frequency bands and adjacent bands, including passive services, with a view to ensuring protection of the primary services. The results of these ITU-R studies should be agreed by Member States by consensus.

The RCC Administrations consider that technical conditions and regulatory provisions should be developed for different types of space stations for satellite-to-satellite operations in the frequency bands 11.7-12.7 GHz, 18.1-18.6 GHz, 18.8-20.2 GHz and 27.5-30 GHz, or portions thereof, including new ISS allocations, as appropriate, taking into account the results of the studies above.

1.18 to consider studies relating to spectrum needs and potential new allocations to the mobile-satellite service for future development of narrowband mobile-satellite systems, in accordance with Resolution 248 (WRC-19)

The RCC Administrations support the studies relating to spectrum needs and potential new allocations to the mobile-satellite service for future development of narrowband mobile-satellite systems.

The RCC Administrations consider that additional allocation to the mobile-satellite service could be possible if only technical and operational characteristics of narrowband mobile-satellite systems as well as regulatory conditions of their use will guarantee exclusion of impermissible interference in overlapping and adjacent bands to the existing and future systems of services operating in accordance with RR Article 5.

1.19 to consider a new primary allocation to the fixed-satellite service in the space-to-Earth direction in the frequency band 17.3-17.7 GHz in Region 2, while protecting existing primary services in the band, in accordance with Resolution 174 (WRC-19)

The RCC Administrations consider it reasonable to study sharing possibilities between FSS in Region 2 and existing services in Region 1 in the frequency band 17.3-17.7 GHz and in the adjacent bands.

2 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with further resolves of Resolution 27 (Rev.WRC-19), and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in resolves of that Resolution

The position is under development.

4 in accordance with Resolution 95 (Rev.WRC-19), to review the Resolutions and Recommendations of previous conferences with a view to their possible revision, replacement or abrogation;

The position is under development.

7 to consider possible changes, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, on advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution 86 (Rev.WRC-07), in order to facilitate the rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit

The RCC Administrations consider it necessary to further improvements in the notification, coordination and recording procedures for frequency assignments to satellite networks in different services in order to ensure equitable access of ITU Member States to orbital and frequency resource.

Issue A – studying tolerances for certain orbital characteristics of non-GSO space stations of the fixed-satellite, mobile-satellite or broadcasting satellite services to account for potential differences between the notified and deployed orbital characteristics for the inclination of the orbital plane, the altitude of the apogee of the space station, the altitude of the perigee of the space station and the argument of the perigee of the orbital plane.

The RCC Administrations support studying tolerances for certain orbital characteristics of non-GSO space stations of the fixed-satellite, mobile-satellite or broadcasting satellite services. Tolerances for the inclination of the orbital plane, the altitude of the apogee of the space station, the altitude of the perigee of the space station and the argument of the perigee of the orbital plane should depend on the type of the space station.

Issue B – developing post-milestone procedure taking into account the reporting defined in resolves 19 of Resolution 35 (WRC-19)

The RCC Administrations do not oppose developing post-milestone procedure taking into account the reporting defined in *resolves 19 of Resolution 35 (WRC-19)*. The post-milestone procedure developed should not impose additional constraints on the non-GSO satellite systems using highly-elliptical orbit.

Issue C – protecting geostationary satellite networks in the MSS operating in 7/8 and 20/30 GHz from emissions of non-geostationary satellite systems operating in the same frequency bands and identical directions

The RCC Administrations do not oppose developing technical and regulatory measures for the protection of GSO mobile-satellite systems operating in 7/8 and 20/30 GHz from emissions of non-geostationary satellite systems operating in the same frequency bands and identical directions.

8 to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution 26 (Rev.WRC-19)

The position is under development.

9.1 on the activities of the Radiocommunication Sector since WRC-19;

a) In accordance with Resolution 657 (Rev.WRC-19), review the results of studies relating to the technical and operational characteristics, spectrum requirements and appropriate radio service designations for space weather sensors with a view to describing appropriate recognition and protection in the Radio Regulations without placing additional constraints on incumbent services

The RCC Administrations support studies to protect space weather sensors without placing additional constraints on incumbent services.

b) Review of the amateur service and the amateur-satellite service allocations in the frequency band 1 240-1 300 MHz to determine if additional measures are required to ensure protection of the radionavigation-satellite (space-to-Earth) service operating in the same band in accordance with Resolution 774 (WRC-19)

The RCC Administrations support conducting studies and consider that when studying possible technical and operational measures aimed at protecting RNSS receivers from the amateur and the amateur-satellite services in the frequency band 1 240-1 300 MHz it is reasonable to prioritize the protection of stations in RNSS in this frequency band.

c) Study the use of International Mobile Telecommunication system for fixed wireless broadband in the frequency bands allocated to the fixed services on primary basis, in accordance with Resolution 175 (WRC-19)

The RCC Administrations consider that the use of IMT systems for fixed wireless broadband in the frequency bands allocated to the fixed service on the primary basis should protect services operating in the these and adjacent frequency bands, if necessary.

d) Protection of EESS (passive) in the frequency band 36–37 GHz from non-GSO FSS space stations (see WRC-19 Document [535](#))

The RCC Administrations support conducting compatibility studies to determine technical conditions and regulatory provisions ensuring EESS (passive) sensors' protection in the frequency band 36-37 GHz from interference of non-GSO FSS space stations operating in the frequency band 37.5-38 GHz.

Additional Issue 1 (WRC-19 Document 550)

Verification of No. 21.5 limits for the notification of IMT stations operating in the frequency band 24.45-27.5 GHz which use an antenna that consists of an array of active elements

The RCC Administrations propose:

Regarding "*notification*", to determine provisionally, pending a decision of WRC-23, Item 8AA in Table 1 of RR Appendix 4 "the power delivered to the antenna" for the IMT stations with active antenna system as the power sum of AAS active elements taking into account IMT station channel bandwidth (basic channel bandwidth being 200 MHz) and ohmic loss in antenna system (3 dB).

Regarding "*verification*", to keep unchanged the limit of power level in RR Article 21 No. 21.5. However, the RCC Administrations propose to study the procedure of applying this level to IMT stations with active antenna system.

Regarding "*the frequency band*", to add frequency band 24.45-27.5 GHz allocated to the mobile service by WRC-19 to Table 21-2 of RR Article 21 .

Additional Issue No. 2

Resolution 427 (WRC-19) "Updating provisions related to aeronautical services in ITU-R"

The position is under development.

Additional Issue No. 2

Resolution 655 (WRC-15) "Definition of time scale and dissemination of time signals via radiocommunication systems"

The position is under development.

9.2 on any difficulties or inconsistencies encountered in the application of the Radio Regulations¹

The RCC Administrations support measures to eliminate any difficulties or inconsistencies encountered in the application of the Radio Regulations.

In order to improve preparation to WRC-23, the RCC Administrations propose early mandatory consideration by Radio Regulations Board, the Radiocommunication Advisory Group, as well as the relevant ITU-R Working parties of the information submitted to Radiocommunication Bureau on difficulties or inconsistencies encountered in the application of the Radio Regulations, taking into consideration WRC-19 materials, which were not sufficiently reviewed due to time constraints.

9.3 on action in response to Resolution 80 (Rev.WRC-07)

The position is under development.

¹ This agenda sub-item is strictly limited to the Report of the Director on any difficulties or inconsistencies encountered in the application of the Radio Regulations and the comments from administrations. Administrations are invited to inform the Director of the Radiocommunication Bureau on any difficulties or inconsistencies encountered in the Radio Regulations.

10 to recommend to the Council items for inclusion in the agenda for the next WRC, and items for the preliminary agenda of future conferences, in accordance with Article 7 of the Convention and Resolution 804 (Rev.WRC-19)

The position is under development.
