



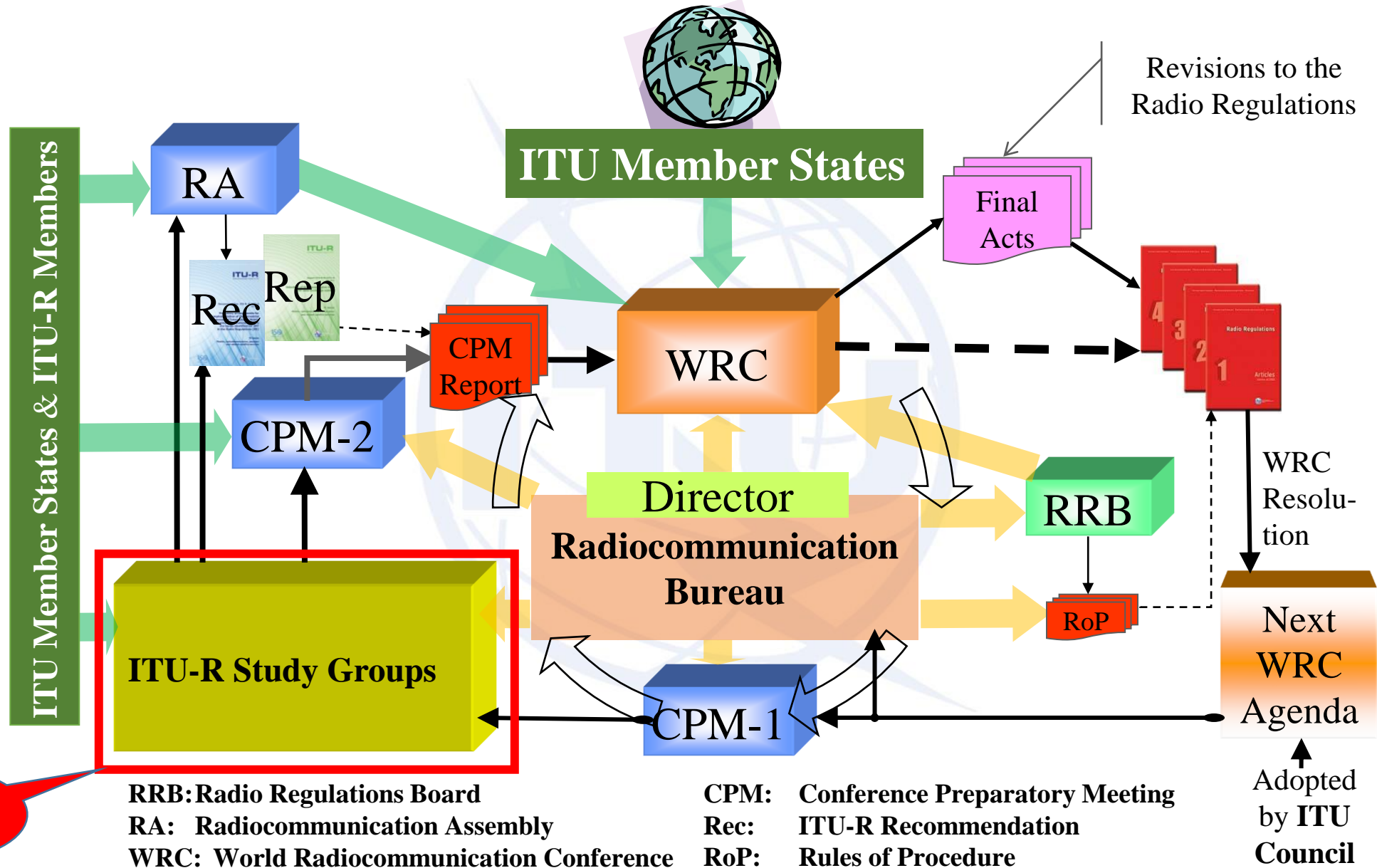
**1st Meeting of the
APT Conference Preparatory Group
for WRC-27 (APG27-1)
3-6 June 2024, Shanghai, People's Republic of China**

**ITU Preparations for
CPM27-2, RA-27 and WRC-27**

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Radiocommunication Bureau, ITU

The WRC Cycle



Main Steps towards WRC-27

WRC-23: WRC-27 Agenda - [Resolution 813 \(WRC-23\)](#)

CPM27-1 (18-19 December 2023)
Results [@CA/270](#) of 26 Jan. 2024

Meetings of ITU-R WPs
responsible/contributing on AIs

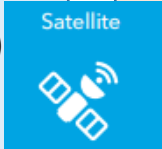
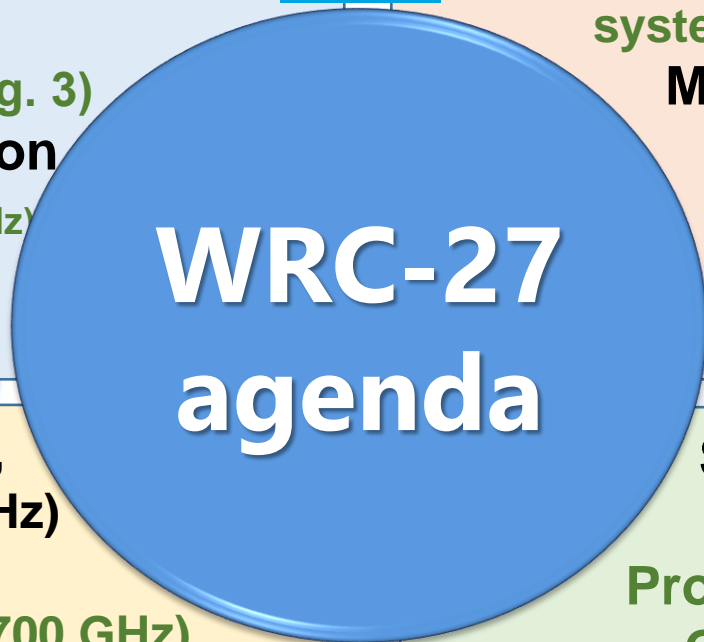
CPM27-2 [Dates t.b.d. for CPM Report
to be available 5 months prior to WRC-27]

Final regional group meetings & national preparations
Member States' proposals to WRC-27

RA-27; WRC-27

Council: Finalize
WRC-27 agenda
(see [Doc. C24/64](#))
with dates, venue

National
and
regional
preparations



- 1.1 FSS A-ESIM & M-ESIM (47.2...51.4 GHz)**
- 1.2 FSS Smaller ES Antenna (13.75-14 GHz)**
- 1.3 FSS gateway ES (51.4-52.4 GHz)**
- 1.4 FSS & BSS (17.3...17.8 GHz , Reg. 3)**
- 1.5 NGSO FSS & MSS ES authorization**
- 1.6 FSS equitable access (37.5...51.4 GHz)**
- 7 Regulatory issues (satellite coordination & notification procedures)**

- MSS NGSO-GSO space-to-space links** *1.11*
- MSS for low-data-rate (IoT) NGSO systems between 1 427 and 2 025 MHz** *1.12*
- MSS for IMT between 694/698 MHz and 2.7 GHz** *1.13*
- MSS new allocations in bands 2010-2025 (E-s) & 2160-2170 MHz (s-E) in R1&R3 and 2120-2160 MHz (s-E) in all Reg.** *1.14*

- 1.7 IMT identification (4.4-4.8 GHz, 7.125-8.4 GHz & 14.8-15.35 GHz)**
- 1.8 RLS (231.5-275 GHz) and identification for apps (275-700 GHz)**
- 1.9 RR App. 26, AM(OR)S HF modernization**
- 1.10 RR Art. 21 limits for BSS, FSS & MSS to protect FS & MS (71-76 GHz and 81-86 GHz)**

- SRS (s-s) allocations in several bands for lunar communications** *1.15*
- Protection of RAS in specific Radio Quiet Zone from NGSO systems** *1.16*
- MetAids (space weather) in bands between 27.5 and 614 MHz for receive-only sensors** *1.17*
- EESS (passive) and RAS protection above 76 GHz from unwanted emissions** *1.18*
- EESS (passive) (4.2-4.4 GHz & 8.4-8.5 GHz)** *1.19*

▶ **19 specific plus the standing items, see Resolution 813 (WRC-23)**



First Session of CPM-27

See [Resolution ITU-R 2-9](#) on Conference Preparatory Meeting (CPM)

- ✓ **Dubai, 18-19 December 2023** (345 participants, 76 MS, 34 SM, 8 contributions)
⇒ **results published in CA/270 of 26 January 2024** (see at www.itu.int/md/R00-CA-CIR-0270/en)
- **Appointed the [CPM-27 Vice-Chairs](#) and [Chapter Rapporteurs](#)**
- **Defined the structure of the draft CPM Report** (see Annexes 5, 6 and 10 to [CA/270](#))
with 5 Chapters, 2 Annexes and 7 Chapter (co-)Rapporteurs
- **Identified responsible ITU-R Groups for the WRC-27 agenda items**
 - ⇒ **8 existing ITU-R Working Parties (WPs) responsible for 20 agenda items**
+ contributing ITU-R WPs for most of the agenda items
 - ⇒ **8 existing WPs for the 14 items on the WRC-31 preliminary agenda**
(see Annexes 7 and 8 to [CA/270](#))
- For the sharing and compatibility studies, **set a general deadline to provide criteria, characteristics and methodologies by [31 December 2024](#)**
(may be extended up to the 1 July 2025 by the CPM-27 Steering Committee if requested by a WP)
(see Annex 4 to [CA/270](#))



Overlapping frequency bands between some WRC-27 agenda items

(see Annex 4 to [CA/270](#))

- The responsible groups are invited to **exchange the necessary characteristics, parameters and protection criteria to complete studies addressing mutual compatibility and sharing feasibility** among the applicable services/applications.
- They should **coordinate their work and review**, as appropriate, the **progress of studies so that any potential difficulties can be addressed.**

| Frequency bands | WRC-27 agenda items (responsible groups) |
|---|--|
| 1 427-1 432 MHz; 1 645.5-1 646.5 MHz; 1 880-1 920 MHz | 1.12 (WP 4C); 1.13 (WP 4C) |
| 1 518-1 544 MHz; 1 545-1 559 MHz; 1 610-1 645.5 MHz; 1 646.5-1 660 MHz; 1 670-1 675 MHz | 1.11 (WP 4C); 1.13 (WP 4C) |
| 2 010-2 025 MHz | 1.12 (WP 4C); 1.13 (WP 4C); 1.14 (WP 4C) |
| 2 120-2 160 MHz; 2 160-2 170 MHz | 1.13 (WP 4C); 1.14 (WP 4C) |
| 2 483.5-2 500 MHz | 1.11 (WP 4C); 1.13 (WP 4C); 1.15 (WP 7B) |
| 2 400-2 483.5 MHz; 2 500-2 690 MHz | 1.13 (WP 4C); 1.15 (WP 7B) |
| 7 190-7 235 MHz | 1.7 (WP 5D); 1.15 (WP 7B) |
| 8 450-8 500 MHz | 1.15 (WP 7B); 1.19 (WP 7C) |
| 42.5-43.5 GHz | 1.6 (WP 4A); 1.16 (WP 7D) |
| 47.2-50.2 GHz; 50.4-51.4 GHz | 1.1 (WP 4A); 1.6 (WP 4A) |
| 71-76 GHz | 1.10 (WP 5C); 1.16 (WP 7D); 1.18 (WPs 7C & 7D) |
| 81-86 GHz | 1.10 (WP 5C); 1.18 (WP 7C & WP 7D) |
| 114.25-116 GHz; 130-134 GHz | 1.16 (WP 7D); 1.18 (WP 7C & WP 7D) |

Draft CPM Report – ToC

(see Annex 5 to [CA/270](#))

Chapters of the draft CPM Report

WRC-27 Agenda items

| | | |
|-----------|--|--|
| 1. | Fixed-satellite and Broadcasting-satellite issues | 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 7 |
| 2. | Fixed, mobile and radiolocation issues | 1.7, 1.8, 1.9, 1.10 |
| 3. | Mobile-satellite issues | 1.11, 1.12, 1.13, 1.14 |
| 4. | Science issues | 1.15, 1.16, 1.17, 1.18, 1.19 |
| 5. | General issues | 2, 4 |
| | Annex 1 | 10 (for information only) |
| | Annex 2 | 8 (for information only) |



Structure of the draft CPM texts for an agenda item in each chapter

(see Annexes 6 and 10 to [CA/270](#), see also Annex 2 to Res. ITU-R 2-9)

Chapter N

Agenda Item 1.XY

[Relevant WRC Resolutions if any]

N/1.XY/1 Executive Summary* (see § A2.1 of Res. ITU-R 2-9)

N/1.XY/2 Background* (see § A2.2 of Res. ITU-R 2-9, incl. “shall not include advertisement, promotional and commercial information”)

N/1.XY/3 Summary and Analysis of the results of ITU-R studies, including a list of relevant ITU-R Recommendations

N/1.XY/4 Method(s) to satisfy the Agenda Item (see § A2.4 of Res. ITU-R 2-9)

N/1.XY/5 Regulatory and procedural considerations

(Page limit and format: see § A2.3 of Res. ITU-R 2-9) * Not more than half a page of text

Annex 1 – Information on WRC-27 AI 10

2.[x] [label of the preliminary agenda item]

[Text of a short summary of ITU-R studies completed under the preliminary agenda item]

Annex 2 – Information on WRC-27 AI 8

(see the Proposed detailed Structure for the draft CPM Report to WRC-27 at: www.itu.int/oth/R0A0A000023/en)



Summary of CPM Report Preparation

Responsible
ITU-R Groups

WRC-27 agenda items

WP 4A

1.1 1.2 1.3
1.4 1.5 1.6 7

WP 4C

1.11 1.12 1.13 1.14

WP 5B

1.8 1.9

WP 5C

1.10

WP 5D

1.7

WP 7B

1.15

WP 7C

1.17 1.18 1.19

WP 7D

1.16

CPM23-2

2, 4 8 10

Chapter 1
Chapter 2
Chapter 3
Chapter 4
Chapter 5
(draft texts)
Annex 1
Annex 2

CPM Management
Team Meeting

Draft
CPM Report

CPM27-2

CPM Report
to WRC-27

Deadlines
and
Meeting
Dates
will be
determined,
based on
WRC-27
dates,
taking into
account
Res.
ITU-R 2-9



ITU-R Preparatory Studies for WRC-27

www.itu.int/go/rcpm-wrc-27-studies

Resolution **813 (WRC-23)** (ex.COM6/23) contains the WRC-27 agenda.

- **As of 16 May 2024**
- **Will be updated on a regular basis after meetings of the responsible groups**

| WRC-27 agenda Item (Chapter) | Topic | WRC Resolution (*) | Responsible Group(s) | Information from Responsible Group(s) ITES |
|------------------------------|-------|-------------------------------|-----------------------|---|
| 1 | | - | - | - |
| 1.1 (1) | | Res.176 (Rev.WRC-23) | WP 4A | Doc. 4A/128 (d) (a), Annex 1 (b), Annex 2 |
| 1.2 (1) | | Res.129 (WRC-23) (ex.COM6/1) | WP 4A (1) | Doc. 4A/128 (d) (a), Annex 3 (b), Annex 4 |
| 1.3 (1) | | Res.130 (WRC-23) (ex.COM6/3) | WP 4A | Doc. 4A/128 (d) (a), Annex 5 (b), Annex 6 |
| 1.4 (1) | | Res.726 (WRC-23) (ex.COM6/24) | WP 4A | Doc. 4A/128 (d) (a), Annex 7 (b), Annex 8, Annex 9 (c) |
| 1.5 (1) | | Res.14 (WRC-23) (ex.COM6/6) | WP 4A | Doc. 4A/128 (d) (a), Annex 10 |
| 1.6 (1) | | Res.131 (WRC-23) (ex.COM6/7) | WP 4A | Doc. 4A/128 (d) (a), Annex 11 (b), Annex 12, Annex 13 |
| 1.7 (2) | | Res.256 (WRC-23) (ex.COM6/26) | WP 5D | Doc. 5D/77 (d), Chapter 1 (a), Chapter 2 Annex 2.24.7 (b), Chapter 4 Sec. 1, 2 & 3.6, Annex 4.10 |
| 1.8 (2) | | Res.663 (Rev.WRC-23) | WP 5B | See BR Administrative Circular CA/270 (a) |
| 1.9 (2) | | Res.411 (WRC-23) (ex.COM6/2) | WP 5B | See BR Administrative Circular CA/270 (a) |
| 1.10 (2) | | Res.775 (Rev.WRC-23) | WP 5C (2) | See BR Administrative Circular CA/270 (a) |
| 1.11 (3) | | Res.249 (Rev.WRC-23) | WP 4C | Doc. 4C/77 (d) (a), Annex 1, Annex 2 (b) |
| 1.12 (3) | | Res.252 (WRC-23) (ex.COM6/8) | WP 4C | Doc. 4C/77 (d) (a), Annex 3, Annex 4 (b) |
| 1.13 (3) | | Res.253 (WRC-23) (ex.COM6/9) | WP 4C (3) | Doc. 4C/77 (d) (a), Annex 6 (b), Annex 7 |
| 1.14 (3) | | Res.254 (WRC-23) (ex.COM6/10) | WP 4C | Doc. 4C/77 (d) (a), Annex 8, Annex 9 (c), Annex 10 (b) |
| 1.15 (4) | | Res.680 (WRC-23) (ex.COM6/4) | WP 7B | Doc. 7B/35 Sec. 2.2, 3.2, 3.2.1, 3.4, 3.4.1, 3.4.2 & 4 (d), Annex 1 (b), Annex 2 (f), Annex 3 |
| 1.16 (4) | | Res.681 (WRC-23) (ex.COM6/11) | WP 7D | Doc. 7D/41 Sec. 2.1, 2.2 & 2.2.1 (d), Annex 1 (b), Annex 11 (e) |
| 1.17 (4) | | Res.682 (WRC-23) (ex.COM6/12) | WP 7C | Doc. 7C/41 Sec. 2.1, 2.3, 4, 4.1 & 8.1 (d), Annex 1 (e), Annex 3 (f), Annex 10 (b) |
| 1.18 (4) | | Res.712 (WRC-23) (ex.COM6/5) | WP 7C WP 7D (4) | Doc. 7C/41 Sec. 2.1, 2.3, 5.3.1 & 8.1 (d), Annex 9 Doc. 7D/41 Sec. 2.1, 2.2, 2.2.2 (d), Annex 2 (b), Annex 3 (f) |
| 1.19 (4) | | Res.674 (WRC-23) (ex.COM4/8) | WP 7C | Doc. 7C/41 Sec. 2.1, 2.3, 5.1, 5.2 & 8.1 (d), Annex 8 (f) |

Notes related to the information from the Responsible Groups

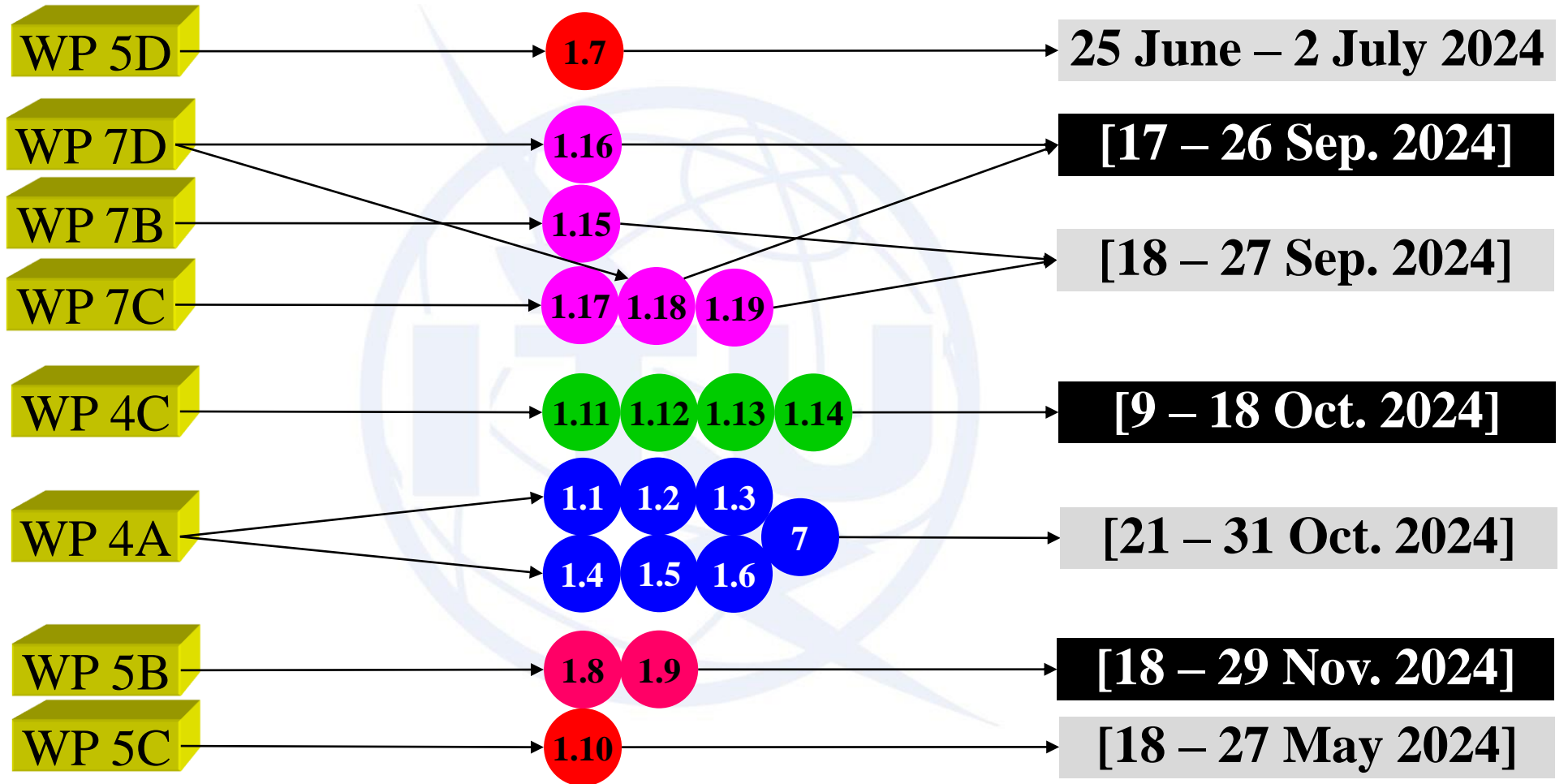
| | |
|---|---|
| a | Relevant part |
| b | Framework/Work Plan/Milestones/Organization of studies |
| c | Draft CPM text or working document towards draft CPM text |
| d | Chair's Report of the meeting (folder with annexes) |
| e | Annex including a DN or DR Rec. , a PDN or PDR Rec. , or WDPDN or WDPDR Rec. |
| f | Annex including a DN or DR Rep. , a PDN or PDR Rep. , or a WDPDN or WDPDR Rep. |



Next Meetings of Resp. Groups

Responsible
ITU-R Groups

WRC-27 agenda items



[planned]



Description of the texts* assigned to the ITU-R Study Groups and sub-groups (Working Methods in [Res. ITU-R 1-9](#))

- **Spectrum Management** (SG 1, see [Doc. 1/1](#))
- **Radiowave Propagation** (SG 3, see [Doc. 3/1](#))
- **Satellite Services** (SG 4, see [Doc. 4/1](#))
- **Terrestrial Services** (SG 5, see [Doc. 5/1](#))
- **Broadcasting Service** (SG 6, see [Doc. 6/1](#))
- **Science Services** (SG 7, see [Doc. 7/1](#))

* ITU-R Questions,
Recommendations,
Reports, Handbooks,
Resolutions,
Opinions, Decisions
and
W(A)RC Resolutions and
Recommendations

ITU-R Collaboration with other sectors and organizations

- **ITU-T and ITU-D** ([Res. ITU-R 75](#))
- **Other relevant organizations, incl. ISO, IEC & CISPR** ([Res. ITU-R 9-7](#))



Conclusions from 31st RAG meeting (25-27 Mach 2024) relating to the preparations for RA-27 & WRC-27

(see [BR Administrative Circular CA/273](#))

- The RAG established **new Correspondence Group (CG)** on **Improving the CPM Process** (see [Res. ITU-R 2-9](#))
 - **Tasked with exploring potential improvements to the CPM process with the following terms of reference:**
 - Conduct a thorough review of the second session of the CPM, in order to identify areas for procedural improvements of preparing the CPM Report.
 - Aims to submit a comprehensive report 45 days prior to 32nd RAG Meeting (planned on 14-17 April 2025)
 - CG Chair: Mr Fahad ALGHAMDI (Saudi Arabia)
 - CG features (SharePoint folder, Mailing List) on [RAG CG webpage](#)
- Among other topics, the RAG considered also:
 - need for seminars, workshops or training events on regulatory and technical aspects of **constellation systems for non-GSO communications**,
 - possibilities for the development of a comprehensive course of action to promote consistency and coherence in **spectrum management practices for aeronautical and maritime services**.



Thank you for your attention

Additional slides on

- **Items on WRC-27 agenda and WRC-31 preliminary agenda**
- **Summary of RA-23 changes in Res. ITU-R 1-9 and 2-9**
- **CPM-27 Chair, Vice-Chairs and Chapter Rapporteurs**
- **ITU-R Study Groups, Working Parties and Responsible Groups for items on WRC-27 agenda and WRC-31 preliminary agenda**
- **RR Navigation Tool and RR Art 5 Viewer based on RR-2020 (version for RR-2024 under development)**
- **Radio services abbreviations**

WRC-27 Agenda – FSS and BSS issues

Outcomes from WRC-23 agenda item 10: WRC-27 agenda items 1.1 to 1.6 and 7

- 1.1 ➤ Technical and operational conditions and development of regulatory measures, as appropriate, for the **use of the bands 47.2-50.2 GHz and 50.4-51.4 GHz (E-s)**, or parts thereof, by **A-ESIM** and **M-ESIM** communicating with **GSO and NGSO FSS** space stations
▶ **Resolution 176 (Rev.WRC-23)**
- 1.2 ➤ Possible **revisions of sharing conditions** in the **band 13.75-14 GHz** to allow the use of **uplink FSS earth stations with smaller antenna sizes** ▶ **Resolution 129 (WRC-23)**
- 1.3 ➤ **Use of the band 51.4-52.4 GHz** to enable use by **gateway earth stations** transmitting to **NGSO systems in the FSS (E-s)** ▶ **Resolution 130 (WRC-23)**
- 1.4 ➤ Possible **new primary allocation** to the **FSS (s-E)** in the **band 17.3-17.7 GHz** and a possible **new primary allocation** to the **BSS (s-E)** in the **band 17.3-17.8 GHz in Reg. 3**, while ensuring the protection of existing primary allocations in the same and adjacent frequency bands, and to **consider EPFD limits** to be applied in **Reg. 1 & 3** to **NGSO FSS systems (s-E)** in the band 17.3 17.7 GHz
▶ **Resolution 726 (WRC-23)**

▶ **see full text of an agenda item in [Res. 813 \(WRC-23\)](#) and details in the associated resolution**

WRC-27 Agenda – FSS and BSS issues (cont'd)

Outcomes from WRC-23 agenda item 10: WRC-27 agenda items 1.1 to 1.6 and 7

- 1.5 ➤ Regulatory measures, and implementability thereof, to **limit the unauthorized operations of NGSO FSS and MSS earth stations** and associated issues related to the service area of NGSO FSS and MSS systems ➤ **Resolution 14 (WRC-23)**
- 1.6 ➤ Technical and regulatory measures for FSS networks/systems in the **bands 37.5-42.5 GHz (s-E), 42.5-43.5 GHz (E-s), 47.2-50.2 GHz (E-s) and 50.4-51.4 GHz (E-s)** for equitable access to these bands ➤ **Resolution 131 (WRC-23)**
- 7 ➤ Possible changes, in response to PP Res. 86 (Rev. Marrakesh, 2002), on **advance publication, coordination, notification and recording procedures** for frequency assignments pertaining to **satellite networks**, in order to **facilitate the rational, efficient and economical use** of radio frequencies and any associated orbits, including the geostationary-satellite orbit ➤ **Resolution 86 (Rev.WRC-07)**

➤ see full text of an agenda item in [Res. 813 \(WRC-23\)](#) and details in the associated resolution

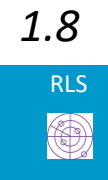
WRC-27 Agenda – FS, MS and RLS issues

Outcomes from WRC-23 agenda item 10: WRC-27 agenda items 1.7 to 1.10



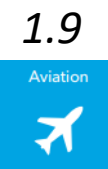
1.7

- Studies on sharing and compatibility and develop technical conditions for the **use of IMT** in the **bands 4 400-4 800 MHz & 7 125-8 400 MHz (or parts thereof), and 14.8-15.35 GHz** taking into account existing primary services operating in these, and adjacent, frequency bands
▶ **Resolution 256 (WRC-23)**



1.8

- Possible **additional spectrum allocations to the RLS** on a **primary** basis in frequency **range 231.5-275 GHz** and possible **new identifications for RLS applications** within frequency **range 275-700 GHz** for millimetric and sub millimetric **wave imaging systems**
▶ **Resolution 663 (Rev.WRC-23)**



1.9

- Appropriate **regulatory actions to update RR Appendix 26** in support of **aeronautical mobile (OR) HF modernization**
▶ **Resolution 411 (WRC-23)**
(RR App.26 - Provisions and associated Frequency Allotment Plan for the AM(OR)S in the bands allocated exclusively to that service **between 3 025 kHz and 18 030 kHz**)



1.10

- Developing **PFD and EIRP limits** for inclusion in **RR Article 21** for **FSS, MSS and BSS** to **protect the FS and MS** in the **bands 71-76 GHz and 81-86 GHz**
▶ **Resolution 775 (Rev.WRC-23)**

▶ **see full text of an agenda item in [Res. 813 \(WRC-23\)](#) and details in the associated resolution**

Outcomes from WRC-23 agenda item 10: WRC-27 agenda items 1.11 to 1.14

- 1.11 ➤ Technical and operational issues, and regulatory provisions, for **space-to-space links among NGSO and GSO satellites** in the **bands 1 518-1 544 MHz, 1 545-1 559 MHz, 1 610-1 645.5 MHz, 1 646.5-1 660 MHz, 1 670-1 675 MHz and 2 483.5-2 500 MHz** allocated to the MSS ➤ **Resolution 249 (Rev.WRC-23)**
- 1.12 ➤ Possible **allocations to the MSS** and possible regulatory actions in the **bands 1 427-1 432 MHz (s-E), 1 645.5-1 646.5 MHz (s-E) (E-s), 1 880-1 920 MHz (s-E) (E-s) and 2 010-2 025 MHz (s-E) (E-s)** required for the future development of **low-data-rate NGSO mobile satellite systems** ➤ **Resolution 252 (WRC-23)**
- 1.13 ➤ Possible **new allocations to the MSS** for **direct connectivity** between **space stations and IMT user equipment to complement terrestrial IMT network coverage** (in the frequency **range between 694/698 MHz and 2.7 GHz**, ➤ **Resolution 253 (WRC-23)** taking into account the IMT frequency arrangements addressed in the most recent version of Rec. ITU-R M.1036)
- 1.14 ➤ Possible **additional allocations to the MSS** ➤ **Resolution 254 (WRC-23)** (in **bands 2 010-2 025 MHz (E-s) and 2 160-2 170 MHz (s-E) in Regions 1 and 3** and **2 120-2 160 MHz (s-E) in all Regions**)

➤ **see full text of an agenda item in [Res. 813 \(WRC-23\)](#) and details in the associated resolution**

Outcomes from WRC-23 agenda item 10: WRC-27 agenda items 1.15 to 1.19

- 1.15 ➤ Studies on frequency-related matters, including possible **new or modified SRS (space-to-space) allocations**, for future development of **communications on the lunar surface and between lunar orbit and the lunar surface**
 (in the following **frequency ranges** or portions thereof: **▶ Resolution 680 (WRC-23)**
 - **390-406.1 MHz, 420-430 MHz and 440-450 MHz**, limited to outside the SZM (shielded zone of the Moon);
 - **2 400-2 690 MHz, 3 500-3 800 MHz, 5 150-5 570 MHz, 5 570-5 725 MHz, 5 775-5 925 MHz, 7 190-7 235 MHz, 8 450-8 500 MHz and 25.25-28.35 GHz;**)
- 1.16 ➤ Studies on the technical and regulatory provisions necessary to **protect RAS operating in specific Radio Quiet Zones** and, **in frequency bands allocated to the RAS on a primary basis globally**, from aggregate radio-frequency interference caused by **NGSO systems** (**bands: 10.6-10.7 GHz; 42.5-43.5 GHz; 76-77.5 GHz; 94.1-95 GHz; 100-102 GHz; 114.25-116 GHz; 130-134 GHz**) **▶ Resolution 681 (WRC-23)**
- 1.17 ➤ **regulatory provisions for receive-only space weather sensors** and their protection in the RR, taking into account the results of ITU Radiocommunication Sector studies
 (**bands: 27.5-28.0 MHz; 29.7-30.2 MHz; 32.2-32.6 MHz; 37.5-38.325 MHz; 73.0-74.6 MHz; 608-614 MHz**) **▶ Resolution 682 (WRC-23)**
▶ see full text of an agenda item in [Res. 813 \(WRC-23\)](#) and details in the associated resolution

Outcomes from WRC-23 agenda item 10: WRC-27 agenda items 1.15 to 1.19

- 1.18 ➤ possible regulatory measures regarding the **protection of the EESS (passive) and the RAS** in certain frequency **bands above 76 GHz** from **unwanted emissions of active services** ➤ **Resolution 712 (WRC-23)**
 (EESS bands: **86-92 GHz; 114.25-116 GHz; 164-167 GHz; 200-209 GHz;**
 RAS bands: **76-81 GHz; 130-134 GHz; 164-167 GHz; 226-231.5 GHz**)
- 1.19 ➤ possible **primary allocations in all Regions to the EESS (passive)** in the frequency **bands 4 200-4 400 MHz and 8 400-8 500 MHz** ➤ **Resolution 674 (WRC-23)**

➤ see full text of an agenda item in [Res. 813 \(WRC-23\)](#) and details in the associated resolution



WRC-31 Preliminary Agenda*

Outcomes from WRC-23 agenda item 10: WRC-31 preliminary agenda items 2.1 to 2.14 (WRC-27 agenda item 10)

- 2.1 ➤ **potential new allocations** to the **FS, MS, RLS, ARS, ARSS, RAS, EESS** (passive and active) and **SRS** (passive) in the frequency **range 275-325 GHz**, with the consequential update of Nos. **5.149, 5.340, 5.564A** and **5.565** ➤ **Resolution 721 (WRC-23)**
- 2.2* ➤ [to consider the **possible [frequency bands]** for [non-beam and beam] wireless **power transmission** to avoid harmful interference to the radiocommunication **services** caused by wireless power transmission ➤ **Resolution 910 (WRC-23)**
- 2.3 ➤ use of **A-ESIM** and **M-ESIM** communicating with **NGSO** stations in the **FSS (E-s)** in the frequency **band 12.75-13.25 GHz** ➤ **Resolution 133 (WRC-23)**
- 2.4 ➤ Support for **ISS allocations** in the **bands 3 700-4 200 MHz** and **5 925-6 425 MHz**, and associated regulatory provisions, to enable **links between NGSO and GSO satellites** ➤ **Resolution 683 (WRC-23)**

* For further consideration at WRC-27, given the divergent views regarding the frequency bands to be studied and the means to ensure the full protection of all incumbent services concerned.

➤ **see full text of an agenda item in [Res. 814 \(WRC-23\)](#) and details in the associated resolution**



WRC-31 Preliminary Agenda* (cont'd)

Outcomes from WRC-23 agenda item 10: WRC-31 preliminary agenda items 2.1 to 2.14 (WRC-27 agenda item 10)

- 2.5* ➤ Possible primary allocation in the **bands [694-960 MHz, or parts thereof, in Region 1], 890-942 MHz, or parts thereof, in Region 2, and [3 400-3 700 MHz, or parts thereof, in Region 3]** to the AMS for the use of IMT user equipment in terrestrial IMT networks by non-safety applications ➤ **Resolution 251 (Rev.WRC-23)**
- 2.6* ➤ Identification of the **bands [102-109.5 GHz, 151.5-164 GHz, 167-174.8 GHz, 209-226 GHz and 252-275 GHz]** for IMT ➤ **Resolution 255 (WRC-23)**
- 2.7 ➤ **improving** the utilization of **VHF** maritime radiocommunication ➤ **Resolution 363 (Rev.WRC-23)**
- 2.8 ➤ **improving** the utilization and channelization of **maritime radiocommunication** in the **MF and HF bands**, incl. potential revisions of Art. **52** and App. **17** ➤ **Resolution 366 (WRC-23)**
- 2.9* ➤ possible **allocations to the RNSS (s-E)** in the frequency **bands [5 030-5 150 MHz and 5 150-5 250 MHz] or parts thereof** ➤ **Resolution 684 (WRC-23)**

* For further consideration at WRC-27, given the divergent views regarding the frequency bands to be studied and the means to ensure the full protection of all incumbent services concerned.

➤ **see full text of an agenda item in [Res. 814 \(WRC-23\)](#) and details in the associated resolution**



WRC-31 Preliminary Agenda* (cont'd)

Outcomes from WRC-23 agenda item 10: WRC-31 preliminary agenda items 2.1 to 2.14 (WRC-27 agenda item 10)

- 2.10 ➤ possible **new primary allocation** to the **EESS (E-s)** in the frequency **band 22.55-23.15 GHz** ➤ **Resolution 664 (Rev.WRC-23)**
- 2.11* ➤ upgrade of the **secondary allocation** to the **EESS (s-E)** in the **band [37.5-40.5 GHz]** or possible new **worldwide frequency allocations** on a **primary basis** to the **EESS (s-E)** in certain bands within the **range [40.5-52.4 GHz]** ➤ **Resolution 685 (WRC-23)**
- 2.12* ➤ possible **new allocations** to the **EESS (active)** in the **bands [3 000-3 100 MHz]** and **[3 300-3 400 MHz]** on a secondary basis ➤ **Resolution 686 (WRC-23)**
- 2.13 ➤ studies on **coexistence** between **spaceborne synthetic aperture radars** operating in the **EESS (active)** and the **RDS** in the **band 9 200-10 400 MHz**, with possible actions as appropriate ➤ **Resolution 722 (WRC-23)**
- 2.14 ➤ review **spectrum use and needs** of **applications of BS and MS** and consider possible regulatory actions in the **band 470-694 MHz or parts thereof** ➤ **Resolution 235 (Rev.WRC-23)**

* For further consideration at WRC-27, given the divergent views regarding the frequency bands to be studied and the means to ensure the full protection of all incumbent services concerned.

➤ **see full text of an agenda item in [Res. 814 \(WRC-23\)](#) and details in the associated resolution**



Other relevant standing items on WRC Agenda

Outcomes from WRC-23 agenda item 10: WRC-27 agenda items 2, 4, 8 and 9

- 2 ➤ Consider the **new approved versions**, if any, of the **ITU-R Recommendation incorporated by reference** in the RR (list in RR Vol.4, mandatory application) ➤ **Res. 27 (Rev.WRC-19)**
 - 4 ➤ **Review of the W(A)RC Resolutions and Recommendations not related to other AIs** (see RR Vol. 3), considering **progress of ITU-R studies, implementation of previous WRC decisions, end of transitional measures**, etc. ➤ **Res. 95 (Rev.WRC-19)**
 - 8 ➤ Consider requests from administrations to **delete** their **country footnotes** or to have their **country name** deleted from footnotes, if no longer required (see RR Article 5), **towards more spectrum harmonization** ➤ **Res. 26 (Rev.WRC-23)**
 - 9 ➤ Consider and approve the Report of the BR Director, in accordance with Article 7 of the ITU Convention:
 - 9.1 – on **ITU-R activities** since WRC 23*
 - 9.2 – on any **difficulties or inconsistencies encountered in the application of the RR****
 - 9.3 – on action in response to ➤ **Res. 80 (Rev.WRC-07)**
- * Strictly limited to the Report of the Director on ITU-R activities, no topics outside WRC-27 agenda items 1.1 to 1.19
- ** Strictly limited to the Report of the Director on any difficulties or inconsistencies ... and the comments from administrations.
- **see full text of an agenda item in Res. 813 (WRC-23) and details in the associated resolution**



Summary of RA-23 changes in Res. ITU-R 1-9 – Working Methods

Resolution ITU-R 1-9 was approved by RA-23. The following summarize the major changes with respect to its previous version:

- Inclusion of reference to [new Resolution ITU-R 72](#) on Promoting gender equality and equity
- Description of each Committee of RA and their mandate
- Addition of a new section on the [procedures of voting at RA](#)
- Establishment of the [maximum term of office for WPs Chairs](#) (two terms, extendable to three)
- After all efforts to reach consensus have been exhausted, the WPs may take decisions, e.g. on the agreement of documents to be submitted to the SGs. The Chair of the WPs will invite the objecting Member State(s) to include an attributed short statement
- Role and mandate of [SGs Vice-Chairs](#) and [WPs Chairs](#). Role of the steering committee members
- SGs Chairs and Vice-Chairs should participate in RA and in RAG to represent their respective study groups
- [Fellowship policy](#) for persons originating from developing countries
- RAG shall be made aware of the [non-attendance of Vice-Chairs](#)
- The [deadline](#) for submission of contributions for meetings of all SGs, the CCV and their subordinate groups (WPs, TGs, etc.) has changed to **12** calendar days (1600 hours UTC) prior to the start of the meeting
- When a new or revised draft Recommendation is adopted, but not approved, the SG may consider submitting the document for approval to the RA



Summary of RA-23 changes in Res. ITU-R 2-9 – CPM

Resolution ITU-R 2-9 was approved by RA-23. The following summarize the major changes with respect to its previous version:

- Technical studies contributed to the second session of CPM shall be limited to rationalization
- Contributions concerning proposals by administrations regarding their country footnotes to CPM should be considered **for information only** and a list of such proposals may be included in an Annex of the CPM Report
- The **number of new topics** under the standing agenda item in accordance with Resolution **86 (Rev.WRC-07)** (currently agenda item 7) **shall be limited**

Guidelines for preparation of the CPM Report

- The **background section** shall not include advertisement, promotional and commercial information and it should avoid repetition or duplication of the already included text
- **Page limit and format for draft CPM texts**
 - All necessary texts should be as concise as possible
 - Acronyms/abbreviations should be included in the beginning of the Report
 - Views of Member States and/or RTOs should not be included in the draft CPM texts or in the CPM Report
- **Methods to satisfy the WRC agenda items**
 - A summary of supporting reasons and possible concerns may be included after the method description to facilitate understanding and should not exceed half a page

CPM-27 Chair and Vice-Chairs

www.itu.int/ITU-R/go/rcpm

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(see details [online here](#))

CPM-27 Chapter Rapporteurs

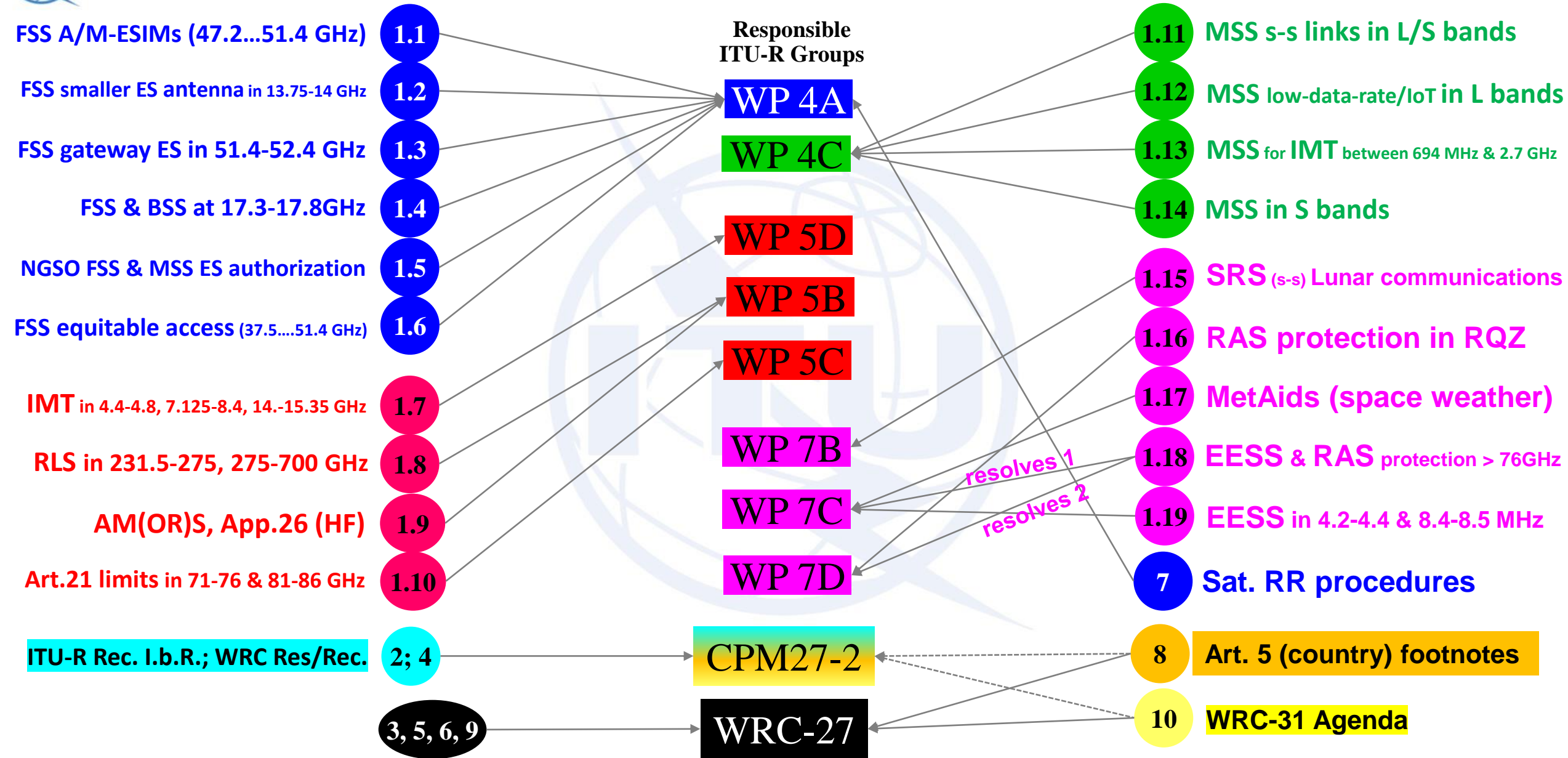
(see Annex 5 to [CA/270](#))

| <u>Chapters</u> | <u>(Co-)Rapporteurs</u> |
|--|--|
| 1. Fixed-satellite and Broadcasting-satellite issues | Mr. Andrew PEGUES  Mr. Mostafa MOUSA  for AIs 1.1, 1.2, 1.3, 1.4, 1.6 for AIs 1.5, 7 |
| 2. Fixed, mobile and radiolocation issues | Mr. Richard MAKGOTLHO  Mr. Abdulla JABER  for 1.8, 1.9 for AIs 1.7, 1.10 |
| 3. Mobile-satellite issues | Mr. Sergey S. UVAROV  |
| 4. Science issues | Mr. Jean PLA  |
| 5. General issues | Mr. Bin LIU  |

(see details at www.itu.int/en/ITU-R/study-groups/rcpm/Pages/cpm-27-chp-rapporteurs.aspx)



WRC-27 agenda items & Resp. Groups

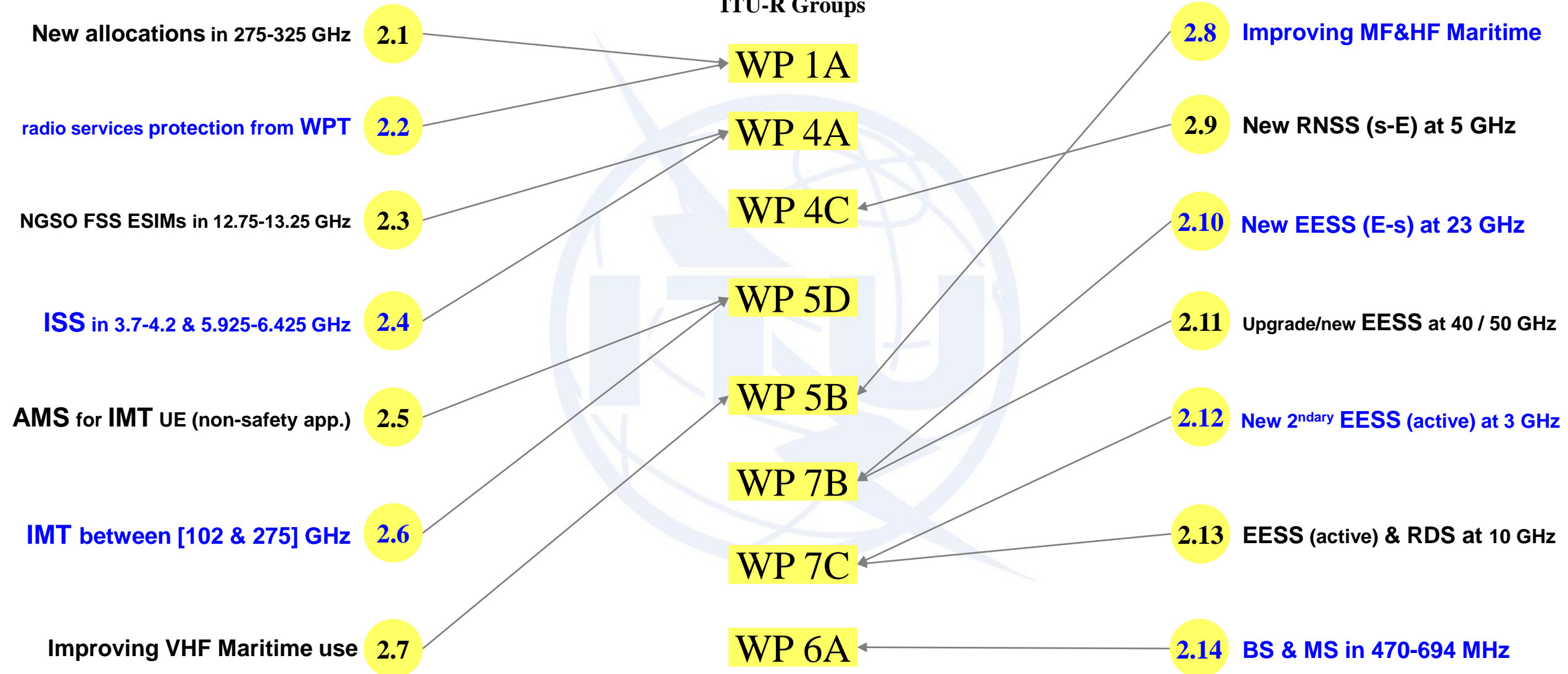


(see Annexes 7 and 9 to [CA/270](#))



WRC-31 preliminary items & Resp. Groups

Responsible ITU-R Groups



(see Annexes 8 and 9 to [CA/270](#))



Radio Regulations Navigation Tool



www.itu.int/pub/R-REG-RRX-2021

A Java application for the browsing of elements from the following ITU publications:

- Volumes I to IV of the **Radio Regulations**
- **Rules of Procedures**
- **ITU Constitution and Convention**
- **Plenipotentiary Conference Resolutions**
- **ITU-R Recommendations** mentioned in the RR (in addition to those incorporated by reference and included in RR Vol. 4)

Allows users to navigate from those publications without requiring any further download.

The screenshot displays the ITU Radio Regulations Navigation Tool (RR 2020 Edition) interface. The top navigation bar includes tabs for RR Vol I, RR Vol II, RR Vol III, RR Vol IV, RR Maps, RoP, Non inc Rec (REF), CS & CV, and Preferences. The main content area is divided into two sections: a left sidebar with a 'Quick access' and 'History' menu, and a main display area. The sidebar menu lists various sections including 'Radio Regulations - Articles - Edition', 'Note by the Secretariat', 'TABLE OF CONTENTS', 'ARTICLES', 'Preamble', and 'CHAPTER I - Terminology and technical provisions' through 'CHAPTER X - Provisions for entry into force'. The main display area features a large red background with a world map and the text 'Radio Regulations Articles Edition of 2020'. A video player overlay is visible in the bottom right corner, showing the ITU logo and the text 'ITU Radio Regulations Navigation Tool (RR 2020 Edition)' with a play button icon.



RR Art 5 Viewer



www.itu.int/pub/R-REG-RR5-2020

Article 5 of the Radio Regulations (RR5) - Table of Frequency Allocations (RR 2016 Edition)

Allocations to services Footnotes Preferences Tools Help



Main Table Allocations to Services

Region 1 Region 2 Region 3 As of 15/11/2018 Frequency Band Below 110 kHz

| Region 1 | Region 2 | Region 3 |
|--|---|--|
| Table: Below 8.3 kHz (Not allocated) | | |
| 5.53 5.54 | | |
| Table: 8.3 - 9 kHz METEOROLOGICAL AIDS (passive) 5.54A 5.54B 5.54C Additional: 8.3 - 9 kHz FIXED MOBILE RADIONAVIGATION | Table: 8.3 - 9 kHz METEOROLOGICAL AIDS (passive) 5.54A 5.54B 5.54C | Table: 8.3 - 9 kHz METEOROLOGICAL AIDS (passive) 5.54A 5.54B 5.54C Additional: 8.3 - 9 kHz FIXED MOBILE RADIONAVIGATION |

The **RR Art.5 Frequency Allocations Table (FAT) Software** (RR5FATViewer):

- **Stand-alone application** (can work offline)
- Useful tool to **electronically use, consult and analyze the RR FAT and its associated notes** (as they appear in RR Article 5 and in some other related texts (Res., ITU-R Rec., Rules of Procedure))

- **Perfect complement to the 2020 Edition of the Radio Regulations** (incl. WRC-19 decisions, but limited to the scope and boundaries of RR Article 5)
- **Enables filtering** by frequency range, service, category of service, footnote, country, etc.
- **Is equipped with several tools and utilities** that allow, among other things:
 - o The exporting data to various formats
 - o The tracing and comparison of the evolution of the Article 5 Table and its associated footnotes (from the 2001 Edition onward)
 - o The **extraction and modification of National Table of Frequency Allocations** for a given geographic area (country), based on the corresponding "International Plan" from RR Art. 5

Radio service abbreviations (1/2)

| Abbreviations | Radio services | RR definition |
|----------------------|--|----------------------|
| AMS | aeronautical mobile service | No. 1.32 |
| AM(R)S | aeronautical mobile (route) service | No. 1.33 |
| AMSS | aeronautical mobile-satellite service | No. 1.35 |
| AMS(R)S | aeronautical mobile-satellite (route) service | No. 1.36 |
| ARNS | aeronautical radionavigation service | No. 1.46 |
| ARNSS | aeronautical radionavigation-satellite service | No. 1.47 |
| ARS | amateur service | No. 1.56 |
| ARSS | amateur-satellite service | No. 1.57 |
| BS | broadcasting service | No. 1.38 |
| BSS | broadcasting-satellite service | No. 1.39 |
| EESS | Earth exploration-satellite service | No. 1.51 |
| FS | fixed service | No. 1.20 |
| FSS | fixed-satellite service | No. 1.21 |
| ISS | inter-satellite service | No. 1.22 |
| LMS | land mobile service | No. 1.26 |
| LMSS | land mobile-satellite service | No. 1.27 |
| MetAids | meteorological aids service | No. 1.50 |
| MetSat | meteorological-satellite service | No. 1.52 |

Radio service abbreviations (2/2)

| Abbreviations | Radio services | RR definition |
|----------------------|--|----------------------|
| MMS | maritime mobile service | No. 1.28 |
| MMSS | maritime mobile-satellite service | No. 1.29 |
| MRNS | maritime radionavigation service | No. 1.44 |
| MRNSS | maritime radionavigation-satellite service | No. 1.45 |
| MS | mobile service | No. 1.24 |
| MSS | mobile-satellite service | No. 1.25 |
| RAS | radio astronomy service | No. 1.58 |
| RDS | radiodetermination service | No. 1.40 |
| RDSS | radiodetermination-satellite service | No. 1.41 |
| RLS | radiolocation service | No. 1.48 |
| RLSS | radiolocation-satellite service | No. 1.49 |
| RNS | radionavigation service | No. 1.42 |
| RNSS | radionavigation-satellite service | No. 1.43 |
| SOS | space operation service | No. 1.23 |
| SFTSS | standard frequency and time signal service | No. 1.53 |
| SFTSSS | standard frequency and time signal-satellite service | No. 1.53 |
| SRS | space research service | No. 1.55 |