

ITUWRS
GENEVA**2024**

2-6 December 2024
Geneva, Switzerland

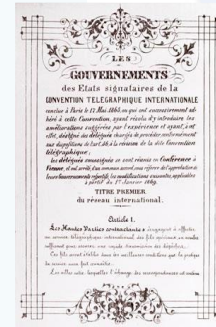
World Radiocommunication Conference (WRC)



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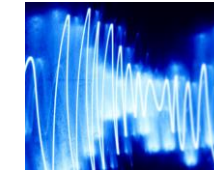
- WRC Objectives, Benefits & Purposes
- WRC Preparatory Process & Cycle
- WRC Regional Preparations

Year	Place
1903 1906	Berlin
1912	London
1927	Washington, D.C.
1932	Madrid
1938	Cairo
1947	Atlantic City
1951	Geneva
1959	Geneva
1963	Geneva
1967	Geneva
1971	Geneva
1974	Geneva
1977	Geneva
1979	Geneva
1983	Geneva

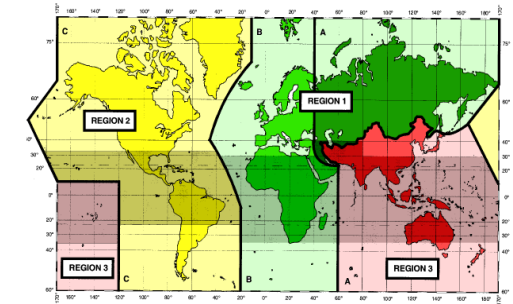


Year	Place
1988	Geneva
1992	Malaga-Torremolinos
1993	Geneva
1995	Geneva
1997	Geneva
2000	Istanbul
2003	Geneva
2007	Geneva
2012	Geneva
2015	Geneva
2019	Sharm el-Sheikh
2023	Dubai





- **Update the Radio Regulations**
- **Allocate spectrum for emerging radio services & applications while protecting existing users**
- Create **regulatory certainty** for spectrum **users, regulators, industry**
- Achieve **spectrum harmonization for economies of scale & equipment interoperability**
- Provide a **stable and predictable regulatory environment** needed for future investments
- **Bring together all stakeholders** in a process that is aimed at **building consensus**



Organized **every 3-4 years**, last one was WRC-23 (20 Nov. – 15 Dec. 2023 Dubai, UAE)

- **3987** Participants, **163** Administrations, **151** Observers (UN Agencies, SDOs, Operators, Industries, etc.)
- **> 40** agenda items, issues and topics
- **967** documents*, **6024** proposals*
- **4** weeks

* see the [WRC-23 Proposal Management System](#)



✓ **Updates the Radio Regulations (CS 89)** (*treaty status*)

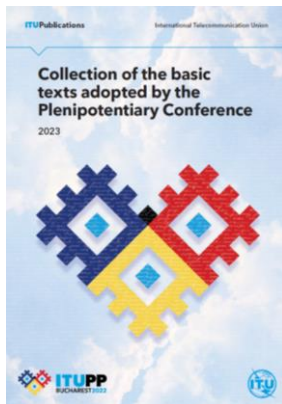
- Spectrum Allocation (RR Art. 5 Table)
- Coordination and Notification procedures
- Administrative and operational procedures



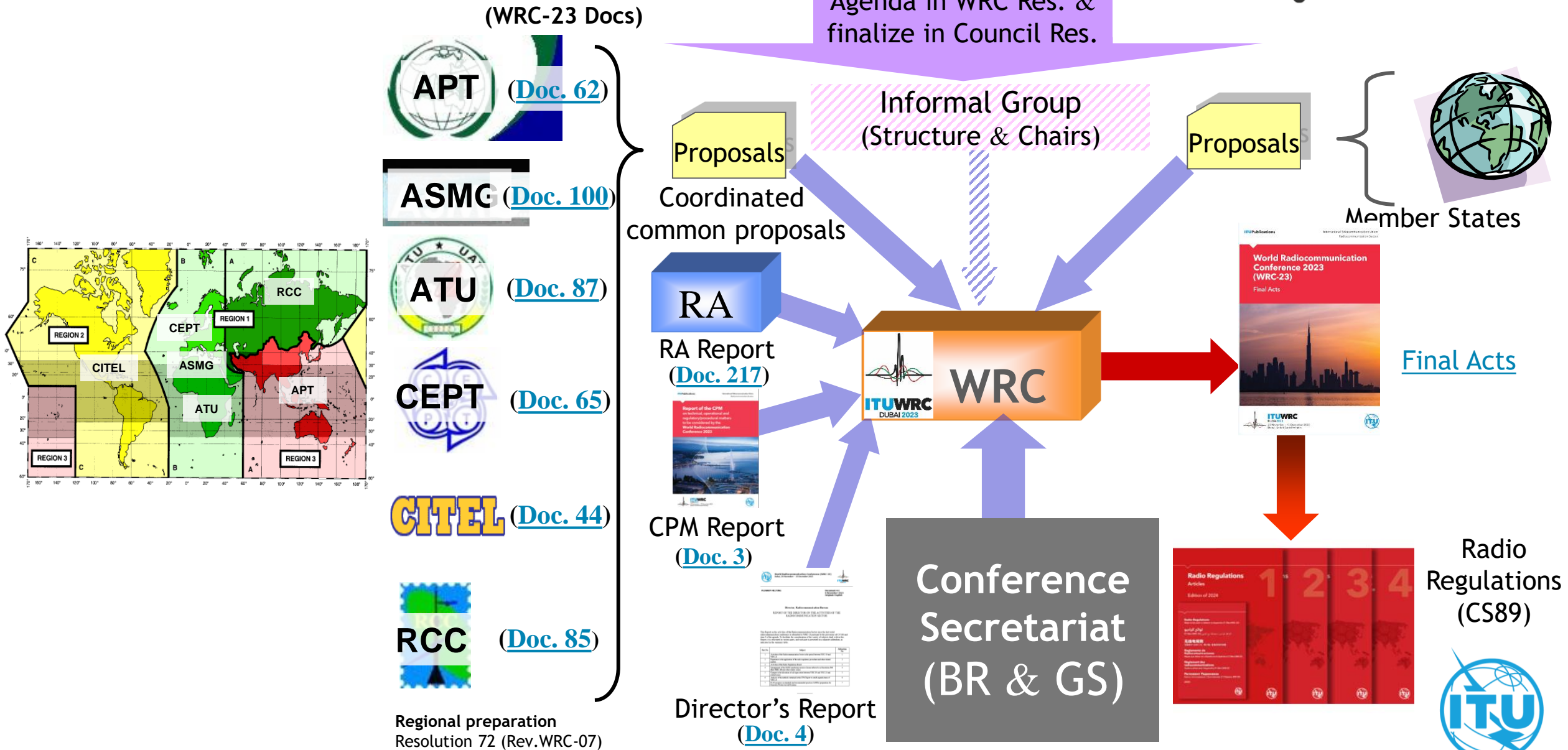
**Binding on all
Member States
(see CS 31)**

✓ **Adopts WRC Resolutions & WRC Recommendations**
(incl. agenda for next WRC and preliminary agenda for subsequent WRC)

✓ **Held every 3-4 years (CS 90)**




- ✓ **Other related provisions can be found mainly in CS Art. 13, CV Art. 7 and in the GR**
- ✓ **WRC shall have reciprocal interpretation in 6 languages: A, C, E, F, R and S (see CS 172)**



Overview of some WRC-23 outcomes


Terrestrial services

1.1 Mobile




1.2 

1.3


1.5 Broadcasting


1.4 

- **IMT** Identification in some countries and in parts of 614-694 MHz and parts of 3-5; 6-7; 10-10.5 GHz bands
- **HIBS** identification in bands within 694 MHz to 2.7 GHz






1.7 Aviation


1.9 

1.10 

1.11 Maritime

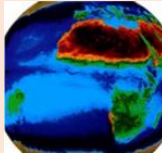


- New **AMS(R)S VHF** alloc.
- **Dig. techno.** for aviation safety-of-life applications in HF
- New **AMS (OR)** alloc. (around 15.5 GHz (2ndary) & 22 GHz (1stary), for non-safety applications
- **GMDSS** modernization and additional GMDSS satellite provider




Aeronautical and Maritime services


Science services




- New **EESS** (active) alloc. @ 45 MHz for Spaceborne radar sounders
- Upgrade **SRS** @ 14.8-15.35 GHz
- New **EESS** (passive) @ 231.5-252 GHz for remote-sensing observation requirements
 - Space weather sensors in MetAids

1.12 Science

1.13 

1.14 



- Conditions for use of FSS **ESIMs** (GSO-Ku & NGSO-Ka)
- New **ISS allocations** in Ka-bands (for science services)
- New **FSS (s-E) allocation in Ka band in Reg. 2**
- Improvement of **satellite regulatory framework** (bringing into use NGSO, Plans, etc.)

A&M- 1.15

1.16

1.17

1.19

7 topics A to K



Satellite services

Note: WRC-23 agenda item numbers indicated in italic

ITU-R WP 4A – FSS and BSS





- 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)**



ITU-R WP 4C – MSS

- 1.11 **MSS NGSO-GSO space-to-space links**
- 1.12 **MSS for low-data-rate (IoT) NGSO systems between 1 427 and 2 025 MHz**
- 1.13 **MSS for IMT between 694/698 MHz and 2.7 GHz**
- 1.14 **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.**

WRC-27 agenda

- 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)**



ITU-R WP 5B, WP 5C, WP 5D – FS, MS, RLS

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

ITU-R WP 7B, WP 7C, WP 7D – Science issues





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

Council: WRC-27
agenda in **Res.1422**
(see [Doc. C24/125](#) & [CL-24/49](#))

Dates & place/venue
to be determined later on

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

Meetings of ITU-R WPs
responsible/contributing on AIs

CPM27-2 [April 2027, 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

National
and
regional
preparations

ITU-R Responsible Groups activities

- ⇒ **Examine contributions from the membership**
(Member States, Sector members, Associates, Academia)
- ⇒ **Ensure necessary coordination with the contributing groups**
(liaison statements to and from contributing working parties)
- ⇒ **Carry out technical studies** (incl. compatibility & sharing studies)
& **develop necessary draft ITU-R Rec. & Reports**
for consideration by the relevant ITU-R Study Group(s)
- ⇒ **Develop regulatory/technical solutions in draft CPM texts**
to be sent to the respective CPM-27 Chapter (co)-Rapporteurs
prior to 23 October 2026 (see [Add. 1 to CA/270](#))
- ⇒ **Finalize the technical studies prior to RA-27**

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

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

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

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

WRC-27 agenda Item (Chapter)	Topic	WRC Resolution (*)	Responsible Group(s)	Information from Responsible Group(s) ITU-R
1		-	-	-
1.1 (1)		Res.176 (Rev.WRC-23)	WP 4A	Doc. 4A/128 Annex 1 (b), Doc. 4A/343 (a) (d), Annex 1 ([f])
1.2 (1)		Res.129 (WRC-23) (ex.COM6/1)	WP 4A (1)	Doc. 4A/128 Annex 3 (b), Doc. 4A/343 (a) (d), Annex 3, Annex 4 (c)
1.3 (1)		Res.130 (WRC-23) (ex.COM6/3)	WP 4A	Doc. 4A/343 (a) (d), Annex 5, Annex 6 (c), Annex 7 (b)
1.4 (1)		Res.726 (WRC-23) (ex.COM6/24)	WP 4A	Doc. 4A/343 (a) (d), Annex 8, Annex 9 (c), Annex 10 (b)
1.5 (1)		Res.14 (WRC-23) (ex.COM6/6)	WP 4A	Doc. 4A/343 (a) (d), Annex 11, Annex 12 (c)
1.6 (1)		Res.131 (WRC-23) (ex.COM6/7)	WP 4A	Doc. 4A/128 Annex 11 (b), Doc. 4A/343 (a) (d), Annex 13
1.7 (2)		Res.256 (WRC-23) (ex.COM6/26)	WP 5D	Doc. 5D/413 (d), Chapter 1 (a), Annex 1.1 (a), Chapter 2 (a), Annex 2.9.4 (b), Chapter 4 (a), Annexes 4.1 (a), 4.2 (a), 4.7, 4.8 (c), 4.9 [(f)], 4.10, 4.11, 4.12, 4.13, Chapter 6 (a)
1.8 (2)		Res.663 (Rev.WRC-23)	WP 5B	Doc. 5B/96 Sec. 7.1.1.1 (d)
1.9 (2)		Res.411 (WRC-23) (ex.COM6/2)	WP 5B	Doc. 5B/96 Sec. 7.2 & 7.2.1.1 (d), Annex 1 (b)
1.10 (2)		Res.775 (Rev.WRC-23)	WP 5C (2)	Doc. 5C/69 Sec. 3.2.2, 3.3.4, 3.3.6 & 4 & Attachment 2 (d), Annex 2 (a), Annex 4 (a)(b)
1.11 (3)		Res.249 (Rev.WRC-23)	WP 4C	Doc. 4C/77 Annex 2 (b), Doc. 4C/204 Sec.2.3, 2.4, 3.1.1, 4.1.2, 4.2, 4.2.1 & 4.2.3 (d), Annex 12
1.12 (3)		Res.252 (WRC-23) (ex.COM6/8)	WP 4C	Doc. 4C/204 Sec. 2.3, 2.4, 3.1.2, 4.1, 4.1.1, 4.1.2 & 4.2.3 (d), Annex 1 (Part 1), Annex 2 (b)
1.13 (3)		Res.253 (WRC-23) (ex.COM6/9)	WP 4C (3)	Doc. 4C/204 Sec. 2.3, 2.4, 2.5, 3.1.3, 3.2.7, 4.1, 4.1.2 & 4.2.3 (d), Annex 3, Annex 4, Annex 5 (Part 1), Annex 6, Annex 7 (b), Annex 8
1.14 (3)		Res.254 (WRC-23) (ex.COM6/10)	WP 4C	Doc. 4C/204 Sec. 2.3, 2.4, 3.1.4, 4.1, 4.1.2, 4.1.3 & 4.2.3 (d), Annex 9, Annex 10 (c), Annex 11 (b)

1.15 (4)		Res.680 (WRC-23) (ex.COM6/4)	WP 7B	Doc. 7B/35 Annex 3, Doc. 7B/97 Sec. 2.2, 3.2.1, 3.3.1, 3.4, 3.4.1, 3.4.3 & 4 (d), Annex 1 (f), Annex 2 (f), Annex 3 (b)
1.16 (4)		Res.681 (WRC-23) (ex.COM6/11)	WP 7D	Doc. 7D/128 Sec. 2.1, 2.2 & 2.2.1 (d), Annex 1 (f), Annex 2, Annex 3 (b)
1.17 (4)		Res.682 (WRC-23) (ex.COM6/12)	WP 7C	Doc. 7C/142 Sec. 2.1, 2.2, 4, 4.1 & 8.1 (d), Annex 7 (e), Annex 9 (b), Annex 10 (f), Annex 11 (c)
1.18 (4)		Res.712 (WRC-23) (ex.COM6/5)	WP 7C WP 7D (4)	Doc. 7C/142 Sec. 2.1, 2.2, 5.4, 5.5 & 8.1 (d), Annex 17 (f), Annex 18 (b), Annex 19 Doc. 7D/128 Sec. 2.1, 2.2 & 2.2.2 (d), Annex 4 (f), Annex 5 (b), Annex 6 (e)
1.19 (4)		Res.674 (WRC-23) (ex.COM4/8)	WP 7C	Doc. 7C/142 Sec. 2.1, 2.2, 5.1, 5.2, 5.3, 6.1 & 8.1 (d), Annex 13 (f), Annex 14 (f), Annex 15 (b)
2 (5)		Res.27 (Rev.WRC-19)	CPM27-2	See BR Administrative Circular CA/270 (a)
3		-	-	Outside scope of the CPM
4 (5)		Res.95 (Rev.WRC-19)	CPM27-2	See BR Administrative Circular CA/270 (a)
5		-	-	Outside scope of the CPM
6		-	-	Outside scope of the CPM
7 (1)		Res.86 (Rev.WRC-07)	WP 4A	Doc. 4A/128 Annex 15, Doc. 4A/343 (a) (d), Annex 14 (b)
	A (1)	Res.86 (Rev.WRC-07)	WP 4A	Topic yet to be identified, if any
8		Res.26 (Rev.WRC-23)	CPM27-2 for information only	See BR Administrative Circular CA/270 (a)
9		-	-	-
9.1		-	-	-
9.2		-	-	-
9.3		Res.80 (Rev.WRC-07)	-	-
10		Res.804 (Rev.WRC-23) - Res. 814 (WRC-23) (ex.COM6/25)	See studies on WRC-31 preliminary agenda items	See studies on WRC-31 preliminary agenda items (updated 25 November 2024)

Notes related to the information from the Responsible Groups

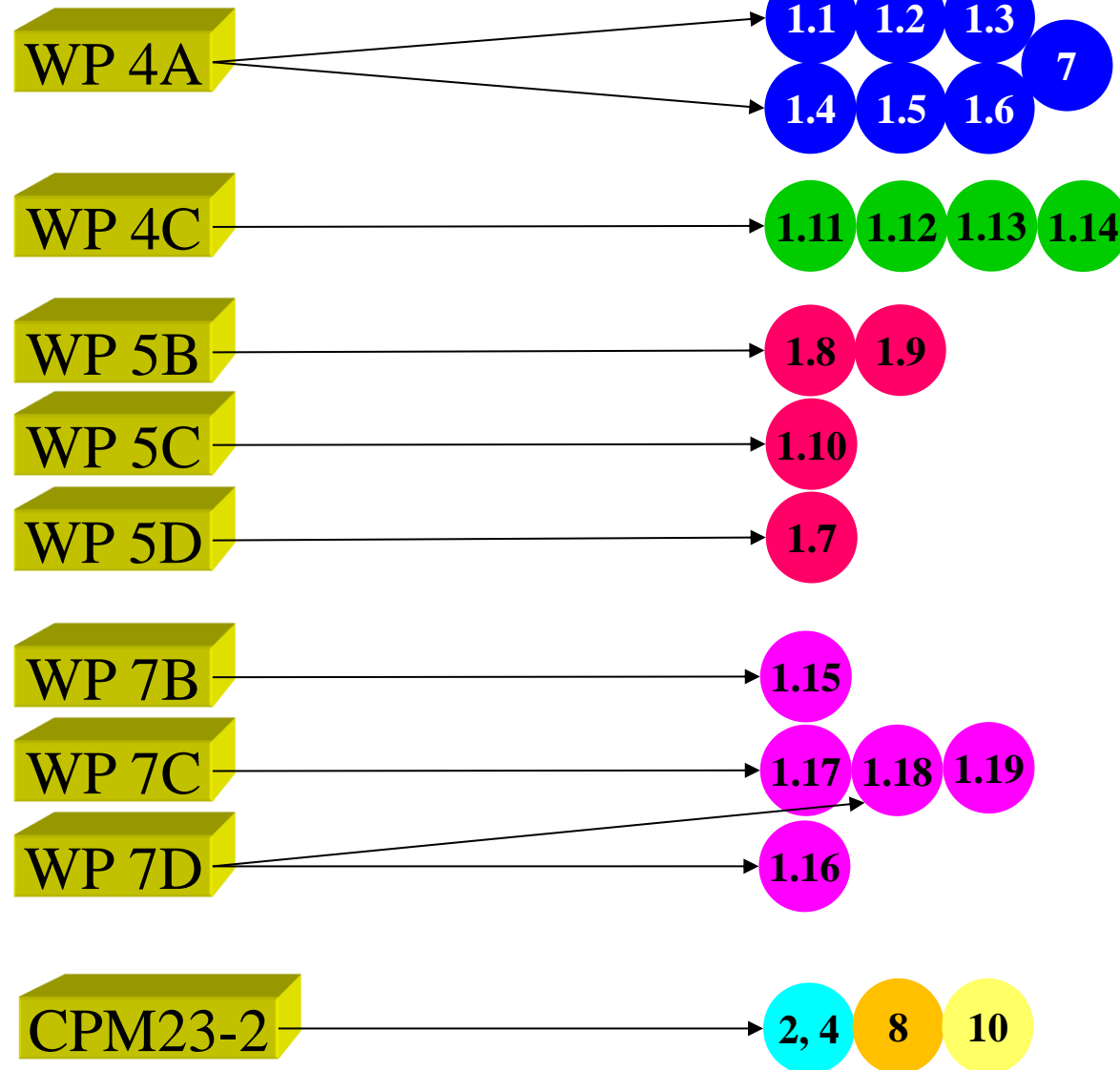
a	Relevant part
b	Framework/Work Plan/Milestones/Organization of studies
c	Draft CPM text or working document towards draft CPM text
d	Chair's Report of the meeting (folder with annexes)
e	Annex including a DN or DR Rec., a PDN or PDR Rec., or WDPDN or WDPDR Rec.
f	Annex including a DN or DR Rep., a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

- As of 25 November 2024
- Updated on a regular basis after meetings of the responsible groups

Summary of CPM Report Preparation

Responsible
ITU-R Groups

WRC-27 agenda items



Chapter 1
(draft text)

Chapter 2
(draft text)

Chapter 3
(draft text)

Chapter 4
(draft text)

Chapter 5
(draft texts)

Annex 1

Annex 2

CPM Management
Team Meeting

Draft
CPM Report

CPM27-2

CPM Report
to WRC-27

Dates/Deadlines

To CPM-27
Chapter
Rapporteurs
**prior to
23 October
2026**

**[11-12
Nov. 2026]**

2 months
prior to
CPM27-2

**[5-15
Apr 2027]***

5 months
prior to
WRC-27

[...]: planned dates

* Dates of CICG availability



(see RR Vol. 3)

Resolution 72 (Rev.WRC-19) on world and regional preparations for WRCs

- Regional groups invited to continue their preparations for WRCs, including the possible convening of joint **meetings of regional groups formally and informally**
- BR Director to assist the regional preparations for example on:
 - ✓ organization of regional preparatory meetings
 - ✓ organization of information sessions (before & after CPM-2)
 - ✓ identification of major issues to be resolved by the WRC
 - ✓ facilitation of regional and interregional formal and informal meetings –
objective of reaching a possible convergence of interregional views on major issues

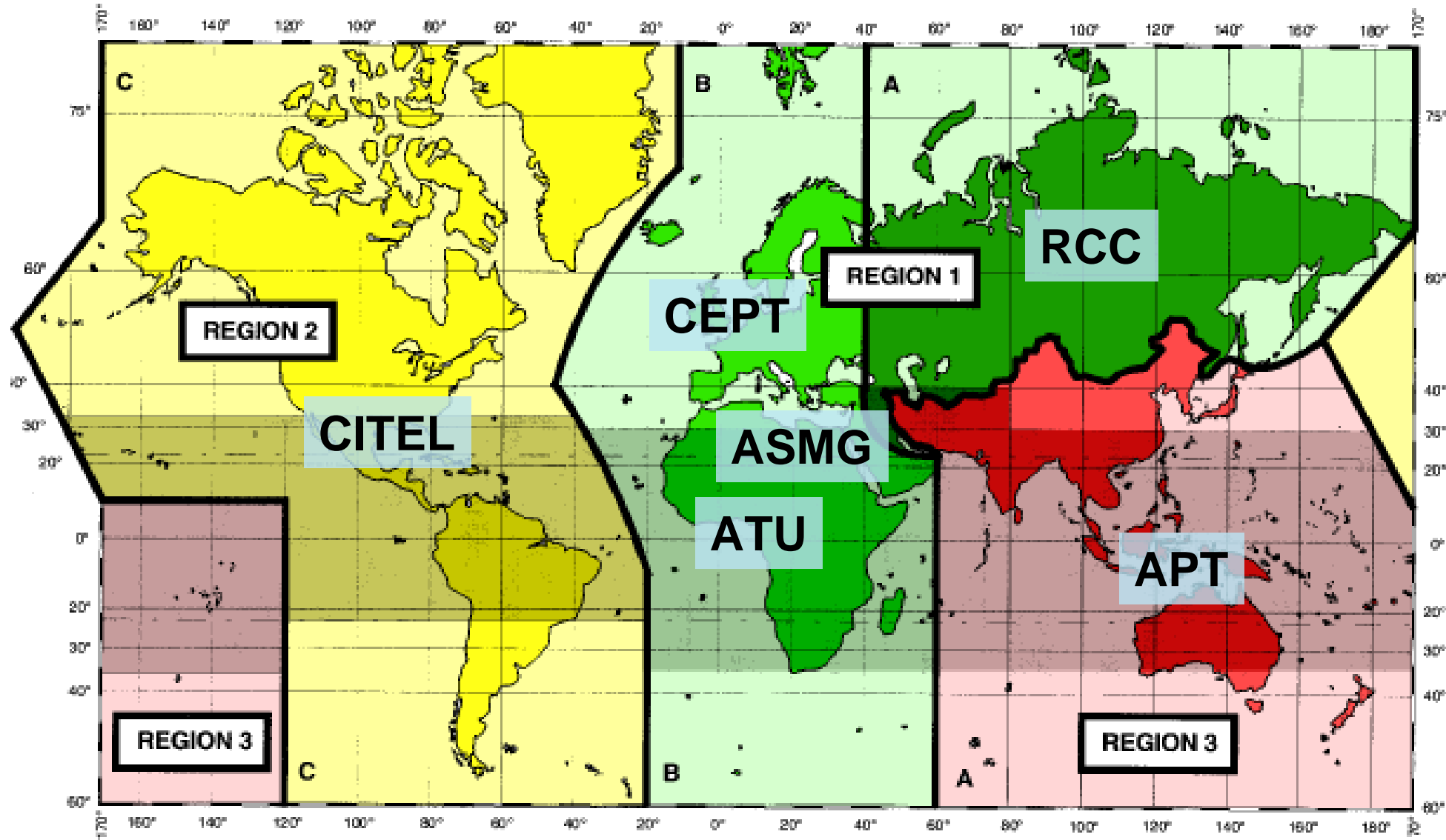


Also addressed in PP Resolution 80 (REV. MARRAKESH, 2002) on WRC process, with for example:

- **support the regional harmonization of common proposals, as stated in WRC Res. 72, for submission to WRCs**

(see ITU Basic Texts)

Main six regional groups preparing for WRC-27



Information on the regional preparations for WRC-27

➤ [Resolution 72 \(Rev. WRC-19\)](#)

www.itu.int/en/ITU-R/conferences/wrc/2027/Pages/reg-prep.aspx

Asia-Pacific Telecommunity (APT)



- ▶ <http://www.apr.int/APTAG>
- ▶ Chair, APG-27:
Mr. Nobuyuki Kawai, Japan,
no-kawai@kddi.com
aptag@apr.int

Arab Spectrum Management Group (ASMG)



- ▶ Chair, ASMG:
Mr. Tariq AL AWADHI, UAE,
tariq.alawadhi@tra.gov.ae

African Telecommunications Union (ATU)



- ▶ <http://www.atuuat.africa>
- ▶ Secretary General – African Telecommunications Union:
Mr. John OMO
sg@atuuat.africa

European Conference of Postal and Telecommunications Administrations (CEPT)



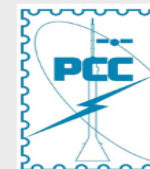
- ▶ <http://www.cept.org/ecc/groups/ecc/cpg>
- ▶ Chair, CPG:
Mr. Stephen Talbot, United Kingdom,
stephen.talbot@ofcom.org.uk

Inter-American Telecommunication Commission (CITEL)



- ▶ <http://www.citel.oas.org/en/Pages/PCCII>
- ▶ Chair of the PCC.II Working Group relative to the CITEL's Preparation for WRCs:
Mr. Ricardo Martinez, Colombia (Republic of)
ricardo.martinez@ane.gov.co

Regional Commonwealth in the Field of Communications (RCC)



- ▶ <http://en.rcc.org.ru>
- ▶ Chair, RCC WG WRC-27/RA-27 *:
Mr. Sergey Pastukh, Russian Federation
serg-past@mail.ru; pastuhsy@niir.ru
- ▶ Draft preliminary position of the RCC Administrations on the WRC-27 agenda items (version of 13 September 2024)

The Network of Women for WRC-27 (NOW4WRC27) initiative has been launched.

ITU Inter-Regional Workshops on WRC-27 Preparation

➤ Resolution 72 (Rev. WRC-19)

1st IRW
[in Q4
of 2025]

- **Scheduled halfway through the preparatory cycle**
 - ⇒ **Presentation and review of the on-going preparatory studies of the responsible groups for the WRC-27 agenda items**
 - ⇒ **Presentation of the organization, preliminary views, draft priorities and positions of the regional groups**

2nd IRW
[in Q4
of 2026]

- **To be scheduled few months prior to CPM27-2**
 - ⇒ **Presentation of the draft CPM Report to WRC-27 (explanation of the draft Methods to satisfy WRC-27 agenda items)**
 - ⇒ **Presentation and review of the regional groups' draft views, positions and common proposals**

3rd IRW
[in Q3/Q4
of 2027]

- **To be scheduled few months prior to WRC-27**
 - ⇒ **Presentation of the CPM & Dir. Reports to WRC-27**
 - ⇒ **Presentation and review of the regional groups' draft views, positions and common proposals**

World Radiocommunication Conference (WRC)

Thank you!

ITU – Radiocommunication Bureau

Questions to brmail@itu.int

Optional slides

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**

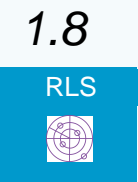
WRC-27 Agenda – FS, MS and RLS issues



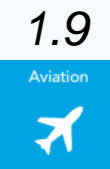
Outcomes from WRC-23 agenda item 10: WRC-27 agenda items 1.7 to 1.10



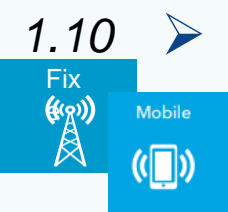
- 1.7 ➤ Studies on sharing and compatibility and develop technical conditions for the **use of IMT** in the **bands 4 400-4 800 MHz & 7 125-8 400 MHz (or parts thereof), and 14.8-15.35 GHz** taking into account existing primary services operating in these, and adjacent, frequency bands
- ▶ **Resolution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



WRC-27 Agenda – MSS issues

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**



WRC-27 Agenda - Science issues



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;** ➤ **Resolution 681 (WRC-23)**
94.1-95 GHz; 100-102 GHz; 114.25-116 GHz; 130-134 GHz)
- 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;** ➤ **Resolution 682 (WRC-23)**
37.5-38.325 MHz; 73.0-74.6 MHz; 608-614 MHz)

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





WRC-27 Agenda - Science issues (cont'd)



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)**

- 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

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 and also its Addendum 1)
- 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 and also its Addendum 1)

CPM-27 Chair and Vice-Chairs

Chair, CPM (appointed at RA-23) Emails

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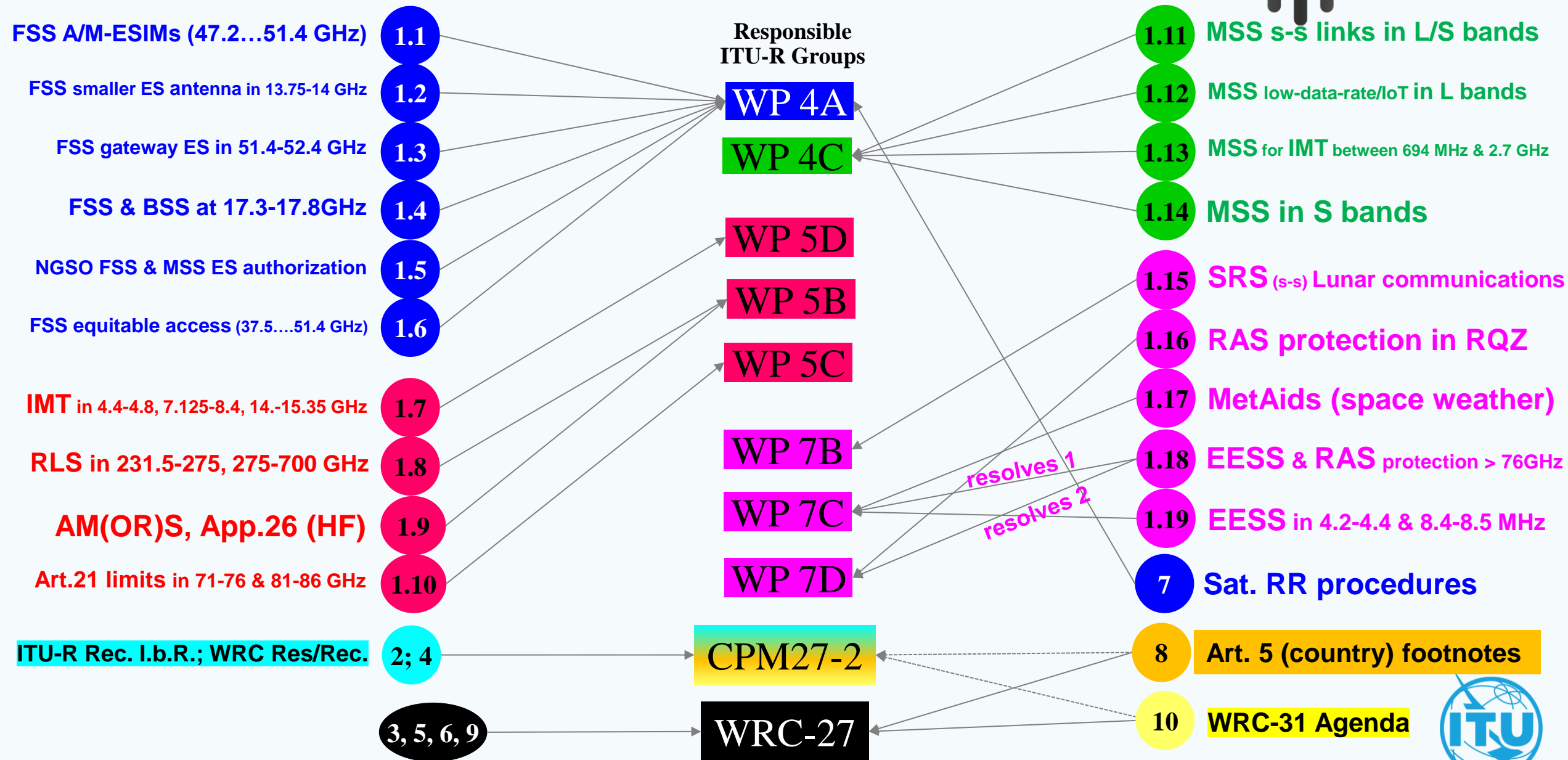


(see details [online here](#))

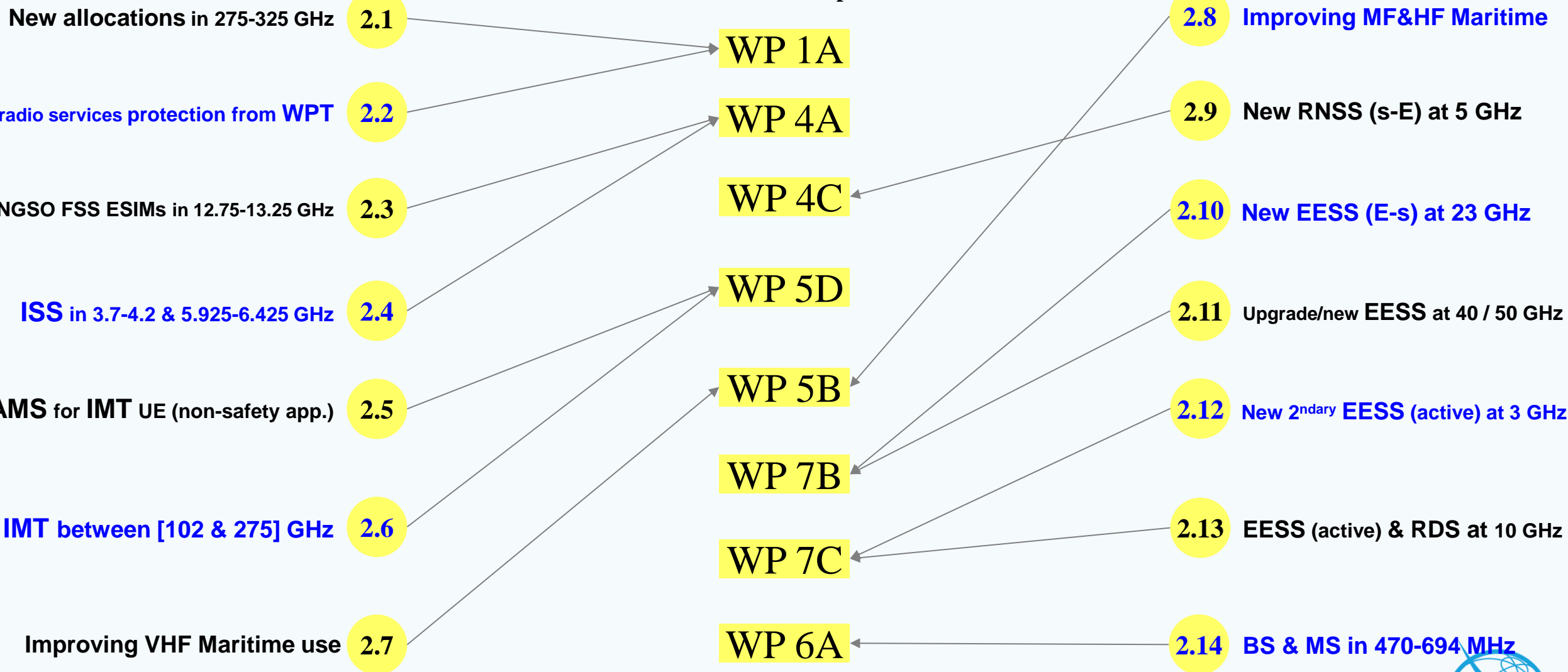
Chapters of the draft CPM ReportWRC-27 Agenda items ((Co-)Rapporteurs)

1. Fixed-satellite and Broadcasting-satellite issues	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 7 <u>Co-Rap.:</u> Mr. Andrew PEGUES (CITEL) <u>Co-Rap.:</u> Mr. Mostafa MOUSA (ASMG/ATU)
2. Fixed, mobile and radiolocation issues	1.7, 1.8, 1.9, 1.10 <u>Co-Rap.:</u> Mr. Richard MAKGOTLHO (ATU) <u>Co-Rap.:</u> Mr. Abdulla JABER (ASMG)
3. Mobile-satellite issues	1.11, 1.12, 1.13, 1.14 <u>Rap.:</u> Mr. Sergey S. UVAROV (RCC)
4. Science issues	1.15, 1.16, 1.17, 1.18, 1.19 <u>Rap.:</u> Mr. Jean PLA (CEPT)
5. General issues	2, 4 <u>Rap.:</u> Mr. Bin LIU (APT)
Annex 1	10 (for information only)
Annex 2	8 (for information only)

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



Responsible
ITU-R Groups



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

Organised in accordance with Res. ITU-R 2-9 and composed of:

- ✓ CPM-27 Chair, Vice-Chairs and Chapter Rapporteurs (= Steering Committee)
- ✓ Chairs of Study Groups and Responsible Groups

⇒ **Consolidate the draft CPM texts/chapters
into the draft CPM Report to WRC-27** (as an input to CPM27-2)

See also [CA/270 Add.1](#) on Preparation of the **draft CPM Report to WRC-27**

Second Session of CPM-23

- **Based on the draft CPM Report**
(available in six official ITU languages a minimum of 2 months before CPM27-2)
- **Consider contributions from ITU Member States
& ITU-R Sector Members**
- **Consider also a draft of the BR Director's Report to WRC-27**
- ⇒ **Finalize the CPM Report to WRC-27**
(incl. draft solutions (methods) to satisfy the agenda items)

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