



**ICAO MID Workshop for the 2023 ITU World Radiocommunication Conference
Cairo, 28 – 29 August 2023**

ITU Preparatory process towards WRC-23

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International Telecommunication Union**



International Telecommunication Union

- Based in Geneva, 193 Member States, 750 private-sector entities and academic institutions, 12 regional and area offices
- 800 staff from 85 countries, 6 official languages
- 3 ITU Sectors:
 - **ITU-R Radiocommunication** – *spectrum management, radio standards*
 - **ITU-T Standardization** – *standards for wired networks*
 - **ITU-D Development** – *assistance to developing countries*
- The basic ITU document dealing with radiocommunication is the **Radio Regulations**

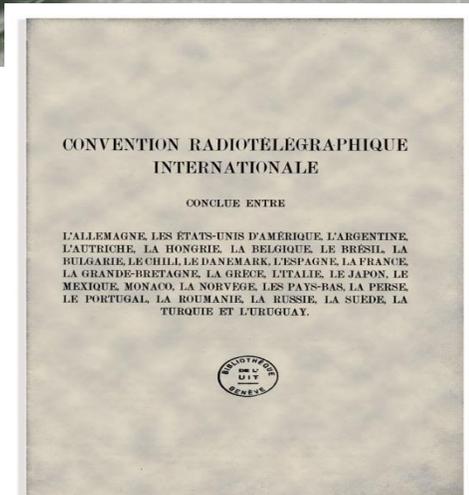




Between 1906 and 2019

IRTC-1906

10 days, 120 participants, 30 countries



WRC-19

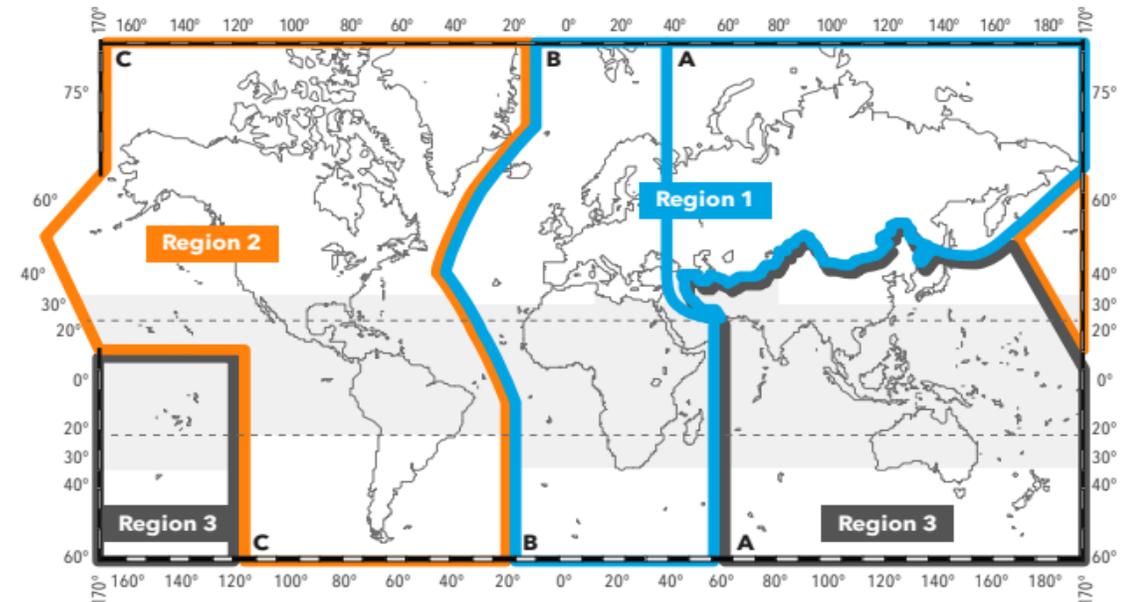
4 weeks, 3 420 participants, 163 countries, 129 other entities





Radio Regulations (RR)

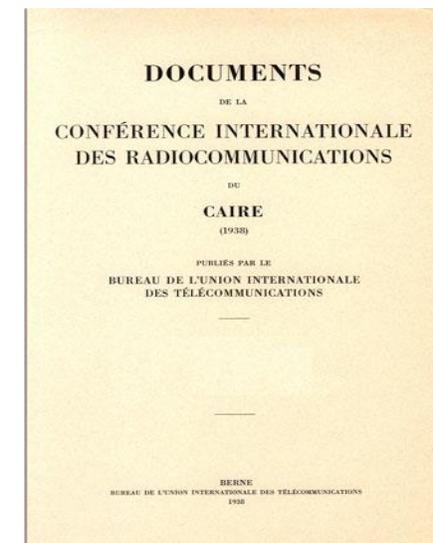
- RR - international rules for use of spectrum and satellite orbits
- RR - intergovernmental treaty: mandatory
- Define the rights and obligations of ITU Member States on use of spectrum/orbit resources.
- Main goals of the RR:
 - interference free operation of stations
 - harmonization of spectrum/orbit use
- RR updated every 4 years by World Radiocommunication Conferences - WRCs





Allocations of aeronautical bands at WRCs

1927, Washington	First definitions of aeronautical and aircraft stations, allocations to aeronautical mobile service in LF and MF bands, e.g. 315 – 350 kHz
1938, Cairo	Exclusive allocations to HF aeronautical services between 6500 and 23380 kHz
1947, Atlantic City	Allocations of 108 – 118 MHz for ARNS and 118 – 132 MHz to the aeronautical mobile service
1963, Geneva	First Conference dealing with satellite issues. Allocation of frequency bands for communication-satellite and <u>radionavigation</u> -satellite services
1959/1964/1966, Geneva	Establishment and revision of the allotment plan for HF aeronautical mobile (R) service
1971, Geneva	Introduction of the aeronautical mobile-satellite service and allocations to it in 1.5/1.6 GHz band. Allocation of 406 – 406.1 to Cospas-Sarsat
....
2015, Geneva	Allocation of spectrum for WAIC, GFT



Delegates at the 1947 Atlantic City Radio Conference



WRC-23 preparation milestones

WRC-19 Developed agenda for WRC-23
Resolution 811 (WRC-19)

1st Session of Conference Preparatory Meeting
right after WRC-19

ITU-R studies
3 years: February 2020 – December 2022

2nd Session Conference Preparatory Meeting
27 March – 6 April 2023, Geneva

Final meetings of regional groups, preparation of
proposals (country and regional) to WRC-23

**WRC-23: 20 November – 15 December
2023 in Dubai, UAE**





Important steps of WRC process

- **Agenda** – determines the scope of discussions – [Resolution 811 \(WRC-23\)](#)
 - Agenda is important, stable. It has a legal notion
 - Agenda Item 1.2 “IMT in mid-bands” lists 5 candidate bands → no other bands can be considered
- **ITU-R Studies**- heart of WRC preparations
 - Making sure that all interference scenarios are analysed and cleared to keep interference within manageable levels under all circumstances
- **CPM - [Conference Preparatory Meeting](#)**
 - Consolidates the results of ITU-R studies. Prepares CPM Report – technical basis for WRC
- **WRC** – allocates frequency bands and establishes operational conditions for newcomers
 - A treaty making Conference, so the final say remains with Member States (telecom regulators)



Agenda items of WRC-23

Fixed, Mobile, Broadcasting

1.1 - 1.3: MS in 3.3-10.5 GHz

1.4: HIBS below 2.7 GHz

1.5: MS, BS in UHF, R1

Satellite science services

1.12: space radar sounders 45 MHz

1.13: space research service in 14.8-15.35 GHz

1.14: Remote-sensing observation requirements in 231.5-252 GHz

WRC-23 agenda

Aeronautical, Maritime

1.6: Sub-orbital vehicles

1.7: AMS(R)S VHF allocation

1.8: UAS CNPC links via FSS

1.9: HF AM(R)S , App.27

1.10: non-safety AMS in 15, 22 GHz

1.11:GMDSS modernization

Space services

1.15: Ku-band ESIM, GSO

1.16: Ka-band ESIM, non-GSO

1.17 intersatellite links

1.18: NB MSS for IoT, L/S-bands

1.19: Ka-band FSS in R2

7: Satellite regulatory issues



WRC preparations. Level 1 – national activities

- National preparations – starting point in WRCs process. Country activities result in adopting a national position for WRC, which is further tuned in regional and international discussions
- Regulators need to keep a balance between different services/applications to respond to the needs of the population and national objectives
- Aviation needs to actively participate in the development of national positions to protect the existing usage and satisfy its future requirements
- It is necessary to pay attention to both in-band and adjacent band protection of aeronautical services



Level 2 - Regional preparations

- The role of the 6 Regional Telecommunication Organizations is constantly growing, both before and during WRCs.
- They consolidate views at regional level, assist in interregional discussions, facilitate reaching a common understanding, save time during WRCs (6 views instead of 193)
- WRC-19: two thirds of documents were common proposals of regional groups
- ITU Radiocommunication Bureau facilitates coordination between regions by organizing ITU Inter-regional Workshops



Asia-Pacific
Telecommunity (APT)



Arab Spectrum
Management Group
(ASMG)



African
Telecommunications
Union (ATU)



European Conference of Postal
and Telecommunications
Administrations (CEPT)



Inter-American
Telecommunication
Commission (CITEL)



Regional Commonwealth
in the Field of
Communications (RCC)



Level 3 – International preparations

International - ITU-R Study Groups, Conference Preparatory Meeting (CPM), ITU Inter-regional workshops

1st Workshop: 13 – 15 December 2021

Presentation and review of the on-going preparatory studies of the ITU-R responsible groups for CPM-23

Presentation of regional groups, international organizations

2nd Workshop: 29 November – 1 December 2022

**Presentation of the Draft CPM Report to WRC-23
(explanation of the draft Methods)**

**Presentation of regional groups, international organizations
on positions & common proposals for CPM23-2**

3rd Workshop: 27 – 29 September 2023

Presentation of CPM & Director's Reports to WRC-23

**Presentation of regional groups, international
organizations on positions, common proposals to WRC-23**



WRC-23 and CPM-23 – practical info



- WRC-23 website: [WRC-23 – World Radiocommunication Conferences \(WRC\) \(itu.int\)](https://www.itu.int/wrc-23)
- Invitation letters (Circular Letters 40, 41): [ITU-SG CIR CIR](#); to observers (1012): [ITU-SG DM CIR](#)
- Documents deadlines: 30 October 2023; 4 months before WRC-23 is recommended timeline
- CPM-23 website: [Conference Preparatory Meeting \(CPM\)](#)
- CPM Report to WRC-23: [CPM Report \(itu.int\)](#)



WRC-23 website

ITU World Radiocommunication Conference 2023 (WRC-23) Dubai, United Arab Emirates, 20 November to 15 December 2023

World Radiocommunication Conferences (WRC) are held every three to four years to review, and, if necessary, revise the Radio Regulations, the international treaty governing the use of the radio-frequency spectrum and the geostationary-satellite and non-geostationary-satellite orbits. Revisions are made on the basis of an agenda determined by the ITU Council, which takes into account recommendations made by previous world radiocommunication conferences.

[Read more](#)

Information



Radio Regulations 2020



WRC-23 Booklet:
Agenda and Relevant
Resolutions



Preparations



Conference
Documents

Venue, transport, visa

Resources



Agenda items and
status of studies



Newsroom



Electronic Tools



Practical information
for participants

Registration info

Delegate registration



Media accreditation



Host Country Website

Hotels, security....

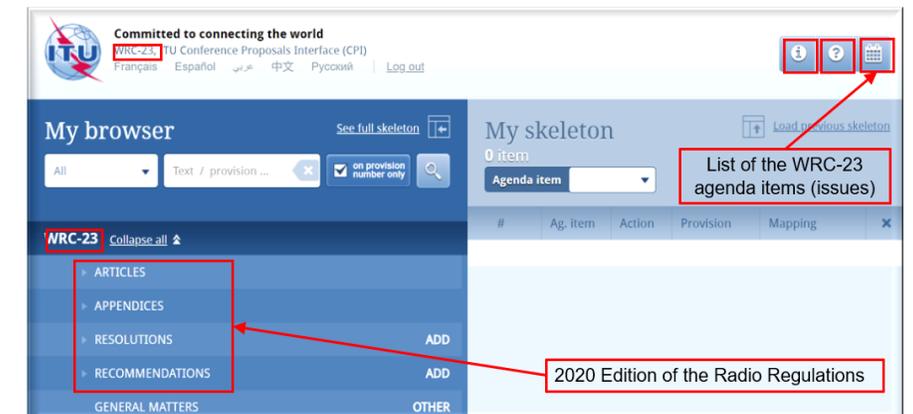


Some ITU/BR tools for WRC preparations

- **RR Navigation tool** – allows navigation of all Radio Regulations, Rules of Procedure, ITU-R Recommendations mentioned in RR, ITU Constitution and Convention, PP Resolutions.
www.itu.int/pub/R-REG-RRX-2021

- **RR Article 5 Viewer** – useful for extracting national footnotes, historical comparison of RR, simultaneous analysis of RR, Rules of Procedure, WRC Resolutions and ITU-R Recommendations
www.itu.int/pub/R-REG-RR5-2020

- **Conference Proposals Interface (CPI)** for WRC-23 – to be used for preparation of draft documents with proposed actions
www.itu.int/net4/proposals/CPI/WRC23





T h a n k y o u !



Structure of draft CPM Report to WRC-23

<u>Chapters of the draft CPM Report</u>	<u>WRC-23 agenda items</u>
1. Fixed, Mobile and Broadcasting issues	1.1, 1.2, 1.3, 1.4, 1.5
2. Aeronautical and maritime issues	1.6, 1.7, 1.8, 1.9, 1.10, 1.11
3. Science issues	1.12, 1.13, 1.14
4. Satellite issues	1.15, 1.16, 1.17, 1.18, 1.19, 7
5. General issues	2, 4, 9.1 topics a), b), c), d)
Annex 1	Information on WRC-23 agenda item 10 (WRC-27 preliminary agenda items)