

ITUEvents

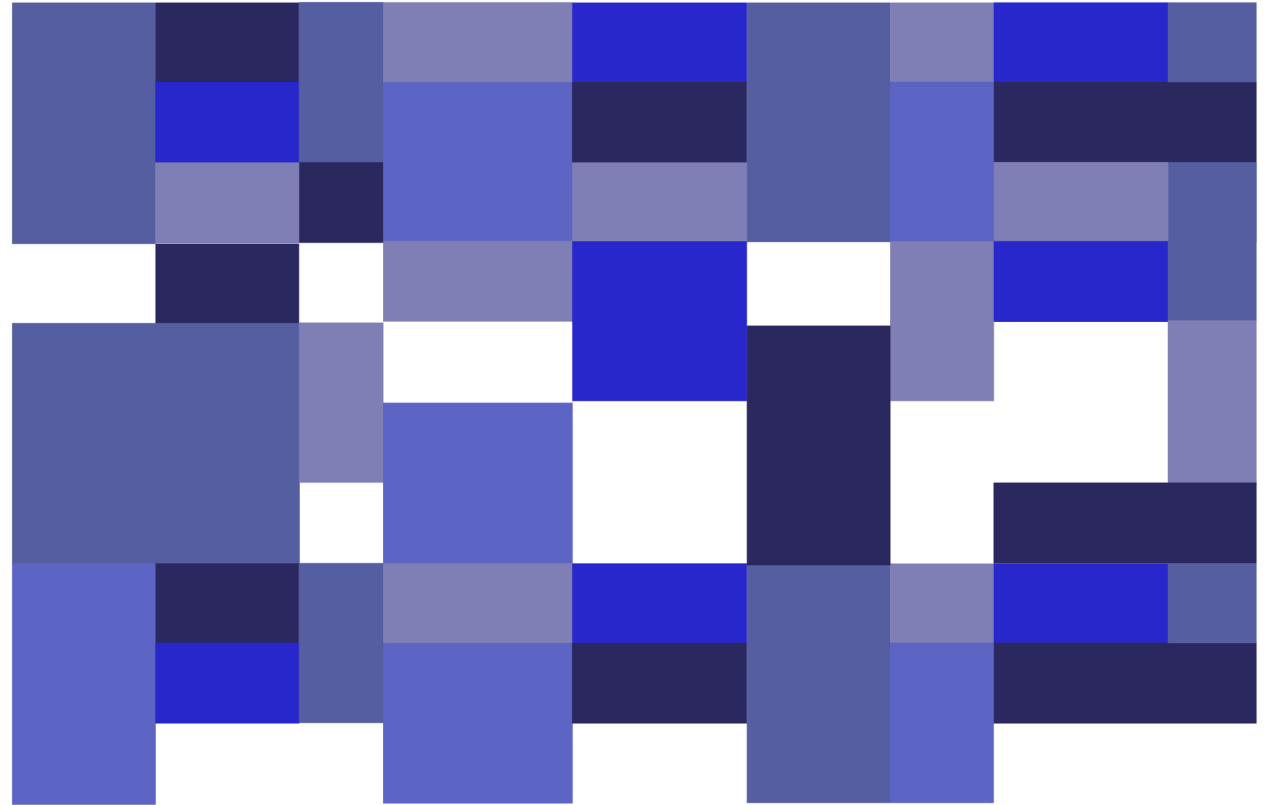
Workshop for Region 2 (RR)

National tables of frequency allocation (NTFA)

17-20 June 2024

Mexico City, Mexico

itu.int/go/ITU-R/NTFA-R2-WS-24



Organized by:



World Radiocommunication Conferences (WRC) Cycle

Joaquin RESTREPO
Capacity Building Coordinator
Study Groups Department, SGD
Radiocommunication Bureau, BR

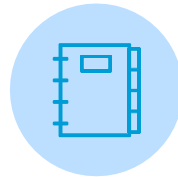
Purpose of WRCs

- Create regulatory certainty for a multi-trillion dollars activity that provides radiocommunications services to billions of people in all countries worldwide, playing an increasingly important role in the development of our societies
- Strike the right balance between the spectrum requirements of all radiocommunication services
- Creating certainty requires consensus in order to achieve stable results on a sustainable use of orbit/spectrum resources
- Reaching consensus requires time, efforts and patience
- This is the price to pay for developing and maintaining a sustainable ecosystem for radiocommunications and avoid massive disruptions

World Radiocommunication Conference (WRC)



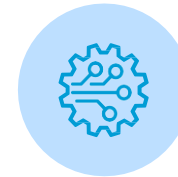
Held every
four years



Reviews and revises
the Radio Regulations



Addresses any
radiocommunicatio
n matter of
worldwide
implication



Considers evolution of
existing, emerging and
future applications,
systems and
technologies

Considers results of ITU-
R studies on spectrum
needs, sharing and
compatibility

Considers proposals
from ITU Member States

World Radiocommunication Conference (WRC)



Brings together all stakeholders to building consensus on the most profitable and efficient ways to exploit the limited resource of radio frequency spectrum and manage satellite orbits

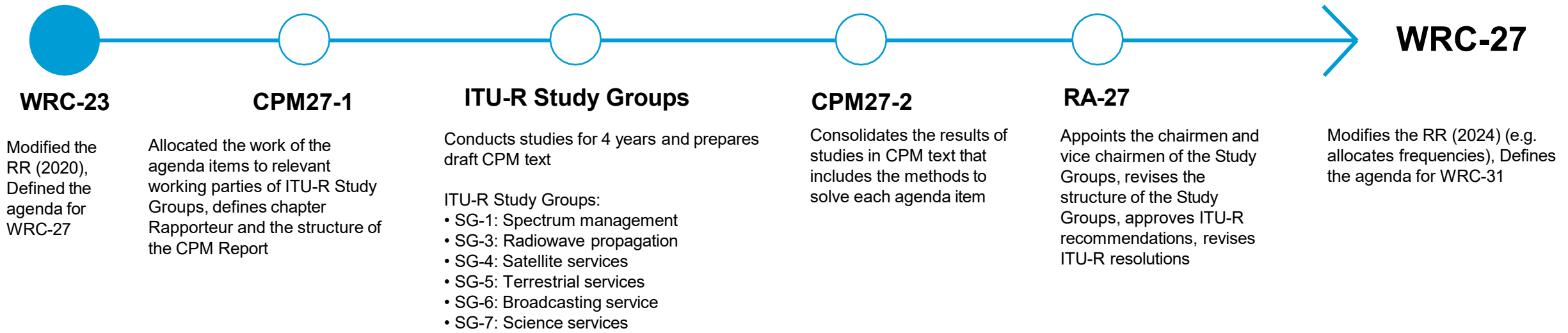


Protects operation of existing services and provides a stable and predictable regulatory environment needed for future investments



Determines the agenda for the next WRC and necessary studies to be carried out by ITU-R Study Groups

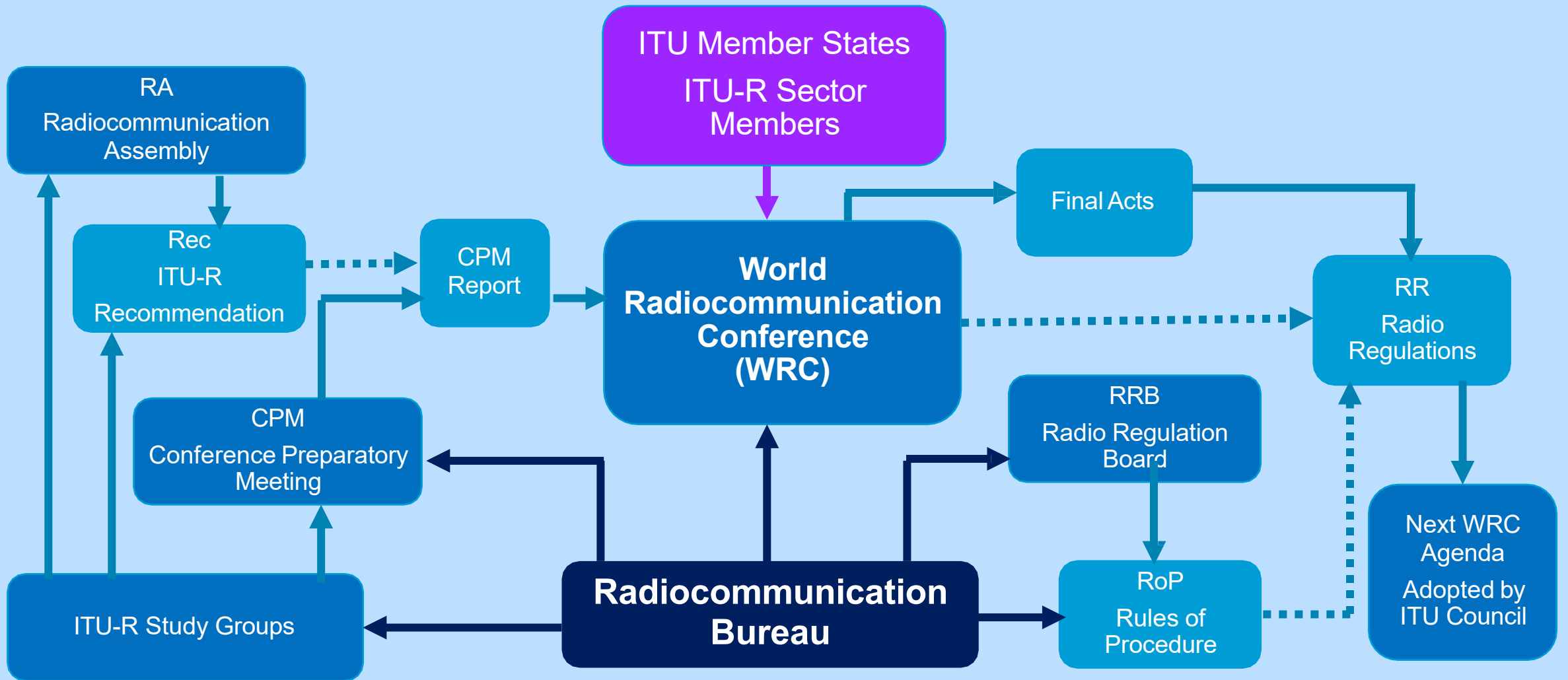
WRC Cycle



Regional Groups / Multi-countries
Consolidates Regional and multi-country proposals



WRC process



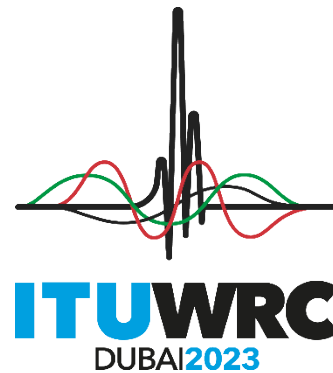
WRC-23 in numbers

3987
Delegates

163
Member
States

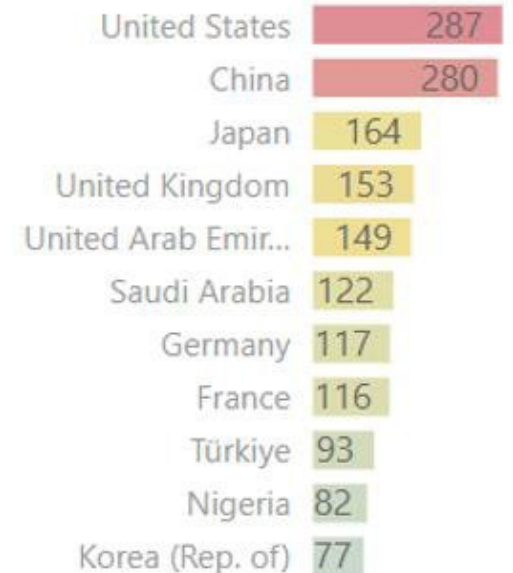
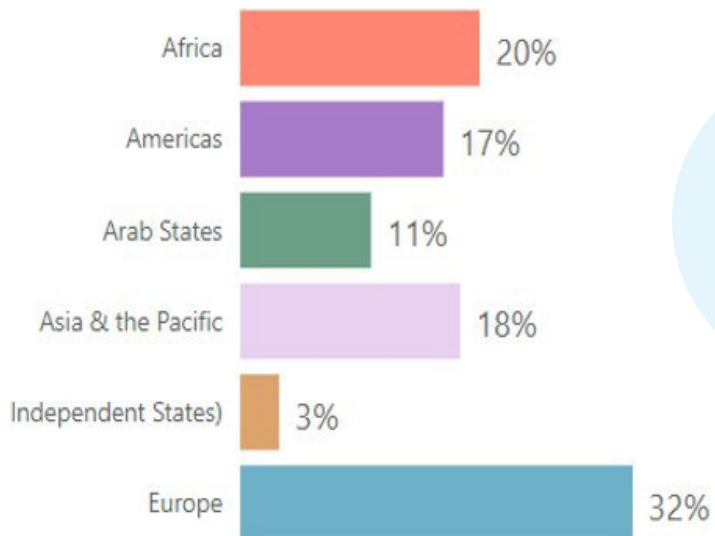
967
Docs.

4
weeks



151
observers

6024
proposals



World Radiocommunication Conference

Structure – Statutory Committees

Committee 1 (Steering Committee)	<p>Composed of the Chairman and Vice-Chairmen of the Conference and the Chairmen and Vice-Chairmen of the Committees. Committee 1 coordinates all matters connected with the smooth execution of the work of WRC, including planning the order and number of meetings, while avoiding overlap wherever possible in view of the limited number of members of some delegations. <i>(No. 67 of the General Rules)</i></p>
Committee 2 (Credentials Committee)	<p>Committee 2 verifies the credentials of delegations and reports on its conclusions to the Plenary Meeting within the time specified by the latter. <i>(No. 68 of the General Rules)</i></p>
Committee 3 (Budget Control Committee)	<p>Committee 3 determines the organization and the facilities available to the delegates, examines and approves the accounts for expenditure incurred throughout the duration of the Conference, reported on the estimated total expenditure, and submits an estimate of the financial implications <i>(No. 488 of the Convention)</i> that may be entailed by the execution of the decisions taken by the Conference. <i>(Nos. 71 to 74 of the General Rules)</i></p>
Committee 7 (Editorial Committee)	<p>The Editorial Committee perfects the form of the texts to be included in the Final Acts of the Conference for submission to the Plenary Meeting. <i>(Nos. 69 and 70 of the General Rules)</i>.</p>

World Radiocommunication Conference

Structure – Committees dealing with specified agenda items

Committee 4 (Specified agenda items)

Committee 4 dealt the following items on the WRC-23 agenda: (item 1.1); (item 1.8); (item 1.9) (item 1.9.1); (item 1.9.2); (item 1.10); (item 1.11); (item 1.12); (item 1.13); (item 1.14); (item 1.15); (item 1.16); (parts of item 3); (parts of item 5); (item 9); (parts of item 9.1); (parts of item 9.2).

Committee 5 (Specified agenda items)

Committee 5 dealt with the following items on the WRC-23 agenda: (item 1.2); (item 1.3); (item 1.4); (item 1.5); (item 1.6); (item 1.7); (parts of item 3); (parts of item 5); (item 7); (item 9); (parts of item 9.1), (parts of item 9.2); (item 9.3).

Committee 6 (Specified agenda items)

Committee 6 dealt with the following items on the WRC-23 agenda: (item 2); (parts of item 3); (item 4); (parts of item 5); (item 6); (item 8); (item 9); (parts of item 9.1) (parts of item 9.2); (item 10)

WRC-23 Main Outcomes

- IMT:

- Identified spectrum for International Mobile Telecommunications (IMT), crucial for expanding broadband connectivity and developing IMT mobile services (4G, 5G and future, 6G).
- That new spectrum includes the 3 300-3 400 megahertz (MHz), 3 600-3 800 MHz, 4 800-4 990 MHz and 6 425-7 125 MHz frequency bands in various countries and regions.

- HAPS:

- identified the 2 GHz and 2.6 GHz bands for using high-altitude platform stations as IMT base stations (HIBS) and established regulations for their operations. HAPS allow to provide mobile broadband with minimal infrastructure using the same frequencies and devices as IMT mobile networks. HIBS can contribute to bridging the digital divide in remote and rural areas and maintain connectivity during disasters.

• - Earth Stations in Motion (ESIMs): in Non-geostationary (NGSO) fixed-satellite service (FSS):

- Identified new frequencies to deliver high-speed broadband onboard aircraft, vessels, trains, and vehicles. These satellite services are also critical following disasters where local communication infrastructure is damaged or destroyed.
- Provisions were included to protect ship and aircraft mobile service stations located in international airspace and waters from other stations within national territories.

WRC-23 Main Outcomes

• - Global Maritime Distress and Safety System (GMDSS)

- Regulatory actions to support the modernization of the WRC-23 took including the implementation of e-navigation systems to enhance distress and safety communications at sea.
- Provisionally recognized the BeiDou Satellite Messaging Service System for GMDSS use, subject to successful completion of coordination with the existing networks and elimination of interference.
- Allocation of additional frequencies for passive Earth exploration satellite services to enable advanced ice cloud measurements for better weather forecasting and climate monitoring.

- Aeronautical mobile satellite services

- Allocation of new frequencies to the aviation industry for (117.975-137 MHz). The new service will enhance bi-directional communication via non-GSO satellite systems for pilots and air traffic controllers everywhere, especially over oceanic and remote areas.
- Allocation of the bands 15.41-15.7 GHz and 22-22.2 GHz in Region 1 and some Region 3 countries to the aeronautical mobile service for non-safety aeronautical applications. This will enable aircraft, helicopters, and drones to carry sophisticated aeronautical digital equipment for purposes such as surveillance, monitoring, mapping, and filming, and have the capacity to transfer large data from these applications using wideband radio links.

WRC-23 Main Outcomes

- inter-satellite links (ISL)

- Adoption of regulatory actions for the provision of ISL. This will allow data to be made available in near-real time, enhancing the availability and value of instrument data for low-latency applications such as weather forecasting and disaster risk reduction.

• - Time- Frequency

- Endorsement of the decision by the International Bureau of Weights and Measures (BIPM) to adopt Coordinated Universal Time (UTC) as the de facto time standard by 2035, with the possibility to extend the deadline to 2040 in cases where existing equipment cannot be replaced earlier.

• - Space weather observation

- Recognition of its importance through a new Resolution and a new Article in the Radio Regulations to recognize the operation of space weather sensors as part of the meteorological aid service to observe space weather phenomena including solar flares, solar radiation and geomagnetic storms which can interfere with radiocommunication services including satellites, mobile phone services and navigation systems.

• - Broadcasting-Satellite

- Approval of a recommendation by the Radio Regulations Board to allow 41 countries to acquire new and usable orbital resources for satellite broadcasting. The countries were unable to use their assigned orbital slots in recent years due to factors such as lack of coordination and interference from other satellite networks. The decision aims to enable countries to implement subregional satellite systems.



WRC-27 Agenda



FIXED-SATELLITE AND BROADCASTING-SATELLITE

MOBILE-SATELLITE

- 1.1 Aeronautical/maritime earth stations in motion
47.2-50.2 GHz / 50.4-51.4 GHz
- 1.2 13.75-14 GHz – FSS earth stations with smaller antennas
- 1.3 51.4-52.4 GHz – Gateway earth stations for NGSO FSS
- 1.4 17.3-17.7/8 GHz – FSS/BSS allocations in 17 GHz in Region 3
- 1.5 Unauthorized operations of NGSO earth stations
- 1.6 Equitable access to FSS in the bands
37.5-42.5 GHz / 42.5-43.5 GHz / 47.2-50.2 GHz / 50.4-51.4 GHz
- 7 Satellite regulatory issues

- Space-to-space links**
- 1 518-1 544 MHz / 1 545-1 559 MHz **1.11**
- 1 610-1 645.5 MHz / 1 646.5-1 660 MHz
- 1 670-1 675 MHz / 2 483.5-2 500 MHz

- MSS - IoT development**
- 1427-1432 MHz / 1645.5-1646.5 MHz 1880-1920 MHz / 2010-2025 MHz **1.12**

- MSS - IMT- direct connectivity** **1.13**

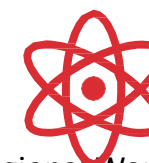
- MSS – additional allocation** **1.14**

- 1.7 4400-4800 MHz / 7125-8400 MHz / 14.8-15.35 – IMT
- 1.8 231.5-275 GHz / 275-700 GHz – Radiolocation
- 1.9 Aeronautical mobile (OR) high frequency modernization
- 1.10 71-76 GHz / 81-86 GHz – Power flux-density / power limits

- Lunar communications** **1.15**
- Radio Quiet Zones** **1.16**
- Space weather sensors** **1.17**
- ≥ 76 GHz – Earth exploration and radio astronomy** **1.18**
- Earth exploration-satellite service** **1.19**
4200 – 4400 MHz / 8400-8500 MHz

FIXED, MOBILE AND RADIOLOCATION

SCIENCE



WRC-27 standing agenda items

1. List of specific agenda items from 1.1 to 1.19
2. Incorporated by reference in the RR of revised ITU-R Recommendations
3. Consequential RR changes & amendments as decided by the WRC
4. Review of Resolutions and Recommendations of previous WRCs
5. Review of the Report from the Radiocommunication Assembly
6. Identify items requiring urgent action by ITU-R SGs for the next WRC

WRC-27 standing agenda items

7. Review RR procedures related to coordination, notification, registration of satellite network frequency assignments, to facilitate rational, efficient, and economical use of frequencies and associated orbits
8. Consider deletion of country names in footnotes of RR Article 5 TFA
9. Consider and approve the BR Director's Report on:
 1. ITU-R activities;
 2. Difficulties/Inconsistencies in RR;
 3. Resolution 80
10. Agenda of next WRC & preliminary agenda of subsequent WRC

Final remarks

- Decisions to modify the RR, the treaty governing the use of the frequency spectrum and satellite orbits, are taken at WRCs
- The RR provides a stable global framework that guarantees the long-term protection of investment in a multibillion-dollar industry

Thank you!

ITU – Radiocommunication Bureau

Questions to:

joaquin.restrepo@itu.int

brmail@itu.int