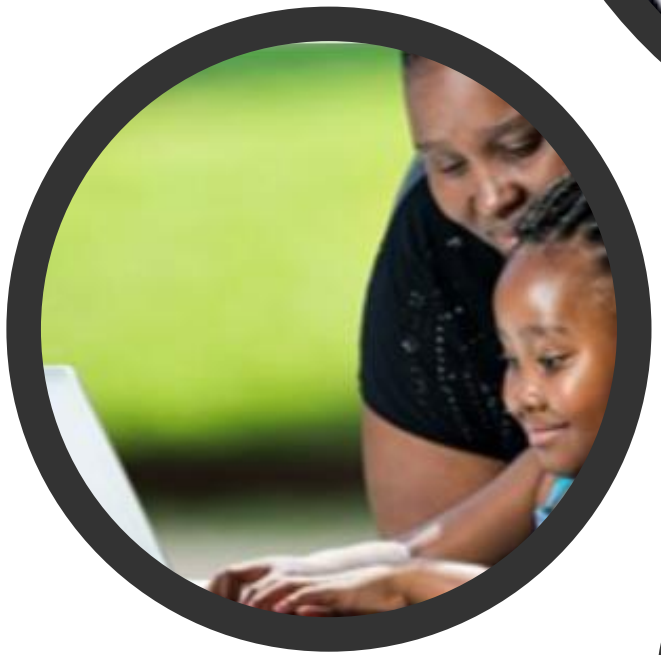
WRC-23 Results – Space related

- Mehtap Dufour
- BR, Space Services Department
- https://www.itu.int/ITU-R/go/space/en

WRC-23 Results – Space related

World Radiocommunication Conferences

- **The Radio Regulations ensure that the use of the radio-frequency spectrum is rational, equitable, efficient, and economical – all while aiming to prevent harmful interference between different radiocommunication services.**
- **The international treaty on radiocommunications dates back to 1906, when the International Radiotelegraph Convention was signed. In the 118 years since, the Radio Regulations have undergone 38 revisions and expanded to a four-volume agreement of more than 2,000 pages.**



ITUWRS GENEVA2024

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WRC-23

- **What are the key Outcomes of WRC-23?**

ITUWRC
GENEVA2024

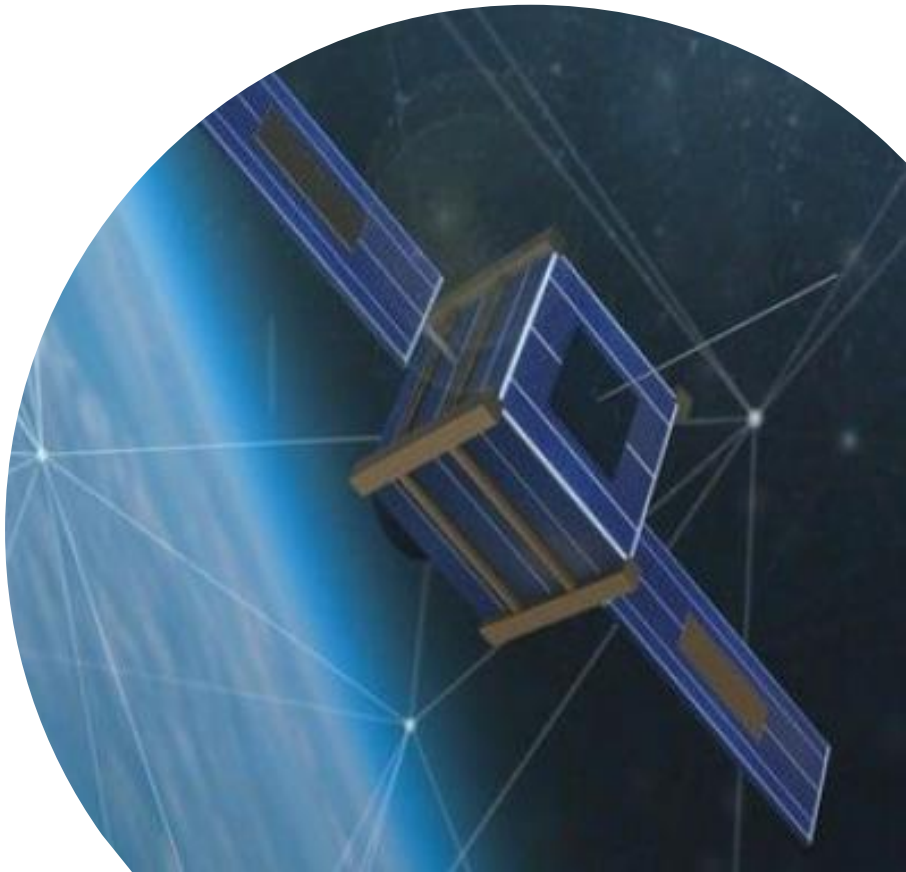
√RC-2023

Key Outcomes of WRC-23

- Earth Stations in Motion (ESIMS) to facilitate the regulatory harmonization for geostationary (GSO) and non-geostationary (non-GSO) fixed-satellite service (FSS) ESIMs to deliver high-speed broadband connectivity onboard aircraft and ship.
- Enhanced and modernized Global Maritime Distress and Safety System(GMDSS), latest e-navigation systems, provisionally use of Beidou Satellite Messaging Service System
- Additional frequencies for passive Earth exploration-satellite services EESS to enable advanced ice cloud measurements for better weather forecasting and climate monitoring
- New primary allocation FSS 17.3 – 17.7 GHz in Region 2
- 41 countries acquired new and usable orbital resources for satellite broadcasting
- Aeronautical Mobile-Satellite (R) (117.975-137 MHz) enhance bidirectional communication via non-GSO satellite systems for pilots and air traffic controllers everywhere, especially over oceanic and remote areas.
- Inter-satellite links to 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 reductions
- Space weather sensors

Key Outcomes of WRC-23

- New secondary allocation to Earth exploration-satellite (active) service for space borne radar sounders in the band of 40 – 50 MHz
- Protection of EESS (passive) in the frequency band 36-37 GHz from non-GSO FSS space stations
- Agenda Item 7:
  - Orbital characteristics of non-GSO space stations
  - Non-GSO bringing into use post-milestone procedure
  - GSO MSS 7/8 and 20/30 GHz protection from non-GSO systems
  - Appendix 1 to Annex of RR Appendix 30B
  - New Appendix parameters for Recommendation ITU-R S.1503 updates
  - Reminders for BIU and BBIU
  - Appendix 30B improved procedures for new Member States
  - Excluding uplink service area in RR Appendix 30A for Regions 1 and 3 and RR Appendix 30B
  - Resolution 770 revised to allow its implementation
  - Enhanced protection of RR Appendices 30/30A in Regions 1 and 3 and RR Appendix 30B
  - Special agreements under RR Appendix 30B
  - Modification to Resolution 76
  - Modification to Resolution 553 to remove certain restrictions that prevent administrations from taking effective advantage of the resolution



Key Outcomes of WRC-23

- **Additional measures for amateur service and amateur-satellite service allocations in the frequency band 1240-1300 MHz to ensure protection of the radionavigation-satellite service**
- **Report of the Director of Radiocommunication Bureau, in accordance with Article 7 of the ITU convention, on any difficulties or inconsistencies encountered in the application of the Radio Regulations**
- **Consideration and Approval of the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the ITU Convention, on action in response to Resolution 80**
- **43 new Resolutions, revised 56 existing and suppressed 33**

ITU-R Preparatory Studies for WRC-27

- In preparation for WRC-27, studies will be conducted within the study groups of the ITU Radiocommunication Sector

- https://www.itu.int/en/ITU-R/study-groups/rcpm/Pages/wrc-27-studies.aspx

Study Group 1 (SG 1)	**Spectrum management**
Study Group 3 (SG 3)	Radiowave propagation
Study Group 4 (SG 4)	Satellite services
Study Group 5 (SG 5)	Terrestrial services
Study Group 6 (SG 6)	Broadcasting service
Study Group 7 (SG 7)	Science services

Topics on the WRC-27 Agenda

WRC-23 agenda item 10

ITU-R WP 4A

- **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 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**

WRC-27 agenda

ITU-R WP 5B, WP 5C, WP 5D

- **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 7B, WP 7C, WP 7D

- 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**

Note: WRC-27 agenda item numbers indicated in italic

Thank You
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