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| **Telecommunication Development Advisory Group (TDAG)**  **31st Meeting, Geneva, Switzerland, 20-23 May 2024** | A close up of a sign  Description automatically generated |
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|  | **Document** **TDAG-2****4/11-E** |
|  | **17 April 2024** |
|  | **English only** |
| Director, Telecommunication Development Bureau | |
| Outcomes of RA-23/WRC-23 relevant to ITU-D | |
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| **Summary:**  The Radiocommunication Assembly 2023 (RA-23) took place in Dubai, United Arab Emirates from 13 to 17 November 2023. It was followed by the World Radiocommunication Conference 2023 (WRC-23) from 20 November to 15 December 2023 and the first session of the Conference Preparatory Meeting (CPM27-1) for the World Radiocommunication Conference 2027 (WRC-27) from 18 to 19 December 2023.  This document summarizes the key outcomes of these meetings while highlighting decisions that are relevant to the work of the Development Sector.  **Action required:**  TDAGis invited to note this report and provide guidance as deemed appropriate.  **References:**   1. RA-23: <https://www.itu.int/ra-23/> 2. WRC-23: <https://www.itu.int/wrc-23/> 3. CPM-27-1:<https://www.itu.int/en/ITU-R/study-groups/rcpm/Pages/cpm-27.aspx> 4. [WRC-23 Final Acts](https://www.itu.int/hub/publication/r-act-wrc-16-2024) | |

# Background

RA-23 took place in Dubai, United Arab Emirates from 13 to 17 November 2023. Over 1,300 delegates from 128 ITU Member States attended the Assembly. Ms Carol Wilson from Australia served as the first ever woman to chair an ITU Radiocommunication Assembly.

WRC-23 took place from 20 November to 15 December 2023 at the same venue as RA-23. Over 3,900 delegates from 163 Member States attended WRC-23, including 88 ministerial-level participants. Women made up 22 per cent of all WRC-23 delegates, an increase from 18 per cent at WRC-19 in 2019. Mr Mohammed AL RAMSI from United Arab Emirates served as the chair of WRC-23

CPM27‑1 was held in Dubai on 18-19 December 2023. It organized the preparatory studies for WRC‑27 and proposed a structure for its Report to WRC‑27 and nominated seven CPM-27 Chapter Rapporteurs and co-Rapporteurs who will assist the CPM-27 Chair in managing the development of the draft Report to WRC‑27.

RA-23, WRC-23 and CPM27-1 were hosted by the Telecommunications and Digital Government Regulatory Authority (TDRA) of the UAE.

# Radiocommunication Assembly 2023 (RA-23)

RA-23, chaired by Ms Carol Wilson, set the future work programmes for the ITU Radiocommunication Sector and approved radiocommunication standards (ITU-R Recommendations) and resolutions. The work of RA-23 was organized by following committees:

* COM 1 – Steering Committee
* COM 2 – Budget control
* COM 3 – Editorial Committee
* COM 4 – Structure and work programme of the Study Groups
* COM 5 – Working methods of the RA and SGs

Key discussions during the RA-23 included:

* Agreement on "IMT-2030" as the technical reference for the 6th generation of mobile systems;
* In accordance with Resolution 219 (Bucharest, 2022), adoption of a new resolution on space sustainability to facilitate the long-term sustainable use of radio-frequency spectrum and associated satellite orbit resources used by space services;
* Revision of ITU-R Resolution 65, paving the way for studies on the compatibility of current regulations with potential 6th generation mobile system radio interface technologies for 2030 and beyond;
* The adoption of the gender resolution as called for by the 2019 World Radiocommunication Conference's “Declaration on Promoting Gender Equality, Equity and Parity in the ITU Radiocommunication Sector";
* Adoption of the new Recommendation ITU-R M. 2160 on the "IMT-2030 Framework," setting the basis for the development of IMT-2030. The next phase will be the definition of relevant requirements and evaluation criteria for potential radio interface technologies (RIT);
* Adoption of a new resolution on the use of IMT technologies for fixed wireless broadband;
* conclusion of a new ITU-R Recommendation on the protection of the radio navigation-satellite service and amateur satellite services;
* Revision of Resolution ITU-R 5-8 which established the work programme and questions for the Radiocommunication Study Groups for 2024-2027. New chairs for the ITU-R Study Groups were also appointed.

The list of ITU-R Resolutions (RA-23) is available at the RA-23 webpage (TIES restricted). A summary of ITU-R Resolutions (RA-23) and their relevance to ITU-D work is available in Annex 1.

# World Radiocommunication Conference 2023 (WRC-23)

WRC-23 negotiations were led by conference Chair, H.E. Eng. Mohammed Al Ramsi from the United Arab Emirates with assistance from six committee chairs. Details of these are as follows.

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| Chair of the Conference: | Mr Mohammed AL RAMSI (UAE) |
| Committee 2: (Credentials) | Chair: Ms Basebi Mosinyi (Botswana) |
| Committee 3: (Budget) | Chair: Ms Cindy Cook (Canada) |
| Committee 4: (Specified agenda items) | Chair: Dr Hiroyuki Atarashi (Japan) |
| Committee 5: (Specified agenda items) | Chair: Ms Anna Marklund (Sweden) |
| Committee 6:(Specified agenda items) | Chair: Mr El Hadjar Abdouramane (Cameroon) |
| Committee 7: (Editorial) | Chair: Mr Christian Rissone (France) |

WRC-23 revised the Radio Regulations (RR), the international treaty governing the use of the radio-frequency spectrum and the geostationary-satellite and non-geostationary-satellite orbits. As per the agenda of the conference, WRC-23 addressed radiocommunication matters of worldwide character for the efficient use of spectrum and orbital resources and also determined Questions for study by the Radiocommunication Assembly and its Study Groups in preparation for future Radiocommunication Conferences.

[WRC-23 Final Acts](https://www.itu.int/hub/publication/r-act-wrc-16-2024) have been published in 6 UN Languages (free of charge). Major WRC-23 outcomes include the following:

**Broadband connectivity** New IMT spectrum identifications include 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.

**Rural and disaster connectivity**

* WRC-23 allocated spectrum in 2 GHz and 2.6 GHz bands for using high-altitude platform stations as IMT base stations (HIBS) and established regulations for their operations.
* Non-geostationary fixed-satellite service Earth Stations in Motion (ESIMs): the Conference 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.

**Maritime and Aeronautical sector**

* Provisions were included in RR to protect ship and aircraft mobile service stations located in international airspace and waters from other stations within national territories.
* Modernization of the Global Maritime Distress and Safety System (GMDSS) was supported through agreed regulatory actions including the implementation of e-navigation systems to enhance distress and safety communications at sea.
* The conference 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.

**Climate change and weather observation**

* Allocation of additional frequencies for passive Earth exploration satellite services to enable advanced ice cloud measurements for better weather forecasting and climate monitoring.
* Recognition of the importance of space weather observation in 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.

**Aviation and airborne communication enhancement**

* Allocation of new frequencies to the aviation industry for aeronautical mobile satellite services (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 Radio Regulations 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.

**Inter-satellite links**: Adoption of regulatory actions for the provision of inter-satellite links. 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.

**Coordinated Universal Time:** 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.

**Improvement of Broadcasting satellite service conditions for selected countries**: 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.

**Key study topics for future WRCs**

Under A.I 10 of the WRC-23, the conference also approved the agenda items for the next World Radiocommunication Conference (WRC-27) and the provisional agenda for WRC-31. To prepare for future WRCs, several resolutions were agreed that mandate the ITU Radiocommunication Sector Study Groups to undertake studies on specified topics that include:

* Possible new or modified space research service (space-to-space) allocations for future development of communications on the lunar surface, and between lunar orbit and the lunar surface.
* The development of regulatory measures to limit the unauthorized operations of non-geostationary-satellite orbit (non-GSO) earth stations in the fixed-satellite service (FSS) and mobile-satellite service (MSS).
* Technical and regulatory measures for fixed satellite systems (FSS) while taking into account the specific needs of developing countries including the need for equitable access to the relevant frequency bands.
* Technical and regulatory provisions necessary to protect radio astronomy operating in specific Radio Quiet Zones from radio-frequency interference caused by systems in the non-geostationary-satellite orbit.
* Possible new allocations to the mobile-satellite service for direct connectivity between space stations and mobile user equipment to complement terrestrial mobile network coverage.
* Spectrum needs and appropriate protection criteria for space weather sensors.
* Potential new frequency allocations and regulatory actions for future development of low-data-rate non-geostationary mobile-satellite systems (small satellites).
* Identification of measures to facilitate the operation of earth stations on board unmanned aircraft, including identification of suitable frequency bands to decide on the appropriate course of action to be taken in 2031 (WRC-31).

In summary, WRC-23 approved 43 new resolutions, revised 56 existing ones, and suppressed resolutions. Table in Annex 2 summarizes important resolutions of WRC-23 relevant to work of BDT and/or ITU-D.

# Conference Preparatory Meeting (CPM27-1) for the World Radiocommunication Conference 2027 (WRC-27)

The first meeting of the [Conference Preparatory Meeting for WRC-27 (CPM-27-1)](https://www.itu.int/en/ITU-R/study-groups/rcpm/Pages/cpm-23.aspx) discussed the Draft structure/table of contents of the CPM report to WRC-27 and a preliminary draft allocation of ITU-R preparatory work for WRC 27 and WRC-31. The details are available at <https://www.itu.int/md/R23-CPM27.1-C-0005/en> (TIES restricted).

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