

# Preparations for WRC-19 and future agenda items for WRC-23

*Presented by :*

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**ITSO/ITU Workshop on Satellite Communications**

**AFRALTI, Nairobi-KENYA, 8-12 August 2016**

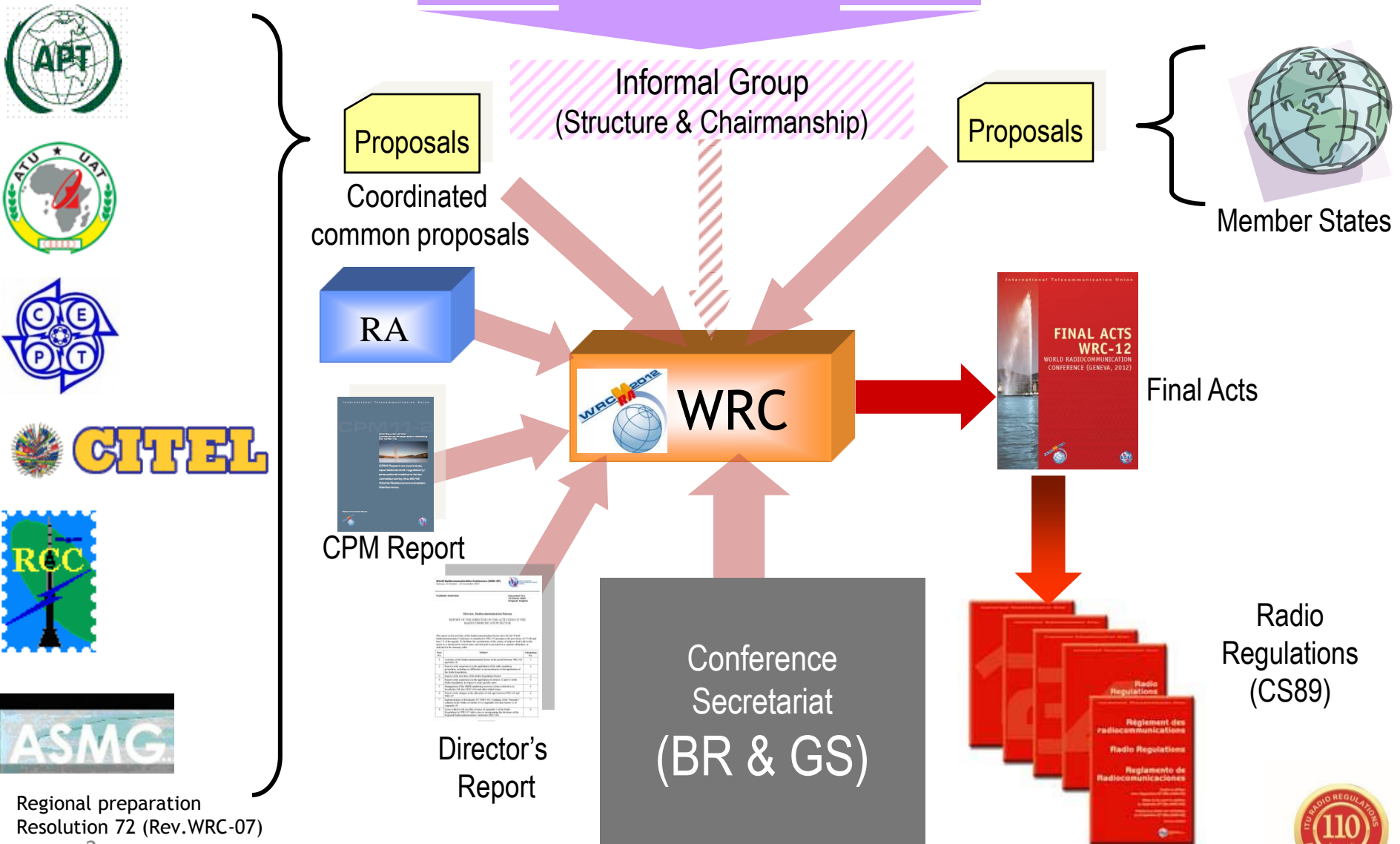
# WRC-19 Preparation

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- Part II** – ITU preparations for WRC-19
- Part III** – Regional preparations for WRC-19
- Part IV** – Agenda Items for WRC-19
- Part V** – WRC-23 preliminary Agenda

# The WRC Process

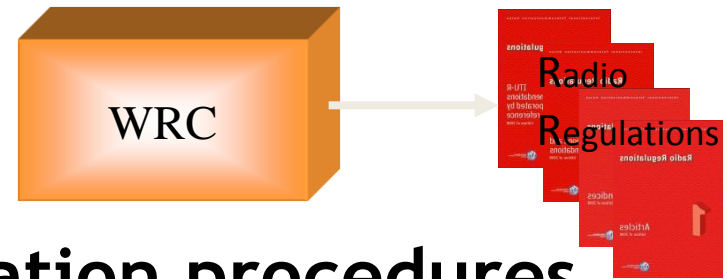
Agenda: in WRC Res, finalized in Council Res



# WRC Purposes

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

- Spectrum Allocation
- Coordination and Notification procedures
- Administrative and operational procedures



## ✓ Adopts Resolutions

## ✓ Held every 4 years (CS 90)

# Main Steps towards WRC-19

WRC-15: WRC-19 Agenda > **Res809[COM6/16]**

**1<sup>st</sup> Session Conference Preparatory Meeting CPM19-1**  
held on 30.11.15 to 01.12.15; Results in **CA/226** of 23.12.15

Council-16 in May **will confirm** WRC-19 Agenda, Date & Venue  
Subsequently will be approved by ITU Member States (CV 42/CV 47)

**2<sup>nd</sup> Session Conference Preparatory Meeting CPM19-2**  
6~9 months before WRC-19, **Report of the CPM to WRC-19**

**Final meetings of regional groups**

**RA-19: before WRC-19**



# WRC-19 Preparation Stages (1/3)

1. 1<sup>st</sup> Session of the CPM-19 (CPM19-1):  
(Organised in accordance with Res. ITU-R 2-6)
  - ✓ Define framework of the preparatory studies and structure of draft CPM Report (Chapter Rapporteurs)
  - ✓ Identify ITU-R Responsible & Concerned Groups for each WRC-19 Agenda Item
    - ⇒ week after WRC-15 (30 november-1 December 2015)
2. Study of the WRC-19 agenda items at: ||  
**Meetings of ITU-R responsible & concerned groups (WPs/JTG)**
  - ⇒ Carry out the necessary technical/regulatory studies
    - Development of new or revised ITU-R Rec. & Report(s)
  - ⇒ Development of draft CPM texts
    - Propose method(s) of satisfying WRC-19 Agenda Items
    - Prepare preliminary draft examples of regulatory texts
  - ⇒ Submission of texts to the CPM Rapporteurs
    - about 14 months before WRC-19

# WRC-19 Preparation Stages (2/3)

## 3. CPM Management Team meeting

(Organised in accordance with Res. ITU-R 2-6)

(CPM Steering Committee and

Chairmen of Study Groups and Responsible Groups)

Geneva, **about 13 months before WRC-19**

⇒ prepare the draft CPM Report to WRC-19

⇒ review regulatory/procedural parts of the draft CPM Report

⇒ prepare a report to the CPM19-2 based on:

- Extracts from the draft CPM Report

- Contributions from ITU-R membership

# WRC-19 Preparation Stages (3/3)

## 4. 2<sup>nd</sup> Conference Preparatory Meeting (CPM19-2) (Organised in accordance with Res. ITU-R 2-6)

⇒ Geneva, 6~8 months before WRC-19

⇒ prepare consolidated CPM Report to WRC-19, using:  
- the draft CPM Report  
- Contributions from ITU-R membership

⇒ Consider the preliminary BR Dir. Report to WRC-19

## 5. RADIOCOMMUNICATION ASSEMBLY 2019 (RA-19): 1 week before WRC-19

## 6. WORLD RADIOCOMMUNICATION CONFERENCE 2019 (WRC-19) Geneva, 2019



# WRC Regional Preparation

[www.itu.int/go/wrc-15-regional](http://www.itu.int/go/wrc-15-regional)

## Regional preparation for WRC-15

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SHARE    



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)

Resolution 72 (Rev. WRC-07)

### ASIA-PACIFIC TELECOMMUNITY (APT)

### AFRICAN TELECOMMUNICATIONS UNION (ATU)

### INTER-AMERICAN TELECOMMUNICATION COMMISSION (CITEL)



CITEL

- ▶ <http://www.citel.oas.org/en/Pages/PCCII>
- ▶ Chairman of the Working Group for the Preparation of CITEL for Regional and World Radiocommunication Conferences:  
Mr. Héctor Budé, Uruguay, [hbude@ursec.gub.uy](mailto:hbude@ursec.gub.uy)

### ARAB SPECTRUM MANAGEMENT GROUP (ASMG)

### EUROPEAN CONFERENCE OF POSTAL AND TELECOMMUNICATIONS ADMINISTRATIONS (CEPT)

### REGIONAL COMMONWEALTH IN THE FIELD OF COMMUNICATIONS (RCC)

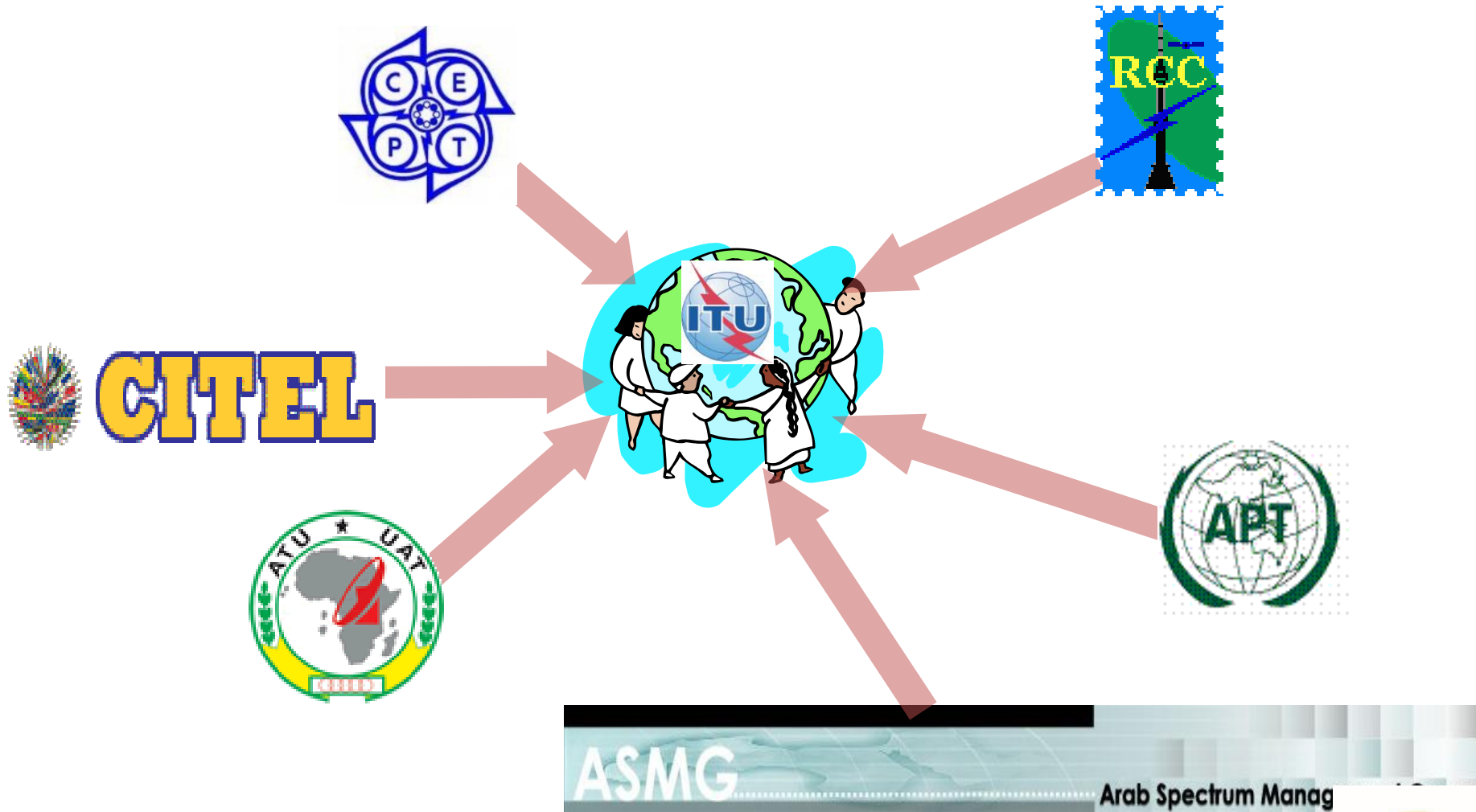


- ▶ <http://www.en.rcc.org.ru>
- ▶ Chairman, RCC WG (WRC-15/RA-15):  
Mr. Albert Nalbandian, Armenia,  
[albert.nalbandian@ties.itu.int](mailto:albert.nalbandian@ties.itu.int)
- ▶ Preparations for WRC-15 and RA-15



# Main regional groups

✓ Six main regional groups:



✓ For the preparation of common and coordinated proposals

# Information also provided at:

- ✓ **Meetings of regional groups & sub-groups**  
(APT/APG, AMSG, ATU, CEPT/ECC/CPG, CITELE/PCC.II-WG, RCC/COMs-WG)
- ✓ **BR World and Regional Seminars**
  - ⇒ Provide progress status reports, informing about the development of ITU-R studies on all WRC-19 Agenda items



# Agenda Items for WRC-19

- 1.1 to consider an allocation of the frequency band 50-54 MHz to the amateur service in Region 1, in accordance with Resolution 658 [COM6/6] (WRC-15);
- 1.2 to consider in-band power limits for earth stations operating in the mobile-satellite service, meteorological-satellite service and Earth exploration-satellite service in the frequency bands 401-403 MHz and 399.9-400.05 MHz, in accordance with Resolution 765 [COM6/7] (WRC-15);
- 1.3 to consider possible upgrading of the secondary allocation to the meteorological-satellite service (space-to-Earth) to primary status and a possible primary allocation to the Earth exploration-satellite service (space-to-Earth) in the frequency band 460-470 MHz, in accordance with Resolution 766 [COM6/8] (WRC-15);
- 1.4 to consider the results of studies in accordance with Resolution 557 [COM6/9] (WRC-15), and review, and revise if necessary, the limitations mentioned in Annex 7 to Appendix 30 (Rev.WRC-12), while ensuring the protection of, and without imposing additional constraints on, assignments in the Plan and the List and the future development of the broadcasting-satellite service within the Plan, and existing and planned fixed-satellite service networks;



# Agenda Items for WRC-19

- 1.5 to consider the use of the frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space) by earth stations in motion communicating with geostationary space stations in the fixed-satellite service and take appropriate action, in accordance with Resolution 158 [COM6/17] (WRC-15);
- 1.6 to consider the development of a regulatory framework for non-GSO FSS satellite systems that may operate in the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space), in accordance with Resolution 159 [COM6/18] (WRC-15);
- 1.7 to study the spectrum needs for telemetry, tracking and command in the space operation service for non-GSO satellites with short duration missions, to assess the suitability of existing allocations to the space operation service and, if necessary, to consider new allocations, in accordance with Resolution 659 [COM6/19] (WRC-15);
- 1.8 to consider possible regulatory actions to support Global Maritime Distress Safety Systems (GMDSS) modernization and to support the introduction of additional satellite systems into the GMDSS, in accordance with Resolution 359 (Rev.WRC-15);



# Agenda Items for WRC-19

1.9.1 regulatory actions within the frequency band 156-162.05 MHz for autonomous maritime radio devices to protect the GMDSS and automatic identifications system (AIS), in accordance with Resolution 362 [COM6/10] (WRC-15);

1.9.2 modifications of the Radio Regulations, including new spectrum allocations to the maritime mobile-satellite service (Earth-to-space and space-to-Earth), preferably within the frequency bands 156.0125-157.4375 MHz and 160.6125-162.0375 MHz of Appendix 18, to enable a new VHF data exchange system (VDES) satellite component, while ensuring that this component will not degrade the current terrestrial VDES components, applications specific messages (ASM) and AIS operations and not impose any additional constraints on existing services in these and adjacent frequency bands as stated in *recognizing d) and e)* of Resolution 360 (Rev.WRC-15);

1.10 to consider spectrum needs and regulatory provisions for the introduction and use of the Global Aeronautical Distress and Safety System (GADSS), in accordance with Resolution 426 [COM6/11] (WRC-15);

1.11 to take necessary actions, as appropriate, to facilitate global or regional harmonized frequency bands to support railway radiocommunication systems between train and trackside within existing mobile service allocations, in accordance with Resolution 236 [COM6/12] (WRC-15);



# Agenda Items for WRC-19

- 1.12 to consider possible global or regional harmonized frequency bands, to the maximum extent possible, for the implementation of evolving Intelligent Transport Systems (ITS) under existing mobile-service allocations, in accordance with Resolution 237 [COM6/13] (WRC-15);
- 1.13 to consider identification of frequency bands for the future development of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution 238 [COM6/20] (WRC-15);
- 1.14 to consider, on the basis of ITU-R studies in accordance with Resolution 160 [COM6/21] (WRC-15), appropriate regulatory actions for high-altitude platform stations (HAPS), within existing fixed-service allocations;
- 1.15 to consider identification of frequency bands for use by administrations for the land-mobile and fixed services applications operating in the frequency range 275-450 GHz, in accordance with Resolution 767 [COM6/14] (WRC-15);
- 1.16 to consider issues related to wireless access systems, including radio local area networks (WAS/RLAN), in the frequency bands between 5 150 MHz and 5 925 MHz, and take the appropriate regulatory actions, including additional spectrum allocations to the mobile service, in accordance with Resolution 239 [COM6/22] (WRC-15);



# Agenda Items for WRC-19

- 2 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution 28 (Rev.WRC-15), and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in Annex 1 to Resolution 27 (Rev.WRC-12);
- 3 to consider such consequential changes and amendments to the Radio Regulations as may be necessitated by the decisions of the conference;
- 4 in accordance with Resolution 95 (Rev.WRC-07), to review the resolutions and recommendations of previous conferences with a view to their possible revision, replacement or abrogation;
- 5 to review, and take appropriate action on, the Report from the Radiocommunication Assembly submitted in accordance with Nos. 135 and 136 of the Convention;
- 6 to identify those items requiring urgent action by the radiocommunication study groups in preparation for the next world radiocommunication conference;





# Agenda Items for WRC-19

- 7 to consider possible changes, and other options, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, an advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution 86 (Rev.WRC-07), in order to facilitate rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;
- 8 to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution 26 (Rev.WRC-07);
- 9 to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention:
- 10 to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7 of the Convention,



# Chapters of CPM-19-1 REPORT

## CHAPTER 1

Agenda items:

Rapporteur:

### Land mobile and fixed services

1.11, 1.12, 1.14, 1.15

Ms Keer ZHU (China (People's Republic of))

## CHAPTER 2

Agenda items:

Rapporteur:

### Broadband applications in the mobile service

1.13, 1.16, 9.1 (issues 9.1.1, 9.1.5, 9.1.8)

Mr José ARIAS (Mexico)

## CHAPTER 3

Agenda items:

### Satellite services

1.4, 1.5, 1.6, 7, 9.1 (issues 9.1.2, 9.1.3, 9.1.9)

Mr Nicolay VARLAMOV (Russian Federation)

## CHAPTER 4

Agenda items:

Rapporteur:

### Science services

1.2, 1.3, 1.7

Mr Vicent MEENS (France)

## CHAPTER 5

Agenda items:

Rapporteur:

### Maritime, aeronautical and amateur services

1.1, 1.8, 1.9, 1.10, 9.1 (issue 9.1.4)

Mr Wael EL SAYED (Egypt (Arab Republic of))

## CHAPTER 6

Agenda items:

Rapporteur:

### General issues

2, 4, 9.1 (issues 9.1.6, 9.1.7), 10

Mr Peter N. NGIGE (Kenya (Republic of))



# WRC-23 preliminary Agenda items

## RESOLUTION 810 [COM6/2] (WRC-15)

-to consider possible spectrum needs and regulatory actions to support Global Maritime Distress and Safety System (GMDSS) modernization and the implementation of e-navigation, in accordance with Resolution 361 [COM6/3] (WRC-15);

-to conduct, and complete in time for WRC-23, studies for a possible new allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz, taking into account the protection of incumbent services, in accordance with Resolution 656 [COM6/4] (WRC-15);

-in accordance with Resolution 657 [COM6/5] (WRC-15), to review the results of studies relating to the technical and operational characteristics, spectrum requirements and appropriate radio service designations for space weather sensors, with a view to providing appropriate recognition and protection in the Radio Regulations without placing additional constraints on incumbent services;

-study of spectrum needs and possible new allocations to the fixed-satellite service in the frequency band 37.5-39.5 GHz (Earth-to-space), in accordance with Resolution 161 [COM6/23] (WRC-15);

-to review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470-694 MHz in Region 1 on the basis of the review in accordance with Resolution 235 [COM4/6] (WRC-15);



# Questions ?



# List of radio service abbreviations (1)

<b>Abbreviations</b>	<b>Radio services</b>	<b>RR definition</b>
AMS	aeronautical mobile service	No. <b>1.32</b>
AM(R)S	aeronautical mobile (route) service	No. <b>1.33</b>
AMSS	aeronautical mobile-satellite service	No. <b>1.35</b>
AMS(R)S	aeronautical mobile-satellite (route) service	No. <b>1.36</b>
ARNS	aeronautical radionavigation service	No. <b>1.46</b>
ARNSS	aeronautical radionavigation-satellite service	No. <b>1.47</b>
ARS	amateur service	No. <b>1.56</b>
ARSS	amateur-satellite service	No. <b>1.57</b>
BS	broadcasting service	No. <b>1.38</b>
BSS	broadcasting-satellite service	No. <b>1.39</b>
EESS	Earth exploration-satellite service	No. <b>1.51</b>
FS	fixed service	No. <b>1.20</b>
FSS	fixed-satellite service	No. <b>1.21</b>
ISS	inter-satellite service	No. <b>1.22</b>
LMS	land mobile service	No. <b>1.26</b>
LMSS	land mobile-satellite service	No. <b>1.27</b>
MetAids	meteorological aids service	No. <b>1.50</b>
MetSat	meteorological-satellite service	No. <b>1.52</b>

# List of radio service abbreviations (2)

<b>Abbreviations</b>	<b>Radio services</b>	<b>RR definition</b>
MMS	maritime mobile service	No. <b>1.28</b>
MMSS	maritime mobile-satellite service	No. <b>1.29</b>
MRNS	maritime radionavigation service	No. <b>1.44</b>
MRNSS	maritime radionavigation-satellite service	No. <b>1.45</b>
MS	mobile service	No. <b>1.24</b>
MSS	mobile-satellite service	No. <b>1.25</b>
RAS	radio astronomy service	No. <b>1.58</b>
RDS	radiodetermination service	No. <b>1.40</b>
RDSS	radiodetermination-satellite service	No. <b>1.41</b>
RLS	radiolocation service	No. <b>1.48</b>
RLSS	radiolocation-satellite service	No. <b>1.49</b>
RNS	radionavigation service	No. <b>1.42</b>
RNSS	radionavigation-satellite service	No. <b>1.43</b>
SOS	space operation service	No. <b>1.23</b>
SFTSS	standard frequency and time signal service	No. <b>1.53</b>
SFTSSS	standard frequency and time signal-satellite service	No. <b>1.53</b>
SRS	space research service	No. <b>1.55</b>