# WRC-23 Road Map
# On Space Issues

**Akim FALOU DINE**
akim.faloudine@itu.int
BR Space Service Department

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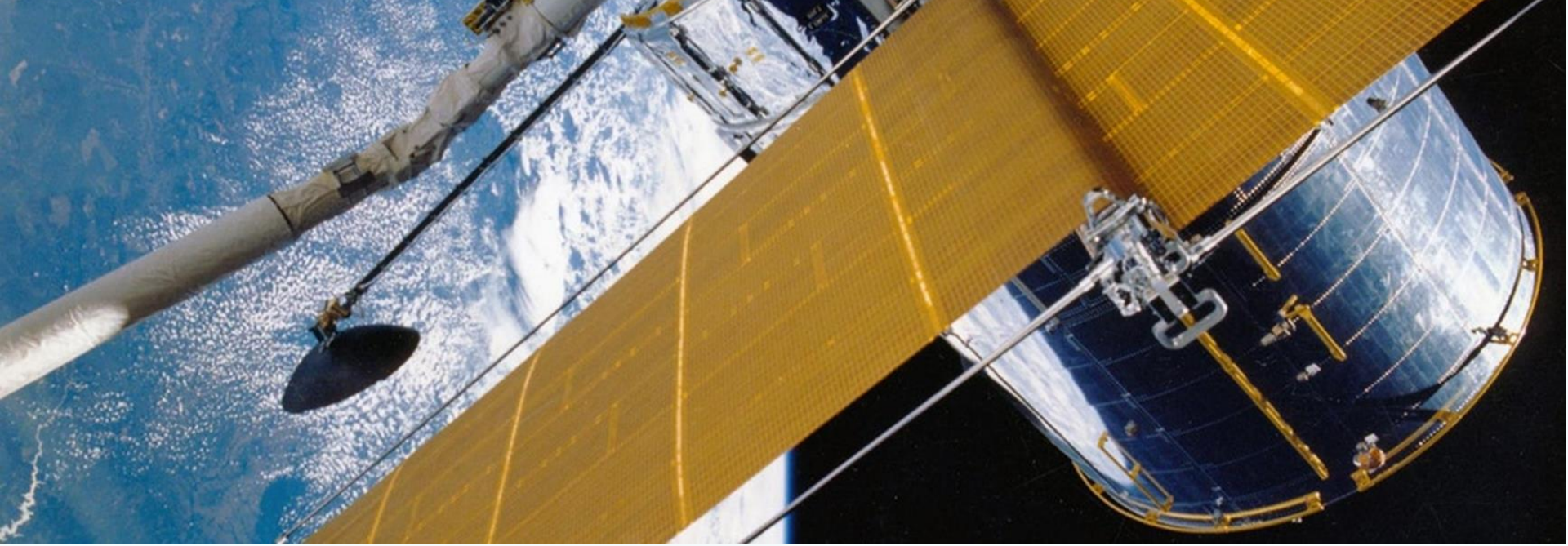

# WRC-23 Space Science Issues

Agenda Items 1.12 and 1.13

**1.12**
Consider new secondary allocation to the EESS (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz
> Res. 656 (Rev.WRC-19)

**1.13**
Consider to upgrade to primary allocation of the frequency band 14.8-15.35 GHz to the space research service
> Res. 661 (WRC-19)

# Agenda Item 1.12

## Agenda Item 1.12

Consider new secondary allocation to the EESS (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz > Res. 656 (Rev.WRC-19)

A secondary allocation to the EESS (active) for spaceborne radar sounders in the frequency range 40-50 MHz will enable the collection of scientific data from space-based ground-penetrating radar (GPR) type missions.

This agenda item seeks a new secondary allocation to the Earth exploration-satellite service (EESS) (active) for spaceborne radar sounders within a range of frequencies around 45 MHz while taking into account the protection of incumbent services including those in adjacent bands

## Agenda Item 1.12

Consider new secondary allocation to the EESS (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz > Res. 656 (Rev.WRC-19)

**Five methods are proposed: The five methods propose the suppression of Resolution 656 (WRC-19).**

**D**) **NOC :** *sharing and compatibility studies have not fully demonstrated incumbent services could be protected*

**A1**) proposes to establish a new global secondary allocation to the EESS (active) in the frequency band **40-50 MHz**. It also proposes a **new footnote** in the Table of Frequency Allocations of RR Article **5** that **references a proposed new WRC Resolution** to protect incumbent in-band and adjacent-band services.

**A2**) proposes to establish a new global secondary allocation to the EESS for active emissions. This new secondary allocation is proposed to be limited, through a **dedicated footnote (such as pfd limits to address the protection of incumbent services)** to the operation of spaceborne radar sounder systems, over the frequency band 40-50 MHz, in the Table of Frequency Allocations of RR Article **5**.

**B**) proposes to establish a new global secondary allocation to the EESS for active emissions. This new secondary allocation is proposed to be limited, through a **dedicated footnote (to address the protection of the secondary radiolocation service in the frequency bands 42-42.5 MHz and 46-68 MHz)** to the operation of spaceborne radar sounder systems, over the frequency band 40-50 MHz, in the Table of Frequency Allocations of RR Article **5**.

**C**) This method proposes to establish a new global secondary allocation to the EESS for active emissions over the frequency band 40-50 MHz in the Table of Frequency Allocations of RR Article **5**. *The majority was not in favour of this Method C since it does not take into account the protection of incumbent services*

# Agenda Item 1.13

## Agenda Item 1.13

Consider to upgrade to primary allocation of the frequency band 14.8-15.35 GHz to the space research service
> Res. 661 (WRC-19)

The frequency band 14.8-15.35 GHz is currently allocated on a primary basis to the FS and the MS, and on a secondary basis to the SRS. Within the SRS, the frequency band is expected to be used for high-speed science data return from space science missions to a limited number of earth stations located globally.

Resolution **661 (WRC-19)** invites ITU-R to investigate and identify all relevant scenarios that need to be considered in assessment of a possible upgrade to the allocation to the space research service to **primary status** in the frequency band 14.8-15.35 GHz

## Agenda Item 1.13

Consider to upgrade to primary allocation of the frequency band 14.8-15.35 GHz to the space research service
> Res. 661 (WRC-19)

**Five methods are proposed: The five methods propose the suppression of Resolution 661 (WRC-19).**

**A) NOC**

**B) to upgrade the secondary allocation to the space research service (space-to-space) in the frequency band 14.8-15.35 GHz to primary status and retain the secondary allocation to SRS (space-to-Earth) and (Earth-to-space)**

**C) to upgrade the secondary allocation to the space research service in the frequency band 14.8-15.35 GHz to primary status, except SRS active and SRS passive applications.**

**D) to upgrade the status of the SRS allocation to primary, with provisions to avoid imposing constraints on the current use and future development of existing systems of primary services, including the aeronautical mobile service (AMS).**

**E) allows upgrading of the SRS and provides provisions to both protect and avoid constraints on primary services for the fixed service (FS) and mobile service (MS) in the frequency band 14.8-15.35 GHz, as well as RAS in the adjacent frequency band 15.35-15.4 GHz.**

# WRC-23 Satellite Communications Issues

## FSS, BSS and MSS by GSO and NGSO systems :

WRC-23 Agenda Items 1.15, 1.17 and 7 (topics B/E/F/H/J/K,
**new Topic at CPM23-2**)

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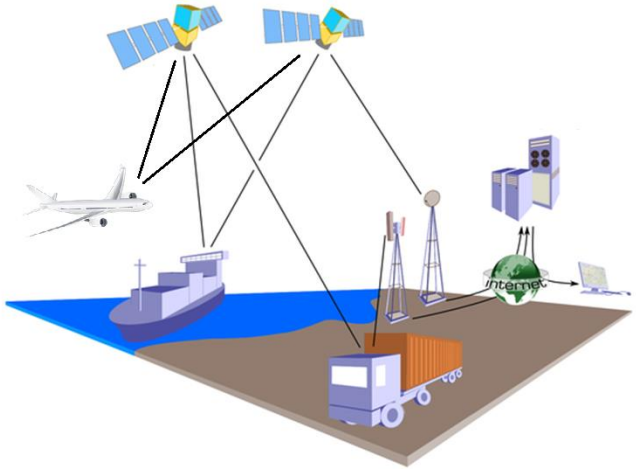
1

**1.15**
to harmonize the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with GSO FSS globally
> Resolution 172 (WRC-19)

**1.17**
Consider inter-satellite links in 11.7-12.7 GHz, 18.1-18.6 GHz, 18.8-20.2 GHz and 27.5-30 GHz frequency bands or portions thereof, by adding an inter-satellite service allocation where appropriate
> Resolution 773 (WRC-19)



# Agenda Item 1.15

## Agenda Item 1.15

to harmonize the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with GSO FSS globally
> Resolution 172 (WRC-19)

ITU has addressed earth stations on aircraft and vessels at previous WRCs

In the past the following unplanned frequency bands have been under study to allow GSO FSS networks to communicate w
earth stations on aircraft or vessels to provide broadband communications.

5 925-6 425 MHz and 14-14.5 GHz Resolution 902 (WRC-03)

19.7-20.2 GHz and 29.5-30.0 GHz Resolution 156 (WRC-15)

17.7-19.7 GHz and 27.5-29.5 GHz Resolution 169 (WRC-19)

**This is the first time a planned band is envisaged for ESIM.**

Some differences between non-planned bands and AP30B need to be taken into account, for instance the definition of servi
area

**Agenda item 1.13**

to harmonize the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with GSO FSS globally

> Resolution 172 (WRC-19)

Two methods are proposed:

A) No changes to the RR and suppression of Resolution **172 (WRC-19)** *due to the existence of various uncertainties in the implementation of several courses of action referred to in the potential Resolution associated with Method B.*

**B**) This method proposes to add a new footnote No. **5.A115** in RR Article **5** and a reference to a new WRC Resolution providing the complete technical, operational and regulatory conditions for the operation of A-ESIM and M-ESIM communicating with GSO space stations in the fixed-satellite service in the frequency band 12.75-13.25 GHz (Earth-to-space) while ensuring protection of allocated services *inter alia* protection of terrestrial services.

# Agenda Item 1.17

## Agenda Item 1.17

Consider inter-satellite links in 11.7-12.7 GHz, 18.1-18.6 GHz, 18.8-20.2 GHz and 27.5-30 GHz frequency bands or portions thereof, by adding an inter-satellite service allocation where appropriate
> Resolution 773 (WRC-19)

There is growing interest by some members of the ITU for utilizing satellite-to-satellite links for relaying data to/from the Earth using a GSO or a non-GSO FSS service provider space station that is operating at an orbital altitude greater than that of the non-GSO user space station generating the data.

Agenda Item 1.15

Studies have shown that some incumbent services could be severely impacted by satellite-to-satellite operations. Therefore, technical or regulatory solutions are required to avoid such impacts of satellite-to-satellite transmissions towards affected incumbent services.

One method is proposed to satisfy the agenda item that includes alternative approaches. Satellite-to-satellite operations can be:

-allocated through a fixed-satellite service (FSS) allocation in RR Article **5**;

-allocated through an inter-satellite service (ISS) allocation in RR Article **5**;

-allowable only within the cone of coverage of the non-GSO and GSO FSS space station;

-allowable outside the cone of coverage of the GSO FSS space station

## Agenda Item 1.17

Consider inter-satellite links in 11.7-12.7 GHz, 18.1-18.6 GHz, 18.8-20.2 GHz and 27.5-30 GHz frequency bands or portions thereof, by adding an inter-satellite service allocation where appropriate
> Resolution 773 (WRC-19)

Two methods are proposed:

A) No changes to the RR and suppression of Resolution **773 (WRC-19)**

B) New Resolution to address the regulatory mechanisms to operate the satellite-to-satellite links in 18.1-18.6 18.8-20.2 GHz and 27.5-30 GHz.

No change (NOC) for the band 11.7-12.7 GHz.

Several options are considered within each of the alternatives pertaining to some of the regulatory mechanisms ensure the protection of incumbent services.

*Alternative FSS: addressing an FSS (space-to-space) allocation/ Alternative ISS: addressing an ISS allocation/ Alternative GS within cone: addressing "within the cone" concept for GSO service provider/ Alternative GSO expanded cone: addressing "expanded-cone" concept for GSO service provider/ Alternative non-GSO FSS coordination: addressing the sharing with non FSS through a 9.12 coordination with space-to-space emissions/ Alternative non-GSO FSS Hard limit: addressing the sharing non-GSO FSS through a Hard Limits with space-to-space emissions.*

# Agenda Item 7

- Agenda item 7: *to consider possible changes, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, on 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 the rational, efficient and economical use of radio frequencies and any associated orbits, including the geostationary-satellite orbit;*
- Resolution **86 (Rev.WRC-07)** – *Implementation of Resolution **86 (Rev. Marrakesh, 2002)** of the Plenipotentiary Conference*

*7 Topics are presented here:*

***Topic B***: Non-GSO bringing into use post-milestone procedure

***Topic E***: AP30B Improved procedures for new Member States

***Topic F***: Excluding uplink service area in Appendix **30A** for Region 1 and 3 and Appendix **30B**

***Topic H1***: Enhanced protection of RR Appendices **30/30A** in Regions 1 and 3 and RR Appendix 30B: Implicit agreement

***Topic H2***: Enhanced protection of RR Appendices **30/30A** in Regions 1 and 3 and RR Appendix **30B**: Reduction of the EPM degradation tolerance from 0.45dB to 0.25dB with respect to BSS assignment or an assignment with national coverage

***Topic J***: Modifications to Resolution 76 (Rev.WRC-15)

***Topic K***: Modification to Resolution 553 (Rev.WRC-15) to remove certain restrictions that prevent administrations from taking effective advantage of the Resolution

**PROPOSED NEW TOPIC TO BE CONSIDERED UNDER WRC-23 AGENDA ITEM 7 (FROM IRAN)**

# Agenda Item 7 Topic B

# Agenda Item 7, Topic B

## Non-GSO bringing into use post-milestone procedure

WRC-19 discussed at length and ultimately agreed on Resolution **35 (WRC-19)**, “A milestone-based approach for the implementation of frequency assignments to space stations in a non-geostationary-satellite system in specific frequency bands and services.”

This Resolution contains a detailed procedure to be followed by administrations and the Radiocommunication Bureau (BR) when recording and maintaining in the Master International Frequency Register (MIFR) frequency assignments for non-geostationary satellite (non-GSO) systems to which the Resolution applies.

**One aspect raised but not addressed** in a regulatory sense in the Resolution **relates to the case where a non-GSO system** has completed the milestone process and subsequently **experiences an intermediate- or long-term reduction of the number of satellites deployed**

# Agenda Item 7, Topic B

## Non-GSO bringing into use post-milestone procedure

Two methods are proposed:

**B1)** No further changes to the RR

**B2)** to permit some operational flexibility in the maintenance of the non-GSO system while keeping reasonable alignment over time between the number of capable non-GSO system satellites deployed for a system, and the number notified in the MIFR through a Resolution referred to in the provision of RR Article **11**. Method B2 contains two options regarding the required threshold for decreases in the number of deployed satellites capable of transmitting/receiving the recorded frequency assignments to apply such a Resolution.

**Option B2a**: involves a single percentage of the system's satellites, without regard to the number of satellites in the non-GSO system.

**Option B2b:** proposes a different number depending on the number of satellites in the non-GSO system.

# Agenda Item 7 Topic E

# Agenda Item 7, Topic E

AP30B Improved procedures for new Member States

## **Article 7 of Appendix 30B**: *Procedure for the addition of a new allotment to the Plan for a new Member State of the Union*

Under Article 7 an administration, new Member State of the Union, can ask the assistance of the Bureau to find an orbital position for its future allotment.

The Bureau stops the processing of networks received but not yet processed to search for an orbital position.

This procedure has already been applied before WRC-07 by 5 administrations and the Bureau was able to find for them 5 orbital positions with no coordination requirement, so the assignments could become Plan allotments immediately, without going through Article 6 procedure.

Recently, seven new ITU Member States (South Sudan, Serbia, Moldova, Macedonia, Georgia, Croatia and Bosnia Herzegovina) applied Article 7 of Appendix **30B** to obtain a national allotment.

The Bureau was unable to find orbital positions for them without any coordination requirement and the 7 proposed allotments were transferred to Article 6 to follow the standard coordination procedure.

The reason of that is the big number of submissions (hundreds of submissions) with global coverage received by the Bureau since WRC-07 and the special treatment given to these administrations of jumping the queue only applies to the submissions not yet processed, which gives an irrelevant advantage (maximum 1 submission has been “jumped”).

# Agenda Item 7, Topic E

## AP30B Improved procedures for new Member States

In summary, the difficulties of these 7 administrations come from the fact that at WRC-07 Appendix **30B** was modified to allow administrations to submit notices with global coverage and service area, but Article 7 was not changed accordingly.

Some data about the coordination requirements of these 7 administrations:

**Single-Entry C/I excess based on criteria in Annex 4 to Appendix 30B**

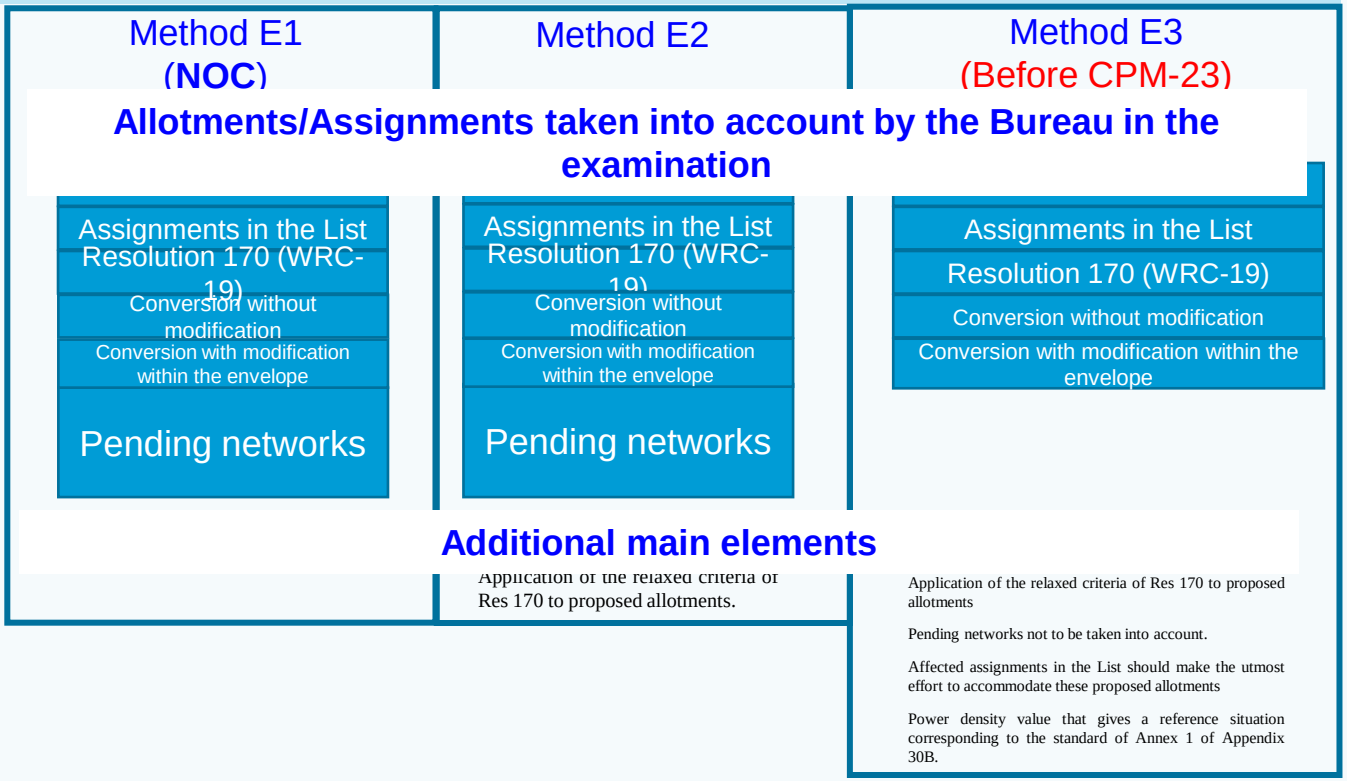
| Adm | Notice_ID | Satellite Name | Position (Degree) | No. Affected Adm* | No. Affected Networks*,** | Minimum Orbital Separation* (Deg.) | Max. C/I Excess Downlink* (SE) (dB) | Max. C/I Excess Uplink* (SE) (dB) |
|---|---|---|---|---|---|---|---|---|
| SRB | 120559032 | SRB00000 | −26.7 | 8 | 29 | 0.7 | 31.10 | 22.75 |
| MKD | 120559035 | MKD00000 | −16.7 | 7 | 23 | 0.7 | 36.65 | 30.47 |
| BIH | 120559036 | BIH00000 | 46 | 13 | 33 | 1 | 25.01 | 24.80 |
| MDA | 120559037 | MDA00000 | 75.1 | 7 | 26 | 0.1 | 33.71 | 30.03 |
| SSD | 120559038 | SSD00000 | −23.9 | 10 | 29 | 1.4 | 26.84 | 23.19 |
| GEO | 120559039 | GEO00000 | 78 | 10 | 28 | 0 | 39.5 | 36.6 |
| HRV | 120559040 | HRV00000 | 63 | 13 | 34 | 0 | 33.6 | 46.4 |

* Excluding Plan allotments.
**Networks with C Band and Ku Band are considered separately.

Table from Document 4A/367 of WP4A

# Agenda Item 7, Topic E

## AP30B Improved procedures for new Member States




At CPM-23, Method E3 was further updated based on an input contribution to the meeting (see the next slide).

# Agenda Item 7, Topic E

AP30B Improved procedures for new Member States

**Under the updated Method E3, it is proposed to develop a special procedure through a new Resolution to better facilitate any new ITU Member State to obtain a national allotment** by providing additional guidance to the Bureau and the new ITU Member State and re-considering some priority between the Article 7 requests and the application of Article 6 for additional systems.

The proposed new resolution proposes generic solutions for future Article 7 requests received after WRC-23 and specific solutions for Article 7 requests already received which are still at the coordination phase in order to fulfil the objectives of the FSS Plan.

# Agenda Item 7 Topic F

# Agenda Item 7, Topic F

## Excluding uplink service area in Appendix 30A for Region 1 and 3 and Appendix 30B

This Topic is based on Resolution 2 of Radio Regulations

*Resolution* ***2*** ***(Rev.WRC-03)*** *resolves that "the registration with the Radiocommunication Bureau of frequency assignments for space radiocommunication services and their use* ***do not provide any permanent priority for any individual country or groups of countries and do not create an*** **obstacle to the establishment of space systems by other countries**".

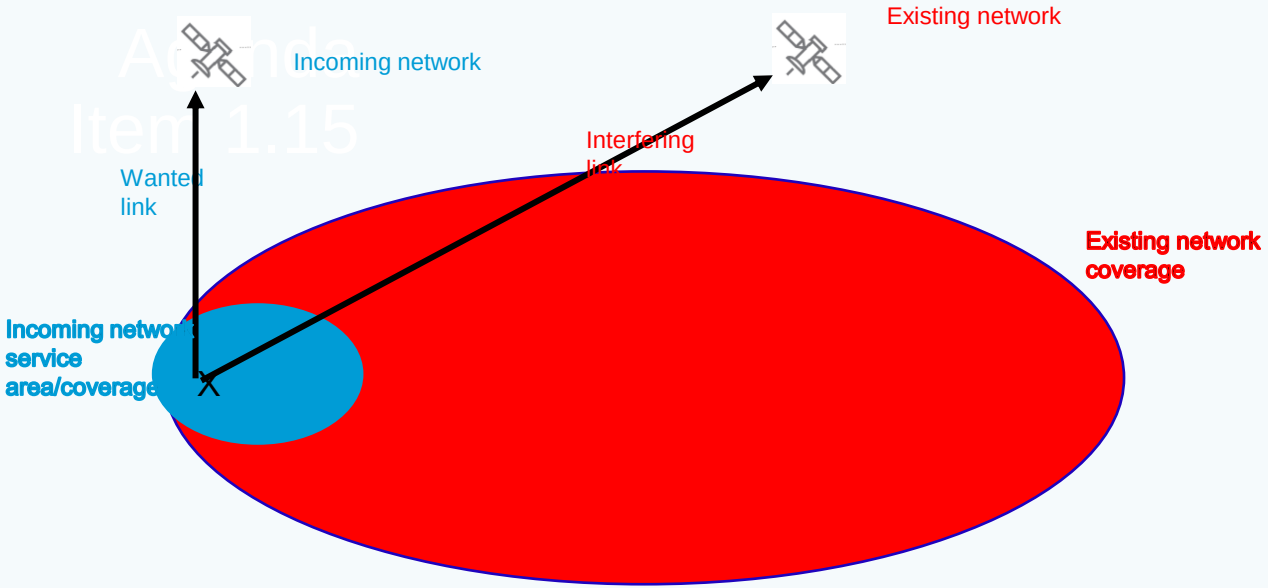
When an administration wishes to provide satellite service to its own territory, other administrations with already registered assignments should make all efforts to accommodate the new network.

# Agenda Item 7, Topic F

## Excluding uplink service area in Appendix 30A for Region 1 and 3 and Appendix 30B

For the downlink, provisions 23.13 for Appendix **30** and 6.16 for Appendix **30B**, together with the shaped beam technology, allow administrations to overcome difficulties in coordination with other satellite networks, when these administrations wish to provide service on their own territories.

However, there is no mechanism for the uplink/feeder-link.



# Agenda Item 7, Topic F

## Excluding uplink service area in Appendix 30A for Region 1 and 3 and Appendix 30B

Four methods are proposed:

**1.** **NOC**

2.

a) Possibility to exclude its territory from the feeder-link service area of a satellite network for Appendix **30A**

b) Requirement for the notifying administration to align the coverage area to the associated up-to-date service area when submitting a Part A and/or Part B of an AP30A/AP30B notice to the Bureau

c) Requirement for the notifying administration of a satellite network having high receiving sensitivity (relative satellite antenna gain of at least -20 dB) over territory of other Administration to accept uplink interference emanating from the territory of other Administration if so requested

d) remove the right to claim protection from harmful interference from additional systems which have not indicated their agreement to inclusion in the given service area

3.

a) Possibility to exclude its territory from the feeder-link service area of a satellite network for Appendix **30A**

b) Allow relocation of uplink test-points if they do not cause more interference

c) request a notifying administration of a satellite network having relative satellite antenna gain derived from the minimum ellipse required to cover the service area of equal to or less than −20 dB over territory of other administration to accept uplink interference emanating from the territory of other administration if so requested. The minimum ellipse is determined by the set of test points contained in the RR Appendices **30** and **30A** or RR Appendix **30B** satellite network using the relevant BR software application.

**4. (Before CPM23-2)**

a) Possibility to exclude its territory from the feeder-link service area of a satellite network for Appendix **30A**

b) amend Annex 3 of RR Appendix **30A** to include a definition of the feeder link coverage area.

At CPM-23, Method F4 was further updated based on an input contribution to the meeting (see the next slide).

# Agenda Item 7, Topic F

## Excluding uplink service area in Appendix 30A for Region 1 and 3 and Appendix 30B

**Under the updated Method F4, it is further proposed that the Bureau will generate coverage diagrams for certain incumbent assignments based on the minimum ellipse determined by the set of test-points** of the satellite network and the reference antenna patterns used for replanning at WRC-97 of § 3.7.3 of Annex 3 to this Appendix, using the relevant BR software applications.

It is further clarified that:

- For assignments where Resolution 49 information has been received by the Bureau, the Bureau will use the set of test points as of the time of receipt of the Resolution 49 information;

- For assignments entered into the Regions 1 and 3 feeder-link List before [16 December 2023], the Bureau will use the coverage diagram as contained in the List.

It should be noted that Method F4 includes proposals only for Appendix 30A.

# Agenda Item 7 Topic H1

# Agenda Item 7, Topic H1

## Enhanced protection of RR Appendices 30/30A in Regions 1 and 3 and RR Appendix 30B

In Appendices **30** and **30A** before WRC-15, if an administration was not commenting within the 4-month period after the publication of a new satellite network, this administration was deemed to have agreed to the satellite network. Because of this many administrations saw their national Plan Assignments being more and more degraded. Resolution 559 (WRC-19) was developed to help these administrations.

After WRC-15, Appendices **30** and **30A** were aligned with Appendix **30B**. If no comment was submitted in the 4-month period after the publication of a new satellite network, this administration was deemed to have NOT agreed to the satellite network.

However, it was introduced a procedure under § § 4.10a-4.10d of Appendices **30** and **30A**, like the one under § § 6.13-6.15 of Appendix **30B**, that gave affected administrations a last chance with 30-day period to answer to the BR letters. If no reply in the 30-day period, the administration <u>is deemed to have agreed to the satellite network.</u>

# Agenda Item 7, Topic H1

## Enhanced protection of RR Appendices 30/30A in Regions 1 and 3 and RR Appendix 30B: Implicit agreement

Four methods are proposed:

**H1A)**ur **NOC**

**H1B)**

Option 1:

to **remove the implicit agreement** applicable to:

a) assignments in the RR Appendices **30** and **30A** Regions 1 and 3 Plans or assignments intended to enter in those Plans;

b) allotments in the RR Appendix **30B** Plan or assignments intended to enter in that Plan

Option 2: **expands Option 1 to include removal of implicit agreement for Region 2 FSS potentially affecting Regions 1 and 3** Appendices **30** and **30A.**

**H1C) replace the implicit agreement** in case of no comments of an affected Regions 1 and 3 BSS Plan assignments or RR Appendix **30B** allotments from an additional use in due time, **by a new mechanism**. **Under such a new mechanism**, the administration of the Regions 1 and 3 BSS Plan assignment or of the RR Appendix **30B** **allotments allows the administration of the additional use to operate until the bringing into use of its national assignment/allotment**. At that time, the administration of the additional use commits to respect some constraints as pfd levels in respect of the affected national assignment/allotment or localisation of transmit earth station. As national allotment/assignment will not operate simultaneously the same frequency over the same area with the additional use, mutual interference is not considered.

**H1D) expands H1C to include that after the termination of the temporary agreement, the notifying administration of the assignment in question, requires updating the technical characteristics of its assignment to reflect the operational characteristics** and in accordance with the commitment resulting from the termination of the temporal agreement. For this modification there is no need to restart the Article 4 procedure and original date of protection will be kept. Furthermore, to make the obligation mentioned for updating the characteristics enforceable, a deadline and consequences for not complying with it have been specified.

This method also proposes to remove the implicit agreement applicable to an assignment in the RR Appendices 30 and 30A Regions 1 and 3 Plans, an assignment intended to enter in those Plans, List or proposed new or modified assignments in the List, when the affecting network is a Region 2 non-Plan FSS.

Option 2 of method H1B and a new method H1D were included at CPM23-2.

# Agenda Item 7 Topic H2

# Agenda Item 7, Topic H2

## Enhanced protection of RR Appendices 30/30A in Regions 1 and 3 and RR Appendix 30B: Reduction of the EPM degradation tolerance

Two methods are proposed:

**H2A)** **NOC**

Agenda Item 1.15

**H2B)** It is proposed to apply EPM degradation tolerance of 0.25 dB instead of 0.45 dB for protection of an assignment in the RR Appendices **30/30A** Regions 1 and 3 Plans or assignments with national coverage from a submission of non-national coverage.

# Agenda Item 7 Topic J

# Agenda Item 7, Topic J

## Modifications to Resolution 76 (Rev.WRC-15)

Resolution 76 (Rev.WRC-15) requires the development of procedures and recommendations to prevent the aggregate epfd limits from being exceeded, and collaboration between administrations to ensure compliance.



However, there is currently no clear methodology or procedure for administrations to determine if these limits are exceeded.

Topic J aims to address this deficiency by developing a consultation process for non-GSO fixed-satellite service (FSS) operators to avoid and potentially remedy any exceedance of the aggregate interference levels.

# Agenda Item 7, Topic J

## Modifications to Resolution 76 (Rev.WRC-15)

Five methods are proposed:

**J1**) **NOC**

**J2**) Modify Resolution 76 (Rev.WRC 15) by introducing a "**consultation process/meetings"** among non-GSO system administrations. This process will allow them to **cooperate and agree on reducing** their aggregate epfd if it exceeds the specified limits.

**J3**) Modify Resolution **76 (Rev.WRC-15)** to **comply with the aggregate epfd levels** included in the same Resolution through a consultation process/meetings taking into account **only non-GSO operational systems**;

**J4**) Modify Resolution **76 (Rev.WRC-15)** to **comply with the aggregate epfd levels** included in the same Resolution through a consultation process/meetings taking into **account both non-GSO operational and planned systems;**

**J5**) Modify Resolution **76 (Rev.WRC-15)** to call for further study on **accurate modelling of non-GSO systems** and a **regulatory procedure** for assuring compliance with the aggregate emission limits.

# Agenda Item 7 Topic K

# Agenda Item 7, Topic K

## Modification to Resolution 553 (Rev.WRC-15) to remove certain restrictions that prevent administrations from taking effective advantage of the Resolution

Resolution **553 (Rev.WRC-15)** titled "*Additional regulatory measures for broadcasting-satellite networks in the frequency band 21.4-22 GHz in Regions 1 and 3...*" has been adopted to enhance equitable access to this frequency band.

**First restriction to the Resolution:** prohibits an administration from applying it if they have already submitted a proposal under the Resolution that was not notified before the ITU deadline. This restriction means that even if the administration's efforts under the Resolution are unsuccessful, they will be treated as if they have notified networks in the frequency band, and thus deprived of additional regulatory measures for equitable access. **Solution:** It aims to modify the restriction mentioned above by allowing administrations without a notified network to apply the Resolution for one network at a time. This modification would enable such administrations to benefit from the Resolution until they are successful in notifying a network in the frequency band

**Second restriction to the Resolution** not applicable by an administration that has networks successfully examined under RR No. **9.34** and published under RR No. **9.38** in the relevant frequency band. Therefore, administrations cannot apply the Resolution if they have a pending request under the normal procedure of coordination. **Solution:** Administrations with only one submission under the normal procedure at the same orbital position as the special procedure described in the Resolution are still eligible to apply the Resolution

# Agenda Item 7, Topic K

Modification to Resolution 553 (Rev.WRC-15) to remove certain restrictions that prevent administrations from taking effective advantage of the Resolution

Two methods are proposed:

**K1) NOC**

Agenda Item 1.15

**K2)** Proposes to modify the Resolution 553 (Rev.WRC-15) by removing the specific restrictions (the 2 restrictions described above) in this Resolution by modifying relevant paragraphs accordingly.

# PROPOSED NEW TOPIC TO BE CONSIDERED UNDER WRC-23 AGENDA ITEM 7 (FROM IRAN)

# PROPOSED NEW TOPIC TO BE CONSIDERED UNDER WRC-23 AGENDA ITEM 7 (FROM IRAN)

**Modification to the Radio Regulations to protect broadcasting-satellite service (BSS) in Regions 1 and 3 from high power-flux density (pfd) values stemming from the operation of fixed-satellite service (FSS) in Region 2 in the frequency band 11.7-12.2 GHz**

The band 11.7-12.7 GHz is allocated to BSS Plan, FSS, and other services as indicated in the Table of Frequency Allocations in Article **5** of the Radio Regulations. In Regions 1 and 3, the frequency band 11.7-12.2 GHz is allocated to BSS on a primary basis which is governed by the provisions of Appendix **30** of the Radio Regulations.

When a frequency band is allocated to planned BSS in a Region, this band is not allocated to FSS in that Region. Therefore, sharing between FSS and planned BSS is an inter-regional sharing. In Regions 1 and 3, the frequency band 11.7-12.2 GHz is not allocated to FSS. Therefore, it is expected that Region 2 FSS produces a low value of power-flux density in these Regions. However, the current procedure makes it possible for Region 2 FSS networks to produce high pfd values in Regions 1 and 3.

# PROPOSED NEW TOPIC TO BE CONSIDERED UNDER WRC-23 AGENDA ITEM 7 (FROM IRAN)

**Modification to the Radio Regulations to protect broadcasting-satellite service (BSS) in Regions 1 and 3 from high power-flux density (pfd) values stemming from the operation of fixed-satellite service (FSS) in Region 2 in the frequency band 11.7-12.2 GHz**

Two methods are proposed:

**1**) intends to replace the current procedures for coordination with a requirement for compliance with **a pfd hard limit applying to FSS Region 2** in the frequency band 11.7-12.2 GHz.

**2**) maintains the coordination procedure; however, it proposes to add new requirements as below:

-The coordination criteria which is the **pfd mask in Annex 4 to RR Appendix 30 shall not be exceeded by FSS Region 2** unless it obtains the explicit agreement of the administrations with affected assignment in RR Appendix **30** in Regions 1 and 3, either in the case of continuing disagreement or in the case that affected administrations fail to reply or to give a decision within the regulatory deadline.

-The **coverage area of FSS Region 2 shall be aligned with the service area.**

-A pfd hard limit shall be applied to FSS Region 2 in the frequency band 11.7-12.2 GHz in addition to the current pfd mask of Annex 4 to RR Appendix **30** which is for coordination.

# Thank you!

ITU – Radiocommunication Bureau
Questions to:
akim.faloudine@itu.int, brmail@itu.int