



India (Republic of)

## **PROPOSAL FOR PRELIMINARY VIEWS ON WRC-27 AGENDA ITEM 1.5**

*1.5 to consider regulatory measures, and implementability thereof, to limit the unauthorized operations of non-geostationary-satellite orbit earth stations in the fixed-satellite and mobile-satellite services and associated issues related to the service area of non-geostationary-satellite orbit satellite systems in the fixed-satellite and mobile-satellite services, in accordance with Resolution 14 (WRC-23);*

Resolution 14 (WRC-23) – Studies on development of regulatory measures, and implementability thereof, 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) and associated issues related to the service area of non-GSO FSS and MSS satellite systems.

Resolution 14 (WRC-23) resolves to invite the ITU Radiocommunication Sector for:

- 1 studies on regulatory measures to limit the unauthorized operations of non-GSO FSS and MSS earth stations in the Earth-to-space direction in order to address and cease such operations, taking into account technical and operational aspects, as appropriate;
- 2 studies on regulatory measures, taking into account recognizing c) with regard to non GSO FSS and MSS satellite systems, and the implementability of such measures, without adversely affecting the provision of service in the rest of the service area of the non-GSO satellite system,

### **Background**

WRC-23 adopted Resolution 14 (WRC-23) calls for studies by Member States and ITU-R to propose regulatory measures to limit unauthorized operations of non-geostationary-satellite orbit (non-GSO) earth stations in the fixed-satellite service (FSS) and mobile-satellite service (MSS). The need for effective enforcement of existing measures and the development of possible additional regulatory measures that do not adversely affect the development and deployment of non-GSO systems have been proposed

WRC-23 Resolution 14 (WRC-23) invites the ITU Radiocommunication Sector to propose regulatory measures to limit unauthorized operations of non-geostationary-satellite orbit (non-GSO) earth stations in the fixed-satellite service (FSS) and mobile-satellite service (MSS).

The need for effective enforcement of existing measures and need for additional measures has been noted by many administrations during the discussions at WRC-23.

Existing regulatory measures in the RR on this issue:

- **§ 18.1 of the Radio Regulations** stipulates that *“no transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations by or on behalf of the government of the country to which the station in question is subject”*.
- **Resolution 25 (Rev. WRC-23)** specifies that “administrations licensing global satellite systems and stations intended to provide public personal communications by means of fixed, mobile or transportable terminals shall ensure, when licensing these systems and stations, that they can be operated only from the territory or territories of administrations having authorized such service and stations in compliance with Articles 17 and 18, in particular No. 18.1”.
- Furthermore, **WRC-19** adopted **Resolution 22 (Rev.WRC-23)**, which provides measures to limit unauthorized uplink transmissions from earth stations.

Nonetheless, at **WRC-23**, the **Radio Regulations Board (RRB)** reported complaints from administrations regarding the presence of unauthorized transmissions of transmitting earth stations of non-GSO FSS and MSS systems within their territory.

Further, additional regulatory measures could be prescribed in a new Resolution by WRC-27

#### **India’s Preliminary views:**

India has the following preliminary view on this agenda item

India supports method B of the methods to satisfy the agenda item as given in the attachment

PROPOSED PRELIMINARY WORKING DOCUMENT TOWARDS  
DRAFT CPM TEXT FOR WRC-27 AGENDA ITEM 1.5

Agenda item 1.5

(WP 4A / WP 1B, WP 4C)

*1.5 to consider regulatory measures, and implementability thereof, to limit the unauthorized operations of non-geostationary-satellite orbit earth stations in the fixed-satellite and mobile-satellite services and associated issues related to the service area of non-geostationary-satellite orbit satellite systems in the fixed-satellite and mobile-satellite services, in accordance with Resolution 14 (WRC-23);*

*Resolution 14 (WRC-23) – Studies on development of regulatory measures, and implementability thereof, 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) and associated issues related to the service area of non-GSO FSS and MSS satellite systems*

**1/1.5/1 Executive summary**

WRC-23 adopted Resolution 14 (WRC-23) calls for studies by Member States and ITU-R to propose regulatory measures to limit unauthorized operations of non-geostationary-satellite orbit (non-GSO) earth stations in the fixed-satellite service (FSS) and mobile-satellite service (MSS). The need for effective enforcement of existing measures and the development of possible additional regulatory measures that do not adversely affect the development and deployment of non-GSO systems have been proposed.

**1/1.5/2 Background**

WRC-23 Resolution 14 (WRC-23) invites the ITU Radiocommunication Sector to propose regulatory measures to limit unauthorized operations of non-geostationary-satellite orbit (non-GSO) earth stations in the fixed-satellite service (FSS) and mobile-satellite service (MSS). The need for effective enforcement of existing measures and need for additional measures has been noted by many administrations during the discussions at WRC-23.

**§ 18.1 of the Radio Regulations** stipulates that “*no transmitting station may be established or operated by a private person or by any enterprise without a licence issued in an appropriate form and in conformity with the provisions of these Regulations by or on behalf of the government of the country to which the station in question is subject*”.

In response to this, **Resolution 25 (Rev.WRC-23)** specifies “*that administrations licensing global satellite systems and stations intended to provide public personal communications by means of fixed, mobile or transportable terminals shall ensure, when licensing these systems and stations, that they can be operated only from the territory or territories of administrations having authorized such service and stations in compliance with Articles 17 and 18, in particular No. 18.1*”.

Furthermore, **Resolution 22 (Rev.WRC-23)** provides measures to limit unauthorized uplink transmissions from earth stations.

Resolution **22 (WRC-23)** resolves:

- 1 that the operation of transmitting earth stations within the territory of an administration shall be carried out only if authorized by that administration;*
- 2 that the notifying administration for a satellite network or system shall, to the extent practicable, limit the operation of transmitting earth stations on the territory of an administration on which they are located and operated to only those licensed or authorized by that administration;*
- 3. that, when an administration identifies the presence of unauthorized transmitting earth station transmissions in its territories:*
  - i) it should take all appropriate actions at its disposal to the extent of its ability to stop such unauthorized transmissions; and*
  - ii) if the matter is not resolved, this administration may report the details of such unauthorized transmissions, if available, to the notifying administrations of the satellite networks or systems that may be associated with these unauthorized transmissions, and the notifying administrations of these satellite networks or systems shall cooperate with the reporting administration, to the maximum extent possible, in order to resolve the matter in a satisfactory and timely manner;*

Nonetheless, there have been reports to the Radio Regulations Board (RRB) from administrations regarding the presence of unauthorized transmissions of transmitting earth stations of non-GSO FSS systems within their territory.

### 1/1.5/3 Summary and analysis of the results of the studies

**WRC-27 agenda item 1.5** addresses 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) and associated issues related to the service area of non-GSO FSS and MSS satellite systems.

For emissions in the Earth-to-space direction, it is acknowledged that it is the sovereign right of any administration to determine who should be authorized to operate transmitting non-GSO earth stations within its territory, including national waters and airspace.

A preliminary review of the **Resolution 14 (WRC-23)** reveals that following regulatory measures are already prescribed in the Radio Regulations:

- i) Paragraph 18.1 of Article 18 of the Radio Regulations;**
- ii) Resolution 22 (Rev.WRC-23); and**
- iii) Resolution 25 (Rev.WRC-23).**

In addition, there are two possible regulatory methods to resolve this agenda:

- Method A: No Change.
- Method B: A new Resolution proposing a regulatory method of blocking the operation of unauthorized non-geostationary-satellite orbit (non-GSO) earth stations in the fixed-satellite service (FSS) and mobile-satellite service (MSS) based on the capabilities of the NCMC.

These methods are covered in section 4 below:

### 1/1.5/4 Methods to satisfy the agenda item

#### 1/1.5/4.1 Method A

No changes to the Radio Regulation and suppression of Resolution **14 (WRC-23)**.

#### 1/1.5/4.2 Method B

Adoption of a draft new Resolution [AI1.5] (WRC-27) and suppression of Resolution **14 (WRC-23)**.

Under this method, the Conference is invited to adopt the provisions of a new Resolution [AI1.5] (WRC-27), which would incorporate the results of studies agreed upon in ITU-R concerning regulatory measures for the utilization of non-GSO satellite systems in the FSS and MSS. The following measures are intended to ensure compliance with the provisions of the Radio Regulations and to achieve the objectives outlined in Resolution **14 (WRC-23)**:

- 1) **Restrict unauthorized operation of earth stations:** The geolocation capabilities for earth stations can be used to restrict unauthorized operations of non-GSO FSS and MSS earth stations within the territory of an administration that has not granted authorization or a license for the operation of such earth stations on its national territory. This approach is already implemented in some non-GSO systems and can effectively prevent unauthorized use.
- 2) **Remote de-activation of unauthorized non-GSO earth stations:** The capability of Network Control and Monitoring Centers (NCMCs) should be effectively utilized to remotely deactivate unauthorized earth stations.
- 3) **Exclusion of territory from the service area:** The exclusion of the territory from the service area of the non-GSO FSS/MSS satellite system, without adversely affecting the provision of service in the rest of the service area, can be effectively achieved through 1 and 2 above.
- 4) The notifying administration(s) of a non-GSO system should ensure that any unauthorized up-linking attempts made from the territory of an administration, that has not authorized such operations (affected administration), is immediately ceased and affected administration is informed about such up-linking attempts within [15/X] days of its occurrence. Timely intervention may allow the affected administration to take prompt action to prevent such unauthorized transmissions. This will further ensure that non-GSO satellite operators adhere to national licensing and regulatory frameworks and respect the sovereign right of each Member State to regulate its telecommunications.

Consider the following scenario to illustrate the issue:

An non-GSO satellite operating entity in Country A (the notifying administration) operates a non-GSO satellite system. In Country B, where the system is not authorized, users install earth station terminals that still manage to connect to the non-GSO system. These attempts are unauthorized under Country B's laws, but the administration of Country B remains unaware. This can lead to regulatory violations, unauthorized use of spectrum, or even security concerns for Country B. The geolocation capabilities for earth stations of the satellite system of Country A can be used to stop unauthorized operations and inform Country B about such unauthorized operations of non-GSO FSS and MSS earth stations within the territory of Country B. Prompt sharing of information helps uphold each country's sovereignty and legal frameworks and prevent unauthorized operations.

- Under this proposal, the notifying administration(s) would be obligated to inform Country B (affected administration), within [15/X] days of the occurrence of any unauthorized unlinking attempts from the territory of Country B. This information enables Country B to investigate the origin and legality of such attempts, enforce domestic regulations against unauthorized earth stations and prevent recurring illegal access to satellite systems.

These measures will also promote an orderly and efficient use of the radio-frequency spectrum and associated satellite orbit resources, while safeguarding the sovereign rights of administrations to manage and control the operation of radio stations within their territories:

**1/1.5/5 Regulatory and procedural considerations**

**1/1.5/5.1 For Method A**

**NOC**

**ARTICLES**

**SUP**

**RESOLUTION 14 (WRC-23)**

**Studies on development of regulatory measures, and implementability thereof, 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) and associated issues related to the service area of non-GSO FSS and MSS satellite systems**

**1/1.5/5.2 For Method B**

**Draft new Resolution [AI1.5] (WRC-23)**

**ADD**

**DRAFT NEW RESOLUTION [AI1.5] (WRC-27)**

**Regulatory measures to limit the unauthorized operations of non-GSO earth stations in the FSS and MSS and associated issues**

The World Radiocommunication Conference (XXX, 2027),

**DRAFT NEW RESOLUTION [AI1.5] (WRC-27)**

**Regulatory measures to limit the unauthorized operations of non-GSO earth stations in the FSS and MSS and associated issues**

The World Radiocommunication Conference (YYYY, 2027),

*considering*

*a)* the increasing use of LEO systems in the non-geostationary-satellite orbit in the fixed-satellite service (FSS) and mobile-satellite service (MSS) for providing connectivity to unconnected areas and for bridging the digital divide;

b) the reports to the Radio Regulations Board (RRB) from administrations regarding the presence of unauthorized transmissions of transmitting earth stations of non-GSO FSS systems within their territory,

*noting*

a) the capability of the Network Control and Monitoring Center (NCMC) of non-GSO systems to remotely deactivate unauthorized earth station(s);

b) the service area of a non-GSO system may include the territories of several administrations, as included in the ITU notification of the non-GSO system,

*recognizing*

a) that the ITU Constitution recognizes the sovereign right of each Member State to regulate its telecommunications;

b) that the Member States are bound to abide by the provisions of the ITU Constitution, the Convention and the Administrative Regulations;

c) that Article **18** specifies the requirements for licensing the operation of stations within any given territory;

d) that No. **18.1** of the RR provides that no transmitting station may be established or operated by a private person or by any enterprise without a license, issued in an appropriate form and in conformity with the provisions of the Radio Regulations by or on behalf of the government of the country to which the station in question is subject;

e) No. **15.5 b)** of the RR provides that radiation in and reception from unnecessary directions shall be minimized by taking the maximum practical advantage of the properties of directional antennas whenever the nature of the service permits;

f) that Resolution **22 (Rev.WRC-23)**, on measures to limit unauthorized uplink transmissions from earth stations, resolves that the operation of transmitting earth stations within the territory of an administration shall be carried out only if authorized by that administration;

g) that Resolution **25 (Rev.WRC-23)**, on operation of global satellite systems for personal communications, resolves that administrations licensing global satellite systems and stations intended to provide public personal communications by means of fixed, mobile or transportable terminals shall ensure, when licensing these systems and stations, that they can be operated only from the territory or territories of administrations having authorized such service and stations in compliance with Articles **17** and **18**, in particular No. **18.1**;

h) it is the responsibility of the notifying administration(s) of non-GSO FSS/MSS system for observing and complying with all relevant regulatory and administrative provisions applicable to the operation of non-GSO FSS/MSS systems,

*recognizing further*

a) that the notification by different administrations of frequency assignments to be used by the same non-GSO satellite system could create difficulties to identify the responsible administration in case of the unauthorized operations of the non-GSO FSS/MSS earth stations;

b) that Member States may wish to exclude its territory from the service area of the non-GSO satellite system;

c) that there is no obligation for any administration to authorize any non-GSO FSS/MSS earth stations to operate within the territory under its jurisdiction, including territorial waters and national airspace, irrespective of the inclusion of its territory within the service area;

d) that administration which has authorized the operation of non-GSO FSS/MSS earth stations in the territory under its jurisdiction, including territorial waters and national airspace, may at any time change or withdraw the authorization;

e) that the exclusion of the territory from the service area of the non-GSO FSS/MSS system can be operationally achieved through interaction between the NCMC and non-GSO FSS/MSS earth stations, in order to comply with the provisions of this Resolution,

*resolves*

1 that the notifying administration(s) of each non-GSO satellite system shall take all necessary measures to ensure that all non-GSO FSS / MSS earth stations remain under the control and monitoring of the NCMC of the non-GSO satellite system and can be geolocated at all times;

2 that the notifying administration(s) of the non-GSO satellite system shall take all necessary measures to ensure that non-GSO FSS/MSS earth stations shall cease transmission of traffic when within the territory, including territorial waters and national airspace, of administrations not authorizing their operation;

2.1 that, if any transmission from non-GSO FSS/MSS earth station(s) is attempted from the territory, including territorial waters and national airspace, of an administration that has not authorized such operations, the notifying administration(s) of the non-GSO system shall inform the affected administration, within [15/X] days of occurrence of such event, to allow the affected administration to take prompt action against such unauthorized transmitting non-GSO FSS/MSS earth station(s);

3 that any non-compliance of the *resolve* 2 shall be reported by the affected administration to the notifying administration(s) of the non-GSO FSS/MSS system, with a copy to the Bureau, and the notifying administration(s) on receipt of such information shall immediately take action to cease transmission of traffic from those earth station(s);

4 that, in the absence of immediate action being taken by the notifying administration(s), with regard to their obligation and responsibilities referred to above, the affected administration may seek the assistance of the Bureau. On receipt of such request, the Bureau shall immediately send a communication to the notifying administration(s) responsible for the non-GSO FSS/MSS system and urge to fully comply with the requirements referred to in *resolves* 2 above;

5 that, should no immediate action be taken by the notifying administration(s) of the above-mentioned systems or within maximum period of 7 calendar days after the dispatch date of the above-mentioned Bureau's communication and the affected Administration has not confirmed to the Bureau that the case of unauthorized operations has been resolved, the Bureau shall immediately:

5.1 post the details of noncompliance on its special web site, to be created for this purpose, and;

5.2 to submit the case to the subsequent meeting of the Radio Regulations Board (RRB) for review and the necessary actions;

6 that non-GSO FSS currently operating and are subject to the reports submitted to the Radio Regulations Board meetings since RRB-92, as referred to in *considering b)* above, are also covered by the terms, conditions as well as regulatory provisions/procedure stipulated in *resolves* 1-5 above,

*instructs the Director of the Radiocommunication Bureau*

1 to take all necessary actions to facilitate the implementation of this Resolution;

2 to implement the specific tasks assigned to it in this Resolution;

3 to periodically report to the Radio Regulations Board the unauthorized operations of non-GSO FSS/MSS earth stations, reported to the Bureau under this Resolution;

4 to post the details mentioned in *resolves* 5.1 above, including the decision/conclusion of the RRB on the matter, if any, on the website created for this purpose;

5 to report to the future WRCs the results of the implementation of this Resolution and indicate any difficulties encountered,



*instructs the Secretary-General*  
to emphasize and reiterate the importance of this Resolution and ensure that it is duly  
circulated among Member States and Sector Members.

**SUP**

**RESOLUTION 14 (WRC-23)**

**Studies on development of regulatory measures, and implementability  
thereof, 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) and associated issues related to the service  
area of**

**non-GSO FSS and MSS satellite systems**

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