ORGANIZACIÓN DE LOS ESTADOS AMERICANOS
ORGANIZATION OF AMERICAN STATES

Comisión Interamericana de Telecomunicaciones
Inter-American Telecommunication Commission

46 MEETING OF PERMANENT CONSULTATIVE COMMITTEE II: RADIOCOMMUNICATIONS
September 29 to October 3, 2025
Salvador, Bahia, Brazil

CITEL/GT/CMR-27/doc. 107/25 rev. 3
01 October 2025
Original: English

PRELIMINARY VIEWS FOR WRC-27 AGENDA ITEM 1.7

(Item on the Agenda: 3.1 (SGT2))

(Document submitted by Coordinator)

SGT2 – Fixed, mobile, broadcasting and radiolocation

Coordinator: Geraldo NETO (B) – geraldo@tmgtelecom.com

Vice-Coordinator: TBD

Agenda Item Rapporteur: Deivit ANDRADE (MEX) – deivit.andrade@transformaciondigital.gob.mx

Agenda Item Vice-Rapporteur: Raphael GARCIA (B) – raphael@anatel.gov.br; Michael MULLINIX – (USA) – mmullinix@ctia.org

Agenda Item 1.7 - *to consider studies on sharing and compatibility and develop technical conditions for the use of International Mobile Telecommunications (IMT) in the frequency bands 4 400-4 800 MHz, 7 125-8 400 MHz (or parts thereof), and 14.8-15.35 GHz taking into account existing primary services operating in these, and adjacent, frequency bands, in accordance with Resolution* ***265 (WRC-23)****;*

BACKGROUND:

Source: Canada 6358

The objective of this agenda item is to consider the possible use of the terrestrial component of IMT in the frequency bands 4 400-4 800 MHz and 7 125-8 400 MHz (or parts thereof), and 14.8-15.35 GHz to meet emerging demand for IMT, while ensuring protection of the existing primary services operating in these frequency bands and without imposing additional regulatory or technical constraints on those services and also on services in adjacent frequency bands.

Source: Brazil 6012/6211, Colombia 6150, Dominican Republic 6209, Mexico 6101, Peru 6149

Resolution **256 (WRC-23)** calls for:

1 studies of technical, operational and regulatory issues pertaining to the possible use of the terrestrial component of IMT in the frequency bands listed in *resolves to invite the ITU Radiocommunication Sector to complete in time for the 2027 world radiocommunication conference* 2, taking into account:

– evolving needs to meet emerging demand for IMT;
– technical and operational characteristics of terrestrial IMT systems that would operate in these specific frequency bands, including the evolution of IMT through advances in technology and spectrally efficient techniques;
– the deployment scenarios envisaged for IMT systems and the related requirements of balanced coverage and capacity;
– the needs of developing countries; and
– the timeframe in which spectrum would be needed.

2 sharing and compatibility studies, with a view to ensuring the protection of services to which the frequency band is allocated on a primary basis, including protection of stations operating in international waters or airspace which cannot be registered in the MIFR, without imposing additional regulatory or technical constraints on those services, and also on services in adjacent bands, for the frequency bands:
4 400-4 800 MHz;
7 125-8 400 MHz; and
14.8-15.35 GHz.

Source: Canada 6358, Ecuador 6334

Additionally, Resolution **256 (WRC-23)** invites WRC-27, to consider, based on the results of the studies, identification of the following frequency bands for the terrestrial component of IMT:

– 4 400-4 800 MHz (or parts thereof) in Regions 1 and 3;
– 7 125-8 400 MHz (or parts thereof) in Regions 2 and 3;
– 7 125-7 250 MHz and 7 750-8 400 MHz (or parts thereof) in Region 1; and
– 14.8-15.35 GHz.

In conclusion within these studies, the following should be considered:

- The evolution of needs to meet the new demands in terms of IMT.
- The technical and operational characteristics of terrestrial IMT systems that would operate in these specific frequency bands and, in particular, the evolution of IMT through technological advances and spectral efficiency techniques.
- The expected deployment cases of IMT systems and the related requirements for balanced capacity and coverage.
- The needs of developing countries.
- The timing in which the spectrum would be needed.
- The ITU Radiocommunication Sector (ITU-Radio) is working on the development of IMT2030 and beyond.
- The protection of services to which the frequency band is allocated on a primary basis, including the protection of stations operating in international waters or airspace.

The recognition of global significance of International Mobile Telecommunications (IMT) systems in providing telecommunication services, its continuous development, and its role in contributing to economic and social development worldwide. Furthermore, when looking at the development of IMT, including IMT for 2030 and, there is a need for harmonized frequency bands and arrangements to facilitate global roaming and economies of scale.

Supporting the IMT implementation and the increasing demand for ultra-low latency and high bit-rate applications, requires the availability of more contiguous spectrum blocks, such as those in the frequency bands under study. There is also acknowledges on the complexity of IMT implementation, which may vary among different administrations, as well as the importance to protect existing services.

Mobile broadband plays a crucial and pivotal role for access to information worldwide. According to ITU statistics, the number of active mobile broadband subscriptions per 100 inhabitants continues to grow strongly, with a growth of 27% in the last five years (2019-2023)[1], four times more than mobile phone subscriptions (7%).

ITU-R undertook a program to develop “IMT for 2020 and beyond”. In November 2015, ITU-R adopted Recommendation ITU-R M.2083 “IMT Vision – Framework and overall objectives of the future development of IMT for 2020 and beyond”, which highlights three trends in future IMT-2020 systems: communications at very high data rate such as enhanced mobile broadband, numerous connected devices such as massive machine type communication, and low latency, high and ultra-reliable applications. The success of these trends, in both developed and developing countries, will depend on both spectrum

[1] https://www.itu.int/hub/publication/d-ind-ict_mdd-2023-1/

availability for IMT-2020 land systems and support of high-capacity *backhaul* capabilities (including fiber optic, wireless, satellite, and microwave solutions).

In some countries there are Mobile Network Operators (MNOs) that still operate on 2G/3G networks, and 4G networks, which are mainly supported in low bands such as 700 MHz, 900 MHz, 1900 MHz, 1.7/2.1 GHz and 2.5 GHz

Likewise, there is an increase in the deployment of 5G networks, as a result of technical adjustments made by mobile operators, mainly in the 2.5 GHz and 3.5 GHz bands. Most of these networks use frequency bands below 3.5GHz, which are effective for extending coverage, but offer limited capacity. To improve network performance and meet growing demand, it is necessary to consider sharing and compatibility studies for IMT use in the frequency bands included under AI 1.7, in accordance with Resolution **256 (WRC-23)**.

Source: United States of America 6403

Today, the early vision for 6G, also known as IMT-2030, is starting to emerge as communications and broader vertical ecosystems embark on foundational technology research preparing for the next decade of innovations. Commercial deployments are expected later in the decade.

Contiguous spectrum bandwidths other than those currently available are necessary to address growing and intensifying consumer data and ubiquitous connectivity demands. As such, discussions have already started to identify the most desirable frequency bands to address these needs. While no single frequency range satisfies all of the spectrum needs, the upper mid-band range (below 10 GHz) is well-suited to bolster current offerings and facilitate next generations of wireless technologies.

Source: Brazil 6012/6211, Colombia 6150, Dominican Republic 6209, Mexico 6101, Peru 6149 Finally, WRC-27, under agenda item 1.7, will consider, based on results of studies, the identification of frequency band(s) 4 400-4 800 MHz, or parts thereof, in Region 1 and Region 3; 7 125-8 400 MHz, or part thereof, in Region 2 and Region 3; 7 125-7 250 MHz and 7 750-8 400, or part thereof, in Region 1; and 14.8-15.35 GHz in all 3 Regions, for the terrestrial component of IMT. The goal of this agenda item is to ensure compatibility with existing services, meet emerging IMT demands, address the needs of developing countries, and consider the evolving landscape of technology and spectrally efficient techniques.

Source: Brazil 6012

Additionally, Brazil considers:

4 400-4 800 MHz

– Resolution **265 (WRC-23)** does not call for studies of the frequency band 4 400-4 800 MHz in Region 2;

– The frequency band 4 400-4 500 MHz is allocated to the MS and FS in a primary basis in all 3 Regions;

– The frequency band 4 500-4 800 MHz is allocated to the MS, FS and FSS (space-to-Earth) in a primary basis in all 3 Regions, and in accordance with **No. 5.441**, the use of this band by the fixed- satellite service shall be in accordance with the provisions of Appendix **30B**;

– Studies on the identification of the frequency band 4 400-4 800 MHz for IMT implementation in Regions 1 and 3 should consider the impact on the existing services in Region 2,

7 125-8 400 MHz

– The frequency band 7 125-8 400 MHz, or parts thereof, is allocated to a number of services in primary basis in all three Regions;

– Brazil has specific concerns on the impact of the identification of IMT in the frequency bands 7 250-7 750 MHz (space-to-Earth) and 7 900-8400 MHz (Earth-to-space) allocated to the fixed-satellite service on primary basis;

– Studies on the identification of the frequency band 7 125-8 400 MHz for IMT implementation in Region 2 should consider the impact on the existing services in all three Regions,

14.8-15.35 GHz

– The frequency band 14.8-15.35 GHz, or parts thereof, is allocated to a number of services in primary basis in all 3 Regions;

– Studies on the identification of the frequency band 14.8-15.35 GHz for IMT implementation in Region 2 should consider the impact on the existing services in all three Regions.

Source: Colombia 6150

In the case of Colombia's frequency bands have the following allocations and spectrum use:

7 125-8 400 MHz

Colombia has the same attribution as the three regions, according to the ITU Radio Regulations. Colombia uses this frequency band for point-to-point links of the fixed service, under the 7 GHz and 8 GHz canalizations, and has approximately 4 thousand links deployed in the country.

14.8-15.35 GHz

Colombia has the same attribution as the three regions, according to the ITU Radio Regulations. Colombia uses this frequency band for point-to-point links in the fixed service, under the 15 GHz canalization, and has approximately 600 links deployed in the country.

Source: Mexico 6101

In Mexico's current frequency bands use, considers the following.

4 400-4 800 MHz

In Mexico, the 4 500-4 800 MHz frequency band is allocated to the Fixed Satellite Service (FSS) on a primary basis in the space-to-Earth direction. Likewise, the frequency band is registered in the FSS Plan of RR Appendix 30B. In said Plan, Mexico has been awarded position 113° West. In that direction, given the existing uses for that frequency band in Mexico, it is very important to ensure the correct operation of the FSS operating within the 4 400- 4 800 MHz band and in adjacent bands, so it is expected that the studies have real technical assumptions and whose results ensure the corresponding criteria of protection, sharing, and compatibility, as applicable.

7 125-8 400 MHz

The 7 075-8 400 MHz frequency band has the same primary allocation in all three regions in the ITU Radio Regulations, including the Mobile Service or Mobile except aeronautical mobile. In Mexico, the 7 125-8 400 MHz frequency band is allocated on a primary basis to the Fixed Service. Consistent with the above, different segments are under concession for the capacity provision service to establish radio links for the fixed service throughout the country within the 7.11-7.725 GHz frequency band. In addition, this frequency band is also used by different public entities for the establishment of point-to-point or point-to-multipoint links.

On the other hand, some segments within the frequency band 7 125-8 400 MHz are allocated on a primary basis to the Earth Exploration-Satellite Service in the Space-to-Earth direction and to the Meteorological-Satellite Service; however, there is no registration of this type of users or licensees. Likewise, some segments within the band of interest are allocated to the FSS on a secondary basis and are currently without the presence of any satellite service in Mexico.

For these reasons, for the Administration of Mexico it is appropriate to carry out the technical studies in the relevant ITU-R groups to identify the technical conditions for the operation of IMT.

14.8-15.35 GHz

The 14.8-15.35 GHz frequency band has the same allocation in all three regions in the ITU Radio Regulations, including the mobile service on a primary basis. In Mexico, the 14.8-15.35 GHz frequency band is allocated to the Fixed Service on a primary basis and to the Space Research Service on a secondary basis. Consistent with the above, different segments are under concession for the capacity provision service to establish radio links for the fixed service throughout the country within the 14.8-15.35 GHz frequency band. In addition, this frequency band is also used by different public entities for the establishment of point-to-point links.

For these reasons, the Administration of Mexico considers that the protection and operation of existing, planned, and future networks of the existing services should be guaranteed, and that the possible operation of IMT systems can be carried out under technical conditions that allow the provision of broadband connectivity for the benefit of the population.

Source: Dominican Republic 6209

In the Dominican Republic, current frequency band allocations and spectrum usage, consider the following:

4 400–4 800 MHz

In the Dominican Republic, the frequency band 4 500–4 800 MHz is allocated to the Fixed-Satellite Service (FSS) on a primary basis in the space-to-Earth direction. Likewise, the frequency band is registered in the FSS Plan of Appendix 30B of the Radio Regulations (RR). In that regard, in view of existing uses in the frequency band in the Dominican Republic, it is of the utmost importance to ensure the correct functioning of the FSS operating within the band 4 400–4 800 MHz and in adjacent bands, as a result of which it is hoped that the studies will rely on real technical assumptions, whose results will ensure the corresponding criteria for protection, sharing, and compatibility, as applicable.

7 125–8 400 MHz

The frequency band 7 075–8 400 MHz has the same primary allocation in all three regions in the ITU Radio Regulations, including the Mobile Service or Mobile except aeronautical mobile. In the Dominican Republic, the frequency band 7 125–8 400 MHz is allocated on a primary basis to the fixed service. Consistent with the above, different segments are under concession for the capacity provision service to establish radio links for the fixed service throughout the country, within the frequency band 7.11–7.725 GHz. In addition, this frequency band is also used by different public entities for the establishment of point-to-point or point-to-multipoint links.

Furthermore, some segments within the frequency band 7 125–8 400 MHz are allocated on a primary basis to the Earth Exploration-Satellite Service in the space-to-Earth direction and to the Meteorological Service-Satellite Service; however, there is no registration of this type of user or licensee. Likewise, some segments within the band of interest are allocated to the FSS on a secondary basis and are currently without the presence of any satellite service in the Dominican Republic.

For these reasons, for the Administration of the Dominican Republic, it is time to undertake technical studies in the relevant ITU-R groups to identify the technical conditions for the operation of the IMT.

14.8–15.35 GHz

The frequency band 14.8–15.35 GHz has the same allocation in all three regions in the ITU Radio Regulations, including the mobile service on a primary basis. In the Dominican Republic, the frequency band 14.8–15.35 GHz is allocated to the Fixed Service on a primary basis and to the Space Research Service on a secondary basis. Consistent with the above, different segments are under concession for the capacity provision service to establish radio links for fixed service throughout the country within the frequency band 14.8–15.35 GHz. In addition, this frequency band is also used by different public entities for the establishment of point-to-point links.

For those reasons, the Administration of the Dominican Republic deems that, to the extent possible, the protection and operation of existing networks should be guaranteed and that the operation of IMT systems can be carried out under technical conditions that allow for the coexistence of all radiocommunication systems.

Source: Ecuador 6334

Regarding the status of these bands in Ecuador, the National Frequency Bands Allocation Table of Ecuador's National Frequency Plan is subject to the provisions of the ITU Radio Regulations for Region 2, with current use as detailed below:

Frequency band	Use
4 400-4 800 MHz	The systems of footnote 5,440A are operating in parts of this band.
7 125-8 400 MHz*	FIXED service (primarily commercial) radio links are operating in this band.
14.8-15.35 GHz*	FIXED service (primarily commercial) radio links are operating in this band.

*National Note EQA.25 currently prioritizes operation of fixed service radio links on a primary basis, *inter alia*, in the bands 7 100 – 8 500 MHz, and 14.4 – 15.35 GHz.

The detailed geographical distribution of the radio links described above is being surveyed and characterized to determine their use within and outside populated areas, with a view to future scenarios of potential coexistence.

Source: Canada 6358

In Canada, the frequency bands 7 250-7 750 MHz (space-to-Earth) and 7 900-8 400 MHz (Earth-to-space) are used for fixed-satellite service (FSS), and the frequency bands 7 250-7 375 MHz (space-to-Earth) and 7 975-8 025 MHz (Earth-to-space) are used for mobile-satellite service (MSS) by the Government of Canada. FSS earth stations deployed in the frequency band 7 900-8 400 MHz include transportable stations which can be deployed anytime, anywhere within the Canadian territory. The frequency bands 7 125-7250 MHz, 7 300-7 975 MHz and 8 025-8 400 MHz are extensively used by fixed services. Finally, Canada has a primary allocation to space research services (SRS) in the frequency band 7 145-7 235 MHz (Earth-to-space). The frequency band 7 190-7 250 MHz is allocated to earth exploration-satellite services (EESS) (Earth-to-space) on a primary basis in Canada.

Additionally, in Canada, the 8025–8400 MHz and 7750-7900 MHz frequency bands are heavily utilized by space science satellites operating under the earth exploration-satellite service (EESS) (space-to-Earth) and meteorological-satellite service (MetSat) (space-to-Earth), respectively, for downlinking critical data. The Canadian Space Agency (CSA) relies on this band for its RADARSAT Constellation Mission (RCM), which includes three satellites. Additionally, RADARSAT-2 satellite also uses this frequency range for data downlinks. Earth observation data is vital to a wide range of Canadian users, including federal and provincial governments, industry stakeholders, and research institutions. Key applications include monitoring natural resources, managing agriculture and forestry, tracking climate change, ensuring border security, assessing environmental impacts, supporting disaster response, and managing fisheries.

In Canada, the band 14.8-15.35 GHz is currently allocated to the fixed service, on a primary basis, and to the mobile service, on a primary (14.8-14.82 GHz and 15.135-15.295 GHz) and secondary (14.82-15.135 GHz and 15.295-15.35 GHz) basis, for the exclusive use of the Government of Canada. This band is used by several Government of Canada systems, including radio-relay systems, aircrafts, and unmanned aerial vehicles (UAV) for payload applications only of anytime/anywhere aerial surveillance for intelligence surveillance and reconnaissance (ISR) operations.

Source: United States of America 6403

In July 2025, President Trump signed The One Big Beautiful Bill Act (OBBBA) into U.S. law that creates a spectrum pipeline by instructing the Federal Communications Commission (FCC) and the National Telecommunications and Information Administration (NTIA) to identify 800 megahertz of spectrum for commercial licensed use. The OBBBA specifies that the FCC auction at least 300 megahertz for non-Federal use; and NTIA, in consultation with the FCC, identify an additional 500 megahertz of Federal use spectrum within the 1.3 – 10.5 GHz range, excluding 3.1 – 3.45 GHz and 7.4 – 8.4 GHz, for reallocation to non-Federal use, shared Federal and non-Federal use, or a combination thereof, for competitive bidding for full power commercial licensed use cases.

Under WRC-27 agenda item 1.7, it is important to recognize that the incumbent services in the candidate bands, and adjacent bands, provide important systems for public safety, aviation, earth observation and other uses operating under the existing primary allocations, and such operations must be protected.

- 4 400-4 800 MHz: The frequency band 4 400-4 800 MHz is allocated to the fixed and mobile services. Additionally, the 4 500-4 800 MHz is allocated to the fixed satellite service.
- 7 125-8 400 MHz: The frequency band 7 125-8 400 MHz, or parts thereof, is allocated to several services on a primary basis in all three Regions (i.e., Fixed, Fixed Satellite Services, Mobile, Mobile Satellite Service including Maritime Mobile-Satellite Service, Space Research Service, Earth Exploration Satellite Service and Meteorological Satellite Service).
- 14.8-15.35 GHz: The frequency band 14.8-15.35 GHz is allocated to several services on a primary basis in all three Regions, including the Fixed, Mobile, and Space Research services. In addition, the immediately adjacent band 15.35-15.4 GHz is allocated to the Earth Exploration Satellite Service (passive), Space Research Service (passive) and Radioastronomy service, where **No. 5.340** applies.

Incumbent services did not arbitrarily select these bands for their operations—the same features which make them favorable for IMT are similarly necessary to fulfill the critical missions of incumbents. Sharing and compatibility studies are required to examine the feasibility of introducing IMT into these bands while ensuring the protection of those services to which the frequency band is allocated on a primary basis without imposing additional constraints on those services, in the same or adjacent band.

PRELIMINARY VIEWS:

Brazil, Colombia, Dominican Republic, Mexico, Peru

Source: Brazil 6012/6211, Colombia 6150, Dominican Republic 6209, Mexico 6101, Peru 6149

The administrations of Brazil, Colombia, Dominican Republic, Mexico and Peru support the studies under WRC-27 agenda item 1.7 on the possible identification of frequency band(s) for the terrestrial component of IMT, while ensuring compatibility with existing services, meeting emerging IMT demands, addressing the needs of developing countries, and considering the evolving landscape of technology and spectrally efficient techniques.

The aforementioned administrations, recognizing the increasing demand for mobile broadband services and the need to enhance network performance, support the studies under WRC-27 agenda item 1.7 regarding the possible identification of additional frequency bands for the terrestrial component of IMT. The identification of new spectrum for IMT is seen as essential to enable the continued evolution of mobile broadband, foster digital innovation, and promote access to affordable and high-capacity telecommunications services globally. This is especially relevant to support the growing diversity of applications, services, and devices, and to ensure that developing regions benefit from the technological advancements that IMT enables.

These studies are expected to assess the feasibility of IMT identification in specific frequency bands, in line with Resolution **256 (WRC-23)**, and should prioritize enabling the development of a sustainable and globally harmonized IMT ecosystem. Harmonization offers significant benefits, including reduced deployment costs, enhanced device interoperability, and increased availability of IMT services across borders. The studies should also be responsive to the evolving technological landscape and spectrum requirements, ensuring that IMT systems can operate efficiently and flexibly to meet future connectivity demands.

At the same time, these studies should ensure the protection of the continued operation of existing services in the bands under consideration and recognize their ongoing development, without imposing additional regulatory or technical constraints on them. While national implementation may vary depending on local

circumstances, efforts to harmonize spectrum use at the regional or global level remain critical to achieving scale economies and ensuring inclusive access to advanced mobile broadband services.

In support of these goals, WP 5D has been actively progressing its work under WRC-27 agenda item 1.7. During the 48th meeting of WP 5D, a total of 24 input contributions and several liaison statements were reviewed, primarily addressing sharing and compatibility studies. Although only a few studies presented initial results, most input documents introduced methodologies, technical assumptions, and propagation models to be further developed. Most of the studies presented are related to the 7/8 GHz band, and these items will be revisited in future meetings. The engagement in WP 5D underscores the collective commitment of Member States and Sector Members to thoroughly assess the technical feasibility of IMT use in the bands identified in Resolution **256 (WRC-23)**, while ensuring that the benefits of IMT—particularly in terms of innovation, connectivity, and economic development—can be fully realized.

Administrations are encouraged to actively participate in the ongoing technical discussions within WP 5D and other relevant groups, contribute to the development of the necessary technical sharing and compatibility studies, and support the collective effort to achieve regional and global harmonization for IMT systems. This collaborative work will facilitate informed decisions at WRC-27 and help ensure that spectrum resources are optimized for the benefit of all regions and populations.

Canada

Source: Canada 6358

Canada supports the sharing studies in ITU-R towards possible identification of IMT under WRC-27 agenda item 1.7, highlighting the critical importance of protecting the incumbent FSS, MSS, EESS, MetSat, and SRS services in the frequency bands 7 125–8 400 MHz and the incumbent fixed and mobile services in the frequency band 14.8-15.35 GHz from potential interference from IMT, as well as compatibility studies to protect services in the adjacent frequency bands.

Ecuador

Source: Ecuador 6334

The Ecuadorian Government supports the studies under Agenda Item 1.7 of WRC-27 for potential identification of specific spectrum for the terrestrial component of IMT, ensuring compatibility with existing services and considering the current and future needs of developing countries.

United States of America

Source: United States of America 6403

The United States supports the sharing and compatibility studies called for in Resolution **256 (WRC-23)**, with a view to ensuring the protection of services to which the frequency bands are allocated on a primary basis, including in adjacent bands, as appropriate, without imposing additional regulatory or technical constraints on those services. The United States supports appropriate action at WRC-27 based on the outcome of studies.

_____