|  |  |  |
| --- | --- | --- |
| APTlogogreen3 | ASIA-PACIFIC TELECOMMUNITY | **Document No:** |
| **The 3rd Meeting of the APT Conference Preparatory Group for WRC-19 (APG19-3)** | **APG19-3/OUT-08** |
| 12 – 16 March 2018, Perth, Australia | **16 March 2018** |

Working Party 2

**PRELIMINARY VIEWs on WRC-19 agenda item 1.13 [[1]](#footnote-1)**

**Agenda Item 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 (WRC‑15)****;*

# 1. Background

IMT systems are now being evolved to provide diverse usage scenarios and applications such as enhanced mobile broadband (eMBB), massive machine-type (mMTC) and ultra-reliable and low-latency communications (URLLC) requiring larger contiguous blocks of spectrum than currently available bandwidth to realize those applications, as described in Recommendation ITU-R M.2083.

Adequate and timely availability of spectrum with appropriate regulatory provisions, as well as improved technologies, are essential to support the future growth of IMT. Harmonized worldwide frequency bands and harmonized frequency arrangements for these systems are highly desirable in order to facilitate global roaming and the benefits of economies of scale.

Regarding WRC-19 agenda item 1.13, Resolution **238 (WRC-15)** calls for studies to determine the spectrum needs for the terrestrial component of IMT in the frequency range between 24.25 GHz and 86 GHz, as well as sharing and compatibility studies, taking into account the protection of services to which the band is allocated on a primary basis, for the frequency bands:

– 24.25-27.5 GHz[[2]](#footnote-2), 37-40.5 GHz, 42.5-43.5 GHz, 45.5-47 GHz, 47.2-50.2 GHz, 50.4‑52.6 GHz, 66-76 GHz and 81-86 GHz, which have allocations to the mobile service on a primary basis; and

– 31.8-33.4 GHz, 40.5-42.5 GHz and 47-47.2 GHz, which may require additional allocations to the mobile service on a primary basis.

With respect to the studies on spectrum needs, the results are documented in the Attachment 1 to Document [5-1/36](https://www.itu.int/md/R15-TG5.1-C-0036/en) and in the working document towards draft CPM text (Annex 2 to Document [5-1/](https://www.itu.int/md/R15-TG5.1-C-0092/en)[287](https://www.itu.int/md/R15-TG5.1-C-0287/en)). With respect to the sharing and compatibility studies, the working documents are available in the Chairman’s Report for the fourth meeting of TG 5/1 (Annexes 3-13 to Document [5-1/](https://www.itu.int/md/R15-TG5.1-C-00287/en)[287](https://www.itu.int/md/R15-TG5.1-C-0287/en)). According to the work plan of TG 5/1, its May 2018 meeting will focus on finalizing the sharing and compatibility studies as well as summarizing the overall studies to be included in the draft CPM text. Furthermore, its final meeting in August 2018 will focus on finalizing the draft CPM text.

Within APT, APT Wireless Group (AWG) is collaborating with APG in certain aspects relating to this agenda item (See Documents APG19-2/[INP-07](http://www.apt.int/sites/default/files/2017/05/APG19-2-INP-07_LS_from_AWG.docx), APG19-3/[INP-08](https://www.apt.int/sites/default/files/2018/01/APG19-3-INP-08_LS_from_AWG.docx)).

# 2. Documents

* Input Documents APG19-3/[INP-07](https://www.apt.int/sites/default/files/2018/01/APG19-3-INP-07_Note_from_Chairman_APG-19_v3.docx) (Chairman, APG-19), [INP-08](https://www.apt.int/sites/default/files/2018/01/APG19-3-INP-08_LS_from_AWG.docx) (AWG), [INP-15](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-15_IND_WP2_0.docx) (IND), [INP-22](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-22_KOR-WP2.docx) (KOR), [INP-29(Rev.1)](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-29Rev.1_IRN_WP2.docx) (IRN), [INP-35](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-35_New_Zealand_WP2_0.docx) (NZL), [INP-42](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-42_Australia_WP2.docx) (AUS), [INP-50](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-50_Japan_WP2.docx) (J), [INP-60(Rev.1)](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-60Rev.1_Thailand_WP2.docx) (THA), [INP-66](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-66_Singapore_WP2_0.docx) (SNG), [INP-75](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-75_Malaysia_WP2.docx) (MLA), [INP-83](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-83_Vietnam_WP2.docx) (VTN), [INP-87](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-87_China_WP2_0.docx) (CHN), [INP-97(Rev.1)](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-97Rev.1_BGD_WP2.docx) (BGD)
* Information Documents APG19-3/[INF-02](https://www.apt.int/sites/default/files/2018/03/APG19-3-INF02_GSMA_5G_and_millimitre_waves_bands_-_final.docx) (GSMA), [INF-03](https://www.apt.int/sites/default/files/2018/03/APG19-3_INF03_GSMA_VIEWS_ON_WRC-19_AI_1.13_-_final.docx) (GSMA), [INF-05(Rev.1)](https://www.apt.int/sites/default/files/2018/03/APG19-3-INF-05Rev.1_Multi_Affiliates_Views_0.docx) (Ericsson, et al.), [INF-06](https://www.apt.int/sites/default/files/2018/03/APG19-3-INF-06_CEPT_Preparation.pdf) (CEPT), [INF-08(Rev.1)](https://www.apt.int/sites/default/files/2018/03/APG19-3-INF-08Rev.1_CITEL_Preparation.pdf) (CITEL), [INF-09](https://www.apt.int/sites/default/files/2018/03/APG19-3-INF-09_IARU_INF.DOCX) (IARU R3)

# 3. Summary of discussions

## 3.1 Summary of APT Members’ views

### **3.1.1 India- Document APG19-3/**[**INP-15**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-15_IND_WP2_0.docx)

India continues to support sharing and compatibility studies for frequency bands in the frequency range between 24.25 GHz and 86 GHz, in accordance with Resolution **238 (WRC-15)**.

With respect to the key point raised in APG19-2 on prioritization of frequency bands, India has a preference to prioritize the following frequency bands:

* 24.25 -27.5 GHz
* 31.8-33.4 GHz
* 37-40.5 GHz

### **3.1.2 Korea (Rep. of) - Document APG19-3/**[**INP-22**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-22_KOR-WP2.docx)

The Republic of Korea proposes to update the APT Preliminary Views developed at the APG19-2 meeting as stated below:

“APT Members also support ITU-R studies on spectrum needs for the terrestrial component of IMT and sharing and compatibility studies in accordance with Resolution **238 (WRC-15)**. It is important for these sharing and compatibility studies to take into account protection of services to which the band is allocated on a primary basis.

Taking into account current ITU-R studies, APT Members support lower frequency bands for identification to IMT such as 24.25-27.5 GHz (with high priority), 31.8-33.4 GHz and 37-40.5 GHz listed in Resolution **238 (WRC-15)**.

APT Members are of the view that studies in certain WRC-19 agenda items do not preclude discussions on the use of same frequency bands under other agenda items and the usage of service in certain frequency bands should be decided in accordance with national circumstance and sovereignty. Therefore, APT Members do not recognize difficulties related to these overlapping issues.”

### **3.1.3 Iran (Islamic Republic of) - Document APG19-3/**[**INP-29(Rev.1)**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-29Rev.1_IRN_WP2.docx)

* This administration support ITU-R studies on sharing and compatibility studies in accordance with Resolution **238 (WRC-15)**. It is important for these sharing and compatibility studies to take into account protection of services to which the band is allocated on a primary basis.
* Since the spectrum needs of various administrations are widely different in various frequency bands, this administration supports flexible regulatory methods and technical possibilities in CPM text to enable administrations in fulfilling their national objectives.
* For the frequency bands overlapping with agenda items **1.6**, **1.14** and issue **9** of agenda item **9.1**, the detailed sharing and compatibility studies with IMT systems (under primary mobile service) is required to be conducted by relevant Working Parties to provide suitable regulatory framework and technical conditions.

### **3.1.4 New Zealand - Document APG19-3/**[**INP-35**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-35_New_Zealand_WP2_0.docx)

New Zealand supports the studies to be conducted by ITU-R Task Group 5/1. Considering that IMT-2020 would cover deployment in both indoor and outdoor environments, the identification of lower, rather than higher frequency bands is preferred from the propagation characteristics perspective.

New Zealand has a preference toward considering the frequency bands 24.25-27.5 GHz, 31.8-33.4 GHz and portions of 40.5-43.5 GHz as possible candidate bands to satisfy this agenda item. New Zealand is also open to consider other feasible candidate bands if there are other suitable frequency ranges being supported more broadly on a global, regional or sub-regional basis.

### **3.1.5 Australia - Document APG19-3/**[**INP-42**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-42_Australia_WP2.docx)

Australia supports the consideration of additional frequency bands for International Mobile Telecommunications (IMT), including possible additional mobile allocations on a primary basis, in accordance with Resolution **238 (WRC-15)**.

Australia supports ITU-R sharing and compatibility studies of frequency bands defined in Resolution **238 (WRC-15)** and where necessary adjacent frequency bands, in order to inform decisions on potential new IMT identifications and primary mobile allocations. A key element of these studies is to ensure incumbent allocated services are adequately protected.

Australia does not oppose consideration of any of the bands defined in Resolution **238 (WRC-15)**.

Based on current studies, Australia believes that some or all of the 24.25-27.5 GHz band is likely to be a suitable candidate for an IMT identification. Australia will monitor ongoing studies on this band and will revise its opinion on this band as necessary.

Australia is also interested in investigating the possibility of an IMT identification in some or all of the 37-43.5 GHz and 66-76 GHz bands.

### **3.1.6 Japan - Document APG19-3/**[**INP-50**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-50_Japan_WP2.docx)

Japan supports global or regional identification of frequency bands for IMT among those bands listed in *resolves to invite ITU-R* 2 of Resolution **238 (WRC-15)** taking into account the following aspects:

* Protection of the incumbent services in these frequency bands should be established appropriately based on the results of sharing and compatibility studies. Thus, these studies should be actively conducted by ITU-R, in particular, for the frequency bands 24.25-27.5 GHz, 31.8-33.4 GHz, 37-40.5 GHz, 40.5-42.5 GHz and 42.5-43.5 GHz.
* The results of studies on spectrum needs for the terrestrial component of IMT in the frequency range 24.25-86 GHz should be taken into account.
* Other WRC-19 agenda items with overlapping frequency bands should be considered.

### **3.1.7 Thailand - Document APG19-3/**[**INP-60(Rev.1)**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-60Rev.1_Thailand_WP2.docx)

Thailand supports ITU-R studies on spectrum needs for the terrestrial component of IMT and sharing and compatibility studies in accordance with Resolution **238 (WRC-15)** and also supports the consideration of additional frequency bands for IMT, including possible additional mobile allocations on a primary basis.

### **3.1.8 Singapore - Document APG19-3/**[**INP-66**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-66_Singapore_WP2_0.docx)

Singapore continues to support sharing and compatibility studies for frequency bands in the frequency range between 24.25 GHz and 86 GHz, in accordance with Resolution **238 (WRC-15)**.

With respect to the key point raised in APG19-2 on prioritisation of frequency bands, Singapore is of the view that frequency bands below 43.5GHz should be prioritised for sharing and compatibility studies mentioned in Resolution **238 (WRC-15)**.

### **3.1.9 Malaysia - Document APG19-3/**[**INP-75**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-75_Malaysia_WP2.docx)

In Malaysia, the band 27.0-27.5 GHz is currently used for Fixed Satellite Service (FSS).

Malaysia is of the view that the band of 24.25-27.50 GHz can be considered as a possible candidate band for IMT provided studies conducted by ITU-R TG 5/1 show that sharing and compatibility with FSS are feasible.

### **3.1.10 Socialist Republic of Viet Nam - Document APG19-3/**[**INP-83**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-83_Vietnam_WP2.docx)

Viet Nam supports sharing and compatibility studies for the bands listed in Resolves 2 of Resolution **238,** with the focus on the frequency bands 24.25-27.5 GHz, 31.8-33.4GHz; 37-40.5 GHz, 40.5-42.5 GHz and 42.5- 43.5 GHz, firstly.

Viet Nam supports frequency bands 24.25 – 27.5 GHz listed in Resolution **238 (WRC-15)**.

### **3.1.11 China (People’s Republic of) - Document APG19-3/**[**INP-87**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-87_China_WP2_0.docx)

1. China supports to seek global or regional harmonized frequency bands for IMT under the WRC-19 AI 1.13 framework.
2. China supports APT to formulate preliminary common views as early as possible subject to discussion and agreement, and to actively harmonize with other regional groups.
3. China has been conducting studies on frequency bands including 24.75-27.5 GHz and 37-42.5 GHz. If sharing with relevant radio services is feasible, China supports identification of these frequency bands to IMT.
4. China is also considering to identify the frequency bands above 43.5GHz especially 66-71GHz, 71-76 GHz and 81-86 GHz under AI 1.13 for IMT towards WRC-19, if sharing with relevant radio services is feasible depending on needs.

### **3.1.12 Bangladesh - Document APG19-3/**[**INP-97(Rev.1)**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INP-97Rev.1_BGD_WP2.docx)

Bangladesh supports the consideration of additional frequency bands for International Mobile Telecommunications (IMT), including possible additional mobile allocations on a primary basis, in accordance with Resolution **238 (WRC-15).** Bangladesh prefers 24.25-27.5 GHz, 31.8-33.4 GHz and also supports sharing and compatibility studies taking into account the protection of incumbent allocated services to support other bands identified globally or regionally for additional frequency bands as IMT.

### **3.1.13 Lao People's Democratic Republic**

With respect to the key point raised during the APG19-2 meeting with the prioritization of the frequency bands for sharing and compatibility study mentioned in resolution in Resolution **238 (WRC-15)**, at this point of time, the Administration of Laos would like to support to prioritize the band 24.25 – 27.5 GHz.

## 3.2 Summary of issues raised during the meeting

### **3.2.1 Prioritization of the frequency bands mentioned in Resolution 238 (WRC-15)**

At the APG19-3 meeting, some APT Members provided preliminary views on prioritization of the frequency bands for sharing and compatibility studies.

Furthermore, some APT Members provided preliminary views on prioritization of the frequency bands for potential IMT identification. These views were summarized in Table 1 below. Some other APT Members did not share the same view due to the fact that it would be premature to discuss potential IMT identification at this point of time as the studies in ITU-R are still on-going.

As shown in this table, some APT Members are prioritizing the frequency bands below 43.5 GHz for finalization of sharing and compatibility studies at the May 2018 meeting of ITU-R Task Group 5/1 and/or potential IMT identification. It should be noted that some APT Members are also interested in investigating the possibility of IMT identification in the frequency bands above 45.5 GHz (e.g., 66-71 GHz, 71-76 GHz and 81-86 GHz) if sharing and compatibility with incumbent applications is feasible and broad supports exist on a global, regional or sub-regional basis in those frequency bands.

It was agreed to continue this prioritization discussion at future meetings of APG-19 with a view to finalize APT views on the identification process, taking into account results of studies to be completed by ITU-R. Formulating APT views on the prioritization of frequency bands for potential IMT identification is essential towards WRC-19.

Table 1: Preliminary views from some APT Members on prioritization of the frequency bands

|  |  |
| --- | --- |
| Symbol | Definition |
| S | Support sharing and compatibility studies with priority |
| X | Support potential IMT identification with priority if sharing is feasible under the framework of agenda item 1.13 |
| I | Support potential IMT identification with priority under the framework of agenda item 1.13 based on internal sharing and compatibility studies in their countries and interim results of sharing and compatibility studies by ITU-R to be completed by August 2018 |

|  | Frequency bands (GHz) mentioned in Resolution **238 (WRC-15)** | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 24.25-27.5 | 31.8-33.4 | 37-40.5 | 40.5-42.5 | 42.5-43.5 | 45.5-47 | 47-47.2 | 47.2-50.2 | 50.4-52.6 | 66-71 | 71-76 | 81-86 |
| IND | S | S | S |  |  |  |  |  |  |  |  |  |
| KOR | I | I | I |  |  |  |  |  |  |  |  |  |
| NZL | X | X |  | X | X |  |  |  |  |  |  |  |
| AUS(1) | S |  | S | S | S |  |  |  |  | S | S |  |
| J | S | S | S | S | S |  |  |  |  |  |  |  |
| SNG | S | S | S | S | S |  |  |  |  |  |  |  |
| MLA | X |  |  |  |  |  |  |  |  |  |  |  |
| VTN | I | S | S | S | S |  |  |  |  |  |  |  |
| CHN(2) | X(3) |  | X | X |  |  |  |  |  | X | X | X |
| BGD | X | X |  |  |  |  |  |  |  |  |  |  |
| LAO | S |  |  |  |  |  |  |  |  |  |  |  |

NOTE:

(1) Australia believes that some or all of the 24.25-27.5 GHz band is likely to be a suitable candidate for an IMT identification. Australia is also interested in investigating the possibility of an IMT identification in some or all of the 37-43.5 GHz and 66-76 GHz bands.

(2) China supports identification of the frequency bands 24.75-27.5 GHz and 37-42.5 GHz to IMT if sharing with relevant radio services is feasible. China is also considering to identify the frequency bands above 43.5GHz especially 66-71GHz, 71-76 GHz and 81-86 GHz for IMT towards WRC-19, if sharing with relevant radio services is feasible depending on needs.

(3) 24.75-27.5 GHz

### **3.2.2 WRC-19 agenda items with overlapping frequency bands**

Several frequency bands under study in agenda item 1.13 are also under study in other agenda items as shown in Table 2 below.

Regarding these certain degrees of overlapping of the frequency bands, after some discussion in the APG19-3 meeting, it was felt appropriate that this issue would be handled by WRC-19, based on proposals submitted to the conference, discussions on these agenda items and decisions on use of each frequency band mentioned in Resolution **238 (WRC-15)**.

Table 2: Overlapping frequency bands under different WRC-19 agenda items

|  |  |  |  |
| --- | --- | --- | --- |
| **1.13 IMT**  Res. **238 (WRC-15)**  Frequencies in GHz (TG 5/1) | **1.6 NGSO FSS** Res. **159 (WRC-15)**  Frequencies in GHz (WP 4A) | **1.14 HAPS**  Res. **160 (WRC-15)**  Frequencies in GHz (WP 5C) | **9.1 (issue 9.1.9) FSS** Res. **162 (WRC-15)** Frequencies in GHz (WP 4A) |
| 24.25-27.5 | - | 24.25-27.5 (Region 2) | - |
| 37-40.5 | 37.5-39.5 (s-E\*) | 38‑39.5 (globally) | - |
| 40.5-42.5 | 39.5-42.5 (s-E\*) | - | - |
| 47.2-50.2 | 47.2-50.2 (E-s\*) | - | - |
| 50.4-52.6 | 50.4-51.4 (E-s\*) | - | 51.4-52.4 (E-s\*) |
| \* E-s: Earth-to-space; s-E: space-to-Earth. | | | |

### **3.2.3 Issue observed by APT Members in ITU-R studies**

The sharing and compatibility studies by ITU-R Task Group 5/1 have not been completed yet, and the results of these studies need to be further analysed and reconciled as different assumptions, criteria, parameters, etc. may be employed in different studies. This situation would make it difficult to compare the results in order to obtain overall conclusions of studies carried out in a given frequency band.

Furthermore, ITU-R Working Party 5D initiated developing a new ITU-R Report on the advanced antenna system (AAS) pattern model for use in sharing and compatibility studies between IMT-2020 systems and systems in other services. The initial focus of the work is on the adjacent frequency-band antenna pattern. Results of this work may impact on analysis of the results of sharing and compatibility studies between IMT and the passive services in the adjacent frequency band being undertaken by ITU-R Task Group 5/1.

APT Members are encouraged to contribute to these ITU-R studies in Task Group 5/1 and WP 5D.

# 4. APT Preliminary View(s)

APT Members support the consideration of additional frequency bands for International Mobile Telecommunications (IMT), including possible additional mobile allocations on a primary basis, in accordance with Resolution **238 (WRC-15)**.

APT Members also support ITU-R studies on spectrum needs for the terrestrial component of IMT and sharing and compatibility studies in accordance with Resolution **238 (WRC-15)**. It is important for these sharing and compatibility studies to take into account protection of services to which the band is allocated on a primary basis.

Subject to satisfactory results of sharing and compatibility studies, APT Members have a preference in prioritizing considerations for IMT identification in the 24.25-27.5 GHz frequency band or portions thereof.

Regarding the overlapping issue of the frequency bands within the scope of agenda item 1.13 associated with Resolution **238 (WRC-15)** and those within the scope of agenda items 1.6, 1.14 and 9.1 (issue 9.1.9), APT Members are of the view that this issue would be handled by WRC-19 based on proposals submitted to the conference, discussion on these agenda items and WRC-19’s decision on use of each frequency band mentioned in the corresponding Resolutions.

# 5. Other View(s) from APT Members

In addition to the APT preliminary views mentioned above, subject to satisfactory results of sharing and compatibility studies, some APT Members have a preference in prioritizing considerations for IMT identification in the 31.8-33.4 GHz and/or 37-43.5 GHz frequency bands or portions thereof.

Subject to satisfactory results of sharing and compatibility studies, some APT Members are also considering other candidate bands above 43.5 GHz, such as, the 66-71 GHz, 71-76 GHz and 81-86 GHz frequency bands or portions thereof.

# 6. Issues for Consideration at Next APG Meeting

* Prioritization of considerations of frequency bands for IMT identification
* Updating APT preliminary views

# 7. Views from Other Organisations

## 7.1 Regional Groups

### **7.1.1 ASMG - Document APG19-2/**[**INF-01**](https://www.apt.int/sites/default/files/2017/05/APG19-2-INF-01_Status_of_Preparation_of_Regional_Groups.docx)

Support initiating studies in the frequency bands listed below, which are included in Resolution **238 (WRC-15)**:

* 24.25 - 27.5 GHz
* 31.8 - 33.4 GHz
* 40.5 - 42.5 GHz
* 42.5 - 43.5 GHz

Not supporting discussing any study or contribution on the frequency bands which are not included in Resolution **238 (WRC-15)** in the work of Task Group 5/1 (TG 5/1).

### **7.1.2 ATU - Document APG19-2/**[**INF-07**](https://www.apt.int/sites/default/files/2017/07/APG19-2-INF-07_ATU.docx)

The 1st African Preparatory meeting for the World Radiocommunication Conference 2019 (APM19-1) considered that there is no prioritization of the bands at this early stage. Possible prioritization to be undertaken after sufficient studies and assessment has been carried out.

APM19-1 invited Administrations to respond to the questionnaire on spectrum needs for IMT under this agenda item issued by WP 5D to gather information on views of different countries and submit contribution on this matter to the said WP 5D.

### **7.1.3 CEPT - Document APG19-3/**[**INF-06**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INF-07_APG_VC_Undue.docx)

CEPT supports the results of the ITU-R studies on IMT spectrum needs in the range 24.25-86 GHz. CEPT supports sharing and compatibility studies for the bands listed in Resolves 2 of Resolution 238 (24.25-27.5 GHz, 31.8-33.4 GHz, 37-43.5 GHz, 45.5-50.2 GHz, 50.4-52.6 GHz, 66-76 GHz and 81-86 GHz), with the focus on the frequency bands 24.25-27.5 GHz, 40.5-43.5 GHz and 66-71 GHz.

CEPT supports the identification of global bands for IMT among the bands listed in resolves to invite ITU R 2 of Resolution 238, taking into account the results of sharing and compatibility studies with existing services. Bands outside those listed in resolves to invite ITU-R 2 of Resolution 238 are not supported for consideration under this Agenda item.

* CEPT intends to harmonise the 24.25-27.5 GHz band for Europe for 5G before WRC-19 through the adoption of a harmonisation decision and to promote it for worldwide harmonisation by an IMT identification. Hence the 24.25-27.5 GHz is a clear priority for immediate study within CEPT and these studies are assuming an individual authorisation regime. Studies need to take into account the compatibility with and protection of all existing services, including their future deployments, in the same and adjacent frequency bands; in particular the protection of current and future EESS/SRS earth stations should be addressed.

Note: CEPT has developed a Roadmap on 5G (<http://cept.org/ecc/topics/spectrum-for-wireless-broadband-5g#roadmap>). In this respect it is noted that “Europe has harmonised the 27.5-29.5 GHz band for broadband satellite and is supportive of the worldwide use of this band for ESIM. This band is therefore not available for 5G”.

### **7.1.4 CITEL - Document APG19-3/**[**INF-08(Rev.1)**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INF-08Rev.1_CITEL_Preparation.pdf)

Preliminary views from several countries support studies to consider regional/global harmonization approaches for the frequency bands under study; one country views bands below 43.5 GHz as providing good opportunities for harmonization.

### **7.1.5 RCC - Document APG19-2/**[**INF-05**](https://www.apt.int/sites/default/files/2017/07/APG19-2-INF-05_RCC.docx)

The RCC Administrations support identification of frequency bands for future development of IMT, including possible additional allocations to the mobile service on a primary basis, in separate bands in the frequency band 24.25-86 GHz in accordance with Resolution **238 (WRC-15)**.

The RCC Administrations consider that when developing technical conditions and regulatory provisions for the allocation of frequency bands to the MS and their identification for IMT it is necessary to ensure protection of other services having allocation in the considered and adjacent frequency bands taking into account the need in their development.

The RCC Administrations consider it is reasonable to perform studies on IMT system compatibility first of all in the frequency bands 24.25 – 27.5 GHz, 31.8 – 33.4 GHz, 40.5 – 42.5 GHz and 66 – 71 GHz, where global harmonization could be achieved.

The RCC Administrations consider that during studies on agenda items 1.6 (non-GSO FSS), 1.13 (IMT), 1.14 (HAPS) and 9.1 (Issue 9.1.9, Resolution **162 (WRC-15)**), it would be reasonable to identify priority and non-overlapping frequency bands for each of these items.

## 7.2 International Organisations

### **7.2.1 IARU - Document APG19-3/**[**INF-09**](https://www.apt.int/sites/default/files/2018/03/APG19-3-INF-09_IARU_INF.DOCX)

The IARU is of the view that the spectrum requirements identified for IMT in the frequency range between 24.25 GHz and 86 GHz can be fully met in the frequency bands that are already allocated to the mobile service on a primary basis and do not justify the allocation of 47.0-47.2 GHz to the mobile service. Therefore the IARU opposes additional allocations in this band to other services, including the mobile service. If either or both of the bands that are adjacent to 47.0-47.2 GHz are identified for the terrestrial component of IMT, suitable emission limits must be included in order to ensure the protection of existing and future amateur and amateur-satellite stations in the 47.0-47.2 GHz band. The IARU is further of the view that any allocation to IMT in the frequency range 24.25-27.5 GHz shall include full consideration and protection for the amateur and amateur-satellite service’s primary allocation at 24-24.05 GHz.

### **7.2.2 ICAO - Document APG19-2/**[**INF-02**](https://www.apt.int/sites/default/files/2017/07/APG19-2-INF-02_ICAO.docx)

To oppose any identification of a frequency band for IMT that could impact aviation systems, within a new or existing allocation to the mobile service in the frequency range 24.25 to 86 GHz, unless agreed ITU-R studies demonstrate no adverse impact to those systems.

\_\_\_\_\_\_\_\_\_\_\_\_

1. Please note that the term ‘Issues/issues’ should not be confused with Issues in WRC-19 Agenda Items 7 and 9. [↑](#footnote-ref-1)
2. When conducting studies in the band 24.5-27.5 GHz, to take into account the need to ensure the protection of existing earth stations and the deployment of future receiving earth stations under the EESS (space-to-Earth) and SRS (space-to-Earth) allocation in the frequency band 25.5-27 GHz. [↑](#footnote-ref-2)