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| APTlogogreen3 | ASIA-PACIFIC TELECOMMUNITY | **Document:** |
| **The 2nd Meeting of the APT Conference Preparatory Group for WRC-19 (APG19-2)** | **APG19-2/OUT-23 (Rev.1)** |
| 17 – 21 July 2017, Bali, Republic of Indonesia | **21 July 2017** |

Working Party 2

**preliminary views on WRC-19 agenda item 1.13**

**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

WRC-19 agenda item 1.13 is 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)** “*Studies on frequency-related matters for International Mobile Telecommunications identification including possible additional allocations to the mobile services on a primary basis in portion(s) of the frequency range between 24.25 and 86 GHz for the future development of International Mobile Telecommunications for 2020 and beyond*”.

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[[1]](#footnote-1), 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 [5-1/92](https://www.itu.int/md/R15-TG5.1-C-0092/en)). With respect to the sharing and compatibility studies, the working documents are available in the Chairman’s Report for the 2nd meeting of TG 5/1 (Annexes 3-11 to Document [5-1/92](https://www.itu.int/md/R15-TG5.1-C-0092/en)).

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

# 2. Documents

* Input Documents: APG19-2/INP-[07](http://www.apt.int/sites/default/files/2017/05/APG19-2-INP-07_LS_from_AWG.docx) (AWG), [09](http://www.apt.int/sites/default/files/2017/07/APG19-2-INP-09_KOR-WP2.docx) (KOR), [17](http://www.apt.int/sites/default/files/2017/07/APG19-2-INP-17_SNG_AI1.13.docx) (SNG), [21](http://www.apt.int/sites/default/files/2017/07/APG19-2-INP-21_NZL_WP2.docx) (NZL), [29](http://www.apt.int/sites/default/files/2017/07/APG19-2-INP-29_AUS_WP2_0.docx) (AUS), [35](http://www.apt.int/sites/default/files/2017/07/APG19-2-INP-35_IRN_WP2.docx) (IRN), [40](http://www.apt.int/sites/default/files/2017/07/APG19-2-INP-40_INS_WP2.docx) (INS), [45](http://www.apt.int/sites/default/files/2017/07/APG19-2-INP-45_VTN_WP2.docx) (VTN), [50](http://www.apt.int/sites/default/files/2017/07/APG19-2-INP-50_CHN_WP2.docx) (CHN), [56](http://www.apt.int/sites/default/files/2017/07/APG19-2-INP-56_J_WP2.docx) (J)
* Information Documents: APG19-2/INF-[01](http://www.apt.int/sites/default/files/2017/05/APG19-2-INF-01_Status_of_Preparation_of_Regional_Groups.docx) (Chairman, APG-19), [02](http://www.apt.int/sites/default/files/2017/07/APG19-2-INF-02_ICAO.docx) (ICAO), [04](http://www.apt.int/sites/default/files/2017/07/APG19-2-INF-04_CITEL_Preparation.pdf) (CITEL), [05](http://www.apt.int/sites/default/files/2017/07/APG19-2-INF-05_RCC.docx) (RCC), [06](http://www.apt.int/sites/default/files/2017/07/APG19-2-INF-06_IARU_0.docx) (IARU), [07](http://www.apt.int/sites/default/files/2017/07/APG19-2-INF-07_ATU.docx) (ATU), [08](http://www.apt.int/sites/default/files/2017/07/APG19-2-INF-08_GSMA_position_on_AI1.13.docx) (GSMA), [09](http://www.apt.int/sites/default/files/2017/07/APG19-2-INF-09_Multi_Affiliates_Views.docx) (Ericsson, et al.), [14](http://www.apt.int/sites/default/files/2017/07/APG19-2-INF-14_CEPT_Preparation_for_WRC-19.pdf) (CEPT)

# 3. Summary of Discussions

## 3.1 Summary of Members’ view

### 3.1.1 Australia

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.

### 3.1.2 China (People’s Republic of)

China’s preliminary views are as follows:

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 ITU-R regions.
3. China has been conducting studies on frequency bands including 24.75-27.5GHz 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 under AI 1.13 for IMT towards WRC-19, if sharing with relevant radio services is feasible depending on needs.
5. The view on AI 1.13 should coordinate with the views on other AIs which have overlapped frequency bands (AI 1.6 / 1.14 / 9.1.9).

### 3.1.3 Indonesia (Republic of)

Indonesia is of the view to support identification of frequency bands for future development of IMT, including possible additional allocations to the mobile service on a primary basis, in the frequency bands 24.25 - 86 GHz in accordance with Resolution **238 (WRC-15)**. Indonesia support appropriate sharing and compatibility studies under Agenda Item 1.13 in the bands:

* + 24.25-27.5 GHz, 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.

### 3.1.4 Iran (Islamic Republic of)

Considering the explanation in Document APG19-2/[35](http://www.apt.int/sites/default/files/2017/07/APG19-2-INP-35_IRN_WP2.docx) and with the aim of facilitating APG work in efficient compilation of submitted contributions under agenda item 1.13, Iran proposes to invite member administrations to prepare their spectrum needs for each of frequency bands listed in the Resolution **238 (WRC-15)**, similar to what had been down already for preparation of APG work for agenda item 1.1 of WRC-15.

Moreover, Iran supports ITU-R studies and is in view of:

a) that any identification of frequency bands for IMT should take into account the use of the bands by other services and the evolving needs of these services;

b) that there should be no additional regulatory or technical constraints imposed to services to which the band is currently allocated on a primary basis.

Based on the ongoing activities in the ITU-R and studies being carried out, the above preliminary views may be updated, modified as well as amended.

### 3.1.5 Japan

Japan supports studies on spectrum needs for the terrestrial component of IMT in the frequency range 24.25-86 GHz and sharing and compatibility studies in accordance with Resolution **238 (WRC-15)**.

Japan is of the view that it would be efficient for ITU-R to perform the sharing and compatibility studies from the lower part of the frequency bands listed in *resolves to invite ITU-R* 2 of Resolution **238 (WRC-15)**, i.e., 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, firstly. This is because more difficult discussions in ITU-R would be expected in the lower part of frequency bands with respect to the sharing and compatibility studies with incumbent services to which these bands are allocated, and it would take more time to conclude the studies.

Taking into account the results of studies on spectrum needs for IMT, 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)**, provided that sharing between IMT and incumbent services in these frequency bands are considered to be feasible.

### 3.1.6 Korea (Republic of)

The Republic of Korea strongly supports frequency bands 24.25 – 27.5 GHz, 31.8 – 33.4 GHz and 37 – 40.5 GHz listed in Resolution **238 (WRC-15)**.

And the Republic of Korea proposes to the APG19-2 that:

* APT Members should prioritize, as early as possible, which frequency ranges/bands listed in AI 1.13 could be supported, in order to facilitate discussions within APG meetings and to harmonize with other regional preparatory groups for WRC-19, taking into account the proposed workplan in Attachment 1 to this contribution.

APG19-2 should send a response liaison statement to AWG on the basis of Attachment 2 to this contribution, in order for AWG to provide further information on its ongoing study status and progress continuously in terms of WRC-19 AI 1.13 appropriately.

### 3.1.7 New Zealand

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.

### 3.1.8 Singapore (Republic of)

Currently, there are no incumbent users in Singapore for any of the frequency bands that have been identified for studies for future IMT development. Singapore has also noted that there is an evident interest and industry preference for the lower frequency bands below 43.5GHz studied under Agenda Item 1.13. However, keeping in mind that we are still in the early stages of preparation for WRC-19, Singapore would like to support ITU-R studies to determine the spectrum needs for the terrestrial component of IMT in the frequency range between 24.25 GHz and 86 GHz.

In addition, Singapore would like to support sharing and compatibility studies for frequency bands 24.25 – 27.5 GHz, 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. It is important for these studies to take into account the protection of services to which the band is allocated on a primary basis. This includes keeping the existing satellite earth stations in these bands from undue interference given the importance of the traffic that is carried and the benefits that satellite connectivity provides to businesses, consumers and government. Satellite operations represent considerable investment to support high value contracts of lengthy duration and any harmful interference to these operations should be avoided.

### 3.1.9 Viet Nam (Socialist Republic of)

The development of new mobile generation has taken up most of the below 6 GHz planned bands for IMT. It is necessary to seek new higher bands to identify for IMT, especially, for systems requiring large bandwidth.

Viet Nam Administration supports studies being undertaken by ITU-R on this issue and is of the view that:

* Support study of spectrum needs for IMT to meet the high demand of mobile broadband systems.
* Support study of sharing and compatibility conditions, taking into account the protection of services (incumbent systems) in the frequency bands known as the candidate bands.
* Support the band 24.25-27.5 MHz if sharing and compatibility conditions are applicable.

## 3.2 Key points raised during the meeting

**(1) Prioritization of the frequency bands for sharing and compatibility studies mentioned in Resolution 238 (WRC-15)**

At the 2nd meeting of APG-19, some APT Members provided preliminary views on support of studies on the frequency bands by ITU-R with priority under WRC-19 agenda item 1.13. These views are summarized in Table 1 below. Taking into account progress of the studies in ITU-R and further inputs from APT Members, the APG19-3 and subsequent meetings will elaborate the ideas on prioritization under the framework of WRC-19 agenda item 1.13.

Table 1: Preliminary views from some APT Members on frequency bands   
which should be studied with priority

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 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 | 66-76 | 81-86 |
| CHN | X1 |  | X | X |  |  |  |  |  |  |  |
| J | X | X | X | X | X |  |  |  |  |  |  |
| KOR | X | X | X |  |  |  |  |  |  |  |  |
| NZL | X | X |  | X | X |  |  |  |  |  |  |
| VTN | X |  |  |  |  |  |  |  |  |  |  |

NOTE 1: 24.75-27.5GHz

**(2) Considerations on spectrum needs for IMT between 24.25-86 GHz range in APT**

APG19-2 discussed a proposal which invited APT Members to prepare their spectrum needs for each of the frequency bands listed in the Resolution **238 (WRC-15)**. After the discussion, it was agreed that, considering acceleration of the process and wider reception, rather than initiating new studies in APT, APT Members were encouraged to contribute to ITU-R WP 5D through providing their responses to the questionnaire (See Attachment 4.17 to Document [5D/374](https://www.itu.int/md/R15-WP5D-C-0374/en)). The summary of responses from other countries is available in Attachment 4.18 to Document [5D/530](https://www.itu.int/md/R15-WP5D-C-0374/en). The next WP 5D meeting is scheduled in 3-11 October, 2017 (the deadline for contributions is 26 September 2017, 16:00 hours UTC).

**(3) Overlap with other agenda items**

Several frequency bands under study in WRC-19 agenda item 1.13 are also under study under other WRC-19 agenda items. CPM19-1, in Circular [CA/226](https://www.itu.int/md/R00-CA-CIR-0226/en), asked the responsible groups in ITU-R to take this fact into account during their studies.

APG 19-2 did not receive any input documents to address this issue. It was agreed to discuss this issue further at the future APG-19 meetings based on input contributions from APT Members.

Table 2: Overlaps of frequency bands among different WRC-19 agenda items

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

# 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.

# 5. Other Views

None

# 6. Views from Other Organisations

## 6.1 CEPT

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, 31.8-33.4 GHz and 40.5-43.5 GHz. In addition, CEPT considers the band 66-71 GHz under this AI

* + 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. 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.

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 AI.

Note: CEPT has developed a roadmap on 5G (<http://cept.org/ecc/topics/spectrum-forwireless-broadband-5g#roadmap>). In this respect it is noted that “Europe has harmonized 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”.

Document APG19-2/[INF-14](http://www.apt.int/sites/default/files/2017/07/APG19-2-INF-14_CEPT_Preparation_for_WRC-19.pdf) provided the CEPT’s considerations on the possible issue regarding the overlap of bands between agenda items of WRC-19.

## 6.2 RCC

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.

## 6.3 ATU

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.

## 6.4 ASMG

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).

## 6.5 CITEL

The PRELIMINARY VIEWS (PV): an informal statement that the Administration is considering possible Preliminary Proposals on specific themes, were provided from Brazil, USA, Columbia, and Mexico.

**Brazil**

Agenda Item 1.13 is key to the future development of IMT systems for the delivery of IMT‐2020 services. The aim of IMT‐2020 is to create a more ‘hyper connected’ society by more comprehensively, and intelligently, integrating LTE, Wi‐Fi and cellular IoT technologies, together with at least one new IMT‐2020 radio interface. This will allow mobile networks to dynamically allocate resources to support the varying needs of a diverse set of connections – ranging from industrial machinery in factories, to automated vehicles as well as smartphones. A central component in the evolution of all mobile technology generations has been the use of increasingly wide frequency bands to support higher speeds and larger amounts of traffic. IMT‐2020 is no different, ultra‐fast IMT‐2020 services will require large amounts of spectrum including above 24 GHz where wide bandwidths are more readily available. Spectrum above 24 GHz is well recognized worldwide as being the key component for the data intensive IMT‐2020 services. Without them, IMT‐2020 won’t be able to deliver significantly faster data speeds or support projected extensive mobile traffic growth.

With that in mind, we support appropriate sharing and compatibility studies under Agenda Item 1.13 in the bands 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. Such studies should consider that the significant extra capacity of IMT‐2020 systems will need to be perfectly integrated with heterogenous networks, including fibre, satellite and microwave systems, taking into account their specific benefits which are crucial to developing countries

**USA**

Support studies under WRC‐19 agenda item 1.13 and take appropriate action based on the results of these sharing and compatibility studies in accordance with Resolution 238 in the following bands:

24.25‐27.5 GHz, 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.

**Colombia**

While all bands remain suitable for identification at this stage, Colombia would like to make the following observations regarding the lower portions of the range, from 24.25 GHz to 43.5 GHz:

•Responses received until the previous meeting of CCP.II to the questionnaire show that, except for a few cases, there are either no services licensed in these bands or the services belong to the fixed service category. When they belong to other service categories (such as FSS), most of them occupy a relatively small (500MHz or less) bandwidth with-respect-to the total range being considered for study (e.g. 3.25 GHz for 24.25GHz – 27.5GHz).

•Other regions initiated discussions on suitable bands among the lists of candidate bands. As an example, Europe ([2], [3]) identified the 24.25 GHz – 27.5 GHz as a “pioneer band”, while other bands up to 43.5 GHz have been positively considered. With the view of seeking not only regional but global frequency harmonization to the possible extent, it is positive to take under consideration activities of other regions.

•The lower portions of the range would provide comparatively more suitable propagation characteristics for deployment compared to the upper portions, considering that some installations could cover outdoor and indoor environments with some Non-Line-of-Sight (NLoS) situations. Based on the considerations above, Colombia is of the initial view that the lower portions of the frequency range (from 24.25 GHz to 43.5 GHz) provide good opportunities in terms of availability, technical performance and potential for global harmonization. Colombia would like to invite other members to consider this initial view for consideration and collaboration towards a regional (and possibly global) harmonization of the frequency bands.

**Mexico**

Regional harmonization for this item on the agenda should consider similar approaches in terms of allocations and plans for the radio spectrum, in order to favor cost reduction and encourage the development of a sustainable ecosystem for the deployment of IMT systems.

A public survey is currently being prepared in Mexico to identify the IMT spectrum requirements from 24.25 GHz to 86 GHz. To this end, we plan to study the discussions and documents issued by the different working groups of both the International Telecommunication Union (ITU) and CITEL regarding regional and global spectral requirements for IMT at the frequencies of 24.25 to 86 GHz.

For this reason, we deem it necessary to conduct, in the best terms possible, the planned studies on sharing and compatibility in the bands agreed on through Resolution 238 (WRC-15), i.e., the segments of 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, in order for the CITEL administrations to make better, more fully-grounded decisions to achieve regional or global harmonization for the future development of IMT-2020 systems.

## 6.6 ICAO

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.

## 6.7 IARU

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. Therefor 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. Issues for Consideration at Next APG Meeting

APT Members are invited to provide contributions to address, *inter alia*, the following items to facilitate the activities within APG:

* updates of APT Preliminary Views,
* prioritization of the frequency bands for sharing and compatibility studies taking into account progress in the ITU-R studies, which plan to be finalized at the 5th meeting of TG 5/1 scheduled in May 2018,
* views on how to address frequency bands overlap among different WRC-19 agenda items with regard to agenda item 1.13.

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

1. 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-1)