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| **The 4th Meeting of the APT Conference Preparatory****Group for WRC-23 (APG23-4)** | **APG23-4/OUT-08** |
| 15 – 20 August 2022, Bangkok, Thailand | 20 August 2022 |

Working Party 1

**PRELIMINARY VIEWs on WRC-23 agenda item 1.4**

**Agenda Item 1.4:**

*to consider, in accordance with Resolution* ***247 (WRC-19)****, the use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level;*

**1. Background**

This Agenda Item was initiated by APT ([24A24-A4](https://www.itu.int/dms_pub/itu-r/md/16/wrc19/c/R16-WRC19-C-0024%21A24-A4%21MSW-E.docx)), ATU ([46A24-A8](https://www.itu.int/dms_ties/itu-r/md/16/wrc19/c/R16-WRC19-C-0046%21A24-A8%21MSW-E.docx)), CITEL ([11A24-A2)](https://www.itu.int/dms_pub/itu-r/md/16/wrc19/c/R16-WRC19-C-0011%21A24-A2%21MSW-E.docx), and PNG ([67A24](https://www.itu.int/dms_pub/itu-r/md/16/wrc19/c/R16-WRC19-C-0067%21A24%21MSW-E.docx)) in WRC-19.

ITU-R WP 5D is the responsible group for the preparation of this agenda item in accordance with the results of CPM 23-1 (Doc. [CA/251](https://www.itu.int/dms_pub/itu-r/md/00/ca/cir/R00-CA-CIR-0251%21%21PDF-E.pdf)), and has been developing the following working documents ([5D/1361](https://www.itu.int/md/R19-WP5D-C-1361/en)):

* WD towards PDN Report ITU-R M.[HIBS-CHARACTERISTICS]/WD related to WRC-23 AI 1.4 (Annex [4.29](https://www.itu.int/dms_ties/itu-r/md/19/wp5d/c/R19-WP5D-C-1361%21H4-N4.29%21MSW-E.docx))
* WD towards sharing and compatibility studies of HIBS under WRC-23 agenda item 1.4 (Annexes [4.30](https://www.itu.int/dms_ties/itu-r/md/19/wp5d/c/R19-WP5D-C-1361%21H4-N4.30%21MSW-E.docx), [4.31](https://www.itu.int/dms_ties/itu-r/md/19/wp5d/c/R19-WP5D-C-1361%21H4-N4.31%21MSW-E.docx), [4.32](https://www.itu.int/dms_ties/itu-r/md/19/wp5d/c/R19-WP5D-C-1361%21H4-N4.32%21MSW-E.docx), [4.33](https://www.itu.int/dms_ties/itu-r/md/19/wp5d/c/R19-WP5D-C-1361%21H4-N4.33%21MSW-E.docx), [4.34](https://www.itu.int/dms_ties/itu-r/md/19/wp5d/c/R19-WP5D-C-1361%21H4-N4.34%21MSW-E.docx), and [4.35](https://www.itu.int/dms_ties/itu-r/md/19/wp5d/c/R19-WP5D-C-1361%21H4-N4.35%21MSW-E.docx))
* WD towards preliminary draft CPM text (Annex [4.28](https://www.itu.int/dms_ties/itu-r/md/19/wp5d/c/R19-WP5D-C-1361%21H4-N4.28%21MSW-E.docx))

WD towards preliminary draft CPM text was also updated at WP 5D#41 (June 2022). Section 3, which refers to the summary of results of studies, was developed in detail and would be further reviewed based on the relevant points resulting from the working document on sharing and compatibility studies. Section 4, a structure for the different methods was agreed as follows:

|  |  |
| --- | --- |
| Frequency range | Methods to satisfy the agenda item |
| 694-960 MHz | A1 | NOC |
| A2 | Identification for the use of HIBS |
| 1 710-1 885 MHz | B1 | NOC |
| B2 | Identification for the use of HIBS |
| 1 885-1 980 MHz,2 010-2 025 MHz,2 110-2 170 MHz | C1 | NOC |
| C2 | Review existing conditions for the use of HIBS |
| 2 500-2 690 MHz | D1 | NOC |
| D2 | Identification for the use of HIBS |

While Section 5 includes regulatory examples to satisfy the different methods, some notes were added to indicate areas where further discussion is needed.

**2. Documents**

* APG23-4/[INP-07](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-07_J-1_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1.C_and_RR_No.21.5.docx) (J), [INP-14](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-14_AUS_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1Topic_c_and_No21.5.docx) (AUS), [INP-19](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-19_BGD_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.2_1.4_and_9.1Topic_c.docx) (BGD), [INP-23](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-23_IRN_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_and_9.1Topic_c.docx) (IRN), [INP-34](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-34_KOR_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4__9.1Topic_c_and_No.21.5.docx) (KOR), [INP-40](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-40_China_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1Topic_c_and_No.21.5.docx) (CHN), [INP-45](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-45_Thailand_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.4_and_9.1Topic_c.docx) (THA), [INP-61](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-61_India_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.2_1.3_1.4_1.5_9.1Topic_c_and_No.21.5.docx) (IND), [INP-66](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-66Rev.1_MLA_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_and_1.4.docx)(Rev.1) (MLA), [INP-71](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-71_Nepal_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_and_1.4_0.docx) (NPL), [INP-73](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-73_Philippines_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_and_9.1Topic_c_0.docx) (PHL), [INP-74](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-74_VTN_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_and_1.5.docx) (VTN), [INP-80](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-80_Indonesia_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.2_and_1.4.docx) (INS)
* APG23-4/[INF-02](https://www.apt.int/sites/default/files/2022/07/APG23-4-INF-02_ATU_preparation.docx) (ATU), [INF-03](https://www.apt.int/sites/default/files/2022/07/APG23-4-INF-03_WMO_Positions.docx) (WMO), [INF-19](https://www.apt.int/sites/default/files/2022/08/APG23-4-INF-19_Brief_on_AI1.4.docx) (DG chair), [INF-21](https://www.apt.int/sites/default/files/2022/08/APG23-4-INF-21_ASMG_Preparation_for_WRC-23.pdf) (ASMG), [INF-28](https://www.apt.int/sites/default/files/2022/08/APG23-4-INF-28Rev.1_CITEL_Preparation_for_WRC-23.pdf)(Rev.1) (CITEL), [INF-44](https://www.apt.int/sites/default/files/2022/08/APG23-4-INF-44_Status_of_RCC_preparation_to_the_World_Radio_Conference_and_Radio_Assembly_2023.pdf) (RCC), [INF-48](https://www.apt.int/sites/default/files/2022/08/APG23-4-INF-48_Status_of_CEPT_preparation_for_WRC-23_and_RA-23.pdf) (CEPT)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 Japan - Document APG23-4/**[**INP-07**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-07_J-1_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1.C_and_RR_No.21.5.docx)

* Based on the results of the sharing and compatibility studies, Japan supports Methods A2, B2, C2 and D2 for each frequency band and the relevant regulatory conditions in the current working document towards the draft CPM text on WRC-23 agenda item 1.4 ([Annex 4.28 to 5D/1361](https://www.itu.int/dms_ties/itu-r/md/19/wp5d/c/R19-WP5D-C-1361%21H4-N4.28%21MSW-E.docx)), subject to ensuring the protection of the existing services, to which the frequency band is allocated on a primary basis, and adjacent bands, as appropriate, without adversely affecting in their deployment including other IMT uses, existing systems and the planned development of primary services. The methods and regulatory conditions supported by Japan are as shown in the embedded document below.

* 
* It should be noted that the above does not mean Japan supports only these regulatory conditions, and Japan will consider supporting additional protection conditions for other existing services or systems at the future APG-23 meetings based on the draft CPM text which will be finalized in the 42nd ITU-R WP 5D meeting.
* Japan also supports stipulating a provision in the Radio Regulations (RR) for HIBS operations at the altitude that could go down to 18 km while RR No.**1.66A** define the altitude of HAPS as 20-50 km, based on the results of sensitivity analysis in the sharing and compatibility studies which showed that HIBS operation at altitude of 18 km does not affect adversely existing services and systems.
* Since the user equipment to be served, whether by HIBS or ground-based IMT base stations, is the same in accordance with Resolution **247 (WRC-19)**, imposing regulatory conditions on user equipment would also impose new restrictions on existing IMT identifications, which is contrary to *invites WRC-23* of Resolution **247 (WRC-19)**. Therefore, Japan is of the views that the studies on HIBS UE should be treated as the outside the scope of this agenda item.

**3.1.2 Australia** - **Document APG23-4/**[**INP-14**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-14_AUS_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1Topic_c_and_No21.5.docx)

* Australia supports establishing a new globally or regionally harmonised regulatory framework that responds to changing technology and improves the efficient use of frequency bands below 2.7GHz already identified for IMT, by facilitating the use of HIBS. Australia notes that any change must ensure the protection of services to which the bands are allocated and should not give priority to HIBS over existing IMT identifications.

**3.1.3 Bangladesh (People's Republic of) - Document APG23-4/**[**INP-19**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-19_BGD_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.2_1.4_and_9.1Topic_c.docx)

* Considering the growing demand for access to mobile broadband, HIBS has been considered as an approach for providing broadband connectivity and telecommunication services with minimal network infrastructure. However, the people’s Republic of Bangladesh is of the view that existing and future services allocated in the frequency bands and the adjacent bands considered under this agenda item including ground-based IMT systems should be protected based on the results of sharing and compatibility studies without imposing any additional technical or regulatory constraints in their deployment.

**3.1.4 Iran (Islamic Republic of) - Document APG23-4/**[**INP-23**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-23_IRN_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_and_9.1Topic_c.docx)

* The Islamic Republic of Iran is of the view that existing services allocated in the frequency bands considered under this agenda item and the adjacent bands, particularly, when neighboring countries use terrestrial IMT base stations and mobile stations, shall be protected based on sharing and compatibility studies, with no additional technical or regulatory constraints on those existing uses and planned development.
* Moreover, this administration is of the view that HIBS operating in the band 694/ 698 MHz -862 MHz shall not cause interference to nor claim protection from the broadcasting services in this frequency band operating in accordance with GE06 Agreement.

**3.1.5 Korea (Republic of) - Document APG23-4/**[**INP-34**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-34_KOR_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4__9.1Topic_c_and_No.21.5.docx)

* The Republic of Korea supports the on-going ITU-R studies and is of the views that
	+ - On-going ITU-R studies should be conducted in accordance with resolves to invite the ITU Radiocommunication Sector in Resolution **247 (WRC-19)**.
		- If HIBS is operated in altitudes lower than 20 km, the protection of the existing services should be ensured.
		- The parameters used in the studies, especially the propagation model, would have a significant impact on the results of the sharing and compatibility studies. Regarding the parameters including the propagation model, the guidelines proposed by the contributing groups need to be respected as much as possible.
		- To protect incumbent services, the power flux density (pfd) levels should be developed as the regulatory application.

**3.1.6 China (People’s Republic of) - Document APG23-4/**[**INP-40**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-40_China_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1Topic_c_and_No.21.5.docx)

* China supports further study how to define HIBS, including possible modifications to the provisions of the Radio Regulations, as appropriate, in ITU-R and APT, based Resolution **247 (WRC-19)**.
* China is also of the view that, HIBS should operate in frequency bands identified for IMT; and the terminals/user equipment for both HIBS and ground-based IMT are the same in those bands are already identified for IMT.
* China supports the ongoing ITU-R studies for establishing a new globally or regionally harmonised regulatory framework for HIBS with a view to providing flexibility of spectrum usage for HIBS in possible new bands in Resolution **247 (WRC-19)** which already identified for IMT, while ensuring protection of the existing services, to which the frequency band is allocated on a primary basis, and adjacent bands, as appropriate, without adversely affecting in their deployment including other IMT uses, existing systems and the planned development of primary services.

**3.1.7 Thailand (Kingdom of)** - **Document APG23-4/**[**INP-45**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-45_Thailand_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.4_and_9.1Topic_c.docx)

* Thailand maintains its Preliminary View expressed at APG23-3 in which Thailand supports the ongoing ITU-R studies for establishing a new globally or regionally harmonised regulatory framework for HIBS with a view to providing flexibility of spectrum usage for HIBS in certain frequency bands below 2.7 GHz already identified for IMT referred to in Resolution **247 (WRC-19)**, while ensuring protection of the existing primary services, to which the frequency band is allocated and in the adjacent frequency bands, without imposing any additional technical or regulatory constraints in their deployment including other IMT uses, existing systems and the planned development of primary services.

**3.1.8 India (Republic of) - Document APG23-4/**[**INP-61**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-61_India_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.2_1.3_1.4_1.5_9.1Topic_c_and_No.21.5.docx)

* While considering the feasibility of HIBS in the IMT bands below 2.7 GHz, India supports technical and regulatory provision for the protection of existing and planned satellite services in the band 2500-2690 MHz and in the adjacent band 2483.5 -2500 MHz.
* In addition, India supports technical and regulatory provisions required for protection of existing and planned IMT services in the proposed bands below 2.7 GHz

**3.1.9 Viet Nam (Socialist Republic of) - Document APG23-4/**[**INP-74**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-74_VTN_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_and_1.5.docx)

* Viet Nam supports the ITU-R studies on the use of HIBS in frequency bands from *resolve to invite ITU-R 2* of Resolution **247 (WRC-19)** with the views that ensuring the protection of existing primary services, including IMT ground systems, broadcasting and aeronautical services, in the same and in adjacent frequency bands, as appropriate and without imposing any technical or regulatory constraints on these services, in accordance with Resolution **247 (WRC-19)**.

**3.1.10 Malaysia - Document APG23-4/**[**INP-66**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-66Rev.1_MLA_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_and_1.4.docx)**(Rev.1)**

* Malaysia supports the development of new regulatory framework for HIBS with a view to provide flexibility of spectrum usage below 2.7 GHz already identified for IMT in accordance with Resolution **247 (WRC-19)**, while ensuring protection of the existing primary services in the allocated frequency band and the adjacent frequency bands, and without imposing any additional technical or regulatory constraints to the deployment of existing services.

**3.1.11 Nepal (Federal Democratic Republic of) - Document APG23-4/**[**INP-71**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-71_Nepal_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_and_1.4_0.docx)

* Nepal supports the studies as per the Resolution **247 (WRC-19).** Nepal is of the view that ground-based IMT systems as well as services in adjacent frequency bands must be protected and there should be no additional regulatory or technical constraints imposed on the deployment of ground based IMT systems.

**3.1.12 Philippines (Republic of the) - Document APG23-4/**[**INP-73**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-73_Philippines_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_and_9.1Topic_c_0.docx)

* Philippines supports the ITU-R studies on the use of HIBS in certain frequency bands below 2.7 GHz already identified for IMT referred to in Resolution **247 (WRC-19)**, while ensuring the protection of existing primary services in the same and in adjacent frequency bands, as appropriate, and without imposing any technical or regulatory constraints on these services.

**3.1.13 Indonesia (Republic of) - Document APG23-4/**[**INP-80**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INP-80_Indonesia_WP1_Preliminary_Views_on_WRC-23_Agenda_Items_1.2_and_1.4.docx)

* Indonesia is of the view to support the sharing and compatibility studies, as well of the development of the working document towards a preliminary draft new Report ITU-R M.[HIBS-CHARACTERISTICS] and working document towards draft CPM Text on WRC-23 agenda item 1.4 by ITU-R on frequency bands below 2.7 GHz already identified for IMT to be used by HIBS as provisioned by Resolution **247 (WRC-19)** and ensuring the protection to the incumbent services, to which the frequency band is allocated on the primary basis.

**3.2 Summary of issues raised during the meeting**

* There was a discussion on the protection of IMT, the broadcasting service (470-694 MHz, 694/698-862 MHz), the aeronautical mobile and the aeronautical radionavigation service (960-1 164 MHz), and the satellite services (2500-2690 MHz and 2483.5 -2500 MHz).
	+ - For the protection of IMT, there was a discussion on what is an appropriate method to protect IMT in terms of APT perspective, given that ITU-R is developing a draft CPM text in which only pfd limitations as the regulatory measures for ground-based IMT are included in the current version. In addition, there was a proposal to initiate the discussion on specific values of pfd limitation. However, agreements were not reached at APG23-4 in light of the views from some APT Members that these issues are still under study in ITU-R and the draft CPM text has not been finalized yet. These matters will be discussed in the APG23-5 based on the results of ITU-R study.
		- For the protection of the broadcasting service, it was expressed that HIBS operating in the band 694/698-862 MHz shall not cause interference to nor claim protection from the broadcasting services in this frequency band operating in accordance with the GE06 Agreement. It was also expressed that the appropriate protection of the broadcasting services is also needed for Region 3 countries outside the GE06 Agreement, which are also neighbours to Region 1, and further discussions are required.
		- For those sharing and compatibility studies in ITU-R that have different results for the same service, the opinion was expressed that the related factors, especially the parameters and methodologies used in the study, should be clarified. APT Members are encouraged to participate in ITU-R studies in this regard.

**4. APT Preliminary View(s)**

* APT Members support the ongoing ITU-R studies for establishing a new globally or regionally harmonized regulatory framework for HIBS with a view to providing flexibility of spectrum usage for HIBS in certain frequency bands below 2.7 GHz already identified for IMT referred to in Resolution **247 (WRC-19)**, while ensuring the protection of the existing services, to which the frequency band is allocated on a primary basis, and adjacent bands, as appropriate, without adversely affecting in their deployment including other IMT uses, existing systems and the planned development of primary services.
* APT Members are considering that there is a need to develop the definition of HIBS with a view to potentially be included in the ITU Radio Regulations.

**5. Other View(s) from APT Members**

* Some APT Members support the study of operational altitude of the HIBS platform from 20 km to 18 km, provided that the protection of the existing and planned services where the frequency bands and the adjacent bands as appropriate, are allocated should be ensured.
* With regard to sharing and compatibility studies with HIBS UE as interfering stations, which is under discussion in ITU-R, Some APT Members are of the view that the studies on HIBS UE should be treated as outside the scope of this agenda item in accordance with Resolution **247 (WRC-19)**.

**6. Issues for Consideration at Next APG Meeting**

* Conditions for the protection of existing services, including IMT (e.g., values of PFD limitation), are expected to be finalized at the next ITU-R WP 5D meeting in October 2022. Based on the results of ITU-R study, APT Members are encouraged to submit their contributions to the next APG23-5 meeting.

**7. Views from Other Organisations** (as provided in the information documents to

APG23-4)

**7.1 Regional Groups**

**7.1.1 ASMG** - **Document APG23-4/**[**INF-21**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INF-21_ASMG_Preparation_for_WRC-23.pdf)

* Follow-up studies of the possibility of using high-altitude platforms as base stations for International Mobile Telecommunications (HIBS) in the frequency bands referred to in Resolution **247 (WRC-19)** with follow-up studies of sharing and compatibility in order to ensure the protection of existing services to which the frequency band is allocated on a primary basis and services operating in adjacent bands as appropriate, in addition to the measures required for coordination with neighboring countries regarding exceeded coverage.
* Protection of existing systems and the future development of services to which bands are distributed on a primary basis and services operating in neighboring bands as necessary.
* To continue to study the spectrum needs of high-altitude platform stations as base stations for International Mobile Communications (HIBS), taking into account that no additional regulatory or technical restrictions are imposed on IMT terrestrial systems and determining the position on the possibility of using these applications in the bands mentioned in Resolution **247 (WRC-19)** or not in the upcoming Arab meetings.

**7.1.2 ATU - Document APG23-4/**[**INF-02**](https://www.apt.int/sites/default/files/2022/07/APG23-4-INF-02_ATU_preparation.docx)

* Support studies to enable the use of HIBS in bands below 2700 MHz, already identified for IMT.
* Support the ITU-R sharing and compatibility studies for HIBS usage and protection of existing co-primary and primary services in adjacent bands without adversely affecting these services,
* Support, based on the result of studies, the global/regional harmonization on the use of the frequency bands for HIBS, which may include addition of African countries names in the existing footnotes in the RR.

**7.1.3 CEPT** - **Document APG23-4/**[**INF-48**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INF-48_Status_of_CEPT_preparation_for_WRC-23_and_RA-23.pdf)

* One issue a) spectrum needs for high-altitude platform stations as IMT base stations:
	+ - HIBS will operate in frequency bands identified for IMT, so CEPT does not see the need for and does not support additional spectrum for HIBS.
* On issue b) sharing and compatibility studies in 694-960 MHz, 1 710-1 885 MHz and 2 500-2 690 MHz:
	+ - To be defined
* On issue c) possible modification to the existing HAPS identification in the 2 GHz IMT bands:
	+ - CEPT does not support any changes to the existing HAPS identification in the 2 GHz IMT bands, which already sufficiently covers the use of HIBS (see RR No. **5.388A**).
* On issue d) the definition of high-altitude platform stations as IMT base stations (HIBS):
* To be defined

**7.1.4 CITEL** - **Document APG23-4/**[**INF-28**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INF-28Rev.1_CITEL_Preparation_for_WRC-23.pdf)**(Rev.1)**

* Preliminary views
	+ - An Administration supports studies on WRC-23 agenda item 1.4, “to consider the use of high-altitude platform stations as IMT base stations (HIBS) in the mobile service in certain frequency bands below 2.7 GHz already identified for IMT, on a global or regional level” in accordance with Resolution **247 (WRC-19)**. It is also of the view that there should be no additional regulatory or technical constraints imposed to existing ground-based IMT networks in the frequency bands under study.
		- Some Administrations consider that modifications to the identifications to IMT (RR Nos. **5.286AA**, **5.317A**, **5.341A**, **5.341B**, **5.341C**, **5.346**, **5.346A**, **5.384A** and **5.388**) in the Radio Regulations are outside the scope of WRC-23 agenda item 1.4; there should be no additional regulatory or technical constraints imposed on the deployment of terrestrial IMT in the frequency bands referred to in those footnotes.
		- Some Administrations support conducting sharing and compatibility studies to ensure the protection of services to which the frequency bands 694-960 MHz, 1 710-1 885 MHz and 2 500-2 690 MHz are allocated on a primary basis, including other IMT uses, incumbent systems and the planned development of services allocated on a primary basis, with the aim of knowing and assessing the potential for establishing the necessary technical and regulatory provisions for HIBS to be used in such frequency bands, if deemed advisable.
* Preliminary Proposal
	+ - An Administration proposes the following modifications:
			* **ADD 5.A14**
			* **ADD RESOLUTION [A14-HIBS 698-960 MHZ] (WRC-23)** *Use of high-altitude platform stations as International Mobile Telecommunications base stations (HIBS) in the frequency band 694-960 MHz, or portions thereof*
			* **MOD 5.388A**
			* **MOD RESOLUTION 221 (REV.WRC 07)** *Use of high altitude platform stations providing IMT in the bands 1 885 1 980 MHz, 2 010-2 025 MHz and 2 110-2 170 MHz in Regions 1 and 3 and 1 885-1 980 MHz and 2 110-2 160 MHz in Region 2*
			* **ADD 5.B14**
			* **ADD RESOLUTION [B14-HIBS 2 500-2 690 MHZ] (WRC-23)** Use of high-altitude platform stations as International Mobile Telecommunications base stations (HIBS) in the frequency band 2 500-2 690 MHz, or portions thereof
			* **Reasons:** The identification of additional frequency bands below 2.7 GHz for HIBS has the potential to support the expansion of coverage and connectivity for existing ground-based IMT networks. The technical studies show when sharing and compatibility with other services is feasible, and when some additional measures may be required, as provided in the text of the new Resolutions.

**7.1.5 RCC** - **Document APG23-4/**[**INF-44**](https://www.apt.int/sites/default/files/2022/08/APG23-4-INF-44_Status_of_RCC_preparation_to_the_World_Radio_Conference_and_Radio_Assembly_2023.pdf)

* The RCC Telecommunication Administrations are of the view that, definition of possibilities and conditions for using HIBS in the radio frequency bands referred to in Resolution **247 (WRC-19)**, shall be based on the results of the appropriate ITU-R compatibility studies, taking into account the planned use of the considered and adjacent frequency bands.
* The RCC Telecommunication Administrations are of the view that, conditions for using HIBS in the radio frequency bands referred to in Resolution **247 (WRC-19)**, shall take into account the requirements for the protection of existing primary services in these and adjacent bands, including other IMT uses.
* The RCC Telecommunication Administrations are of the view that, the use of HIBS in the frequency band 694-960MHz shall not cause interferences to and impose any additional restrictions on the use of frequency bands 645-862 MHz and 960-1164 MHz by the stations in the aeronautical radionavigation service, as well as the use of HIBS in the frequency bands 1710-1885 MHz, 1885-1980 MHz, 2010-2025 MHz and 2110-2170 MHz shall not cause interferences to and impose any additional restrictions on the use of frequency band 1675-1710MHz by the stations in the Meteorological Satellite Service, the frequency band 2025-2110 MHz by SOS, SRS, EESS stations, and the frequency bands 1980-2010 MHz, 2170-2200 MHz by MSS stations.

**7.2 International Organisations**

**7.2.1 ICAO** - **Document APG23-3/**[**INF-15**](https://www.apt.int/sites/default/files/2021/10/APG23-3-INF-15_ICAO-Position_for_ITU_WRC-23.docx)

* To ensure that high‑altitude platform stations as IMT‑base stations (HIBs) sharing and compatibility studies performed under Resolution **247 (WRC-19)** address the protection of aeronautical systems operating in the frequency bands 960-1 164 MHz and 2 700-2 900 MHz.
* In particular, to oppose the use of HIBS within the frequency band 2 500-2 690 MHz or parts thereof where agreed studies have not demonstrated that the signal levels from the HIBS will be below the predicted levels from the ground based IMT studies.

**7.2.2 WMO** - **Document APG23-4/**[**INF-03**](https://www.apt.int/sites/default/files/2022/07/APG23-4-INF-03_WMO_Positions.docx)

* WMO is of the opinion that studies must be conducted to specify the HIBS out-of-band unwanted emissions to prevent interference:
	+ - to meteorological radars in the 2700-2900 MHz band from HIBS operated in the 2500-2690 MHz band,
		- to MetSat service in the 1675-1710 MHz from HIBS operated in the 1710-1885 MHz band. This is important to ensure the protection of the downlink of the measured data as well as the global dissemination of the data directly to the users,
		- to the EESS/SOS in the 2025-2110 MHz band.

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