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| A picture containing text, clipart  Description automatically generated | ASIA-PACIFIC TELECOMMUNITY | **Document No:** |
| **The 5th Meeting of the APT Conference Preparatory**  **Group for WRC-23 (APG23-5)** | **APG23-5/OUT-07**  **(Rev.1)** |
| 20 – 25 February 2023, Busan, Republic of Korea | 25 February 2023 |

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!A24-A4!MSW-E.docx)), ATU ([46A24-A8](https://www.itu.int/dms_ties/itu-r/md/16/wrc19/c/R16-WRC19-C-0046!A24-A8!MSW-E.docx)), CITEL ([11A24-A2)](https://www.itu.int/dms_pub/itu-r/md/16/wrc19/c/R16-WRC19-C-0011!A24-A2!MSW-E.docx) and PNG ([67A24](https://www.itu.int/dms_pub/itu-r/md/16/wrc19/c/R16-WRC19-C-0067!A24!MSW-E.docx)) in WRC-19. In the 42nd WP 5D meeting (WP 5D#42), the draft CPM text was approved with the following Methods to satisfy the agenda item and consequently was contained in the draft CPM Report ([CPM23-2/1](https://www.itu.int/md/R19-CPM23.2-C-0001/en)):

|  |  |  |
| --- | --- | --- |
| Frequency range | Methods to satisfy the agenda item | |
| Issue A:  694-960 MHz | A1 | NOC |
| A2 | Identification for the use of HIBS globally |
| A3 | Identification for the use of HIBS globally not claiming protection |
| A4 | Identification for the use of HIBS per region or country |
| Issue B:  1 710-1 885 MHz | B1 | NOC |
| B2 | Identification for the use of HIBS globally |
| B3 | Identification for the use of HIBS globally not claiming protection |
| B4 | Identification for the use of HIBS per region |
| Issue C:  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 |
| C3 | Review existing conditions for the use of HIBS not claiming protection |
| Issue D:  2 500-2 690 MHz | D1 | NOC |
| D2 | Identification for the use of HIBS globally |
| D3 | Identification for the use of HIBS globally not claiming protection |
| D4 | Identification for the use of HIBS per region |

**2. Documents**

* Input Documents APG23-5/[INP-08](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-08_Thailand-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.4_and_9.1_TOPIC_C.docx) (THA), [INP-14](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-14_Japan-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1C_and_RR_NO.21.5.docx) (J), [INP-25](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-25_Multicountry-WP1-Preliminary_View_on_WRC-23_Agenda_Item_1.4.docx) (J, PNG, SMO, TON), [INP-26](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-26_India_WP1-Preliminary_Views_on_WRC_23_Agenda_Items_1.2_1.3_1.4_1.5_9.1Topic_c_and_RR_No.21.5.docx) (IND), [INP-32](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-32_Bangladesh_WP1-Preliminary_Views_on_WRC_23_Agenda_Items_1.2_1.3_1.4_and_9.1_Topic_c.docx) (BGD), [INP-36](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-36_Iran-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-52](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-52_Viet_Nam-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_and_1.5.docx) (VTN), [INP-56](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-56_Australia-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1Topic_c_and_RR_No.21.5.docx) (AUS), [INP-63](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-63_Rep_of_Korea-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.4_9.1Topic_c_and_RR_No.21.5.docx) (KOR), [INP-78](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-78_Indonesia-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_and_1.4.docx) (INS), [INP-88](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-88_China-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_and_RR_No.21.5.docx) (CHN), [INP-95](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-95_Malaysia-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_and_1.4.docx) (MLA)
* Information Documents APG23-5/[INF-01](https://www.apt.int/sites/default/files/2023/01/APG23-5-INF-01_WMO_Position_on_WRC-23_Agenda.docx) (WMO), [INF-07](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-07_Brief_on_AI1.4.docx) (DG chair), [INF-20](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-20_HAPS_Alliance_Views_on_WRC-23_Agenda_Item_1.4.pdf) (HAPS Alliance), [INF-39](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-39_Status_of_CEPT_preparation_for_WRC-23_and_RA-23.pdf) (CEPT), [INF-43](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-43_CITEL_preparation_for_WRC-23.pdf) (CITEL), [INF-45](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-45_Status_of_RCC_preparation_to_the_WRC-23.pdf) (RCC)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 Thailand (Kingdom of) - Document APG23-5/**[**INP-08**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-08_Thailand-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.4_and_9.1_TOPIC_C.docx)

* Thailand supports the establishment of the new globally 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)**. The regulatory framework should ensure protection of the existing primary services, to which the frequency bands are 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.

**3.1.2 Japan - Document APG23-5/**[**INP-14**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-14_Japan-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1C_and_RR_NO.21.5.docx)

* Based on the results of the sharing and compatibility studies, Japan supports Methods A2, B2, C2 and D2 respectively for each frequency band and the relevant regulatory conditions in the draft CPM Report, subject to ensuring the protection of the existing services, without adversely affecting in their deployment, to which the frequency band is allocated on a primary basis, including other IMT uses, existing systems and the planned development of primary services, and adjacent bands, as appropriate. The methods and regulatory conditions supported by Japan are as shown in the embedded document below.

* 

**3.1.3 Japan, Papua New Guinea, Samoa (Independent State of), Tonga (Kingdom of), Vanuatu (Republic of) - Document APG23-5/**[**INP-25**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-25_Multicountry-WP1-Preliminary_View_on_WRC-23_Agenda_Item_1.4.docx)

* Member states of this input contribution support considering identification of HIBS in the frequency bands under this agenda item including appropriate modifications to the existing footnote and associated resolution, with appropriate regulatory conditions for ensuring the protection of existing services and systems including other IMT uses.

**3.1.4 India (Republic of) - Document APG23-5/**[**INP-26**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-26_India_WP1-Preliminary_Views_on_WRC_23_Agenda_Items_1.2_1.3_1.4_1.5_9.1Topic_c_and_RR_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. The frequency band 2483.5-2500 MHz is used in NavIC user receivers; and frequency bands 2500-2535 MHz, 2555-2635 MHz and 2655-2690 MHz used in S-band MSS satellites of India and currently experiencing interference into the satellite receivers.
* 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
* In view of above usages, India may support following Method
  + - * Band A - 694-960 MHz

Method A3: Use by HIBS in single footnote not claiming protection

* + - * Band B - 1 710-1 885 MHz

Method B3: Use by HIBS in single footnote not claiming protection

* + - * Band C - 1 885-1 980 MHz, 2 010-2 025 MHz, and 2 110-2 170 MHz

Method C3: Use by HIBS in single footnote not claiming protection

* + - * Band D - 2 500-2 690 MHz

Method D1: No change to the Radio Regulations (RR)

**3.1.5 Bangladesh (People's Republic of) - Document APG23-5/**[**INP-32**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-32_Bangladesh_WP1-Preliminary_Views_on_WRC_23_Agenda_Items_1.2_1.3_1.4_and_9.1_Topic_c.docx)

* In order to satisfy the agenda item, Bangladesh administration supports method A1 for the band A, method B1 for the band B, method C1 for the band C and method D1 for the band D of the draft CPM report to WRC-2023 i.e., no change to the Radio Regulation.

**3.1.6 Iran (Islamic Republic of) - Document APG23-5/**[**INP-36**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-36_Iran-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 impact / adverse effect 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.
* This administration does not have any position, at this stage, on any of methods provided in the draft CPM text to the fact that these methods are subject to further discussion and refinement at the CPM23-2 which may conclude that further in-depth studies might be required before deciding on the allocation of any band to HIBS.

**3.1.7 Viet Nam (Socialist Republic of) - Document APG23-5/**[**INP-52**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-52_Viet_Nam-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).
* Method A1 is strongly supported.
* Method B3, C3, D3 could be supported in the conditions of:
  + - * Appropriately revised Resolution 212 (Rev. WRC-07) to ensure the protection of existing services in the same and in adjacent frequency bands.
      * Related ITU-R studies for the operation of HIBS be finalized, including the spectrum need and protection criterion for HIBS.

**3.1.8 Australia - Document APG23-5/**[**INP-56**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-56_Australia-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_9.1Topic_c_and_RR_No.21.5.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. Also, there should be no additional regulatory or technical constraints imposed on the deployment of terrestrial IMT in the frequency bands used by HIBS.

**3.1.9 Korea (Republic of) - Document APG23-5/**[**INP-63**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-63_Rep_of_Korea-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.4_9.1Topic_c_and_RR_No.21.5.docx)

* The Republic of Korea is of the view that the power flux-density (pfd) limitation as the regulatory measure is an appropriate method to ensure protection of incumbent services. The Republic of Korea is of the view that Methods D2 and D3 in the draft CPM Report are appropriate as the regulatory conditions.

**3.1.10 Indonesia (Republic of) APG23-5/**[**INP-78**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-78_Indonesia-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_and_1.4.docx)

* Indonesia is of the view to support consideration of the identification of HIBS in the frequency bands under this agenda item including further studies, with appropriate technical and regulatory conditions for ensuring the protection of the incumbent services, to which the frequency band is allocated on the primary basis.

**3.1.11 China (People’s Republic of) - Document APG23-5/**[**INP-88**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-88_China-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_1.2_1.3_1.4_1.5_and_RR_No.21.5.docx)

* China observed that both different views in the section on Methods to satisfy AI 1.4 and complicated examples of regulatory and procedural considerations in the resolves part, are still existed. Thus, how to ensure the protection of current services reflected in the AI 1.4 of Draft CPM Report could be request to further develop in the CPM 23-2 meeting.
* In particular, taking into account the results of Draft CPM text on WRC-23 AI 1.4, China supports that APT reviews which frequency bands who have already studied in AI 1.4 can be used by HIBS with/without claiming protection against other services. By contrast, other frequency bands who is difficult to coexistence with incumbent services can be considered to NOC.
* Therefore, in current stage, China generally supports Method 3 and/or Method 1 for ensuring the protection of current services depending different frequency bands. However, both issues on which specific frequency band(s) below 2.7Ghz can be used by HIBS and whether HIBS shall claim protection against other services should be further discussed after CPM 23-2 meeting.

**3.1.12 Malaysia - Document APG23-5/**[**INP-95**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INP-95_Malaysia-WP1-Preliminary_Views_on_WRC-23_Agenda_Items_1.1_and_1.4.docx)

* Malaysia is of the view that the consideration of the use of HIBS in the frequency bands below 2.7 GHz already identified for IMT, as referred to in Resolution **247 (WRC-19)**, shall ensure the protection of services to which the frequency bands are allocated and not impose any additional regulatory or technical constraints on the deployment of ground-based IMT systems in the frequency bands.

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

The following tables summarize the supporting Methods that were indicated from each APT Member:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Frequency range  Issue | | THA | J, PNG, SMO, TON, VUT | IND | BGD | IRN |
| A | 694-960 MHz | \*1 | A2 or A3 | A3 | A1 | \*2 |
| B | 1 710-1 885 MHz | \*1 | B2 or B3 | B3 | B1 |  |
| C | 1 885-1 980 MHz, 2 010-2 025 MHz,  2 110-2 170 MHz | \*1 | C2 or C3 | C3 | C1 |  |
| D | 2 500-2 690 MHz | \*1 | D2 or D3 | D1 | D1 | \*2 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Frequency range  Issue | | VTN | AUS | KOR | INS | CHN | MLA |
| A | 694-960 MHz | A1 | \*1 | A2 or A3\*3 | A2 or A3 or A4 | A1 or A3 | \*1 |
| B | 1 710-1 885 MHz | B3 | \*1 | B2 or B3\*3 | B2 or B3 or B4 | B1 or B3 | \*1 |
| C | 1 885-1 980 MHz, 2 010-2 025 MHz,  2 110-2 170 MHz | C3 | \*1 | C2 or C3\*3 | C2 or C3 | C1 or C3 | \*1 |
| D | 2 500-2 690 MHz | D3 | \*1 | D2 or D3\*3 | D2 or D3 or D4 | D1 or D4 | \*1 |

\*1 Methods have not been decided in APG23-5

\*2 Shall not cause unacceptable interference to nor claim protection from GE06 Agreement/BSS and its future development. For the implementation of the provision, notifying administration of HIBS when submitting Appendix 4 to the Radiocommunication Bureau, shall also send firm commitment that in case of occurrence of unacceptable interference undertakes to immediately reduce interference to acceptable level or cease the emission of the signal. Subject to further discussion and refinement at the CPM23-2 which may conclude that further in-depth studies might be required before deciding on the allocation of any band to HIBS.

\*3 Power flux-density (pfd) limits are to be stipulated in each frequency bands in order to ensure the protection of incumbent services, including IMT.

Moreover, assignments relating to HIBS shall not cause unacceptable interference to nor claim protection from assignments related to broadcasting service of APT Member States included in GE06 Agreement and its future development.

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

None at this stage

See [Section 3.2](#Section32)

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

None

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

Some APT Members have yet to decide on the Methods on agenda item 1.4 of WRC-23 and may indicate the proposed Methods at APG23-6 considering the outcome of CPM23-2, in order to develop a Preliminary APT Common Proposal (PACP).

**7. Views from Other Organisations**

**7.1 Regional Groups**

**7.1.1 ASMG - Document** [**WRC-23-IRW-22/5**](https://www.itu.int/md/R19-2WSHWRC23-C-0002/en)

* 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** [**WRC-23-IRW-22/2**](https://www.itu.int/md/R19-2WSHWRC23-C-0002/en)

* 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.
* Support the identification of the candidate bands for the use of high altitude platform stations as base stations for International Mobile Communications (HIBS), taking into account that no additional regulatory or technical restrictions should be imposed on the existing IMT terrestrial systems and applications operating in the same bands or in adjacent bands and also to identify the necessary measures required for coordination with neighbouring countries regarding exceeded coverage.

**7.1.3 CEPT - Document APG23-5/**[**INF-39**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-39_Status_of_CEPT_preparation_for_WRC-23_and_RA-23.pdf)

* CEPT supports regulatory provisions applying to HIBS in order to enable their use of the frequency bands 694-960 MHz, 1710-1885 MHz and 2500-2690 MHz while protecting other services and applications in these frequency bands as well as in the adjacent bands.
* CEPT is of the view that the use by HIBS of these frequency bands should be on a non-protection basis, since studies have not addressed the risk that HIBS may require more protection than conventional IMT base stations.
* CEPT is of the view that the use of HIBS should be enabled at an altitude lower than 20 km, down to a minimum of 18 km, since ITU-R studies have confirmed that there is a negligible difference in terms of impact to other services.

**7.1.4 CITEL - Document APG23-5/**[**INF-43**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-43_CITEL_preparation_for_WRC-23.pdf)

* Preliminary Proposal (PP: a proposal by a CITEL Member State that has not been supported by another Member State.)
  + - * NOC
* Draft Inter American Proposal (DIAP: PP that has been supported by at least one other Member State.)
  + - * An Administration proposes the following modifications

|  |  |
| --- | --- |
| Frequency range | DIAP |
| 694-960 MHz | **ADD 5.A14, ADD 5.B14**  **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* |
| 1 710-1 885 MHz | **MOD 5.388 A**  **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* |
| 1 885-1 980 MHz,  2 010-2 025 MHz,  2 110-2 170 MHz |
| 2 500-2 690 MHz | **ADD 5L14**  **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* |
| **MOD 11.9**  **MOD 11.26A**  **SUP RESOLUTION 247 (WRC-19)** *Facilitating mobile connectivity in certain frequency bands below 2 7 GHz using high altitude platform stations as International Mobile Telecommunications base stations* | |

**7.1.5 RCC - Document APG23-5/**[**INF-45**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-45_Status_of_RCC_preparation_to_the_WRC-23.pdf)

* Technical and regulatory conditions for the use of HIBS in the bands mentioned in Res. **247 (WRC-19)** shall be based on the results of relevant ITU-R compatibility studies and should take into account the requirements for the protection of services with the primary allocation in these and adjacent frequency bands, including other uses of IMT systems.
  + - * 694-960 MHz: shall not cause interferences and impose additional restrictions on the use of the 645-862 MHz and 960-1164 MHz bands by aeronautical radionavigation service stations;
      * 1710-1885 MHz, 1885-1980 MHz, 2010-2025 MHz and 2110-2170 MHz: should not cause interferences and impose additional restrictions on the use:
        + of frequency band 1675-1710 MHz by Meteorological Satellite Service;
        + of the band 2025-2110 MHz by SOS, SRS, EESS;
        + of the bands 1980-2010 MHz, 2170-2200 MHz by MSS.
* Methods A4, B3, C3 and D3 from the draft CPM Report

**7.2 International Organisations**

**7.2.1 ICAO - Document APG23-5/**[**INF-07**](https://www.apt.int/sites/default/files/2023/02/APG23-5-INF-07_Brief_on_AI1.4.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 APG23-5/**[**INF-01**](https://www.apt.int/sites/default/files/2023/01/APG23-5-INF-01_WMO_Position_on_WRC-23_Agenda.docx)

* WMO is not opposed to an HIBS identification if the following provisions are implemented in the Radio Regulations:
  + - * In order not to change the interference environment for the MetSat systems in the 1 675-1 710 MHz band, HIBS operations in the 1 710-1 785 MHz band would have to be limited to the uplink direction (HIBS receiving from IMT UE),
      * In order not to change the interference environment for EESS and SOS in the 2 025-2 110 MHz band, HIBS operations in the 2 110-2 170 MHz band would have to be limited to the downlink direction (HIBS transmitting to ground-based UE),
      * Application of appropriate regulatory provisions for HIBS operations in the 2 500-2 690 MHz band, with necessary limits in the 2 700-2 900 MHz band to ensure protection of meteorological radar measurements. The development of these limits would have to take into account the spatial nature of meteorological radar measurements and their sensitive Minimum Detectable Signal (MDS) requiring that every scan direction (elevation and azimuth) be adequately protected,
      * Moreover, the application of HIBS in the 2 500-2 690 MHz shall not impose extra limitations over the expansion of weather radars in the band 2 700-2 900 MHz. This is to avoid the situation with the current terrestrial-based IMT systems, which impose limitations on meteorological radars.

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