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|  | ASIA-PACIFIC TELECOMMUNITY | Document No: |
| **The 6th Meeting of the APT Conference Preparatory****Group for WRC-23 (APG23-6)** | **APG23-6/OUT-10** |
| 14 – 19 August 2023, Brisbane, Australia | 18 August 2023 |

Working Party 1

**APT VIEW and Preliminary APT Common Proposal on WRC-23 agenda item 1.3**

**Agenda Item 1.3:**

*to consider primary allocation of the band 3 600‑3 800 MHz to mobile service within Region 1 and take appropriate regulatory actions, in accordance with Resolution****246 (WRC‑19****);*

**1. Background**

At WRC-19, ASMG, in [Document 29](https://www.itu.int/md/R16-WRC19-C-0029/en) (Add.24-Add.4), and a number of African countries, in [Document 94](https://www.itu.int/md/R16-WRC19-C-0094/en), proposed this agenda item for WRC-23. Resolution **246 (WRC-19)**, resolves to invite ITU-Rto conduct sharing and compatibility studies in time for WRC‑23 between the mobile service and other services allocated on a primary basis within the frequency band 3 600-3 800 MHz and adjacent bands in Region 1, as appropriate, to ensure protection of those services to which the frequency band is allocated on a primary basis, and not impose undue constraints on the existing services and their future development.

In accordance with the Resolution and 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)), ITU-R Working Party (WP) 5A is the responsible group for conduction of predatory work for WRC-23. [ITU-R WP 5A](https://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5a/Pages/default.aspx) has discussed this agenda item six times (in its 23rd, to 28th meetings) During its 27th meeting in May/June 2022, the [draft CPM](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597%21N04%21MSW-E.docx) Report for the agenda item 1.3 was finalized and transferred to the CPM chapter Rapporteur and finalized in the second CPM meeting.

The following five methods to satisfy this agenda item are proposed in Section 1/1.3/4 of the [CPM Report](https://www.itu.int/md/R19-CPM23.2-R-0001/en):

* + - **Method A:** No change
		- **Method B:** Upgrade of the allocation of 3 600-3 800 MHz to the mobile, except aeronautical mobile, service on a primary basis within Region 1 without conditions
		- **Method C:** Upgrade of the allocation of 3 600-3 800 MHz to the mobile, except aeronautical mobile, service on a primary basis within Region 1 with regulatory and/or technical conditions. This Method includes five alternatives for conditions.
		- **Method D:** Upgrade of the allocation of 3 600-3 800 MHz to the mobile service on a primary basis within Region 1 without conditions, and identification for IMT
		- **Method E:** Upgrade of the allocation of the band 3 600-3 800 MHz or parts thereof to the mobile, except aeronautical mobile, service on a primary basis in Region 1 with regulatory and/or technical conditions, and identification for IMT. This Method includes two alternatives for conditions.

All five methods also propose to suppress Resolution **246 (WRC-19)**.

In the heading of the CPM Report section 1/1.3, nine *views* on Methods raised about the:

* + inclusion/exclusion of IMT identification within the scope of the agenda item,
	+ pfd limit for the long-term/short-term protection of FSS receiver,
	+ inclusion of aeronautical mobile service in the Method D,
	+ unconditional upgrading of mobile service in the Method D.

The work on “[Working document towards a draft Report for sharing and compatibility studies in compliance with Resolution **246 (WRC-19)** in relation with WRC-23 agenda item 1.3](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0708%21N14%21MSW-E.docx)” would probably continue in the [WP 5A](https://www.itu.int/en/ITU-R/study-groups/rsg5/rwp5a/Pages/default.aspx) 30th meeting (13 to 22 September 2023) by reviewing the document, if necessary, for submission to Study Group 5.

Region 3 already has a primary mobile, except aeronautical Mobile, allocation within the 3 600 – 3 800 MHz frequency band with a number of countries deploying stations in the mobile service in this band.

**2. Documents**

* Input Documents APG23-6/[INP-06](https://www.apt.int/sites/default/files/2023/06/APG23-6-INP-06_WP1_Report.docx) (WP1 Co-Chairs), [INP-17](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-17_India_WP1_PACP_WRC-23_Agenda_Items.docx) (IND), [INP-23](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-23_Bangladesh_WP1_PACP_WRC-23_Agenda_Items.docx) (BGD), [INP-29](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-29_Japan_WP1_PACP_WRC-23_Agenda_Items.docx) (J), [INP-65](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-65_Iran_WP1_Preliminary_Views_on_WRC-23_Agenda_Items.docx)(Rev.1) (IRN), [INP-80](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-80_Australia_WP1_PACP_WRC-23_Agenda_Items_and_WRC-19_Document_550.docx)(Rev.1) (AUS), [INP-87](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-87_KOR_WP1_PACP_WRC-23_Agenda_Items.docx) (KOR), [INP-92](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-92_Philippines_WP1_PACP_WRC-23_Agenda_Items.docx) (PHL), [INP-98](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-98_New_Zealand_WP1_PACP_WRC-23_Agenda_Items.docx) (NZL), [INP-103](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-103_China_WP1_PACP_WRC-23_Agenda_Items.docx) (CHN), [INP-118](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-118_VietNam_WP1_PACP_WRC-23_Agenda_Items.docx) (VTN)
* Information Documents APG23-6/[INF-02](https://www.apt.int/sites/default/files/2023/06/APG23-6-INF-02_WMO_Position_on_WRC-23_Agenda.docx) (WMO), [INF-25](https://www.apt.int/sites/default/files/2023/07/APG23-6-INF-25_ICAO-Position_for_ITU-WRC23.docx) (ICAO), [INF-28](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-28_GSOA_Positions_on_WRC-23_Agenda_Items_0.docx) (GSOA), [INF-40](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-40_GSMA_Views_WRC-23_for_mobile.docx) (GSMA Hong Kong), [INF-45](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-45_Status_of_RCC_preparation_to_WRC-23.pdf) (RCC), [INF-46](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-46_Status_of_CEPT_preparation_for_WRC-23_and_RA-23.pdf) (CEPT), [INF-47](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-47_GSA_PACP_WRC-23_Agenda_Items.docx) (GSA), [INF-50](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-50_Brief_on_AI1.3.docx) (DG Chair), [INF-52](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-52_CITEL_preparation_for_WRC-23.pdf) (CITEL)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 India (Republic of)** - **Document APG23-6/**[**INP-17**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-17_India_WP1_PACP_WRC-23_Agenda_Items.docx)

* India is of the view that any possible upgrade of mobile service to primary allocation in the band 3 600 – 3 800 MHz in Region 1 shall protect existing and planned services to which the frequency band is allocated on a primary basis (and in adjacent bands, as appropriate) in Region 3, taking into account the results of sharing and compatibility studies.

**3.1.2 Bangladesh (People's Republic of)** - **Document APG23-6/**[**INP-23**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-23_Bangladesh_WP1_PACP_WRC-23_Agenda_Items.docx)

* Bangladesh is of the view that a possible upgrade of the mobile service to a primary allocation in the band 3 600 – 3 800 MHz in Region 1 shall protect existing and planned services to which the frequency band is allocated on a primary basis (and in adjacent bands, as appropriate) in Region 3, taking into account the results of sharing and compatibility studies.
* This Administration supports Alternative C1 of Method C, which proposes the same technical and regulatory conditions as for the frequency band 3 400-3 600 MHz (except IMT identification).

**3.1.3 Japan** - **Document APG23-6/**[**INP-29**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-29_Japan_WP1_PACP_WRC-23_Agenda_Items.docx)

* Japan supports a method for the primary allocation of the frequency band 3 600-3 800 MHz to the mobile service in Region 1 for global harmonisation of the frequency band allocated to the mobile service, while ensuring protection of the existing services to which the frequency band is allocated on a primary basis taking into account the results of sharing and compatibility studies.
* Japan is of the view that Method C is appropriate to ensure protection of the existing services.

**3.1.4 Iran (Islamic Republic of)** - **Document APG23-6/**[**INP-65 (Rev.1)**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-65R1_Iran_WP1_Preliminary_Views_on_WRC-23_Agenda_Items.docx)

* I.R. of Iran is of the view that the potential possibilities of upgrading mobile service to primary allocation in the band 3 600 – 3 800 MHz in Region 1 shall be conditioned to fully protect services to which the frequency are allocated in Region 3 and shall not have any adverse effect, what so ever, on the operation of the assignments to which the existing services and their future development in Region 3.
* This Administration supports Alternative C1 of Method C, which proposes the same technical and regulatory conditions as for the frequency band 3 400-3 600 MHz (except IMT identification).
* It is important and fundamental that any discussions on this agenda item shall not be mixed up on the discussions being followed / carried out under Agenda Item 1.2. This agenda item does not relate to the potential use of the band, if upgraded to primary, for IMT.

**3.1.5 Australia** - **Document APG23-6/**[**INP-80 (Rev.1)**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-80R1_Australia_WP1_PACP_WRC-23_Agenda_Items_and_WRC-19_Document_550.docx)

* Australia notes that this is a Region 1 issue and does not have a position on this agenda item. ITU-R studies including adjacent band services in accordance with Resolution 246 (WRC-19) may assist to inform a decision on allocation of the 3.6-3.8 GHz band to the mobile, except aeronautical mobile, service on a primary basis within Region 1.
* Australia does not propose a Preliminary APT Common Proposal for this agenda item.

**3.1.6 Korea (Republic of)** - **Document APG23-6/**[**INP-87**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-87_KOR_WP1_PACP_WRC-23_Agenda_Items.docx)

* The Republic of Korea is of the view that the primary allocation of the frequency band 3 600-3 800 MHz to the mobile service in Region 1 and identification for IMT has the benefit of global harmonization spectrum and the added value on worldwide economies of scale.
* The Republic of Korea proposes that the above views should be reflected properly in section 4 (APT Views), if APG agreed. If not, it should be included in section 6 (Issues for Consideration at APG Coordination Meeting at WRC-23) of [the template of the APT OUTPUT](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-09Rev.1_TMP_and_OUT_Template_for_PACP.docx).

**3.1.7 Philippines (Republic of the)** - **Document APG23-6/**[**INP-92**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-92_Philippines_WP1_PACP_WRC-23_Agenda_Items.docx)

* Philippines notes that Region 3 has an existing primary allocation to the mobile, except aeronautical mobile, service in the frequency band 3 600-3 800 MHz. Philippines supports harmonization in this band, and thus, we support any method for the upgrade of the allocation of the frequency band 3 600-3 800 MHz to the mobile, except aeronautical mobile, service on a primary basis within Region 1.

**3.1.8 New Zealand** - **Document APG23-6/**[**INP-98**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-98_New_Zealand_WP1_PACP_WRC-23_Agenda_Items.docx)

* New Zealand notes that this is a Region 1 issue, and that Region 3 has an existing primary allocation to the mobile service in the 3 600 – 3 800 MHz frequency band without additional conditions through footnote. New Zealand notes that Method B of the draft CPM text would result in a Region 1 Primary Mobile Allocation having comparable conditions to the current Region 3 Primary Mobile allocation. New Zealand supports harmonisation in this band and notes that Region 3 countries have deployed stations in the mobile service in the 3600 – 3800 MHz frequency band. New Zealand is also of the view that a IMT identification is out of scope of this agenda item.
* New Zealand is of the view that APG23-6 should not develop a PACP on this Agenda Item as it is out of scope for Region 3 and there is no clear consensus among APT members.

**3.1.9 China (Republic of)** - **Document APG23-6/**[**INP-103**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-103_China_WP1_PACP_WRC-23_Agenda_Items.docx)

* China is of the view that the primary allocation to the mobile service in the band 3 600-3 800 MHz in Region 1 should take into account the results of studies conducted in ITU-R **WP 5A** and take appropriate regulatory and technical conditions to fully ensure the protection of services to which the frequency band is allocated on a primary basis (and in adjacent bands, as appropriate) in Region 3.China supports method A (NoC).

**3.1.10 Viet Nam (Socialist Republic of)** - **Document APG23-6/**[**INP-118**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-118_VietNam_WP1_PACP_WRC-23_Agenda_Items.docx)

* Taking into account relevant ITU-R studies as well as the interest of global harmonization and economies of scale, Viet Nam supports to upgrade the allocation of 3 600-3 800 MHz to the mobile, except aeronautical mobile, service on a primary basis within Region 1 and identification for IMT. Therefore Methods D is preferable. Method E could be support if the practical operation of IMT stations is ensured.

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

* It was discussed that harmonization of a frequency allocation in multi-Regions scale, is an outcome of a process supported by successful studies on protection of other existing and planned radiocommunication services with similar conditions within the concerned frequency band and adjacent frequency bands. Therefore, it is not the only driving objective for agenda item 1.3.
* Some APT Members raised the point that IMT identification of the band 3 600 – 3 800 MHz in Region 1, if upgraded to primary, is not in the scope of WRC-23 agenda item 1.3. However, there were also supporting some APT Members for such identification. These different interpretations of this agenda item, were also reflected by *views* 1 and 2 of the [CPM Report](https://www.itu.int/md/R19-CPM23.2-R-0001/en).
* There was discussion of not having PACP due to no consensus status of views submitted to APG23-6.

**4. APT View(s)**

APT Members are of the view that a possible upgrade of the mobile, except aeronautical mobile, service to primary allocation in the frequency band 3 600-3 800 MHz in Region 1 shall protect existing and planned services to which the frequency band is allocated on a primary basis (and in adjacent bands, as appropriate) in Region 3, taking into account the results of sharing and compatibility studies.

APT Members are of the view that this agenda item is a Region 1 issue.

APT Members are also of the view that such upgrading shall not have any adverse effect on the allocation of the existing services and their future development in Region 3.

APT Members are of the view that any discussions on this agenda item shall not be mixed up on the discussions being followed / carried out under agenda item 1.2, i.e., no identification of the frequency band 3 600-3 800 MHz for IMT.

**5. Preliminary APT Common Proposal**

None.

**6. Issues for Consideration at APG Coordination Meeting at WRC-23 (if any)**

There is an issue that the primary allocation of the frequency band 3 600-3 800 MHz to the mobile, except aeronautical mobile, service in Region 1 and identification for IMT has the benefit of global harmonization of spectrum and the added value on worldwide economies of scale.

Some APT Members have a concern about the sharing and compatibility conditions between the FSS and MS if the allocation of the frequency band 3 600-3 800 MHz to the mobile, except aeronautical mobile, is upgraded to the primary service in Region 1.

**7. Views from Other Organisations**

**7.1 Regional Groups**

**7.1.1 CEPT** - **Document APG23-6/**[**INF-46**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-46_Status_of_CEPT_preparation_for_WRC-23_and_RA-23.pdf)

* CEPT supports the upgrade of the allocation of the frequency band 3600-3800 MHz to the mobile, except aeronautical mobile, service on a primary basis in Region 1 to improve opportunities for the introduction of mobile service applications in Europe.
* This support is subject to the conditions that the current use in the frequency bands 3400-3800 MHz and the protection of primary services, under the existing CEPT regulatory framework, can be continued, and that no undue constraints are imposed on the existing services and their future development.
* In consequence, CEPT supports that the technical and regulatory conditions applicable to the band 3400-3600 MHz, in particular the pfd limit of -154.5 dBW/m²/4 kHz not to be exceeded for more than 20% of time 3 m above ground at the border to protect the neighbouring countries, are one part of the technical conditions in response to WRC- 23 Agenda item 1.3, recognising that sharing studies carried out in ITU-R ensured that the full objective of Resolution **246 (WRC-19)** has been met. In addition, CEPT opposes making these technical and regulatory conditions for the frequency band 3 600-3 800 MHz more stringent than those applicable to the band 3400-3600 MHz to protect FSS earth stations, in particular any changes to the value or percentage of time of the pfd limit, or to the height above ground where this limit applies.
* CEPT does not support introducing any further requirements or requests for coordination, in particular under No. **9.21**.
* CEPT is of the view that consideration of an IMT identification as well as consideration of the aeronautical mobile service in this band are not in the scope of Resolution **246 (WRC-19)**

**7.1.2 CITEL** - **Document APG23-6/**[**INF-52**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-52_CITEL_preparation_for_WRC-23.pdf)

* **Proposal:** NOC to Article 5 in the 3600-3800 MHz frequency allocations for Region 2.
* WRC-23 agenda item 1.3 addresses the consideration of a possible primary allocation of the band 3600-3800 MHz to mobile service, except aeronautical mobile, in Region 1. It should be noted that Regions 2 and 3 already have primary mobile (except aeronautical mobile) allocation in the 3600 – 3800 MHz frequency band, which could be harmonized with other Regions depending on the results of this agenda item at WRC-23. Any changes made to the Radio Regulations under WRC-23 agenda item 1.3 must not impact the existing allocations and identifications for Region 2, nor subject Region 2 to any changed procedural or regulatory provisions. Therefore, no change is proposed for Region 2 and this proposal does not address Regions 1 and 3.

**7.1.3 RCC** - **Document APG23-6/**[**INF-45**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-45_Status_of_RCC_preparation_to_WRC-23.pdf)

* In favour of the protection of FSS (s-E), FS and other services operating in the frequency band 3.6-3.8 GHz and in adjacent frequency bands, without imposing undue constraints on these services and their further development.
* Taking into account the existing results of ITU-R studies - Reports ITU-R S.2368, ITU-R M.2109 and ITU-R М.2111, as well as the results of studies during the current ITU-R study cycle.
* For the primary LMS allocation in Region 1 in the band 3600-3800 MHz provision of **9.21** RR should apply with coordination trigger minus 154.5 dB(W/m2 4 kHz) for 20% of time at the border. With respect to specific FSS ES provisions **9.17** and **9.18** of RR should apply.
* NOC for status of MMS and AMS allocations in Region 1 in the frequency band 3600-3800 MHz
* **Method C1/C2 from the CPM Report**

**7.2 International Organisations**

**7.2.1 WMO** - **Document APG23-6/**[**INF-02**](https://www.apt.int/sites/default/files/2023/06/APG23-6-INF-02_WMO_Position_on_WRC-23_Agenda.docx)

* Since an IMT identification in the 3 600-3 800 MHz could lead to a shift of current FSS usage in the band above 3 800 MHz, WMO is concerned regarding the possible impact on future usage of the existing FSS (space-to-Earth) allocation in the frequency band 3.8-4.2 GHz used for the distribution of meteorological data in the framework of the GEONETCast network.

**7.2.2 ICAO - Document APG23-6/**[**INF-25**](https://www.apt.int/sites/default/files/2023/07/APG23-6-INF-25_ICAO-Position_for_ITU-WRC23.docx)

* To ensure that any mobile allocation in Region 1 in the frequency bands 3 600-3 800 MHz would include technical conditions to protect FSS in order to continue the use of these bands by the FSS for the provision of aeronautical services, including GSO MSS feeder links for the purpose of supporting aeronautical services.

**7.2.3 GSOA** - **Document APG23-6/**[**INF-28**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-28_GSOA_Positions_on_WRC-23_Agenda_Items_0.docx)

* MS should use the available spectrum before seeking more spectrum that impacts existing services.
* Using 3.6-3.8 GHz in R1 for MS would lead to excessive interference making the band unusable for FSS.
* An IMT identification is not in the scope of the agenda item nor Resolution 246 (WRC 19).
* No undue constraints should be imposed on the existing services and their future development.
* GSOA supports No Change to ITU RR for 3.6-3.8 GHz in R1 but recognizes the various preferences in R1. An upgrade of MS in 3.6-3.7 GHz could be a balance between MS and FSS use. Methods which do not propose any conditions to protect existing services should also be opposed.

**7.2.4 GSMA Hong Kong**- **Document APG23-6/**[**INF-40**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-40_GSMA_Views_WRC-23_for_mobile.docx)

* The 3.5 GHz band (as a whole, 3.3-4.2 GHz) has served as the 5G launchpad globally. Its harmonisation varies, however, and individual countries have outgrown internationally agreed allocations.
* AI 1.3 is an opportunity to achieve greater harmonisation of the 3.5 GHz range. Along with AI 1.2, mentioned above, which considers the identification of 3 300-3 400 MHz and 3 600-3 800 MHz for IMT, a primary allocation for mobile within 3 600-3 800 MHz in Region 1 will broaden global harmonisation of the 3.5 GHz range, enable greater benefit from economies of scale and support mid-band capacity requirements of IMT-2020.
* IMT identification is now one of the Methods being considered under Agenda Item 1.3 under Method D. The GSMA supports the allocation of the band 3.6-3.8 GHz for co-primary Mobile and its identification for IMT.

**7.2.5 GSA[[1]](#footnote-1)** - **Document APG23-6/**[**INF-47**](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-47_GSA_PACP_WRC-23_Agenda_Items.docx)

* GSA supports the primary allocation of the band 3 600-3 800 MHz to the mobile service and IMT identification within Region 1. Region 3 countries can take benefits of economies of scale and global harmonized IMT eco-systems.

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1. Global mobile Suppliers Association [↑](#footnote-ref-1)