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| **The 3rd Meeting of the APT Conference Preparatory Group for WRC-23 (APG23-3)** | **APG23-3/OUT-09** |
| 8 – 13 November 2021, Virtual/Online Meeting | 13 November 2021 |

Working Party 1

**PRELIMINARY VIEWs on WRC-23 agenda item 1.5**

**Agenda Item 1.5:**

*to review the spectrum use and spectrum needs of existing services in the frequency band 470-960 MHz in Region 1 and consider possible regulatory actions in the frequency band 470‑694 MHz in Region 1 on the basis of the review in accordance with Resolution* ***235 (WRC‑15)****;*

**1. Background**

Spectrum below 1 GHz is exceptionally well suited for mobile broadband applications. In particular, the unique propagation characteristics of the bands below 1 GHz allow for wider area coverage, which in turn requires fewer infrastructures and facilitates service delivery to rural or sparsely populated areas.

During WRC-15, after proposal of WRC-19 agenda item by multiple Region 1 administrations for studying Region 1 identification of 470-694/698 MHz for IMT and consequent Plenary-session discussions, an agenda item was proposed for WRC-23,as item 2.5 in the Resolution **810 (WRC-15)**. This proposal was approved in WRC-19 as Agenda Item 1.5 and the relevant Resolution **235** **(WRC-15)** kept intact.

The Resolution **235** **(WRC-15)** invites ITU-R to review the spectrum use and study the spectrum needs of existing services within the frequency band 470-960 MHz in Region 1, in particular the spectrum requirements of the broadcasting and mobile, except aeronautical mobile, services. Furthermore, ITU-R invited to carry out sharing and compatibility studies, as appropriate, in the frequency band 470‑694 MHz in Region 1 between the broadcasting and mobile, except aeronautical mobile, services, as well as to conduct sharing and compatibility studies, as appropriate, in order to provide relevant protection of systems of other existing services. At the end, this Resolution limits WRC-23 to take possible regulatory actions in the frequency band 470-694 MHz in Region 1, as appropriate, based on the results of completed studies above.

Task Group 6/1 (TG 6/1) was established by [CPM23-1](https://www.itu.int/dms_pub/itu-r/md/00/ca/cir/R00-CA-CIR-0251%21%21MSW-E.docx) to be responsible group for conduction of Agenda Item 1.5 work. Third meeting of this group was finished on second day of APG23-3 meeting. At the TG6/1 second meeting, the progress of thee Working Groups, WG 1 to WG 3, were reported. There was agreement on the baseline parameters in WG 2 which is responsible for Sharing and compatibility studies, however there was no agreement whether and how studies using adjusted parameters could be distinguished from those using the baseline parameters. There is also ambiguity on necessity of IMT protection. The output of WG 3, which is responsible for drafting CPM text, contains square brackets due to lack of consensus on a “secondary/primary issue”, i.e. whether or not Resolution **235 (WRC-15)** limits consideration of “other services” only to protection of services having primary allocations in the band 470-694 MHz. The opinion of the Legal Affairs Unit requested. Five to six meeting proposed for TG 6/1 by item 9 Annex 9 [CPM23-1 Report](https://www.itu.int/dms_pub/itu-r/md/00/ca/cir/R00-CA-CIR-0251%21%21MSW-E.docx). The following ITU-R Reports are relevant, as stated in [Annex 6](https://www.itu.int/dms_ties/itu-r/md/19/tg6.1/c/R19-TG6.1-C-0024%21N01-R1%21MSW-E.docx) to Document 6-1/24 for the [TG 6/1](https://www.itu.int/en/ITU-R/study-groups/rsg6/tg6-1/Pages/default.aspx) Chairman’s Report:

– [BT.2301-2](https://www.itu.int/pub/R-REP-BT.2301): National field reports on the introduction of IMT in the bands with co-primary allocation to the broadcasting and the mobile services

– [BT.2337-1](https://www.itu.int/pub/R-REP-BT.2337): Sharing and compatibility studies between digital terrestrial television broadcasting and terrestrial mobile broadband applications, including IMT, in the frequency band 470-694/698 MHz

– [BT.2339-0](http://www.itu.int/pub/R-REP-BT/publications.aspx?lang=en&parent=R-REP-BT.2339): Co-channel sharing and compatibility studies between digital terrestrial television broadcasting and international mobile telecommunication in the frequency band 694-790 MHz in the GE06 planning area.

AWG has developed and published the [APT/AWG/REP-79](https://www.apt.int/sites/default/files/Upload-files/AWG/APT-AWG-REP-79_APT_Report_Arrangement_470-698_MHz.docx) “APT Report on Frequency Arrangements for IMT in the Band 470-698 MHz.”

**2. Documents**

* Input Documents APG23-2/[INP-24](https://www.apt.int/sites/default/files/2021/04/APG23-2-INP-24_AUS_contribution_for_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) (AUS), [INP-50](https://www.apt.int/sites/default/files/2021/04/APG23-2-INP-50_VTN_WP1_PV_1.1_1.2_1.3_1.4_1.5.docx) (VTN), [INP-53](https://www.apt.int/sites/default/files/2021/04/APG23-2-INP-53_LS_from_AWG.docx) (AWG)
* Input Documents APG23-3/[INP-07](https://www.apt.int/sites/default/files/2021/10/APG23-3-INP-07_AUS_contribution_for_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_v2.docx) (AUS), [INP-20](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-20_New_Zealand_input_to_WP1_AIs_1.1_1.2_1.3_1.5_9.1_Topic_C_Art._No_21.5.docx) (NZL), [INP-40](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-40_Samoa_-_WRC-23_Agenda_Item_1.5.docx) (SMO),
[INP-46](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-46_Iran-AI1.2_1.3_1.4_1.5_9.1c.docx) (IRN), [INP-51](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-51_VTN_WP1_PV_1.1_1.2_1.3_1.4_1.5.docx) (VTN)
* Information Documents APG23-2/[INF-12](https://www.apt.int/sites/default/files/2021/03/APG23-2-INF-12_Briefing_on_AI1.5.docx) (DG Chair), [INF-25](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-25_ASMG.docx) (ASMG),
[INF-30](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-30_GSMA_contribution_APG23-2_final.docx) (GSMA), [INF-34](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-34_CITEL_Preparation_for_WRC23_april_2021_revfinal.docx) (CITEL), [INF-36](https://www.apt.int/sites/default/files/2021/04/APG23-2-INF-36_RCC_Preparation_to_the_World_Radio_Conference_and_Radio_Assembly_2023.docx) (RCC)
* Information Documents APG23-3/[INF-01](https://www.apt.int/sites/default/files/2021/10/APG23-3-INF-01_Preliminary_WMO_Position_on_WRC-23_Agenda.docx) (WMO), [INF-18](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-18_GSMA_Views.docx) (GSMA Hong Kong),
[INF-20](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-20_Status_of_CEPT_Preparation_for_WRC-23_and_RA-23.pdf) (CEPT), [INF-22](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-22_Briefing_on_AI1.5-clean.docx) (DG Chair), [INF-37](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-37_ASMG_Preparation_for_WRC-23.pdf) (ASMG), [INF-39](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-39_Report_of_APM23-2.docx) (ATU)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 Australia** - **Document APG23-3/**[**INP-07**](https://www.apt.int/sites/default/files/2021/10/APG23-3-INP-07_AUS_contribution_for_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_v2.docx)

Australia notes that this is a Region 1 issue and does not have a position on this agenda item. However, studies may assist towards reviewing spectrum use and spectrum needs of existing services in the frequency band 470-694 MHz.

**3.1.2 New Zealand – Document APG23-3/**[**INP-20**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-20_New_Zealand_input_to_WP1_AIs_1.1_1.2_1.3_1.5_9.1_Topic_C_Art._No_21.5.docx)

New Zealand notes that this is a Region 1 issue and that Region 3 has an existing primary allocation to the mobile service the 470 -694 MHz frequency band. New Zealand notes that several Region 3 countries are included in RR No **5.296A** as having an identification to International Mobile Telecommunications (IMT) in portions of the 470 – 694 MHz or 610-698 MHz frequency bands.

**3.1.3 Samoa (Independent State of)** - **Document APG23-3/**[**INP-40**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-40_Samoa_-_WRC-23_Agenda_Item_1.5.docx)

Given the complexity of the issues on Agenda Item 1.5, it is expected that TG6/1 tasked to manage the workload may find difficulties given the commitment made by many developing countries on their implementation of DTT.

Whatever the conclusions are to be reached on the Agenda Item 1.5 for Region 1, WRC-23 decisions should in no way adversely affect Region 3 frequency allocations and existing and future use of the relevant frequency band nor subject Region 3 to any changes procedural or regulatory provisions.

This Administration does not support any changes to the regulatory conditions for using the 470 -694 MHz frequency band in Region 1 under this WRC-23 agenda item due to the existing services' current and future intensive use of this frequency band globally by SIDs and Developing countries.

**3.1.4 Iran (Islamic Republic of) – Document APG23-3/**[**INP-46**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-46_Iran-AI1.2_1.3_1.4_1.5_9.1c.docx)

The Islamic Republic of Iran is of the view that allocation of the frequency band 470-694/698 MHz, or portions thereof, to any form of primary mobile service in Region 1, shall be subject to protection of existing services and systems of Region 3 countries neighboring to Region 1, especially Islamic Republic of Iran.

Also, with respect to the GE06 regional agreement, this Administration is of the view that technical, operational and regulatory conditions resulted from the ITU-R sharing and compatibility studies, shall in no way undermine or reduce protection of and conditions under which this agreement made.

**3.1.5 Viet Nam (Socialist Republic of) – Document APG23-3/**[**INP-51**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-51_VTN_WP1_PV_1.1_1.2_1.3_1.4_1.5.docx)

Viet Nam supports sharing and compatibility studies in ITU-R, as appropriate, in the frequency band 470-694 MHz in Region 1 between the broadcasting and mobile, except aeronautical mobile, services, taking into account relevant ITU-R studies, Recommendations and Reports.

Taking into account above studies as well as the interest of global harmonization and economies of scale, Viet Nam supports appropriate action at WRC-23 including potential identifications of the frequency band 470-694 MHz to IMT in Region 1.

* 1. **Summary of issues raised during the meeting**

There was discussion on possible action by WRC-23 on this agenda item in relation to global harmonization and economy of scale, including potential identifications of the frequency band 470-694 MHz to IMT in Region 1. There was also discussion that this issue is outside the scope of Agenda Item 1.5.

There was discussion referring to the existence of primary mobile allocation in Region 3 in the 470 – 694 MHz frequency band.

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

APT Members are of the view that conclusions to be reached on Agenda Item 1.5 are a Region 1 issue and WRC-23 decisions shall in no way adversely affect Region 3 frequency allocations and existing and future use of the relevant frequency band or subject to any changes to procedural or regulatory provisions.

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

With respect to the GE06 regional agreement, one administration, part of GE06 agreement in Region 3, is of the view that technical, operational and regulatory conditions resulted from the ITU-R sharing and compatibility studies, shall in no way undermine or reduce protection of and conditions under which this agreement made.

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

APT Members are encouraged to submit their contributions for further considerations in the next APG23-4 meeting, taking into account progress of ITU-R studies.

**7. Views from Other Organisations**

**7.1 Regional Groups**

**7.1.1 ASMG** - **Document APG23-3/**[**INF-37**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-37_ASMG_Preparation_for_WRC-23.pdf)

To emphasize on the protection of existing services and systems, especially the broadcasting service, and not affecting it, and to study the possibility of allocating the band (470-694 MHz) or part of it to the mobile service and identifying it for applications of IMT by the interested administrations.

**7.1.2 CEPT- Document APG23-3//**[**INF-20**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-20_Status_of_CEPT_Preparation_for_WRC-23_and_RA-23.pdf)

* CEPT supports a complete and comprehensive overview of the existing usage and evaluation of spectrum needs of the existing services within the frequency band 470–960 MHz in Region 1 as a basis for further work on Agenda Item 1.5.
* CEPT is of the view that any consideration of possible regulatory action(s) in the band 470‐694 MHz requires a full account of the results and impact of sharing studies including a thorough analysis.
* In line with Resolution **235 (WRC‐15)**, CEPT acknowledges and supports that no regulatory action is required in the band 694‐960 MHz.
* CEPT is of the view that the primary allocation of the 470‐862 MHz band to the broadcasting service in Region 1 shall remain, in order to enable the protection and development of incumbent usage of the broadcasting service.
* CEPT is of the view that any possible regulatory action by WRC‐23 in the band 470 – 694 MHz shall not be in conflict with any provision of the GE‐06 Agreement.
* CEPT is of the view that this agenda item seeks the long‐term balance between meeting various national requirements and the challenges of effective cross‐border coordination between the existing services and various services/applications wishing to access spectrum, including applications of the mobile service.
* CEPT supports the continuation and development of the incumbent usage by PMSE (SAP/SAB) (in accordance with existing RR No. **5.296**).
* CEPT supports the protection of the radioastronomy service within the frequency band 606‐614 MHz to ensure its continued operation. CEPT is of the view that any decision on regulatory action(s) in the band 470‐694 MHz at the WRC‐23 shall consider regulatory action to protect RAS, taking into account RR **5.149**.
* CEPT is currently of the view that no changes are necessary concerning RR No. **5.291A** addressing the operation of wind profiler radars.
	+ 1. **ATU** - **Document APG23-3/**[**INF-39**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-39_Report_of_APM23-2.docx)

A position on this agenda item would be developed once studies have sufficiently progressed in accordance with Resolution **235 (WRC-15)**.

**7.1.3 CITEL**

Contribution has not been submitted to APG23-3. More information may be found in [Document](https://www.citel.oas.org/en/SiteAssets/PCCII/WRC/CITEL%20Preparation%20for%20WRC23_april%202021_revclean_RevF.pdf) linked to the ITU web site on [Regional Preparation for WRC-23](https://www.itu.int/en/ITU-R/conferences/wrc/2023/Pages/reg-prep.aspx)

**7.1.4 RCC**

Contribution has not been submitted to APG23-3. More information may be found in [Document](https://www.itu.int/oth/R0A0200000B/en) linked to the ITU web site on [Regional Preparation for WRC-23](https://www.itu.int/en/ITU-R/conferences/wrc/2023/Pages/reg-prep.aspx)

**7.2 International Organisations**

**7.2.1 WMO** - **Document APG23-3/**[**INF-01**](https://www.apt.int/sites/default/files/2021/10/APG23-3-INF-01_Preliminary_WMO_Position_on_WRC-23_Agenda.docx)

WMO would appreciate the development of a solution to ensure the effective operation of the wind profiler radars in the 470-494 MHz frequency band.

**7.2.2 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)

No position.

**7.2.3 IARU** - **Document APG23-3/**[**INF-17**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-17_IARU_Views.docx)

No position.

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