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| **The 3rd Meeting of the APT Conference Preparatory Group for WRC-23 (APG23-3)** | **APG23-3/OUT-22** |
| 8 – 13 November 2021, Virtual/Online Meeting | 13 November 2021 |

Working Party 3

**PRELIMINARY VIEWs on WRC-23 agenda item 1.13**

**Agenda Item 1.13:**

*to consider a possible upgrade of the allocation of the frequency band 14.8-15.35 GHz to*

*the space research service, in accordance with Resolution****661******(WRC‑19)****;*

**1. Background**

The frequency band 14.8-15.35 GHz is currently allocated to the SRS on a secondary basis, which is used by some administrations for data relay systems (DRS). Considering that there is an interest among space agencies and administrations to use this frequency band in scientific missions, WRC-19 adopted Resolution **661 (WRC-19)** to develop compatibility and sharing studies on this frequency band during WRC-23, with a view to ensuring protection of the primary services and the technical and regulatory conditions determined in the ITU-R according to the results of the aforementioned studies.

In accordance with the decision made by CPM23-1, as the responsible group, ITU-R Working Party 7B (WP 7B) is conducting the above studies. At its meeting held in September 2021, ITU-R WP 7B made further progress on Recommendation and Report for the activities associated with the study, SRS technical characteristics and sharing analysis conducted under this agenda item, respectively.

Relevant ITU-R documents:

* [Resolution **661** (WRC-19)](https://www.itu.int/dms_pub/itu-r/oth/0c/0a/R0C0A00000D0013PDFE.pdf) “Examination of a possible upgrade to primary status of the secondary allocation to the space research service in the frequency band 14.8-15.35 GHz”
* [ITU-R Rec. SA.510-3](https://www.itu.int/rec/R-REC-SA.510-3-201707-I/en) “Feasibility of frequency sharing between the space research service and other services in bands near 14 and 15 GHz - Potential interference from data relay satellite systems”
* [ITU-R Rec. SA.1414-2](https://www.itu.int/rec/R-REC-SA.1414-2-201707-I/en) “Characteristics of data relay satellite systems”
* [ITU-R Rec. SA.1626-1](https://www.itu.int/rec/R-REC-SA.1626-1-201312-I/en) “Feasibility of sharing between the space research service (space-to-Earth) and the fixed and mobile services in the band 14.8-15.35 GHz”
* [Chairman's Report 7B/158 (Annex 1)](https://www.itu.int/dms_ties/itu-r/md/19/wp7b/c/R19-WP7B-C-0158!N01!MSW-E.docx) “Draft CPM text framework for WRC-23 agenda item 1.13”
* [Chairman's Report 7B/158 (Annex 2)](https://www.itu.int/dms_ties/itu-r/md/19/wp7b/c/R19-WP7B-C-0158!N02!MSW-E.docx) “Working document towards a preliminary draft new Report ITU-R SA.[15 GHZ SRS SHARING]”
* [Chairman's Report 7B/158 (Annex 3)](https://www.itu.int/dms_ties/itu-r/md/19/wp7b/c/R19-WP7B-C-0158!N03!MSW-E.docx) “Proposed Working Party 7B workplan for Agenda Item 1.13”
* [7/30](https://www.itu.int/md/R19-SG07-C-0030/en) “Draft new Recommendation ITU-R SA.[15 GHZ SRS CHARACTERISTICS]”

**2. Documents**

* Input Documents APG23-3/[INP-09](https://www.apt.int/sites/default/files/2021/10/APG23-3-INP-09_AUS_contribution_for_WP3_Preliminary_Views_on_WRC-23_Agenda_Items_1.12_1.13_1.14_9.1_Topics_a_and_d.docx) (AUS), [INP-17](https://www.apt.int/sites/default/files/2021/10/APG23-3-INP-17_Indonesia-Preliminary_Views_on_WRC-23_Agenda_Items_1.12_1.13_and_9.1_Topics_a.docx) (INS), [INP-26](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-26_WP3_Kor_1.12_1.13_1.14_9.1.a_9.1.d.docx) (KOR), [INP-30](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-30_J-3_WP3_PRELIMINARY_VIEWS_ON_WRC-23_AGENDA_ITEMS_1.12_1.13_1.14_9.1A_9.1D_AND_RES.655.docx) (J), [INP-43](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-43_China_WP3.docx) (CHN), [INP-48](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-48_Iran-AI1.13.docx) (IRN), [INP-53](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-53_VTN_WP3_PV_1.13.docx) (VTN)
* Information Documents APG23-2/[INF-10](https://www.apt.int/sites/default/files/2021/10/APG23-3-INF-10_Briefing_on_AI1.13.docx)(DG Chair), [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-15](https://www.apt.int/sites/default/files/2021/10/APG23-3-INF-15_ICAO-Position_for_ITU_WRC-23.docx) (ICAO), [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-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-09**](https://www.apt.int/sites/default/files/2021/10/APG23-3-INP-09_AUS_contribution_for_WP3_Preliminary_Views_on_WRC-23_Agenda_Items_1.12_1.13_1.14_9.1_Topics_a_and_d.docx)

Australia supports studies assessing the feasibility of upgrading the current secondary allocation to the SRS in the frequency band 14.8-15.35 GHz to primary status. If the results of the studies show that protection of existing primary services is feasible, then Australia supports an upgrade to primary status, while ensuring protections to primary fixed service and mobile service systems in the frequency band 14.8-15.35 GHz.

**3.1.2 Indonesia (Republic of)** - **Document APG23-3/** [**INP-17**](https://www.apt.int/sites/default/files/2021/10/APG23-3-INP-17_Indonesia-Preliminary_Views_on_WRC-23_Agenda_Items_1.12_1.13_and_9.1_Topics_a.docx)

Indonesia is of the view to support studies by ITU-R in ensuring protection and compatibility between SRS and incumbent services in the band 14.8-15.35 GHz and in the adjacent bands 15.35-15.4 GHz and that upgrading to primary status the allocation of the frequency band 14.8-15.35 GHz for the SRS should not impose constraints on existing and planned systems of primary services in the frequency band 14.8-15.35 GHz.

**3.1.3 Korea (Republic of)** - **Document APG23-3/**[**INP-26**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-26_WP3_Kor_1.12_1.13_1.14_9.1.a_9.1.d.docx)

The Republic of Korea is of the view that in order to determine the feasibility of upgrading the SRS allocation to primary status in the frequency band 14.8-15.35 GHz, compatibility and sharing studies in ITU-R considering all relevant scenarios should ensure the protection of the incumbent services in this frequency band without imposing constraints on the services in the frequency band 14.8-15.35 GHz and 15.35-15.4 GHz. Appropriate transitional measure needs to be developed to protect incumbent service allocated on a secondary basis in the frequency band 15.2-15.35 GHz.

**3.1.4 Japan** - **Document APG23-3/**[**INP-30**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-30_J-3_WP3_PRELIMINARY_VIEWS_ON_WRC-23_AGENDA_ITEMS_1.12_1.13_1.14_9.1A_9.1D_AND_RES.655.docx)

Japan supports ITU-R studies for the consideration of upgrading the SRS allocation from secondary to primary in the frequency band 14.8-15.35 GHz, while ensuring protection and not imposing constraints on incumbent services in this frequency band as well as the band 15.35-15.4 GHz and appropriate transitional measures need to be developed to protect incumbent service allocated on a secondary basis in the frequency band 15.2-15.35 GHz.

**3.1.5 China (People’s Republic of)** - **Document APG23-3/**[**INP-43**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-43_China_WP3.docx)

China supports the studies on this agenda item carried out in ITU-R WP 7B and supports the possible upgrading of the SRS allocation from secondary to primary status, if the studies show that sharing and compatibility is feasible with existing co-frequencies and adjacent-frequencies primary and secondary services and systems.

**3.1.6 Iran (Islamic Republic of)** - **Document APG23-3/**[**INP-48**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-48_Iran-AI1.13.docx)

APT Members support ITU-R studies for the consideration of upgrading the SRS allocation from secondary to primary in the frequency band 14.8-15.35 GHz, while ensuring protection and not adversely affecting incumbent services in this frequency band as well as the band 15.35-15.4 GHz and appropriate transitional measures need to be developed to protect incumbent services allocated on a secondary basis in the frequency band 15.2-15.35 GHz.

**3.1.7 Socialist Republic of Viet Nam** - **Document APG23-3/**[**INP-53**](https://www.apt.int/sites/default/files/2021/11/APG23-3-INP-53_VTN_WP3_PV_1.13.docx)

Viet Nam supports conducting sharing and compatibility studies in ITU-R in accordance with Resolution **661 (WRC-19)** to consider a possible upgrade of the allocation of the frequency band 14.8-15.35 GHz to the space research service, while ensuring no adverse effect on the allocation of the existing services and their future development in the same and adjacent frequency bands, in particular the fixed service allocated in the frequency band 14.5-15.35 GHz.

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

None.

**4. APT Preliminary View**

APT Members support ITU-R sharing and compatibility studies for the consideration of upgrading the SRS allocation from secondary to primary in the frequency band 14.8-15.35 GHz, while ensuring protection of and not adversely affecting incumbent services in this frequency band as well as the adjacent bands.

Appropriate transitional measures need to be developed to protect incumbent services that are allocated on a secondary basis in the frequency band 15.2-15.35 GHz.

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

None.

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

APT Members are encouraged to participate in and contribute to the work of WP 7B at its next meeting in April 2022 and as well as to future APG23 meetings.

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

APG23-3)

**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)**

Follow-up studies under this agenda item, focusing on protecting existing services, especially microwave links operation in the band 14.8-15.35 GHz and radio services in adjacent bands, without imposing additional restrictions on existing primary service and systems in the band and adjacent bands.

**7.1.2 ATU** - **Document APG23-3/****[INF-39](https://www.apt.int/sites/default/files/2021/11/APG23-3-INF-39_Report_of_APM23-2.docx)**

Support the studies under this Agenda Item to upgrade the use of SRS in the band 14.8-15.35 GHz without imposing constraints on existing systems of primary allocation in-band and adjacent bands. Specifically ensuring the protection of Radio Astronomy, Earth Exploration and SRS passive in the band 15.35-15.4 GHz.

**7.1.3 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 is supporting upgrade of SRS allocation from secondary to primary while ensuring protection for in-band FS/MS and for radioastronomy service in the adjacent band 15.35-15.4 GHz. Upgrading of the allocation of the frequency band 14.8‐15.35 GHz to the space research service should not impose constraints on existing systems of FS and MS in the frequency band 14.8-15.35 GHz.

**7.1.4 CITEL** - **Document APG23-3/**[**INF-10**](https://www.apt.int/sites/default/files/2021/10/APG23-3-INF-10_Briefing_on_AI1.13.docx)

An Administration supports studies in accordance with Resolution 661 (Rev. WRC-19) to consider a possible upgrade to the existing global allocation to the SRS in the frequency range 14.8-15.35 GHz, taking into account the need to provide protection to and to not impose constraints on incumbent services in this frequency band and adjacent frequency bands.

**7.1.5 RCC** - **Document APG23-3/**[**INF-10**](https://www.apt.int/sites/default/files/2021/10/APG23-3-INF-10_Briefing_on_AI1.13.docx)

The RCC Administrations are in favour of upgrading the allocation of the frequency band 14.8-15.35 GHz to the space research service while protecting FS and MS in the subject frequency band, as well as passive services in the adjacent frequency band 15,35-15,4 GHz, taking into account results of the compatibly and sharing studies. Upgrading the SRS allocation should not impose constraints on the incumbent FS and MS systems in the frequency band 14.8-15.35 GHz.

**7.2 International Organizations**

**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 is not opposed to the upgrading the existing space research service (SRS) secondary allocation in 14.8-15.35 GHz to primary status.

**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)

To support studies called for by Resolution **661** (WRC 19) ensuring that they take account of systems operating in the aeronautical mobile service.

To ensure that any radio regulatory action taken as a result of agreed studies does not adversely affect the provision of aeronautical services.

**7.2.3 SFCG** - **Document APG23-3/**[**INF-10**](https://www.apt.int/sites/default/files/2021/10/APG23-3-INF-10_Briefing_on_AI1.13.docx)

SFCG supports the upgrade of the SRS allocation from secondary to primary status in the band 14.8-15.35 GHz subject to the completion of studies in ITU-R in order to guarantee the compatibility between SRS and MS and FS in the band 14.8-15.35 GHz, and between SRS and RAS in the adjacent band 15.35-15.4 GHz.

SFCG believes that the band 15.35-15.4 GHz should remain a viable option for future passive sensing missions as this band is covered by FN 5.340. However, addressing the protection of EESS (passive) and SRS (passive) in this band from out of band emissions of SRS operated in the 14.8-15.35 GHz band may be problematic due to the lack of operational characteristics for EESS (passive) and SRS (passive) in the concerned band.

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