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|  | ASIA-PACIFIC TELECOMMUNITY | **Document No:** |
| **The 4th Meeting of the APT Conference Preparatory**  **Group for WRC-23 (APG23-4)** | **APG23-4/OUT-38** |
| 15 – 20 August 2022, Bangkok, Thailand | 20 August 2022 |

Working Party 5

**PRELIMINARY VIEWs on WRC-23 agenda item 9.1 (Topic b))**

**Agenda Item 9.1. Topic b):**

*review of the amateur service and the amateur-satellite service allocations in the frequency band 1 240 1 300 MHz to determine if additional measures are required to ensure protection of the radionavigation-satellite (space-to-Earth) service operating in the same band in accordance with Resolution****774 (WRC-19)***

**1. Background**

Resolution **774 (WRC-19)** *resolves to invite ITU‑R*

1 to perform the detailed review of the different systems and applications used in the amateur service and amateur-satellite service allocations within the frequency band 1 240‑1 300 MHz;

2 taking into account the results of the above review, to study possible technical and operational measures to ensure the protection of RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services within the frequency band 1 240-1 300 MHz, without considering the removal of these amateur and amateur-satellite services allocations,

ITU-R Working Party (WP) 5A was identified as the responsible group for this agenda item, together with WP 4C and WP 3M as the contributing groups. WP 4C is responsible for the detailed interference analysis between stations of the amateur service and receivers of the radionavigation-satellite service. WP 5A is also responsible for the review amateur service applications and development of appropriate and relevant parameters of amateur service stations for the studies undertaken by WP 4C.

WP 5A completed the work on the [Draft CPM text for WRC-23 Agenda Item 9.1 TOPIC B).](https://www.itu.int/dms_pub/itu-r/md/19/wp5a/c/R19-WP5A-C-0597!N06!MSW-E.docx) [A Preliminary Draft New Report ITU-R M.[AMATEUR.CHARACTERISTICS]](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0597!N10!MSW-E) and a [WORKING DOCUMENT TOWARDS A Preliminary Draft New Recommendation ITU-R M.[AS GUIDANCE]](http://www.itu.int/md/dologin_md.asp?lang=en&id=R19-WP5A-C-0597!N11!MSW-E) are in course of preparation.

WP 4C updated [A Preliminary Draft New Report ITU-R M.[Amateur-RNSS]](https://www.itu.int/dms_ties/itu-r/md/19/wp4c/c/R19-WP4C-C-0333!N01!MSW-E.docx) to document its ongoing work on the studies for this topic. This document includes relevant amateur/amateur-satellite transmitter parameters and interference scenarios agreed with WP 5A, relevant RNSS receiver parameters and protection criteria developed in WP 4C, analysis methodologies employing propagation models discussed with WP 3M, and the results of studies completed. WP 4C also revised the Recommendations ITU-R M.1902-1 and M.1787-3 to support the studies.

**2. Documents**

***2.1. Input Documents:*** APG23-4/[INP-11(J)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F08%2FAPG23-4-INP-11_J-5_WP5_Preliminary_Views_on_WRC-23_Agenda_Items_9.1.B_and_10.docx&wdOrigin=BROWSELINK), [18(AUS)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F08%2FAPG23-4-INP-18_AUS_WP5_Preliminary_Views_on_WRC-23_Agenda_Items_2_4_8_9.1Topic_b_and_10.docx&wdOrigin=BROWSELINK), [31(IRN)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F08%2FAPG23-4-INP-31_IRN_WP5_Preliminary_Views_on_WRC-23_Agenda_Item_9.1Topic_b.docx&wdOrigin=BROWSELINK), [38(KOR)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F08%2FAPG23-4-INP-38_KOR_WP5_Preliminary_Views_on_WRC-23_Agenda_Items_9.1Topic_b_and_10.docx&wdOrigin=BROWSELINK), [44(CHN)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F08%2FAPG23-4-INP-44_China_WP5_Preliminary_Views_on_WRC-23_Agenda_Items_2_4_9.1Topic_b_and_10.docx&wdOrigin=BROWSELINK), [49(THA)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F08%2FAPG23-4-INP-49_Thailand_WP5_Preliminary_View_on_WRC-23_Agenda_Item_9.1Topic_b.docx&wdOrigin=BROWSELINK), [65(IND)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F08%2FAPG23-4-INP-65_India_WP5_Preliminary_Views_on_WRC-23_Agenda_Items_2_4_and_9.1Topic_b.docx&wdOrigin=BROWSELINK), [83(INS)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F08%2FAPG23-4-INP-83_Indonesia_WP5_Preliminary_View_on_WRC-23_Agenda_Item_9.1Topic_b.docx&wdOrigin=BROWSELINK)

***2.2. Information Documents:*** APG23-4/[INF-02(ATU)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F07%2FAPG23-4-INF-02_ATU_preparation.docx&wdOrigin=BROWSELINK), [03(WMO)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F07%2FAPG23-4-INF-03_WMO_Positions.docx&wdOrigin=BROWSELINK), [21(ASMG)](https://www.apt.int/sites/default/files/2022/08/APG23-4-INF-21_ASMG_Preparation_for_WRC-23.pdf), [24(DG chair)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F08%2FAPG23-4-INF-24_Brief_on_AI9.1Topic_b.docx&wdOrigin=BROWSELINK), [27(IARU)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.apt.int%2Fsites%2Fdefault%2Ffiles%2F2022%2F08%2FAPG23-4-INF-27_IARU_Views_on_WRC-23_Agenda_Items_1.2_1.12_1.14_1.18_and_9.1_Topic_a_and_b.docx&wdOrigin=BROWSELINK), [28(CITEL)](https://www.apt.int/sites/default/files/2022/08/APG23-4-INF-28_CITEL_Preparation_for_WRC-23.pdf)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

A total of eight countries submitted their views as contributions for the APG23-4 meeting, and APT members’ views haven’t changed much except for some expressions.

APT Members support studies in ITU-R to protect RNSS (space-to-Earth) from the amateur and amateur-satellite services allocated on a secondary basis in the frequency band 1 240-1 300 MHz, and also support the continued use of these frequency bands by the amateur and amateur-satellite services.

**3.1.1 Japan** - **Document APG23-4/INP-11**

Japan supports ongoing studies in ITU-R to ensure the protection of RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz in accordance with Resolution **774 (WRC-19)**.

Japan also supports the consideration of guideline in ITU-R to protect RNSS (space-to-Earth) receivers given that the ITU-R studies have shown that interference into RNSS receivers would occur depending on the cases.

**3.1.2 Australia** - **Document APG23-4/INP-18**

Australia supports studies in line with Resolution **774 (WRC-19)** to protect RNSS receivers while supporting the continued use of these frequency bands by the amateur and amateur-satellite services.

**3.1.3 Iran** - **Document APG23-4/INP-31**

The Administration of the I.R. Iran proposes that the following view be adopted as APT Preliminary Views:

APT Members support studies in ITU-R in accordance with Resolution **774 (WRC-19)**, to protect RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz without considering the removal of the amateur and amateur-satellite service allocations.

APT Members do not support any changes to the Radio Regulations under Agenda Item 9.1 and are of the view that Agenda Item 9.1 Topic B is fully satisfied by developing relevant new ITU-R report and recommendation to provide guidance towards the implementation of technical and operational measures for the continued use the frequency band 1 240‐1 300 MHz by the Amateur and Amateur‐satellite service in accordance with the RR in order to protect the RNSS (space-to-Earth) receivers.

**3.1.4 Korea** - **Document APG23-4/INP-38**

The Republic of Korea is of the view that protection of RNSS (space-to-Earth) from the amateur and amateur-satellite services allocated on a secondary basis in the frequency band 1 240-1 300 MHz should be ensured with appropriate technical and operational measures, and supports on-going ITU-R studies to provide guidelines to ensure the protection of the RNSS (space-to-Earth) in the frequency band 1 240-1 300 MHz.

**3.1.5 China** - **Document APG23-4/INP-44**

China supports the studies in accordance with Resolution 774 (WRC‑19) to ensure the protection of RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services within the frequency band 1 240-1 300 MHz. China also supports the development of the Recommendation ITU-R M.[AS GUIDANCE] as a guideline to guarantee that all the frequency bands of RNSS signal specified in Recommendation M.1787-3 within 1 240-1 300 MHz are given due protection.

**3.1.6 Thailand** - **Document APG23-4/INP-49**

Thailand supports to consider additional measures to protect the radionavigation-satellite (space-to-Earth) service from the amateur and amateur-satellite services operating in the frequency band 1 240-1 300 MHz. The measures nevertheless shall not lead to the removal of amateur and amateur-satellite service allocations.

**3.1.7 India** - **Document APG23-4/INP-65**

India supports ongoing ITU-R studies in line with Resolution **774** (**WRC-19**) to ensure the protection of RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz.

**3.1.8 Indonesia** - **Document APG23-4/INP-83**

Indonesia is of the view to support sharing and compatibility study by ITU-R in Working Party 5A to ensure protection of the radionavigation-satellite service (space-to-Earth) allocated on a primary basis in the frequency band 1 240-1 300 MHz from the operation of the amateur and amateur-satellite services (Earth-to-space) allocated on the secondary service in the same band.

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

It was noted that in contradiction with APT Preliminary View under this topic, there may be proposals from other regional organizations for changes to the Radio Regulations or addition a WRC Resolution to protect RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz.

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

APT Members support ITU-R studies in accordance with Resolution **774 (WRC-19)**, and development of new ITU-R recommendations to protect RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz without considering the removal of the amateur and amateur-satellite service allocations. APT Members support no changes to the Radio Regulations under Agenda Item 9.1 Topic B.

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

None

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

APT Members are encouraged to participate in the relevant ITU-R studies, and contribute on this topic to the next APG meetings. It is also required to monitor whether there is any proposals from other regional organizations to make changes in the Radio Regulations under AI 9.1 Topic b) and if this is the case, prepare to how to react to such proposals.

**7. Views from Other Organisations**

**7.1 Regional Groups**

**7.1.1 ASMG** - **Document APG23-4/INF-21**

Support the development of possible technical and operational measures to ensure the protection of receivers of operating systems according to the primary allocation to the RNSS service in the frequency band 1 240 – 1 300 MHz.

**7.1.2 ATU** - **Document APG23-4/INF-02**

Support the protection of RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz.

**7.1.3 CEPT** - **Document APG23-4/INF-48**

* CEPT supports the protection of the RNSS.
* CEPT supports the development of a new ITU‐R Report or Recommendation to provide guidance towards the implementation of technical and operational measures for the continued use the frequency band 1 240‐1 300 MHz by the Amateur and Amateur‐satellite service in accordance with the RR in order to protect the RNSS.
* CEPT supports that above mentioned measures to be applied on use of secondary the Amateur and Amateur satellite service, should be based on the results of co‐existence studies and measurement campaigns.

**7.1.4 CITEL** - **Document APG23-4/INF-28**

One administration is of the view that changes to the Radio Regulations are outside the scope of Agenda Item 9.1. For WRC-23 Agenda Item 9.1, Topic b), and supports studies to be carried out under Resolution 774 (WRC-19). The results of these studies should seek to identify possible technical and operational measures to ensure the protection of RNSS (space-to-Earth) receivers from the amateur and amateur-satellite services in the frequency band 1 240-1 300 MHz, without considering the removal of these amateur and amateur-satellite service.

Another administration supports studying the potential for interference to RNSS (space-to-Earth) receivers from amateur and amateur-satellite services in the frequency band 1 240–1 300 MHz and, if warranted, providing possible technical and/or operational measures to prevent any future cases of such interference, without considering any regulatory measures under this topic.

**7.1.5 RCC[[1]](#footnote-1)**

The RCC Telecommunication Administrations are of the view that, based on outcomes of carried out studies, the technical and operational measures to ensure the protection of RNSS receivers from the stations in the amateur and the amateur-satellite services in the frequency band 1 240‑1 300 MHz need to be defined.

**7.2 International Organisations**

**7.2.1 IARU** - **Document APG23-4/INF-27**

During many years of operational experience, the secondary amateur and amateur satellite services have successfully co-existed with all the primary services in the range 1 240-1 300 MHz with very few issues. In cases where certain applications (in particular, wide bandwidth, high duty cycle applications) could increase the potential for interference, careful spectrum management and national licensing conditions have minimised any risk. Radio amateurs have successfully co-existed and innovated in this frequency range for many years and IARU believes that the regulatory status of the amateur and amateur satellite services in this range is already clear. Therefore, any additional regulatory, operational, or technical measures incorporated into the Radio Regulations are unnecessary. Any recommendations resulting from studies under Resolution 774 can be applied on a national basis and should be based on realistic assumptions, proportionate in scope, and carefully justified so as not to unnecessarily inhibit development of the amateur services.

IARU supports the draft CPM text developed by WP5A and will actively take part in the continuing work with the preliminary draft new recommendation ITU-R M. [AS GUIDANCE].

* + 1. **ICAO** - **Document APG23-3/INF-15**

To ensure that ITU-R studies under Resolution 774 (WRC-19) address whether potential mitigation measures will impact the protection of aeronautical radar systems operating under the existing aeronautical radionavigation or radiolocation service allocations.

* + 1. **WMO** - **Document APG23-4/INF-03**

WMO will monitor and, if necessary, contribute to the work on this Topic to ensure that wind profiler radar will not be affected.

* + 1. **Eurocontrol (May 2021)**

To ensure that ITU-R studies under Resolution 774 (WRC-19) address whether potential mitigation measures will impact the protection of aeronautical radar systems operating under the existing aeronautical radionavigation or radiolocation service allocations.

* + 1. **Space Frequency Coordination Group (September 2021)**

SFCG supports studies providing appropriate technical conditions applicable to the amateur service to protect RNSS. In addition, SFCG shall ensure that any possible change will not adversely impact the operation of EESS (active) and SRS (active) in the 1 215-1 300 MHz.

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1. https://www.rcc.org.ru/netcat\_files/userfiles/Position\_RCC\_for\_WRC-23\_3\_June\_2022.doc [↑](#footnote-ref-1)