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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-22** |
| 14 – 19 August 2023, Brisbane, Australia | 18 August 2023 |

Working Party 3

**APT VIEW and Preliminary APT Common Proposal on WRC-23 agenda item 1.12 [[1]](#footnote-1)**

**Agenda Item 1.12:**

*to conduct, and complete in time for WRC 23, studies for a possible new secondary allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz, taking into account the protection of incumbent services, including in adjacent bands, in accordance with Resolution* ***656 (Rev.WRC-19)****;*

**1. Background**

There is an interest among climate researchers in remote sensing of the Earth’s subsurface with the intent of locating water/ice/deposits and examining sub-ice glacial bed surfaces using active spaceborne sensors. This information can help to understand the global thickness, inner structure, and the thermal stability of the Earth’s ice sheets as an observable parameter of Earth climate evolution. The 40-50 MHz frequency range is preferable to satisfy all requirements for spaceborne radar sounders and a bandwidth of 10 MHz is sufficient for use.

ITU-R Recommendation [RS.2042-1](https://www.itu.int/rec/R-REC-RS.2042/en) titled “Typical technical and operating characteristics for spaceborne radar sounder systems using the 40-50 MHz band” was completed during the WRC-19 study cycle. This recommendation indicates that:

* operations of spaceborne radar sounder with other primary and secondary services would be under RR No. **4.4**, non-interference basis and shall not cause harmful interference to, and shall not claim protection;
* that operational limitations have been identified to allow operation under RR No. **4.4** on a non-interference basis such as operating only in either uninhabited or sparsely populated areas of the ice sheets of Greenland and Antarctica and deserts of northern Africa and the Arabian Peninsula and operating the radar at night-time only from 3 a.m. to 6 a.m. locally

The spaceborne active sensor is expected to be carried on a low-Earth orbiting satellite at an altitude of 400 km, an inclination optimized for a sun synchronous orbit. The number of spaceborne radar sounder missions operating simultaneously is expected to remain very low; perhaps only one, or two.

ITU-R WP 7C (responsible for this agenda item) has not met since the conclusion of APG23-5 however this agenda item was considered further at the CPM23-2 meeting. The following is a summary of the current status of work on this agenda item:

1. **Final CPM23-2 Report to WRC-23** – As a result of the output from the CPM23-2 meeting (refer Report [CPM23-2/0001](https://www.itu.int/md/R19-CPM23.2-R-0001/en)) five methods have been proposed to satisfy WRC-23 Agenda Item 1.12, summarised as follows:

**Method A1** proposes to establish a new global secondary allocation to the EESS (active) in the frequency band 40-50 MHz. It also proposes a new footnote in the Table of Frequency Allocations of RR Article 5 that references a proposed new WRC Resolution to protect incumbent in-band and adjacent-band services. Within Method A1 there are 4 options in the draft text for the *resolves* section of a proposed new Resolution:

All 4 options resolve that that the use of the band 40-50 MHz by EESS (active) is limited to spaceborne radar sounders as described in Recommendation ITU R RS.2042. In addition, for each option:

**Option 1:**

* Proposes TBD pfd levels per spaceborne radar sounder produced at the surface of the Earth not to be exceeded for a TBD percentage of time.
* Proposes that that systems operate in a few hours centred at approximately 4am local time

**Option 2:**

* Proposes that the systems shall not claim protection from stations operating in the radiolocation service in the frequency bands 42-42.5 MHz or 46-50 MHz. No. 5.43A does not apply;
* Proposes that the systems shall not claim protection from stations operating in the space research service in the frequency bands 40-40.02 MHz or 40.98-41.015 MHz. No. 5.43A does not apply;
* Defines various areas (Southern and Northern polar regions, plus Greenland) where operations are permitted based on latitude and longitude.
* that stations in the EESS (active) operating in areas outside of these areas shall not transmit without prior agreement of directly overlapped and neighbouring administrations.

**Option 3:**

* Proposes 2 different pfd levels per spaceborne radar sounder at the surface of the Earth (for latitudes above and below +64 deg and -64 deg (due to different propagation characteristics).
* Proposes that these pfd levels can be exceeded (by 9dB) for no more than 0.05% of the time.
* Proposes that if more than one system is in operation, that the limits are not exceeded for more than 0.1% of the time and administrations shall have consultations accordingly.
* Proposes that the spaceborne radar sounders should only operate in a few hours window centred approximately at 4 a.m. local time.

**Option 4:**

* Proposes TBD pfd levels per spaceborne radar sounder produced at the surface of the Earth not to be exceeded for a TBD percentage of time, and a TBD transmit peak power that shall not be exceeded for a TBD percentage of time.
* Proposes that the systems operate in a few hours centred at approximately 4am local time

**Method A2** proposes to establish a new global secondary allocation to the EESS (active). This new secondary allocation is proposed to be limited, through a dedicated footnote, to the operation of spaceborne radar sounder systems, over the frequency band 40-50 MHz, in the Table of Frequency Allocations of RR Article 5. This footnote would also include relevant technical conditions, such as the power flux-density at the surface of the Earth, to address the protection of incumbent services in the frequency band 40-50 MHz.

**Method B** proposes to establish a new global secondary allocation to the EESS (active). This new secondary allocation is proposed to be limited, through a dedicated footnote, to the operation of spaceborne radar sounder systems, over the frequency band 40-50 MHz, in the Table of Frequency Allocations of RR Article 5. In addition, this footnote would address the protection of the secondary radiolocation service in the frequency bands 42-42.5 MHz and 46-68 MHz.

**Method C** proposes to establish a global secondary allocation to the EESS (active) in the frequency band 40-50 MHz in the Table of Frequency Allocations of RR Article 5.

**Method D** proposes no change to the Radio Regulations (Articles and Appendices).

All five methods propose the suppression of Resolution **656 (WRC 19)**.

1. **Revision of ITU-R Report RS.2455** **(now Preliminary draft new report ITU-R RS.[Spaceborne VHF Radar Sounder])**– work continued at the September/October 2022 WP 7C meeting on the Preliminary draft revision of this report. The meeting agreed that as more than 90% of the proposed revisions to the report is new material it would be better to create a new report (and subsequently suppress the in-force version). The latest version of the new report is attached to the WP 7C Chair’s report (Document [7C/459](https://www.itu.int/md/R19-WP7C-C-0459/en) Annex 2) and is now titled “Preliminary draft new Report ITU-R RS.[Spaceborne VHF Radar Sounder]”. As significant further work is required on the sharing studies a correspondence group was formed to progress this work.
2. **WP 7C Correspondence Group on WRC-23 agenda item 1.12** – the correspondence group met virtually in February 2023 and it became evident that given the substantial nature of the contributions received and the limited time available the group would not be able to provide an updated preliminary draft new report. Instead it was decided that the Chair of the correspondence group would submit to WP 7C (refer Document [7C/467](https://www.itu.int/md/R19-WP7C-C-0467/en)) a summary of the work of the group and identify a number of areas requiring further consideration in the preliminary draft new report,
3. **Revision of ITU-R Recommendation RS.2042** – minor revisions were made at the September/October 2022 meeting of WP 7C and an updated preliminary draft revision was carried forward as an annex to the WP 7C Chair’s report (refer Annex 1 to ITU-R document [7C/459](https://www.itu.int/md/R19-WP7C-C-0459/en)).

Work is expected to continue at the next meeting of WP 7C (4-11 October 2023) on the draft new report ITU-R RS.[Spaceborne VHF Radar Sounder] and ITU-R Recommendation RS.2042 taking into account the output from the WP 7C agenda item 1.12 Correspondence Group as noted above.

Link to relevant ITU-R Preparatory Studies for [WRC-23 Agenda Item 1.12](https://www.itu.int/en/ITU-R/study-groups/rcpm/Pages/wrc-23-studies.aspx).

**2. Documents**

* Input Documents: APG23-6/[INP-19(IND)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-19_India_WP3_PACP_WRC-23_Agenda_Items.docx) , [INP-32(J)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-32_Japan_WP3_PACP_WRC-23_Agenda_Item_1.12.docx) , [INP-49(INS)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-49_Indonesia_WP3_PACP_WRC-23_Agenda_Item_1.12_0.docx), [INP-60(THA)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-60_Thailand_WP3_PACP_WRC-23_Agenda_Items.docx), [INP-67(IRN)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-67_Iran_WP3_Preliminary_Views_on_WRC-23_Agenda_Items.docx), [INP-82(AUS)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-82_Australia_WP3_PACP_WRC-23_Agenda_Items_and_Res.655_WRC-15.docx), [INP-89(KOR)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-89_KOR_WP3_PACP_WRC-23_Agenda_Items.docx), [INP-105(CHN)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-105_China_WP3_PACP_WRC-23_Agenda_Items.docx), [INP-111(MLA)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-111_Malaysia_WP3_PACP_WRC-23_Agenda_Items.docx)
* Information Documents: APG23-6/[INF-02(WMO)](https://www.apt.int/sites/default/files/2023/06/APG23-6-INF-02_WMO_Position_on_WRC-23_Agenda.docx), [INF-27 (Chair, DG AI 1.12)](https://www.apt.int/sites/default/files/2023/07/APG23-6-INF-27_Brief_on_AI1.13.docx) , [INF-30(IARU)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-30_IARU_Views_on_WRC-23_Agenda_Items.docx), [INF-45(RCC)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-45_Status_of_RCC_preparation_to_WRC-23.pdf), [INF-46(CEPT)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-46_Status_of_CEPT_preparation_for_WRC-23_and_RA-23.pdf), [INF-52(CITEL)](https://www.apt.int/sites/default/files/2023/08/APG23-6-INF-52_CITEL_preparation_for_WRC-23.pdf)

**3. Summary of discussions**

**3.1 Summary of APT Members’ views**

**3.1.1 India (Republic of)** - **Document APG23-6/**[INP-19](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-19_India_WP3_PACP_WRC-23_Agenda_Items.docx)

As the current sharing and compatibility studies have not fully demonstrated that incumbent services could be protected from potential harmful interference from the operation of spaceborne radar sounders in the frequency band 40-50 MHz, India supports Method D which proposes “No Change” to Radio Regulations.

**3.1.2 Japan - Document APG23-5/**[INP-32](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-32_Japan_WP3_PACP_WRC-23_Agenda_Item_1.12.docx)

The mobile and radiodetermination services in the frequency band 40-50 MHz and the amateur service in the frequency band 50-54 MHz are allocated on a primary basis in Japan. Possible secondary allocation to the EESS (active) in the frequency band 40-50 MHz shall ensure that these incumbent services are adequately protected and not imposed additional restrictions. However, the results of ITU-R studies do not show sufficient protection of the incumbent services.

In addition, wind profiler radars, which provide valuable scientific data, are being operated in the Asia-Pacific region including Japan, and Antarctica. And it is preferred to continue operation of such radars.

For the above reasons, Japan supports no change to the Radio Regulations and suppression of Resolution 656 (Rev. WRC-19) (Method D in the CPM Report) and proposes Preliminary APT Common Proposals (PACP) on WRC-23 Agenda Item 1.12 as shown in the embedded file below.



**3.1.3 Indonesia (Republic of)** - **Document APG23-5/**[INP-49](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-49_Indonesia_WP3_PACP_WRC-23_Agenda_Item_1.12_0.docx)

Indonesia is of the view that a new secondary allocation could be supported for the Earth exploration-satellite service (active) for spaceborne radar sounders in the 40-50 MHz frequency band, including support a possible solution such as operational limitations and establishment of pfd limits in order that protection of primary and secondary incumbent services would be ensured while not adversely affecting those services as described in Recommendation ITU-R RS.2042.

Indonesia has also expressed its interest in including its country name in the footnotes No **5.162A** of the Radio Regulations (RR) concerning the radiolocation service, allowing for the operation of wind profiler radar on a secondary basis.



**3.1.4 Thailand (Kingdom of) - Document APG23-5/**[INP-60](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-60_Thailand_WP3_PACP_WRC-23_Agenda_Items.docx)

Thailand supports the APT preliminary view reached at APG23-5.

In order to ensure the protection of the existing services in the frequency band 40-50 MHz and adjacent bands, Thailand supports the following elements:

- The Earth exploration-satellite service (active) should be limited to spaceborne radar sounder systems.

- Establishment of operation limits for EESS (active) should include the pfd limit at the surface of the Earth, specific coverage areas as well as operation time limit.

- Active spaceborne sensors in the Earth exploration-satellite service should not cause harmful interference to, nor claim protection from stations in the radiolocation and space research services operating in the 40-50 MHz band.

To ensure the aforementioned conditions, elements of Option 2 and Option 3 of Method A1 may be required to address this agenda item.

**3.1.5 Iran (Islamic Republic of)** - **Document APG23-5/**[INP-67](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-67_Iran_WP3_Preliminary_Views_on_WRC-23_Agenda_Items.docx)

This Administration is of the view that a new secondary allocation could be supported for the Earth exploration-satellite service (active) for spaceborne radar sounders in the 40-50 MHz frequency band if ensures the appropriate protection of in-band and adjacent band incumbent services would be ensured while not adversely affecting those services.

This Administration believes that Method B could satisfy the above conditions.

This Administration also supports a possible solution including operational limitations and establishment of PFD limits in order that protection of in-band and adjacent band incumbent services could be ensured.

**3.1.6 Australia** - **Document APG23-5/**[INP-82](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-82_Australia_WP3_PACP_WRC-23_Agenda_Items_and_Res.655_WRC-15.docx)

Australia supports the APT Preliminary View on this agenda item from the APG23-5 meeting.

Australia supports a possible secondary allocation to EESS (active) for spaceborne radar sounders operating in the 40-50 MHz frequency range, subject to protection of existing services (including adjacent bands), in order to enable the collection of important observable parameters of the Earth’s climate.

Australia recognises that operational and regulatory provisions, including establishment of pfd limits, may be required to manage the protection of existing services (including in adjacent bands).

Method A1 of the CPM report is in line with Australia's position of supporting secondary allocation while protecting incumbent services. Australia notes that further work is required to identify the appropriate elements of the provisions from CPM Report Method A1, Option 1, 2 or 3 in order to ensure protection of existing services.

The provisions should also allow for the continued operation, with no harmful interference, of Wind Profile Radars (WPRs) operating in the adjacent band at a frequency of 55 MHz.

Australia proposes a Preliminary APT Common Proposal as follows:



**3.1.7 Korea (Republic of)** - **Document APG23-5/**[INP-89](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-89_KOR_WP3_PACP_WRC-23_Agenda_Items.docx)

Method A1 on Agenda item 1.12 of the CPM Report to WRC-23 contains the most detailed descriptions on the operational limitations including operated areas among the methods provided in the CPM Report. In addition, Method A1 includes all the protection measures proposed in the other methods in the form of options, and has the possibility to include any protection measures. Therefore, it would be most appropriate method for protection of incumbent services to be ensured while not adversely affecting those services, if the new secondary allocation should be made.

Accordingly, the Republic of Korea supports Method A1 that proposes to establish a new global secondary allocation to the EESS (active) in the frequency band 40-50 MHz and to add a new footnote in the Table of Frequency Allocations of RR Article **5** that references a proposed new WRC Resolution to protect incumbent in-band and adjacent-band services.

Taking into account the APT Preliminary View developed at APG23-5 meeting for WRC-23 agenda item 1.12, the Republic of Korea proposes the followings as APT Views for this agenda item:

* APT Members are of the view that a new secondary allocation could be supported to the Earth exploration-satellite service (active) for spaceborne radar sounders operated only in deserts and polar ice fields in the 40-50 MHz frequency band if the current ITU-R studies, to be completed before WRC-23, show that appropriate protection of in-band and adjacent band incumbent services would be ensured while not adversely affecting those services.
* APT Members are of the view that a possible solution should include detailed descriptions on the use limit of the band, operated areas, case-by-case coordination, pfd limits, and other operational limitations in order that protection of in-band and adjacent band incumbent services could be ensured.

**3.1.8 China (People’s Republic of)** - **Document APG23-5/**[INP-105](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-105_China_WP3_PACP_WRC-23_Agenda_Items.docx)

1. China supports method A1,option 3.This option proposed the pfd limits per spaceborne radar sounder produced at the surface of the Earth. The limits make sure the in-band and adjacent-band services have been protected.
2. Method A1,option 2 mentioned that stations in the EESS (active) operating in areas outside of those provided in draft new resolution [A112-Method-A1] resolves 2.3 shall not transmit without prior agreement of directly overlapped and neighbouring administrations. Considering that science business is for the purpose of scientific research and should not be mixed with too much political and geopolitical factors, China opposes this proposal.
3. Taking into account the protection of incumbent services , China opposes method C.

**3.1.9 Malaysia** - **Document APG23-5/**[INP-111](https://www.apt.int/sites/default/files/2023/08/APG23-6-INP-111_Malaysia_WP3_PACP_WRC-23_Agenda_Items.docx)

Malaysia supports the establishment of a new secondary allocation to the EESS (active) in the 40-50 MHz frequency band, limited to the operation of spaceborne radar sounder systems, while ensuring protection to incumbent services in the 40-50 MHz frequency band and in the adjacent

frequency bands. As such, Malaysia supports **Method A1** of the CPM report.

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

A draft Preliminary APT Common Proposal (PACP) on WRC-23 agenda item 1.12 which supported a secondary allocation to the EESS (active) in the 40-50 MHz frequency band, limited to the operation of spaceborne radar sounder systems, was discussed during the meeting. During discussion of this draft PACP it was recognized that more work is required in ITU-R WP 7C in order to finalise the most appropriate options in the Methods of the CPM report in order to ensure protection of incumbent services.

Most APT members support Methods that propose a secondary allocation to the EESS (active) for spaceborne radar sounders, operated only in desert and polar regions, including possible solutions such as operational limitations and pfd limits in order to ensure protection of incumbent primary and secondary services (in-band and adjacent band) to address this agenda item (noting that options within some methods are still to be finalised). Compatibility studies have not at this stage fully demonstrated that incumbent services can be protected from potential harmful interference from operation of spaceborne radar sounders in the frequency band 40 to 50 MHz, hence some APT members prefer No Change.

A consensus was not able to be reached on the inclusion of this draft PACP as some administrations maintain a position of No Change to the Radio Regulations due to concerns regarding the incomplete state of current ITU-R studies and protection of incumbent services in-band and in the adjacent bands.

The issue of addition of some administrations to footnote **5.162A** (allocating the frequency band 46-68 MHz to the radiolocation service on a secondary basis with use limited to the operation of wind profiler radars) was also reviewed. As a PACP was not agreed by consensus, and due to one administration’s indication that more information was required in order to finalise their analysis of any possible interference, it was agreed to add the text in section 4 below indicating that concerned APT Members should provide their views/concerns to Administrations who are planning to add their country name in footnote **5.162A** before the WRC-23 deadline for submission of contributions and resolve any possible concerns before WRC-23 on the basis of mutual collaboration among APT members.

It was noted during the meeting that there will only be one more meeting of WP 7C prior to WRC-23 and concern was raised regarding the ability to complete studies on this agenda item.

During the APG23-5 and 6 meetings, Australia, Indonesia and Japan announced their intent for inclusion of their country name in the footnote **5.162A** that allows operation of wind profiler radars under the Radiolocation service on a secondary basis.

One administration has expressed a view the Antarctica needs to be included in footnote 5.162A.

**4. APT View(s)**

The APT has considered agenda item 1.12 but has not developed a Preliminary APT Common Proposal on the matter.

At the APG23-6 meeting APT members were unable to reach full consensus on the best solution to satisfy this agenda item. Noting that ITU-R studies and methods are still to be finalised and that some conditions included in the methods have not yet been agreed in ITU-R, APT members noted that work will continue at the ITU-R on this agenda item at the October 2023 meeting of WP 7C.

APT members are invited, should they deem appropriate, to provide their views/concerns to Administrations intending to add their country name (see above section 3.2) to the footnote **5.162A** before the WRC-23 deadline for submission of contributions with a view to resolve any possible concerns before WRC-23 on the basis of mutual collaboration among APT members.

**5. Preliminary APT Common Proposal**

None.

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

At APG23-6, APT members differed regarding the preferred Method to satisfy this agenda item. Many APT members proposed a secondary allocation to the EESS(active) with most nominating Method A1 but proposing different options under this Method to achieve this outcome.

Other administrations proposed No Change to the Radio Regulations due to the incomplete ITU-R studies not ensuring protection to incumbent services.

APT Members are encouraged to monitor the progress of work related to this agenda item at the October 2023 meeting of ITU-R WP 7C (Geneva) in preparation for WRC-23 with the intention of finalising the APT position/views for this Agenda Item.

The APT Coordination Meetings at WRC-23 should consider the above information on the different positions of administrations at APG23-6 and (taking into account developments at the ITU-R between APG23-6 and WRC-23) review the final position/views for WRC-23.

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

APG23-6)

**7.1 Regional Groups**

**7.1.1 ASMG** - (as of February 2023) – Initial support to consider the possibility of upgrading the to the Earth exploration-satellite (active) service for spaceborne radar sounders within the frequency band 40 -50 MHz, if ITU-R technical and regulatory studies demonstrate that radio services in this frequency band and the adjacent frequency bands are protected.

**7.1.2 ATU** - (as of September 2022) – **Support** Method B, because:

1. it addresses the invite of **Resolution 656,** and itprovides for the protection of radiolocation through a footnote.
2. limits allocation’s emissions to only those from spaceborne radar sounder systems.

**7.1.3 CEPT** - **Document APG23-6/INF-46**

CEPT supports a new secondary allocation to the Earth exploration-satellite service (active) in the 40-50 MHz band while ensuring the protection of incumbent services already allocated to the 40-50 MHz band or adjacent frequency ranges.

CEPT supports the development of technical and regulatory provisions, which would provide protection to the incumbent services while allowing the operation of spaceborne radar sounders in the EESS (active). Specifically, CEPT proposes to apply a set of pfd limits to EESS (active), one reference value (-147 dB(W/(m2 · 4 kHz))) not to be exceeded for more than 0.05% of the time and a cap value (-136 dB(W/(m2 · 4 kHz))), with additional provisions to cover the case

of multiple EESS (active) systems in operation.

**7.1.4 CITEL** - **Document APG23-6/INF-52**

**Draft Inter-American Proposal**

Some Administrations support Method A1 of CPM text which establish a new global

secondary allocation to the EESS (active) and proposes a new WRC Resolution to

protect incumbent services in-band and in adjacent-bands. Finally, **RES 656 (Rev.WRC-**

**19)** will be consequentially suppressed.

**7.1.5 RCC** - **Document APG23-6/INF-45**

The RCC Administrations ***do not oppose*** a new secondary allocation to the Earth exploration-satellite (active) service within the range of frequencies around 45 MHz ***provided protection*** of existing services in the 40-50 MHz band.

No specific Method from the CPM Report

**7.2 International Organisations**

**7.2.1 IARU** - **Document APG23-6/INF-30**

The IARU acknowledges that the studies for a possible new secondary allocation to the Earth exploration-satellite (active) service for spaceborne radar sounders within the range of frequencies around 45 MHz include the need to protect the incumbent amateur service in the adjacent 50-54 MHz band. The IARU will contribute to the studies to ensure adequate protection of the sensitive receivers used by stations in the amateur service in the 50-54 MHz band, especially the frequencies 50-50.5 MHz where the majority of amateur communications via the ionosphere is conducted, often with very low signal levels.

IARU prefers Method D (No change) in the CPM Report.

**7.2.2 SFCG** - (as of June 2023) – SFCG supports a new secondary allocation to the EESS (active) in the 40-50 MHz band with associated regulatory provisions to balance the protection of existing services with the opportunities for spaceborne radar sounder operations in the 40-50 MHz frequency band.

Elements of the provisions defined in CPM Report Method A1, Options 2 and 3, would apply adequate restrictions to the EESS (active) to ensure protection of the incumbent services. These elements include geographic operational restrictions and the application of a PFD limit to the EESS (active) operations. SFCG highlights that the pfd limits contained in Options 1 and 4 would overly constrain EESS (active) operation and would make the allocation unusable.

**7.2.2 WMO** - **Document APG23-6/INF-02**

WMO supports a new secondary allocation to EESS (active) in the 40–50 MHz frequency band with appropriate protection being provided to wind profiler radars under **No** **5.162A** and oceanographic radars under **No 5.161A**.

Method A1 of the CPM Report is in line with WMO objectives to ensure the protection of the oceanographic and wind profiler radars. However, in order to equally balance the protection of existing services operating in-band and adjacent bands and the opportunities for spaceborne radar sounder operations, WMO is of the view that an optimal solution might consist of elements included in Options 2 and 3 proposed in Method A1.

WMO also agrees with the proposal that consultation between operators of EESS (active) systems and users of wind profiler radars operating in the 40-50 MHz range may be needed on a case-by-case basis to ensure coexistence between the corresponding stations. If deemed appropriate, WMO could be proposed as a focal organisation for facilitating such consultation.

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1. Please note that the term ‘Issues/issues’ should not be confused with Issues in WRC-23 Agenda Items 7 and 9. [↑](#footnote-ref-1)