6/13/2025

Comments Received on Consultation Document on World Radiocommunications Conference – 2027 (WRC-27) Agenda Items

SPECTRUM MANAGEMENT AUTHORITY

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1.0 Intent

1.1. As a follow up to the Spectrum Management Authority's ("SMA") stakeholder consultation engagement held on 2024 November 13 regarding informing Jamaica's position to be taken at the Inter-American Telecommunications Commission's (CITEL) Permanent Consultative Commission Two (PCC II) meetings, the SMA published a Consultation Document on 2025 April 04 in order to gather additional and more detailed information from industry stakeholders.

1.2. Stakeholders were asked to review the documents and submit written comments and response to the concerns of their respective industry with regards to the Agenda Items.

1.3. The said Consultation Document advised that Stakeholders must submit their comments and responses to the matters raised to the SMA on or before the deadline of **2025 June 06**, in order to ensure consideration.

1.4. At the end of Friday, 2025 June 06, the SMA received comments from two (2) stakeholders.

1.5. As set out in the Consultation Document the SMA indicated that it would publish all comments received by **2025 June 13** on the SMA's website at http://www.sma.gov.jm

2.0 Objective

2.1. The SMA hereby provide interested parties with the opportunity to reply to comments from other parties; an action which is intended to increase engagement, foster trust, and provides valuable insights for decision-making and improvement.

2.2. Additionally, this action demonstrates the SMA's commitment to open communication and transparency, which can contribute to problem-solving and to motivate stakeholders to find solutions that are mutually beneficial.

2.3. The deadline for reply comments shall be no later than **2025 July 11**.

2.4. The comments received from the two stakeholders are set out in Section 3.0.

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3.0 Comments Received on WRC-27 Agenda Items

3.1. **Agenda item 1.1**: *to consider the technical and operational conditions for the use of the frequency bands 47.2-50.2 GHz and 50.4-51.4 GHz (Earth-to-space), or parts thereof, by aeronautical and maritime* ***earth stations in motion (ESIM)*** *communicating with space stations in the* ***fixed-satellite service*** *and develop regulatory measures, as appropriate, to facilitate the use of the frequency bands 47.2-50.2 GHz and 50.4-51.4 GHz (Earth-to-space), or parts thereof, by aeronautical and maritime earth stations in motion communicating with geostationary space stations and non-geostationary space stations in the fixed-satellite service, in accordance with Resolution* ***176 (Rev.WRC-23)****;*

Stakeholder Comment 1

Respondent1 does not believe, based on its current spectrum holdings, that its operations will be impacted by the use of the frequency bands 47.2-50.2 GHz and 50.4-51.4 GHz (Earth-to-space), or parts thereof, by aeronautical and maritime earth stations in motion (ESIM) communicating with space stations in the fixed-satellite service.

Stakeholder Comment 2

Respondent2 supports development of a framework for ESIMs in Q/V band subject to following conditions:

- *NGSO systems are required to protect GSO ESIMs and NGSO ESIMs are required to protect GSO satellite networks from unacceptable interference according to RR No. 22.2, which applies in these bands.*
- *Existing regulatory and technical framework (RR No. 22.5L, 22.5M, Res 770 and Res 769) in these bands and the corresponding downlink bands (37.5-42.4 GHz) for protection of GSO networks from NGSO systems is dependent on the probability of rain fade which does not apply for a major part of aeronautical ESIM operation (which is above the clouds) and hence cannot be applied under this Agenda Item.*
- *New conditions would have to be developed for protection of GSO ESIMs from NGSO systems and GSO networks from NGSO ESIMs in both the uplink (47.2-50.2 GHz, 50.4-51.4 GHz) and corresponding downlink bands (37.5-42.5 GHz).*
- *If the above issues are not addressed, Respondent2 does not support use of this band for NGSO ESIM.*

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3.2. **Agenda item 1.2**: *to consider possible revisions of sharing conditions in the frequency band 13.75-14 GHz to allow the use of uplink* ***fixed-satellite service (FSS)*** *earth stations with smaller antenna sizes, in accordance with Resolution* ***129 (WRC-23)****;*

Stakeholder Comment 1

Respondent1 does not believe that, based on its current spectrum holdings, its operations will be impacted by frequency band 13.75-14 GHz as our 13GHz assignment is between 12.7GHz to 13.2GHz, used for microwave transmission. However, should there be a need for additional holdings in the future in the frequency bands 13.75-14 GHz, likely interference would be anticipated.

Stakeholder Comment 2

Respondent2 Position:

- *Removing the limitations on the minimum earth station size of an NGSO system and consequential deployment of smaller earth stations in this band would constrain the NGSO-NGSO sharing environment. Studies are required to identify appropriate provisions to address this impact.*
- *For protection of GSO networks from NGSO systems, the current EPFD limits shall continue to apply in this band.*
- *If issues mentioned earlier regarding the blocking effect of large NGSOs, undue consumption of aggregate NGSO interference allowance, and update of S.1503 are not addressed, Respondent2 does not support removing minimum earth station size limitation for NGSO use*

3.3. **Agenda item 1.3**: *to consider studies relating to the use of the frequency band 51.4-52.4 GHz to enable use by gateway earth stations transmitting to* ***non-geostationary-satellite orbit systems*** *in the* ***fixed-satellite service (FSS)*** *(Earth-to-space), in accordance with Resolution* ***130 (WRC-23)****;*

Stakeholder Comment 1

Respondent1 does not believe that its operations will be impacted by use of the frequency band 51.4-52.4 GHz to enable use by gateway earth stations transmitting to non-geostationary satellite orbit systems in the fixed-satellite service (FSS) (Earth-to-space).

Stakeholder Comment 2

Respondent2 Position:

- *If a new allocation is considered for NGSO FSS uplink in 51.4-52.4 GHz, RR No. 22.2 protecting GSO networks from unacceptable interference should apply.*
- *For protection of GSO networks from interference from NGSO systems in this band, the existing provisions of RR (No. 22.5L and 22.5M) in the adjacent band should not be extended as they are not adequate to protect GSO networks from NGSO system interference, particularly the average throughput degradation metric.*
- *The existing framework underestimates the interference caused by NGSOs and its impact on GSO service level agreements (SLAs).*
- *There is no methodology to evaluate aggregate NGSO interference in Q/V band and the supplemental GSO network links are not included on the framework.*
- *The framework evaluates degradation of total throughput when it should evaluate degradation of reserve capacity (maintained during rain fade) according to S.1323.*
- *Further studies are required to develop alternative provisions, such as EPFD limits which are effectively used in other bands, to ensure adequate protection of GSO networks.*
- *For protection of EESS (passive) in the adjacent band (i.e., 52.6-54.25 GHz), the addition of NGSO systems in this band should not cause further constraints to GSO networks.*
- *Respondent2 does not support a new allocation for NGSO feeder links if the issues mentioned above and in general position are not addressed.*

3.4. **Agenda item 1.4**: *to consider a possible new primary allocation to the fixed-satellite service (space-to-Earth) in the frequency band 17.3-17.7 GHz and a possible new primary allocation to the **broadcasting-satellite service** (space-to-Earth) in the frequency band 17.3-17.8 GHz in **Region 3**, while ensuring the protection of existing primary allocations in the same and adjacent frequency bands, and to consider equivalent power flux-density limits to be applied in **Regions 1 and 3** to non-geostationary-satellite systems in the fixed-satellite service (space-to-Earth) in the frequency band 17.3-17.7 GHz, in accordance with Resolution 726 (WRC-23);*

Stakeholder Comment 1

The allocation in the frequency bands 17.3-17.7 GHz will directly overlap with Respondent1 18Ghz assignments, used for microwave transmission. Thereby impacting our operations and likely causing interference which could result in service degradation for mobile and ICT services supported by these microwave links.

Stakeholder Comment 2

Respondent2 supports the new FSS (space-Earth) allocation in Region 3 in 17.317.7 GHz subject to following conditions:

- Application of existing single-entry and aggregate EPFD limits in this band for protection of GSO networks from NGSO systems in Region 1 and 3. Single-entry NGSO EPFD limits already apply for Region 2 so it would harmonize the framework globally.
- Application of aggregate EPFD limits to all three Regions.

Respondent2 does not support a new allocation for NGSO system use if the issues mentioned above are not addressed.

3.5. **Agenda item 1.5**: *to consider regulatory measures, and implementability thereof, to limit the unauthorized operations of **non-geostationary-satellite orbit** earth stations (ES) in the **fixed-satellite and mobile-satellite services (MSS)** and associated issues related to the service area of non-geostationary-satellite orbit satellite systems in the fixed-satellite and mobile-satellite services, in accordance with Resolution 14 (WRC-23);*

Stakeholder Comment 1

Respondent1 supports the implementation of these regulatory measures, as unauthorized operations risk causing harmful interference that may degrade service quality.

3.6. **Agenda item 1.6**: *to consider technical and regulatory measures for **fixed-satellite service** satellite networks/systems in the frequency bands 37.5-42.5 GHz (space-to-Earth), 42.5-43.5 GHz (Earth-to-space), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space) for equitable access to these frequency bands, in accordance with Resolution 131 (WRC-23);*

Stakeholder Comment 1

Respondent1 does not believe that its operations will be impacted by the technical and regulatory measures for fixed-satellite service satellite networks/systems in the frequency bands 37.5-42.5 GHz (space-to-Earth), 42.5-43.5 GHz (Earth-to-space), 47.250.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space).

3.7. **Agenda item 1.7**: *to consider studies on sharing and compatibility and develop technical conditions for the use of **International Mobile Telecommunications** (IMT) in the frequency bands 4 400-4 800 MHz, 7 125-8 400 MHz (or parts thereof), and 14.8-15.35 GHz taking into account existing primary services operating in these, and adjacent, frequency bands, in accordance with Resolution 256 (WRC-23);*

Stakeholder Comment 1

The frequency bands 4 400-4 800 MHz, 7 125-8 400 MHz (or parts thereof), and 14.815.35 GHz overlaps, or, are adjacent to Respondent1's 4GHz, 5GHz, 8GHz and 15GHz bands used for microwave transmission. As a consequence, there are potential interference risks.

Respondent1 notes that Resolution 256 (WRC-23) does not call for studies of the frequency band 4 400-4 800 MHz in Region 2 (where Jamaica and other Caribbean jurisdictions are domiciled). However, it is prudent to state that Respondent1 does not support further studies on sharing and compatibility that would facilitate encroachment of IMT spectrum bands allocated for terrestrial mobile services by either fixed or mobile satellite services respectively. Respondent1 would accommodate such studies and analysis if they are wholly focused on ensuring the protection of existing and evolving needs of incumbent services (i.e., terrestrial mobile services) utilizing the IMT frequency bands in question.

3.8. **Agenda item 1.8**: *to consider possible additional spectrum allocations to the radiolocation service (RLS) on a primary basis in the frequency range 231.5-275 GHz and possible new identifications for **radiolocation service** applications in the frequency bands within the frequency range 275-700 GHz for millimetric and sub-millimetric wave imaging systems, in accordance with Resolution **663 (Rev.WRC-23)**;*

Stakeholder Comment 1

Respondent1 does not believe that its operations will be impacted by possible additional spectrum allocations to the radiolocation service (RLS) on a primary basis in the frequency range 231.5-275 GHz and possible new identifications for radiolocation service applications in the frequency bands within the frequency range 275-700 GHz for millimetric and sub-millimetric wave imaging systems.

3.9. **Agenda item 1.9**: *to consider appropriate regulatory actions to update Appendix **26** to the Radio Regulations in support of aeronautical mobile off route services (OR) high frequency (HF) modernization, in accordance with Resolution **411 (WRC-23)**;*

Stakeholder Comment 1

Respondent1 does not believe that its operations will be impacted by this item. However, depending on confirmation of frequency ranges, we would be in a position to indicate otherwise or any likely impact.

3.10. **Agenda item 1.10**: *to consider developing power flux-density (pfd)and equivalent isotropically radiated power (e.i.r.p.) limits for inclusion in Article 21 of the Radio Regulations for the fixed-satellite, mobile-satellite and broadcasting-satellite services to protect the fixed and mobile services in the frequency bands 71-76 GHz and 81-86 GHz, in accordance with Resolution 775 (Rev.WRC-23);*

Stakeholder Comment 1

Respondent1 does not believe that its operations will be impacted by this item. However, Respondent1 supports the protection of terrestrial fixed and mobile services in the frequency bands 7176 GHz and 81-86 GHz, in accordance with Resolution 775 (Rev.WRC-23)

Stakeholder Comment 2

Respondent2 encourages participation in the studies for this WRC-27 Agenda Item to ensure reasonable limits are adopted.

3.11. **Agenda item 1.11**: *to consider the technical and operational issues, and regulatory provisions, for space-to-space links among non-geostationary and geostationary satellites in the frequency bands 1 518-1 544 MHz, 1 545-1 559 MHz, 1 610-1 645.5 MHz, 1 646.5-1 660 MHz, 1 670-1 675 MHz and 2 483.5-2 500 MHz allocated to the* ***mobile-satellite service****, in accordance with Resolution* ***249 (Rev.WRC-23)****;*

Stakeholder Comment 1

Except for frequency bands 2 483.5-2 500 MHz, Respondent1 does not believe that its operations would be impacted. However, frequency bands 2 483.5-2 500 MHz is adjacent to Respondent1's band 41GHz and as such there are potential interference risks.

Stakeholder Comment 2

Respondent2 support allocations for MSS (space-to-space) while ensuring interference-free operation of coordinated MSS networks in the bands. Space-to-space links, within the scope defined in Res 249, should only be operated in conjunction with coordinated MSS (Earth-to-space and space-to-Earth) networks in these bands.

3.12. **Agenda item 1.12***: to consider, based on the results of studies, possible allocations to the mobile-satellite service and possible regulatory actions in the frequency bands 1 427-1 432 MHz (space-to-Earth), 1 645.5-1 646.5 MHz (space-to-Earth) (Earth-to-space), 1 880-1 920 MHz (space-to-Earth) (Earth-to-space) and 2 010-2 025 MHz (space-to-Earth) (Earth-to-space) required for the future development of low-data-rate non-geostationary mobile-satellite systems, in accordance with Resolution* ***252 (WRC-23)****;*

Stakeholder Comment 1

Except for frequency bands 1 880-1 920 MHz (space-to-Earth) (Earth-to-space) and 1 645.5-1 646.5 MHz (space-to-Earth) (Earth-to-space), Respondent1 does not believe that its operations would be impacted. However, frequency bands 1 880-1 920 MHz (space-toEarth) (Earth-to-space) overlaps with Respondent1's band 2GHz and 1 645.5-1 646.5 MHz (space-to-Earth) (Earth-to-space) is in very close proximity to Respondent1's AWS Uplink (17101730 MHz) frequency range. As such there are potential interference risks.

Stakeholder Comment 2

Respondent2 cautions that the 1 645.5-1 646.5 MHz band is designated for distress and safety use and already in use by Inmarsat GSO MSS satellite networks, and operation of NGSO systems in this band can cause harmful interference. Any new narrowband NGSO MSS requirements should be accommodated in existing MSS bands or the other potential new bands considered in this AI and AI 1.14.

3.13. Agenda item 1.13: *to consider studies on possible new allocations to the **mobile-satellite service** for direct connectivity between space stations and **International Mobile Telecommunications** (IMT) user equipment to complement terrestrial IMT network coverage, in accordance with Resolution **253 (WRC-23)**;*

Stakeholder Comment 1

Frequency bands between 694 - 2 700 MHz encapsulates all five (5) of Respondent1's operating mobile bands. As a consequence, there are likely potential interference risks.

Existing mobile satellite services (MSS) systems that operate in bands (i.e., L and S frequency bands inclusive of the satellite component of IMT) already primarily allocated by the ITU to MSS can already connect and communicate with terrestrial devices.

The 3GPP standardization of non-terrestrial networks services include satellite as a key component of 5G systems. As such, Mobile Satellite Services that have long been allocated Land S frequency bands, are now standardized for non-terrestrial networks by 3GPP. By virtue of said standardization 5G terrestrial systems are now able to integrate with satellite networks including services directly to handheld devices. It should also be noted that L and S bands have been widely assigned globally for MSS and initial allocations, sharing mechanisms and co-existence requirements have been established.

Respondent1 is of the position that satellite service providers (SSPs) using ITU MSS allocated spectrum should not be allowed to utilize IMT frequency bands already allocated for terrestrial mobile services and assigned to mobile operators. Sufficient spectrum should be allocated for MSS systems operating within bands allocated for MSS and assigned to SSPs by the ITU.

Stakeholder Comment 2

No change is required to the RR for the provision of D2D in the current MSS bands. It is critical to note that some of the suggested new bands for satellite operations in IMT band lead to coexistence issues with the existing uses of MSS bands (Lband and S-band), which must be addressed under this WRC-27 Agenda Item.

3.14. **Agenda item 1.14***: to consider possible additional allocations to the* ***mobile-satellite service****, in accordance with Resolution* ***254 (WRC-23)****;*

Stakeholder Comment 1

Frequency bands 2 120-2 160 MHz (space-to-Earth) in all Regions will overlap with Respondent1's band 4, resulting in likely interference risks. See responses to Agenda item 1.13. Respondent1 is also not in support of Agenda item 1.14 premised on the aforementioned risks.

Stakeholder Comment 2

Respondent2 encourages the SMA to monitor and participate in the studies under this WRC-27 Agenda Item as appropriate.

3.15. **Agenda item 1.15***: to consider studies on frequency-related matters, including possible new or modified* ***space research service*** *(space-to-space) allocations, for future development of communications on the lunar surface and between lunar orbit and the lunar surface, in accordance with Resolution* ***680 (WRC-23)****;*

Stakeholder Comment 1

Respondent1 does not believe that its operations will be impacted by this item. However, depending on confirmation of frequency ranges, we would be in a position to indicate otherwise or any likely impact.

3.16. **Agenda item 1.16***: to consider studies on the technical and regulatory provisions necessary to protect radio astronomy operating in specific Radio Quiet Zones and, in frequency bands allocated to the* ***radio astronomy*** *service on a primary basis globally, from aggregate radio-frequency interference caused by* ***non-geostationary-satellite orbit*** *systems, in accordance with Resolution* ***681 (WRC-23)****;*

Stakeholder Comment 1

Respondent1 does not believe that its operations will be impacted by this item. However, depending on confirmation of frequency ranges, we would be in a position to indicate otherwise or any likely impact.

Stakeholder Comment 2

Respondent2 does not support inclusion of the L band within the scope of this Agenda Item. This is not a national issue as the Radio Quiet Zones are spread around various countries, and there is potential for cross-border interference between Member States, therefore international action is required.

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3.17. **Agenda item 1.17***: to consider regulatory provisions for receive-only* ***space weather sensors*** *and their protection in the Radio Regulations, taking into account the results of ITU Radiocommunication Sector studies, in accordance with Resolution* ***682 (WRC-23)****;*

Stakeholder Comment 1

Respondent1 does not believe that its operations will be impacted by this item. However, depending on confirmation of frequency ranges, we would be in a position to indicate otherwise or any likely impact.

3.18. **Agenda item 1.18**: *to consider, based on the results of ITU Radiocommunication Sector studies, possible regulatory measures regarding the protection of the* ***Earth exploration-satellite service*** *(EESS) (passive) and the radio astronomy service (RAS) in certain frequency bands above 76 GHz from unwanted emissions of active services, in accordance with Resolution* ***712 (WRC-23)****;*

Stakeholder Comment 1

Respondent1 does not believe that its operations will be impacted by this item. However, depending on confirmation of frequency ranges, we would be in a position to indicate otherwise or any likely impact.

3.19. Agenda item 1.19*: to consider possible primary allocations in all Regions to the* ***Earth exploration-satellite service*** *(passive) in the frequency bands 4 200-4 400 MHz and 8 400-8 500 MHz, in accordance with Resolution* ***674 (WRC-23)****,*

Stakeholder Comment 1

The frequency bands 4 200-4 400 MHz and 8 400-8 500 MHz overlaps with Respondent1's 4000MHz (4GHz) and 8000MHz (8GHz) bands used for microwave transmission and as such there are potential interference risks. Respondent1 is not in support of Agenda item 1.19 premised on the aforementioned potential risks.

3.20. **Agenda item 7 (Satellite Coordination Procedures)**: *to consider possible changes, in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference, on advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks, in accordance with Resolution 86 (Rev.WRC-07), in order to facilitate the rational, efficient and economical use of radio frequencies and any associated orbits, including the GSO orbit.*

Stakeholder Comment 2

Respondent2 encourages SMA to monitor studies and participate as appropriate

4.0 Submitting Comments

4.1. Respondents are invited to review the responses made by other stakeholders above and provide their comments in electronic format (Microsoft Word or Adobe PDF) to the following email address**:** **info@sma.gov.jm**

4.2. In addition, respondents are asked to specify the agenda item number and the comment number (eg. – *Stakeholder Comment 1*) for ease of referencing and provide supporting rationale for their comments as are necessary.

4.3. Submissions should be addressed to:

Managing Director,
Spectrum Management Authority
13-19 Harbour Street,
Kingston, Jamaica

4.4. All submissions should cite the name of the document, **Comments Received on Consultation Document on World Radiocommunications Conference – 2027 (WRC-27) Agenda Items,** and the publication date.

4.5. Parties should submit their comments no later than **2025 July 11**, to ensure consideration. Soon after the close of the comment period, all comments received will be posted so those making submissions are asked not to provide confidential or private information in their submissions.

4.6. All comments and reply comments will be published/posted by **2025 July 25** on the SMA's website at http://www.sma.gov.jm

4.7. After the initial comment period, the SMA may, at its discretion, request additional information if needed to clarify significant positions or proposals. Should additional information be requested, the reply comment deadline may be extended.

5.0 Next Step

5.1. The SMA intends to review the comments received on the agenda items, consider the studies that are being conducted at the ITU's study group level, and the positions of the various CITEL member administrations, then make its recommendation to the Minister with responsibility for Telecommunications.