4/2/2025

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

SPECTRUM MANAGEMENT AUTHORITY

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1.0 Intent

1.1. On 2024 November 13, the Spectrum Management Authority ("SMA") on behalf of the Government of Jamaica (GoJ) initiated consultations to inform Jamaica's position to be taken at the Inter-American Telecommunications Commission's (CITEL) Permanent Consultative Commission Two (PCC II) meetings leading up to the World Radiocommunications Conference 2027 (WRC-27). The SMA at that engagement indicated that it would further launch written consultations to gather additional and more detailed information from industry stakeholders.

1.2. As such, to inform Jamaica's position at these meetings, the SMA is hereby seeking written comments on WRC-27 Agenda Items that will impact on the use of spectrum locally in Jamaica and potentially, on a regional and global level.

2.0 Mandate

2.1. The SMA is mandated to efficiently manage Jamaica's radio frequency spectrum in keeping with international best practices and in the interest of social, economic and technological development.

3.0 Legislation

3.1. The SMA operates within the legislative framework as established by the Telecommunications Act, 2000 and the Radio and Telegraph Control Act, 1973 as the regulatory body responsible for managing Jamaica's radio frequency spectrum on behalf of the GoJ and its people.

4.0 Policy Objectives

4.1. To have efficient spectrum planning, allocation and assignment in accordance with international best practices, protocols and standards, taking account of the need to:

(i) Facilitate the deployment of existing and emerging wireless technologies;

(ii) Derive maximum economic benefit and promote development; and

(iii) Attract investments.

5.0 Background

5.1. The International Telecommunication Union's (ITU) WRCs are held every three or four years, and are mandated to review, and if necessary, revise the Radio Regulations, the international treaty governing the use (allocation) of radio-frequency spectrum and the geostationary-satellite and non-geostationary-satellite orbits.

5.2. Revisions are made on the basis of agendas determined by the ITU Council, which takes into account recommendations made by previous WRCs. This process involves extensive studies and preparatory discussions among stakeholders (equipment makers, network operators, regulators, and users of the spectrum) at national, regional and global levels. The decisions of the conferences are agreed by the ITU Member States and applied in all countries of the Union.

5.3. Essential to the success of the WRCs are the preparatory works by stakeholders. These include the following:

- Efforts of the ITU membership within study groups of the ITU Radiocommunication Sector. – Their efforts result in a comprehensive report that contains the basis and background information used by ITU Member States in formulating their proposals to the conferences.
- The Radiocommunication Bureau also prepares a background document which reflects the Bureau's experience in applying the Radio Regulations and includes a report on the activities of the Radio Regulations Board.
- The ITU Radiocommunication Bureau organizes ITU Inter-regional Workshops on WRC Preparation in accordance with Resolution 72 (Rev.WRC-07).

5.4. There are six (6) regional telecommunication organizations within the three (3) ITU regions (***Region 1*** *-Europe, Africa, Middle East and Russia,* ***Region 2*** *-the Americas and Region 3 -Asia, Pacific, Australia and Oceania*), which conduct intensive preparatory programmes that inform Member States of the issues for WRC and prepare coordinated proposals. The regional bodies are namely, Asia-Pacific Telecommunity (APT), Arab Spectrum Management Group (ASMG), African Telecommunications Union (ATU), European Conference of Postal and Telecommunications Administrations (CEPT), Inter-American Telecommunication Commission (CITEL), and the Regional Commonwealth in the Field of Communications (RCC). **Jamaica resides in region 2 and as such participates in CITEL's regional meetings.**

5.5. On the basis of proposals from administrations, taking account of the results of WRC-23 and the Report of the Conference Preparatory Meeting (CPM Text), and with due regard to the requirements of existing and future services in related frequency bands, several agenda items were identified for WRC-27.

6.0 WRC-27 Agenda Items

6.1. **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)**;*

Previous WRC's have addressed the spectrum needs and use of aeronautical ESIM (A-ESIMs) and maritime ESIM (M-ESIMs), which includes the adoption of technical and regulatory requirements to allow such operations. In the Radio Regulations, Resolutions 902 (WRC-03), 156 (WRC-15), 169 (WRC-19), 121 (WRC-23) and 123 (WRC-23) define technical and regulatory rules to allow ESIM communicating with GSO (Geosynchronous Orbit) FSS (Fixed Satellite Services) networks and/or non-GSO (non-geostationary satellite orbit) FSS systems to provide broadband communications in various frequency bands.

Resolution 176 (Rev.WRC-23) calls for studies on possible use of frequency bands 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space), or parts thereof, by aeronautical and maritime earth stations in motion to communicate with space station in the fixed-satellite service. These studies should assess the spectrum needs for additional A-ESIMs and M-ESIMs, as well as the sharing and compatibility with the services allocated in these frequency bands (and adjacent) on a primary basis. Given Resolution 176 considers both the use of GSO and NGSO ESIMs, the aggregate impact should be accounted for in the studies.

Additionally, Resolution 176 (Rev. WRC-23), also considers the frequency band 47.2-50.2 GHz for FSS (Earth-to-space) NGSO A-ESIM and M-ESIM operations.

Note that these candidate bands are the Earth-to-space direction, given the space-to-Earth direction should be unaffected by the receiver being an ESIM.

The SMA invites comments on agenda item 1.1 and the spectrum needs and technical operational characteristics of A-ESIMs and M-ESIMS that would operate within the FSS in these bands and its impact on any planned future use or on incumbent services.

6.2. **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)**;*

The frequency band 13.75-14.0 GHz has been subject to regulatory and allocation changes over the years. WARC-92 (now known as WRC) added an allocation, further revised by WRC-03, to the FSS (Earth-to-space) in this band that impose requirements for minimum size of satellite earth station antennas operating in the 13.75-14 GHz band (1.2 m for geostationary satellite orbit (GSO) networks and 4.5 m for non-geostationary satellite orbit (non-GSO) systems) and on the maximum power flux density that an earth station can transmit towards the sea. These limits, particularly the minimum antenna diameter of 4.5m for non-GSO systems, are increasingly seen as constraining and not technologically neutral between GSO and non-GSO.

WRC-23 again identified the need for further studies to address the operational and technical limitations regarding the minimum antenna size and associated power limitations for GSO and NGSO FSS earth stations in the 13.75-14.0 GHz band. Resolution 129 (WRC-23) acknowledges the increasing demand for uplink spectrum by smaller antennas for earth stations and the necessity to review sharing conditions with the RLS and SRS to support the evolving needs of FSS applications efficiently and rationally.

The SMA invites comments on agenda item 1.2, either in support of the possible revisions of sharing conditions to allow for use of uplink FSS earth stations with smaller antenna, or your reasons why it should not be considered.

6.3. **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)****;*

The frequency band 51.4-52.4 GHz is allocated on a primary basis in the three Regions to the Fixed-Service and the Mobile Service and is available for high-density applications in the fixed service. This frequency band was included in those bands available for GSO systems but not non-GSO systems at WRC-19, as part of the Q/V band package under WRC-19 agenda item 1.6. Given the development of non-GSO systems, there has been interest in using these bands for non-GSO FSS feeder links, but there remain the requirements to protect other services, such as EESS (passive) and radio astronomy.

The 50.2-50.4 GHz frequency band is also allocated to the Earth exploration-satellite service (EESS) (passive), with non-GSO FSS unwanted emission limits provided in Resolution 750 (Rev.WRC19). The 52.6-54.25 GHz band is similarly allocated to the EESS (passive). Consideration should be given to possibly revising Resolution 750 (Rev.WRC-19) to include the non-GSO FSS unwanted emission limit for the 52.6-54.25 GHz band and possibly modifying the GSO FSS unwanted emission limit for the same band, based on study results, considering the aggregation of interference into EESS (passive).

The SMA invites comments on agenda item 1.3 as it relates to the use of 51.4 - 52.4 GHz by gateway earth stations transmitting to non-GSO systems in the FSS.

6.4. **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);*

Agenda item 1.4 is a region 1 and 3 issue and as such comments are not necessary but will be accepted. Further, at WRC-23 a new primary allocation to the FSS in the space-to-Earth direction in the frequency band 17.3 - 17.7 GHz was agreed in region 2.

6.5. **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);*

This agenda item is to consider regulatory measures and their implementability to limit the unauthorized operations of non-GSO ES in the FSS and MSS and associated issues related to the service area of non-GSO satellite systems in the FSS and MSS.

There was some controversy about this agenda item during WRC-23 as initial proposals considered both the Earth-to-space and the space-to-Earth direction. Progress was made easier by limiting the agenda item to the Earth-to-space direction, where operation of ES is subject to Article 18 which specifies the requirements of licensing the operation of stations within a given territory. Additionally, unauthorized operations can cause harmful interference to authorized services, leading to disruptions and potential safety concerns and ensuring compliance with regulatory measures across different regions and administrations can be complex

The ITU-R is invited to:

- study regulatory measure to limit the unauthorized operations of non-GSO FSS and MSS earth stations in the Earth-to-space direction
- studies on regulatory measures that take account of some administrations wishing to exclude operation within their territory without adversely affecting the provision of services in the rest of the non-GSO system's service area

The SMA invites comments on agenda item 1.5, in relation to the necessary and appropriate actions that should be taken.

6.6. **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)****;*

This agenda considers equitable access, while ensuring the protection of existing primary services to which the band is allocated in the same and adjacent bands, taking into account the specific needs of developing countries: without adversely affecting those services, specifically the operation of the satellite networks and systems in the bands; and without changing measures to protect terrestrial services from unacceptable interference. Note that this covers both GSO and non-GSO.

The SMA invites comments on agenda item 1.6, in relation to the necessary and appropriate actions that should be taken.

6.7. **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)****;*

The text of Resolutions 256 (WRC-23) calls for ITU-R to study the possible identification of specific additional frequency bands, or parts thereof, for IMT. All subject frequency bands to be studied are already allocated for the mobile service on a primary basis, so this agenda item does not include any additional mobile service allocations; however, as has been seen at previous WRCs, identifying or designating a mobile service band for IMT can change the interference environment due to the unique and ubiquitous deployment of IMT. The frequency bands to be studied, and bands adjacent to those frequency bands in Resolution 256 (WRC-23) are already allocated and used by a variety of incumbent services/systems on a primary basis by many administrations, and studies are required to ensure the protection of existing and evolving needs of these incumbent services:

4 400-4 800 MHz: The frequency band 4 400- 4 800 MHz is allocated to fixed and mobile. Additionally, the 4 500-4 800 MHz is allocated to the fixed satellite service. It should be noted that Resolution 256 (WRC-23) does not call for studies of the frequency band 4 400-4 800 MHz in Region 2 (***where Jamaica is located***).

The SMA invites comments on agenda item 1.7 as it relates to the technical, operational and regulatory issues pertaining to the possible use of the terrestrial component of IMT in the candidate bands, taking into account:

- **the evolving needs to meet emerging demand for IMT**
- **technical and operational characteristics of terrestrial IMT that would operate in these bands including the evolution of IMT through advances in technology and spectrally efficient techniques**
- **deployment scenarios envisaged for IMT systems and related requirements of balanced coverage and capacity**
- **the needs of developing countries**
- **the time-frame in which spectrum would be needed**

6.8. **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)****;*

The RLS applications for these bands include ranging, imaging (including material analysis and localization) and there are two main configurations:

- active (radars) which may require bandwidths up to 30 GHz to achieve range resolutions in the order of 0.5cm.
- receive-only use, which will detect extremely weak power that is naturally radiated and require a wider frequency bandwidth than active systems to collect enough power for detection.

These frequency ranges, well above 100 GHz, are mooted to be still under-utilised but offer potential for future services. Note the difficulty of protecting, of not just the current use, but also services that could operate in the future within unknown characteristics.

The SMA invites comments on agenda item 1.8 in relation to the additional spectrum allocation to the RLS on a primary basis in the stated frequency range.

6.9. **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)**;*

This agenda item is primarily in relation to an update of Appendix 26 to allow wide band HF transmission from aeronautical mobile off route service.

Note that in the case of HF communications, wideband may refer to emissions wider than 3 kHz channels, and can be achieved by single or multi-carrier emissions. Appendix 26 covers use of parts of the 3 025 - 18 030 kHz band by the aeronautical mobile (OR) service, with the relevant frequency ranges in 26/1. A wide range of other services operate in this frequency range including fixed, mobile, broadcasting, amateur and amateur satellite, standard frequency and time signal and radiolocation.

The SMA invites comments on agenda item 1.9 in relation to the update of Appendix 26, to allow wide band HF transmission from aeronautical mobile off route service.

6.10. **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);*

WRC-2000 adopted co-primary allocations in the 71-76 GHz and 81-86 GHz band for terrestrial (fixed and mobile services) and the fixed-satellite, mobile-satellite and broadcasting-satellite services. Due to technological readiness however, administrations historically have deployed on the primary fixed service allocation in the 71-76 GHz and 81-86 GHz bands for high-capacity fixed wireless backhaul systems for point-to-point (P-P) applications. According to industry data in the United States, wireless data traffic exceeded 73.7 trillion megabytes, a 157% increase since 2018 and a 38% increase since 2021. To accommodate the growing demand for IMT services, wireless network deployments trend towards improving broadband coverage and increasing the availability of higher speeds to more subscribers. Ultimately, this translates in an increase of mobile broadband throughput and/or capacity.

As a result, new base stations are being designed to facilitate mounting on lamp posts and other street level structures. As it is difficult and costly to provide necessary backhaul connections using fibre to these structures, microwave links using the optimal characteristics of the 71-76 and 81-86 GHz bands are being deployed to support wideband integrated access backhaul solutions.

Recognizing the growing terrestrial use of the 70/80 GHz bands to support future mobile networks, and the increasing number of satellite filings in the frequency bands, WRC-23 agreed

to study the protection of terrestrial services from satellites services, under agenda item 1.10 and Resolution 775.3 Accordingly, studies should be performed to determine the power flux-density (pfd) and equivalent isotropically radiated power (e.i.r.p.) limits to be included in Article 21 for satellite services (fixed-satellite service (FSS), mobile-satellite service (MSS) and broadcasting-satellite service (BSS)) to protect the current and planned fixed and mobile services in the frequency bands 71-76 GHz and 81-86 GHz.

Article 21 of the Radio Regulations contains a range of e.i.r.p. and pfd limits to protect terrestrial services from space services, often of the form of a pfd vs elevation angle table.

The SMA invites comments on agenda item 1.10, considering development of pfd and equivalent 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 candidate bands.

6.11. **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)****;*

It is necessary to study the impact on, and to protect, other services, including earth-to-space and space-to-earth operation within the MSS, from the operation of space-to-space links in the frequency bands under this agenda item, taking into account applicable footnotes to the Table of Frequency Allocations. This is to ensure compatibility with incumbent services in these frequency bands and the adjacent frequency bands and avoid harmful interference. Studies will need to be conducted on the technical and operational characteristics, and protection, sharing and potential compatibility between satellite-to-satellite links and the allocated primary services in the frequency ranges and adjacent bands specified in Resolution 249 (Rev. WRC-23). These studies are underway in the ITU.

The SMA invites comments on agenda item 1.11, regarding the technical and operational issues, and regulatory provisions, for space-to-space links among non-geostationary and geostationary satellites in the candidate bands

6.12. **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)****;*

WRC-27 is invited to consider the results of the requisite studies and take necessary actions, as appropriate.

There were some discussions at WRC-23 about what was meant by "low-data-rate" in the context of non-geostationary MSS, but it was generally accepted that it relates to applications like the internet of things (IoT). Note how the allocations are often adjacent to existing MSS allocations and how some bands are considering both space-to-Earth and Earth-to-space operation that would allow time-division duplex (TDD) operation.

The SMA invites comments on agenda item 1.12 as it relates to the possible allocation to the mobile-satellite service and possible regulatory actions in the related frequency bands.

6.13. 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)****;*

As technologies evolve, terrestrial mobile network operators have been looking for ways to extend cellular coverage to keep users connected particularly in remote areas. Direct-to-cellular technologies have become a hot topic for several of the non-GSO constellations and promises to deliver mobile connectivity in previously unreachable areas and allows mobile network operators to extend their existing spectrum holdings to connect unmodified mobile handsets in unserved, or unreachable areas and in the wake of emergencies.

Resolution 253 (WRC-23) calls for studies to facilitate direct connectivity between space stations and IMT user equipment to complement terrestrial IMT network coverage. Sharing and compatibility studies in bands between 694 - 2 700 MHz identified for IMT in the Radio Regulations and reflected in Recommendation ITU-R M.1036 are essential to ensure the protection of incumbent services, including in adjacent frequency bands in accordance with the Radio Regulations. Resolution 253 (WRC-23) also calls for possible technical and operational measures to ensure that such envisaged space stations do not cause harmful interference nor claim protection from stations in the mobile service.

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The SMA invites comments on agenda item 1.13 and the possible new allocations to the mobile satellite services for direct connectivity between space stations and IMT equipment to complement terrestrial IMT network coverage.

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

Current and future MSS systems will deliver more robust voice and data communication applications representing a practical and effective method for delivering connectivity particularly in unserved and underserved areas, and enable access to essential information, educational resources, healthcare services, and economic opportunities. To address the additional MSS spectrum needs to support these benefits, WRC-27 agenda item 1.14 will study the sharing and compatibility between new MSS operations and incumbent services.

Resolution 254 (WRC-23) explores the feasibility of new MSS frequency allocations in the frequency bands 2 010-2 025 MHz (Earth-to-space) and 2 160-2 170 MHz (space-to-Earth) in Regions 1 and 3; and 2 120-2 160 MHz (space-to-Earth) in all Regions.

The SMA invites comments on agenda item 1.14 in relation to the possible additional allocations to the MSS in particular the 2120 – 2160 MHz (space-to-earth)

6.15. **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)****;*

This agenda item aims to address sharing/compatibility studies and spectrum needs related to systems in the space research service (SRS) planned for operations on the lunar surface, or systems in lunar orbit communicating with systems on the lunar surface, in accordance with Resolution 680 (WRC-23).

According to ITU Resolution 680 (WRC-23), the focus is on studying potential frequency bands for lunar communications, inviting further investigation into spectrum needs for communications between Earth, lunar-orbiting spacecraft, and the lunar surface, without specifying exact frequency bands within the resolution itself; essentially calling for future research on this topic to be completed before the 2027 World Radiocommunication Conference.

The SMA invites comments on agenda item 1.15 in relation to sharing/compatibility studies and spectrum needs for systems in the SRS.

6.16. **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)****;*

In accordance with Resolution 681 (WRC-23), WRC-27 agenda item 1.16 essentially invites studies on how the interference caused by unwanted emissions from non-GSO satellite systems operating in the adjacent bands to a set of RAS primary frequency bands affects the operation of RAS stations.

The SMA invites comments on agenda item 1.16 as it relates to the technical and regulatory provisions necessary to protect RAS.

6.17. **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)****;*

Space weather events can cause harm to important sectors of national economies, security and human welfare. As such, space weather data is important, and regulatory protection is needed for space weather observation systems, including receive-only sensors that measure low-level emissions from sources such as the Sun, the Earth's atmosphere and other celestial bodies.

This agenda item is 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.

The SMA invites comments on agenda item 1.17, bearing in mind the studies on sharing and compatibility, spectrum needs and appropriate protection and regulatory provisions for receive-only space weather sensors.

6.18. **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)**;*

As noted above, this agenda focuses on examining potential regulatory measures to protect the Earth Exploration-Satellite Service (passive) and the Radio Astronomy Service from interference caused by active services in specific high-frequency bands above 76 GHz, primarily aiming to ensure compatibility between these passive services and potentially harmful emissions from active services operating in nearby bands, all in line with Resolution 712 adopted during WRC-23.

The SMA invites comments on agenda item 1.18 in relation to the potential regulatory measures to protect EESS and RAS.

6.19. 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)**,*

In accordance with Resolution 674 (WRC-23), WRC-27 agenda item 1.19 invites studies on the use of the EESS (passive) to perform sea surface temperature (SST) measurements for detecting and forecasting meteorological events in the complementary frequency bands 4 200-4 400 MHz and 8 400-8 500 MHz SST, together with ocean salinity, is one of the drivers of the ocean circulation, which is key for any numerical weather prediction (NWP) or numerical ocean prediction (NOP) models. SST is also a critical variable for climatological studies and for the assessment of global temperature trends, and it is fundamental to understand the exchanges of heat, gas and momentum between the atmosphere and the ocean, and in calculations of carbon uptake by the ocean from the atmosphere. Global maps of SST are also important for commercial applications such as fishery assessment.

The SMA invite comments on agenda item 1.19 with regards to the possible primary allocations in all regions to the EESS (passive) in the candidate bands.

7.0 Submitting Comments

7.1. Respondents are requested to provide their comments in electronic format (Microsoft Word or Adobe PDF) to the following email address**: info@sma.gov.jm**

7.2. In addition, respondents are asked to specify the agenda item number for ease of referencing and provide supporting rationale for their comments as are necessary.

7.3. Submissions should be addressed to:

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

7.4. All submissions should cite the name of the document, **Consultation on the World Radiocommunications Conference – 2027 (WRC-27)**, and the publication date.

7.5. Parties should submit their comments no later than **2025 June 06**, to ensure consideration. Soon after the close of the comment period, all comments received will be posted **by 2025 June 13** on the SMA's website at http://www.sma.gov.jm

7.6. The SMA will also provide interested parties with the opportunity to reply to comments from other parties. Reply comments will be accepted **until 2025 July 11**.

7.7. All comments and reply comments will be published, so those making submissions are asked not to provide confidential or private information in their submissions.

7.8. 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.

8.0 Next Step

8.1. 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.