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| **World Radiocommunication Conference (WRC-19)Sharm el-Sheikh, Egypt, 28 October – 22 November 2019** |  |
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| PLENARY MEETING | **Addendum 8 toDocument 91-E** |
|  | **7 October 2019** |
|  | **Original: English** |
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| Tanzania (United Republic of) |
| Proposals for the work of the conference |
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| Agenda item 1.8 |

1.8 to consider possible regulatory actions to support Global Maritime Distress Safety Systems (GMDSS) modernization and to support the introduction of additional satellite systems into the GMDSS, in accordance with Resolution **359** (**Rev.WRC-15**);

Introduction

WRC-19 agenda item 1.8 encompasses two separate items. The first is global maritime distress and safety system (GMDSS) modernization addressed under *resolves to invite ITU-R* 1 of Resolution **359 (Rev.WRC-15)**, referred to as “Issue A.” The second is the introduction of an additional satellite system into the GMDSS covered under *resolves to invite ITU-R* 2 of Resolution **359 (Rev.WRC-15)**, referred to as “Issue B.”

Proposals

On Issue B: introduction of an additional GMDSS satellite system

**Tanzania** administration supports introduction of the additional GMDSS service providers to achieve redundancy, global coverage and enhancements of both safety and value-for-money through competition and also supports the activities of IMO related to the introduction of additional satellite systems into the GMDSS.

Tanzania administration supports Method B4

Method B4

In order that a satellite network or satellite system be used for GMDSS, the frequency band of that satellite network /system, must be of primary status and be contained into Appendix **15** to the Radio Regulations (RR). Regarding the frequency band 1 616-1 626.5 MHz, the secondary MSS allocation in the space-to-Earth direction cannot be considered for use by GMDSS due to the fact that *non-GSO MSS* has a status of “non-interference, non-protection” *vis-à-vis* any primary service within the same band and in the adjacent bands. Moreover according to paragraph 2.3 of the Rules of Procedure relating to the application of RR No. **9.11A** (“While recognizing the difficulties of harmonizing the text of the footnotes to RR Article **5** introduced by WARC-92, WRC-95 and WRC-97 on the one hand, and the text of the provision of RR No. **9.11A** (including RR Nos. **9.12** to **9.16**) and RR No. **9.17A**, as appropriate with respect to the services to which this provision is applicable, on the other hand, the Board concluded that the procedure is applicable to all other space and terrestrial services with respect to those satellite services having allocations with equal rights and mentioned in the specific footnotes to which this provision applies.”)

The regulatory proposal for this method is as follows:

– Upgrade the status of the band 1 621.35-1 626.5 MHz from a secondary to a primary allocation to the MMSS (space-to-Earth). The status of all other allocations in the frequency band 1 613.8-1 626.5 MHz will remain unchanged.

– Identify this band 1 621.35-1 626.5 MHz in RR Appendix **15** for GMDSS purpose with a note like “In addition to its availability for routine non-safety purposes, the band 1 621.35-1 626.5 MHz is used for distress and safety purposes in the Earth-to-space and space-to-Earth directions in the maritime mobile-satellite service. GMDSS distress, urgency and safety communications have priority in this band.”

– Modification of RR Nos. **5.364** and **5.368**, in relevant methods, in order to remove any ambiguity due to the upgrade of the status for the downlink segment.

– A modification of RR No. **5.372** is proposed to introduce the maximum value of epfd and pfd defined in Resolution **739 (Rev.WRC-15)**, in order to make mandatory and quantify the protection of the radio astronomy.

– Adjustment of RR No. **5.208B** and of Resolution **739 (Rev.WRC-15)** in order not to refer any more to the band 1 613.8-1 626.5 MHz. The Resolution gives just a threshold of “best effort” which is less effective than a regulatory limit. In any case the RR No. **5.208B** could be suppressed for the band 1 613.8-1 626.5 MHz due to the modification of RR No. **5.372**.

– Consequential modifications in RR Article **33** are proposed.

– Suppression of Resolution **359 (Rev.WRC-15)** with regard to *resolves* 2.

The Administration of Tanzania also supports all the proposed modifications to the provisions of RR as follows:

ARTICLE 5

Frequency allocations

Section IV – Table of Frequency Allocations
(See No. 2.1)

MOD TZA/91A8/1

1 610-1 660 MHz

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| --- |
| Allocation to services |
| Region 1 | Region 2 | Region 3 |
| 1 613.8-1 621.35MOBILE-SATELLITE(Earth-to-space) 5.351AAERONAUTICALRADIONAVIGATIONMobile-satellite (space-to-Earth) | 1 613.8-1 621.35MOBILE-SATELLITE(Earth-to-space) 5.351AAERONAUTICALRADIONAVIGATIONRADIODETERMINATION-SATELLITE(Earth-to-space)Mobile-satellite (space-to-Earth) | 1 613.8-1 621.35MOBILE-SATELLITE(Earth-to-space) 5.351AAERONAUTICAL RADIONAVIGATIONMobile-satellite (space-to-Earth)Radiodetermination-satellite(Earth-to-space) |
| 5.341 5.355 5.359 MOD 5.364 5.365 5.366 5.367 MOD 5.368 5.369 5.371 MOD 5.372 | 5.341 MOD 5.364 5.365 5.366 5.367 MOD 5.368 5.370 MOD 5.372 | 5.341 5.355 5.359 MOD 5.364 5.365 5.366 5.367 MOD 5.368 5.369 MOD 5.372 |
| 1 621.35-1 626.5MARITIME MOBILE-SATELLITE (space-to-Earth) ADD 5.GMDSS-B4 MOBILE-SATELLITE(Earth-to-space) 5.351AAERONAUTICALRADIONAVIGATIONMobile-satellite (space-to-Earth) except maritime mobile-satellite (space-to-Earth)  | 1 621.35-1 626.5MARITIME MOBILE-SATELLITE (space-to-Earth) ADD5.GMDSS-B4MOBILE-SATELLITE(Earth-to-space) 5.351AAERONAUTICALRADIONAVIGATIONRADIODETERMINATION-SATELLITE(Earth-to-space)Mobile-satellite (space-to-Earth) except maritime mobile-satellite (space-to-Earth)  | 1 621.35-1 626.5MARITIME MOBILE-SATELLITE (space-to-Earth) ADD5.GMDSS-B4MOBILE-SATELLITE(Earth-to-space) 5.351AAERONAUTICAL RADIONAVIGATIONMobile-satellite (space-to-Earth) except maritime mobile-satellite (space-to-Earth) Radiodetermination-satellite(Earth-to-space) |
| 5.341 5.355 5.359 MOD 5.364 5.365 5.366 5.367 MOD 5.368 5.369 5.371 MOD 5.372 | 5.341 MOD 5.364 5.365 5.366 5.367 MOD 5.368 5.370 MOD 5.372 | 5.341 5.355 5.359 MOD 5.364 5.365 5.366 5.367 MOD 5.368 5.369 MOD 5.372 |
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| 1 626.5-1 660 MOBILE-SATELLITE (Earth-to-space) 5.351A 5.341 5.351 5.353A 5.354 5.355 5.357A 5.359 5.362A 5.374 5.375 5.376 |

MOD TZA/91A8/2

**5.208B**[[1]](#footnote-1)\* In the frequency bands:

 137-138 MHz,
 387-390 MHz,
 400.15-401 MHz,
 1 452-1 492 MHz,
 1 525-1 610 MHz
 2 655-2 690 MHz,
 21.4-22 GHz,

Resolution **739** **(Rev.WRC-15)** applies.     (WRC19)

ADD TZA/91A8/3#50275

5.GMDSS-B4 The use of the band 1 621.35-1 626.5 MHz by the maritime mobile-satellite to support GMDSS is subject application of No. **9.11A** and its associated Rules of Procedure requiring, *inter alia*, to coordinate with all space and terrestrial services in this band and the adjacent bands, having allocation with primary status.     (WRC‑19)

**Reasons:** The downlink of the non-GSO MSS system using the band 1 613.8-1 626.5 MHz or part thereof is currently on a secondary basis. Consequently, according to the footnote to Annex 1 of Appendix **5** of the Radio Regulations, coordination was not required with any space or terrestrial service of primary status. However, should a primary status (on a provisional or permanent basis) be granted to this allocation, it is fundamental that the notifying administration of the non-GSO MSS system, if used as Maritime Mobile Satellite Service to support GDMSS, would have to effect the required coordination with all space and terrestrial services submitted to the Bureau at the date of coming into force of the new primary allocation to the Maritime Mobile Satellite Service.

For the regulatory example of RR No. **5.364** under Method B4, 2 options of the CPM Report are proposed:

Option 1: MOD

MOD TZA/91A8/4

5.364 The use of the band 1 610-1 626.5 MHz by the mobile-satellite service (Earth-to-space) and by the radiodetermination-satellite service (Earth‑to‑space) is subject to coordination under No. **9.11A**. A mobile earth station operating in either of the services in this band shall not produce a peak e.i.r.p. density in excess of ‑15 dB(W/4 kHz) in the part of the band used by systems operating in accordance with the provisions of No. **5.366** (to which No. **4.10** applies), unless otherwise agreed by the affected administrations. In the part of the band where such systems are not operating, the mean e.i.r.p. density of a mobile earth station shall not exceed –3 dB(W/4 kHz). Except when used for maritime distress and safety purposes in the band 1 621.35-1 626.5 MHz by satellite networks in the maritime mobile-satellite service (see Appendix **15**), stations of the mobile-satellite service shall not claim protection from stations in the aeronautical radionavigation service, stations operating in accordance with the provisions of No. **5.366** and stations in the fixed service operating in accordance with the provisions of No. **5.359**. Administrations responsible for the coordination of mobile-satellite networks shall make all practicable efforts to ensure protection of stations operating in accordance with the provisions of No. **5.366**.      (WRC‑19)

Option 2: NOC

NOC TZA/91A8/5#50267

5.364

**Reasons:** Under Section 5/1.8/5 of the CPM Report, Regulatory and procedural considerations, a point was raised regarding apparent inconsistency between RR No. **5.364** (adopted several years ago) and RR No. **5.367** (adopted at WRC-12).

To address this apparent inconsistency, proponent of Method B1 proposed certain modifications to RR No. **5.364**.

It was emphasized that no such inconsistency was reported to the Director of the Radiocommunication Bureau, Moreover to address such an apparent inconsistency, there were two agenda items which could have been used to that effect, namely agenda items 3 and 7 of WRC-19, noting that such inconsistency was not raised under these agenda items, neither to WRC-15 nor to ITU-R Study Groups dealing with these agenda items.

It should be borne in mind that current agenda items of WRC-19, namely agenda items 3, 7 and 9.1 could still be used to report the matter to WRC-19.

It is further emphasized that the proposed modification to RR No. **5.364** would result in an implicit super primary to up-link of non-GSO MSS under consideration to support GMDSS if used as a maritime mobile satellite service which adversely affects the primary station of AMRS, which is a safety of life service at sea, land and air. Such implicit super primary status is also in contradiction with the objectives of No. **4.10** of the Radio Regulations accorded to all safety services including AMRS.

In view of the above, in order to avoid such negative consequence, it is proposed NOC for RR No. **5.364** as an option for Method B4.

MOD TZA/91A8/6

5.368 With respect to the radiodetermination-satellite and mobile-satellite services the provisions of No. **4.10** do not apply in the band 1 610-1 626.5 MHz, with the exception of the aeronautical radionavigation-satellite service and of the maritime mobile-satellite service in the band 1 621.35-1 626.5 MHz when used for GMDSS.     (WRC‑19)

MOD TZA/91A8/7

5.372 Harmful interference shall not be caused to stations of the radio astronomy service using the band 1 610.6‑1 613.8 MHz by stations of the radiodetermination-satellite and mobile-satellite services (including land, aeronautical and maritime mobile-satellite services) (No. **29.13** applies). For the mentioned services non-GSO satellite systems operating in the band 1 613.8-1 626.5 MHz shall not exceed an epfd of −258 dB(W/(m2 · 20 kHz)) in the band 1 610.6-1 613.8 MHz unless the data loss resulting from exceeding this limit is less than 2%, and GSO satellite networks operating in the band 1 613.8-1 626.5 MHz shall not exceed a pfd of −194 dB(W/(m2 · 20 kHz)) in the band 1 610.6-1 613.8 MHz, at any radio astronomy station performing observations in this band. The verification of the compliance with the epfd threshold for non-GSO systems shall be done using Recommendation ITU‑R M.1583‑1 and the antenna pattern and the maximum antenna gain given in Recommendation ITU‑R RA.1631‑0.      (WRC‑19)

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1. \* This provision was previously numbered as No. 5.347A. It was renumbered to preserve the sequential order. [↑](#footnote-ref-1)