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13 June 2025

Independent Communications Authority of South Africa
Block B
350 Witch-Hazel Ave
Eco-Park Estate
Centurion
0169

For the attention of: Mr Davis Kgosimolao Moshweunyane / Mr Manyaapelo Richard Makgotlho
Per email: dmoshweunyane@icasa.org.za / rmakgotlho@icasa.org.za

Dear Chairperson

DRAFT NATIONAL RADIO FREQUENCY PLAN 2025

1. eMedia refers to the publication by the Independent Communications Authority of South Africa (the Authority) for public consultation of the Draft National Radio Frequency Plan 2025 in Government Gazette 52449 on 4 April 2025 in the Government Gazette No. 52449, Notice 3109 of 2025 (the Draft Radio Frequency Plan).
2. Thank you for this opportunity to make written submissions on the Draft Radio Frequency Plan. We set out below our detailed submission.
3. eMedia remains committed to engaging with the Authority on this process and wishes to make a oral representation should the opportunity arise.
4. We remain at your disposal to discuss what is set out in the attached.

Yours sincerely,

Philippa Rafferty / Junior Qwabe
eMedia Investments

Comments on the ICASA Draft National Radio Frequency Plan 2025. As published in Government Gazette 52449 Notice 3109 of 2025.

Medium Wave Sound Broadcasting Band (526.5 – 1606.5 kHz)

526.5-1 606.5 kHz BROADCASTING	**526.5-1 606.5 kHz** BROADCASTING	Medium Wave Sound Broadcasting (535.5 -1606.5 kHz) Inductive Loop Systems (740 – 8800 kHz)	The Terrestrial Broadcasting Frequency Plan as amended (GG No. 36321) 02 April 2013 Radio Frequency Spectrum Regulations (Annex B) (GG. No.38641, 30 March 2015).
5.87 5.87A		Digital Sound Broadcasting (DSB) services	Digital Sound Broadcasting (DSB) Regulations was published in GG44469 Notice 215 of 2021.

The current analogue AM transmissions in this band is becoming obsolete and the power consumption of such analogue transmissions is unaffordable. We are of the opinion that DRM 30 (broadcast services below 30 MHz) provide a much more feasible broadcast opportunity. The DRM standard used in the AM bands (also referred to as DRM30) can deliver FM-comparable sound quality and is specifically designed to utilise the broadcast bands below 30MHz (Long Wave, Medium Wave and Short Wave) which allow for very-long-distance signal propagation.

DRM in AM bands is designed to fit in with the existing AM broadcast band plan, based on signals of 9 kHz or10 kHz bandwidth. It also has modes requiring only 4.5 kHz or 5 kHz bandwidth, and modes that can take advantage of wider bandwidths – 18 kHz or 20 kHz – allowing DRM to operate alongside AM transmissions in every market of the world.

The system allows the new digital transmissions to co-exist with the current analogue broadcasts, and a significant amount of work has been undertaken to quantify the operating parameters that assure mutual analogue and digital compatibility. Hence the changeover from analogue to digital broadcasting can be phased over a period of time, which in turn allows existing broadcasters to spread the required investment to meet any budgetary constraints. Furthermore, unlike some other digital systems, the DRM system has been designed to allow suitable analogue transmitters to be modified to switch easily between digital and analogue broadcasts. This can significantly reduce the initial investment cost for a broadcaster. An additional budgetary benefit is the reduction of transmission energy costs.

DRM30 receivers, which are devices capable of receiving digital radio broadcasts using the DRM (Digital Radio Mondiale) standard, are readily available worldwide, both online and in retail stores. The cost of these receivers varies depending on features, quality, and the specific vendor.

DRM30 can cover large service areas(much larger than FM) and can full-fill the requirement for multiple radio services from a single transmitter station. There are numerous frequencies available in the band and ICASA should promote this band where large area coverage is required by the broadcaster.

FM Sound Broadcasting Band

87.5-100 MHz BROADCASTING 5.190	**87.5-100 MHz** BROADCASTING	FM Sound Broadcasting (87.5-108 MHz) Digital sound broadcasting (DSB)	The Terrestrial Broadcasting Frequency Plan (GG no.36321) 02 April 2013 Geneva agreement GE84 Digital Sound Broadcasting (DSB) Regulations was published in GG44469 Notice 215 of 2021
100-108 MHz BROADCASTING 5.192 5.194	**100-108 MHz** BROADCASTING	FM Sound Broadcasting (87.5-108 MHz) Digital sound broadcasting (DSB)	The Terrestrial Broadcasting Frequency Plan (GG no.36321) 02 April 2013 Geneva agreement GE84 Digital Sound Broadcasting (DSB) Regulations was published in GG44469 Notice 215 of 2021

FM sound broadcasting has been extremely successful for public service broadcasting(PBS), Commercial Broadcasters as well as community broadcasting in South Africa. There are a limit number of broadcast frequencies available throughout South Africa and the demand exceed the availability in most urban and city areas as well as some rural areas. ICASA just released in excess of 150 FM frequencies nationally for Community broadcasting.

There are a request from certain groupings to release some of the FM broadcast spectrum for DRM+. We are not in favor of such re-allocation to use DRM+ in this band currently. The FM band is fully occupied and we cannot allow any more services in this band which can compromise existing FM broadcasters with the possibility of harmful interference. We believe that the current DAB+ trial in the VHF band should rather be utilized for such radio broadcast expansion.

VHF Analogue Television Band.

174-223 MHz BROADCASTING 5.235 5.237 5.243	**174-223 MHz** BROADCASTING NF5	Analogue Television Broadcasting (174 – 214 MHz) T-DAB (214 – 230 MHz) Digital Sound-Broadcasting Digital Television Broadcasting (174 – 214 MHz) Wireless microphones (173.7 – 175.1 MHz)	TV Band III Migration from analogue to digital is harmonised in SADC. Digital Sound Broadcasting (DSB) planned in this band. TV Band III Regulations was published in GG44469 Notice 215 of 2021 The Terrestrial Broadcasting Frequency Plan as amended (GG no.36321) 02 April 2013 Radio Frequency Spectrum Regulations (Annex B) (GG. No.38641, 30 March 2015)
223-230 MHz BROADCASTING Fixed Mobile 5.243 5.246 5.247	**223-230 MHz** BROADCASTING Fixed Mobile	T-DAB (214 – 230 MHz) Digital Sound Broadcasting	Migration from analogue to digital is harmonised in SADC. Digital sound broadcasting is being planned in this band. Digital Sound Broadcasting (DSB) Regulations was published in GG44469 Notice 215 of 2021 The Terrestrial Broadcasting Frequency Plan as amended (GG no.36321) 02 April 2013
230-235 MHz FIXED MOBILE 5.247 5.251 5.252	**230-238 MHz** BROADCASTING 5.252	Digital Television Broadcasting (230 – 238 MHz)	The Terrestrial Broadcasting Frequency Plan as amended (GG no.36321) 02 April 2013
235-267 MHz FIXED MOBILE	**238-246 MHz** FIXED MOBILE	PMR and/or PAMR(238- 242.95 MHz) International Distress Frequency at 243 MHz (242.95 – 243.05 MHz) Low-power devices (243.05-246.00 MHz)	Band available for distress and safety purposes. Low-power devices ancillary to the broadcasting service.
	Mobile-satellite 5.111 5.252 5.254 5.256	DAB+ (238-242.95 MHz)	Mobile-satellite may be used in (235 -322 MHz) and (335.4 -399.9 MHz) Future consideration for Digital Sound Broadcasting in the band 238 – 240 MHz Channel 13F (239.2 MHz) can be used nationally for DAB+ as currently used.during DAB+ trials Radio Frequency Spectrum Regulations (Annex B) (GG. No.38641, 30 March 2015)
	246-254 MHz BROADCASTING 5.254	Digital Television broadcasting (246-254 MHz)	The Terrestrial Broadcasting Frequency Plan as amended (GG no.36321) 02 April 2013

The frequency band 174 to 254 MHz is currently still used for analogue television in South Africa. There are no pressure to vacate this band in any area for other applications except for the deployment of DAB+ services in 214 to 230 MHz and 238 to 242.95 MHz in the sections of the band mentioned. Currently there are only one trial license for a DAB+ frequency CH13F (239.2 MHz) operational as an SFN between Johannesburg and Pretoria. This operational DAB+ frequency is not affected by the current operational analogue frequencies. It needs to be noted that there are several services ancillary to broadcasting that makes use of this frequency band and such services will require protection to ensure that such services can continue operating in this parts of the VHF frequency band as listed in the latest NRFP.

We recommend that the existing DAB+ radio frequency spectrum assignment plan(RFSAP) be expanded to allow for more national and regional DAB+ frequencies. This should go hand-in-hand with an invitation by ICASA for DAB+ frequency applications to address the frequency shortage in the FM band. This will assist ICASA to digitize DSB with national implementation of DAB+ and to stimulate the economy in the broadcasting sector.

DTT Band (470 – 694 MHz)

470-694 MHz BROADCASTING	**470-606 MHz** BROADCASTING Land mobile	DTT Broadcasting (470-694 MHz) SAP/SAB Applications Applications ancillary to broadcasting and programme-making	Broadcasting Allotments in accordance with GE89 and GE06. Broadcast assignments in accordance with the latest version of the Terrestrial Broadcasting Frequency Plan as amended (GG No.36321) 02 April 2013. Band IV/V Analogue television is to be migrated to digital television and ensure harmonisation with SADC. The use of Television Whitespaces in the band 470 – 694 MHz excluding sub band 606 to 614 MHz, subject to non-Interference non-Protection basis to users under a primary allocation, max. 50 mW ERP. Regulations Television Whitespace – GG 44373 (Notice 164 of 2021) and Government Gazette No. 4151 (Notice 147 of 2018) Radio Frequency Spectrum Assignment Plan, GG 43341 (Notice 284 of 2020
	5.149 5.296 5.304 5.306		The use of land mobiles in accordance with footnote No. 5.296
	606-614 MHz BROADCASTING RADIO ASTRONOMY Land mobile 5.149 5.296 5.304 5.306	DTT Broadcasting (470-694 MHz) Radio Astronomy (606 – 614 MHz) SAP/SAB Applications Applications ancillary to broadcasting and programme-making	Broadcasting Allotments in accordance with GE89 and GE06. Broadcast assignments in accordance with the latest version of the Terrestrial Broadcasting Frequency Plan as amended (GG No.36321) 02 April 2013. Band IV/V Analogue television is to be migrated to digital television and ensure harmonisation with SADC. Radio Frequency Spectrum Assignment Plan, GG 43341 Notice 284 of 2020 RAS VLBI Observations (608 – 614 MHz). See Section 5 for coordination with radio astronomy.
	614-694 MHz BROADCASTING Land mobile	DTT Broadcasting (470-694 MHz) SAP/SAB Applications	Broadcasting Allotments in accordance with GE89 and GE06. Broadcast assignments in accordance with the latest version of

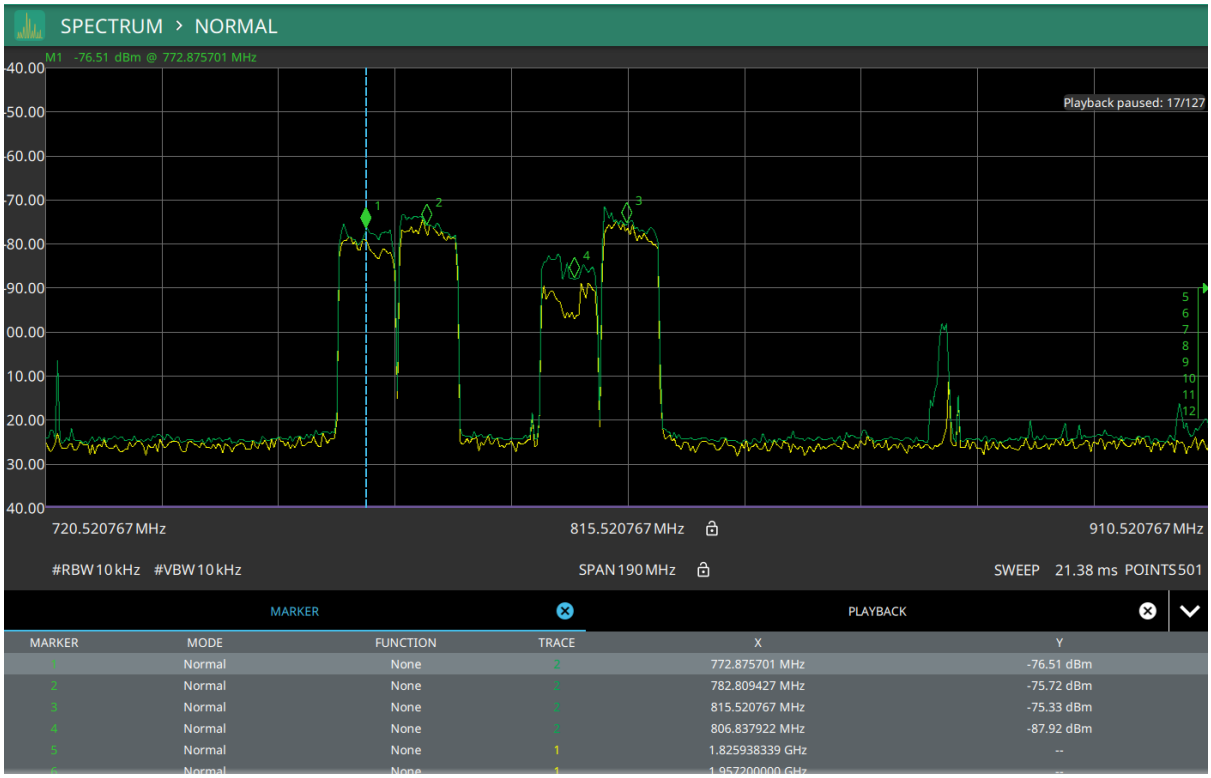
5.300 5.312	~~5.312A 5.317A~~		Assignment Plan (GG 38640 Notice 271 and 272 of 2015) as amended IMT in accordance with ITU-R Recommendation ITU-R M.2090 latest version and Resolution **760 (WRC-15)** applies Recommendation ITU-R M.1036-6 Consideration of the future spectrum needs of Broadband Public Protection and Disaster Relief (PPDR) in the range 694-790 MHz as described in the most recent ITU-R M.2015, while taking into account studies called for by Resolution 646 (WRC15) for technical and operational measures. Band IV/V analogue television is to be migrated to digital television and ensure harmonisation with SADC. WRC-07, WRC-12 and WRC-15 allocated this band to Mobile service except aeronautical mobile and identified it for IMT. Fixed links operating in this band will have to be migrated in order to accommodate IMT.

The current DTT spectrum allocation in the frequency band 470 to 694 MHz allows for the adjudication of 7 provincial multiplex allocations nationally. This implicate the potential of 154 standard definition services nationally or 42 high definition services nationally. The DTT spectrum allocation can be further optimized by adding local or city multiplexes nationally by performing a frequency planning exercise to incorporate such additional program channels. ICASA can use such additional capacity for licensing of dedicated educational channels that can improve our educational system.
Currently there are three DTT multiplex licensees leaving 4 national DTT multiplexes un utilized. This has the result that analogue television can still be utilized in areas where no subsidised DTT decoders have been distributed and where analogue transmitter infrastructure is available.

IMT Band (694 – 860 MHz)

790-862 MHz FIXED	**790-862 MHz** FIXED	Fixed Links (856 – 864.1 MHz) Wireless Access (827.775 – 832.695 MHz)	Paired with 868.1 – 876 MHz Paired with 827.775- 832.695 MHz
MOBILE except aeronautical mobile 5.316B 5.312B 5.317A BROADCASTING	MOBILE except aeronautical mobile 5.316B 5.317A NF9 5.312A 5.312B 5317A	IMT800 MTX (832 - 862 MHz) IMT850 MTX (825 – 830 MHz) HIBS – Resolution 213 (WRC-23) applies	Paired with BTX (791 – 821 MHz) Paired with BTX (870 – 875 MHz) International Mobile Telecommunication Roadmap (GG No.42829 Notice 600 of 2019) . Radio Frequency Spectrum Assignment Plan (GG 38640 Notice 271 and 272 of 2015) as amended IMT in accordance with ITU-R Recommendation ITU-R M.2090 latest version and Resolution **760 (WRC-15)** applies Recommendation ITU-R M.1036-6 Consideration of the future spectrum needs of Broadband Public Protection and Disaster Relief (PPDR) in the range 694-790 MHz as described in the most recent ITU-R M.2015, while taking into account studies called for by Resolution 646 (WRC15) for technical and operational measures. Band IV/V analogue television is to be migrated to digital television and ensure harmonisation with SADC. WRC-07, WRC-12 and WRC-15 allocated this band to Mobile service except aeronautical mobile and identified it for IMT. Fixed links operating in this band will have to be migrated in order to accommodate IMT.
5.312 5.319			Radio Frequency Spectrum Assignment Plan GG 42337 Notice 165 of 2019 Radio Frequency Spectrum Assignment Plan (GG 38640 Notice 273 of 2015) as amended Radio Frequency Spectrum Assignment Plan GG 41082 Notice 648 of 2017

The frequency band 694 to 860 MHz was released to IMT as a result of the outcome of WRC-19. We have not seen a huge take-up of the band by the MNO's on a national basis. This indicates that the MNO's have not started with huge deployment of 5G in South Africa on a national basis. This also indicate that ICASA should take a conservative stance towards the adjudication of other broadcast frequency bands for IMT. The image below gives an indication of partial deployment of SFN Mobile transmissions in the Johannesburg area.



The image above indicate 4 X 10 MHz mobile channels active in some parts of Johannesburg in the band 694 MHz to 860 MHz.

C-Band (3.600 – 4.200 GHz)

3 600-~~4 200~~3 800 MHz FIXED FIXED-SATELLITE (space-to-Earth) ~~Mobile~~MOBILE except aeronautical mobile 5.433B 5.434A 5.434B 5.435A	3 600-~~3 800~~4 200 MHz FIXED FIXED-SATELLITE (space-to-Earth) ~~NF1~~409 MOBILE except aeronautical mobile 5.434A 5.434B	Fixed links (4 GHz) (3600 – 4200 MHz) C-band downlink (VSAT/SNG/PTP links)(3600 – 4200 MHz) BFWA (3600 – 3800 MHz) IMT (3600 – 3800 MHz)	~~The sub-band 3 600-3 800 MHz could be used for BFWA where frequency sharing with FS PTP and/or FSS is feasible.~~ The band 3 600-3 800 MHz shall be used for IMT noting ITU-R Recommendation 1036-8. The channelling arrangement for PTP links in this band is based on ITU-R Recommendation F.635 latest versionAnnex 1. The sub-band 3 600-4 200 MHz is used for medium and high capacity PTP links and FSS. In the band 3 600-3 800 MHz, FS PTP and FSS applications will have to operate on coordinated basis. Operators are encouraged to apply for spectrum licenses including registering all C-Band Earth stations on the ICASA online database
3 800-4 200 MHz FIXED FIXED-SATELLITE (space-to-Earth) Mobile	3 800-4 200 MHz FIXED FIXED-SATELLITE (space-to-Earth) Mobile	Fixed links (4 GHz) (3600 – 4200 MHz) C-band downlink (VSAT/SNG/PTP links)(3600 – 4200 MHz) BFWA (3600 – 3800 MHz)	The channelling arrangement for PTP links in this band is based on ITU-R Recommendation F.635 latest versionAnnex 1. The sub-band 3 600-4 200 MHz is used for medium and high capacity PTP links and FSS. In the band 3 600-3 800 MHz, FS PTP and FSS applications will have to operate on coordinated basis. Operators are encouraged to apply for spectrum licenses including registering all C-Band Earth stations on the ICASA online database

The broadcasters use frequencies in the C-band 3.6 to 4.2 GHz frequencies extensively for VSAT, SNG and PTP links. This band is not susceptible to rain fading and the band is crucial for signal distribution, news gathering and linking applications. The NRFP states the following situation. The satellite component shares the band with terrestrial links and this requires careful coordination between the different operators. The band 3.6 to 3.8 GHz also share MOBILE on a primary basis while the band 3.8 to 4.2 GHz share with mobile on a secondary basis(Mobile secondary). ICASA needs to ensure that the broadcasters do not incur unnecessary disruptions on critical program feeds from new services that can impact on the total broadcast distribution network. Coordination processes need to be introduced to prevent such situations.

KU-Band (10.7 GHz to 12.75 GHz)

10.7-10.95 GHz FIXED FIXED-SATELLITE (space-to-Earth) 5.441 (Earth-to-space) 5.484 MOBILE except aeronautical mobile	**10.7-10.95 GHz** FIXED FIXED-SATELLITE (space-to-Earth) 5.441 (Earth-to-space) 5.484 MOBILE except aeronautical mobile	Feeder links in the BSS Fixed Links (11 GHz) (10.7 – 11.7 GHz) DTH Applications under the FSS	This band is used for Fixed links (11 GHz) (10.7-11.7 GHz). The channeling plan for FS Links are in accordance with ITU-R Rec.F387.latest version The band is also available for FSS Planned services (see Appendix 30B). The use of the band 10.7-11.7 GHz by the fixed-satellite service (Earth-to-space) is limited, can also be used for BSS feeder links (see 5.484).
10.95-11.2 GHz FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B (Earth-to-space) 5.484 MOBILE except aeronautical mobile	**10.95-11.2 GHz** FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B (Earth-to-space) 5.484 MOBILE except aeronautical mobile	Feeder links in the BSS Fixed Links (11 GHz) (10.7 – 11.7 GHz) DTH Applications under the FSS Ku-band downlink (VSAT/SNG)	This band is used for Fixed links (11 GHz) (10.7-11.7 GHz). The channeling plan for FS Links are in accordance with ITU-R Rec.F387 latest version.. This band is also used for FSS (downlink) (VSAT/SNG/BSS feeder links). The use of the band 10.7-11.7 GHz by the fixed-satellite service (Earth-to-space) is limited to can also be used for BSS feeder links (see 5.484).
11.2-11.45 GHz FIXED FIXED-SATELLITE (space-to-Earth) 5.441 (Earth-to-space) 5.484 MOBILE except aeronautical mobile	**11.2-11.45 GHz** FIXED FIXED-SATELLITE (space-to-Earth) 5.441 (Earth-to-space) 5.484 MOBILE except aeronautical mobile	Feeder links in the BSS Fixed Links (11 GHz) (10.7 – 11.7 GHz) DTH Applications under the FSS	This band is used for Fixed links (11 GHz) (10.7-11.7 GHz). The channeling plan for FS Links are in accordance with ITU-R Rec.F387 latest version. The band is also available for FSS Planned services (see Appendix 30B). The use of the band 10.7-11.7 GHz by the fixed-satellite service (Earth-to-space) is limited to can also be used for BSS feeder links (see 5.484).
11.45-11.7 GHz FIXED FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B (Earth-to-space) 5.484	**11.45-11.7 GHz** FIXED NF14 FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B (Earth-to-space) 5.484	Fixed Links (11 GHz) (10.7 – 11.7 GHz) Fixed-satellite downlinks (PTP/VSAT/SNG). Feeder links in the BSS DTH Applications under the FSS	This band is used for Fixed links (11 GHz) (10.7-11.7 GHz). The channeling plan for FS Links are in accordance with ITU-R Rec.F387 latest version. This band is also used for FSS (downlink) (VSAT/SNG/BSS feeder links). The use of the band 10.7-11.7 GHz by the fixed-satellite service (Earth-

MOBILE except aeronautical mobile	MOBILE except aeronautical mobile		to-space) is limited to can also be used for BSS feeder links (see 5.484).
11.7-12.5 GHz FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 5.492 5.487 5.487A	**11.7-12.5 GHz** FIXED MOBILE except aeronautical mobile BROADCASTING BROADCASTING-SATELLITE 5.492 FIXED-SATELLITE (non-GSO) (space-to-Earth) 5.487 5.487A	Fixed links OB links ENG Broadcast satellite systems BSS feeder links	This band is available for BSS in accordance with Appendix 30 of ITU RR. Refer to Annex B.
12.5-12.75 GHz FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B (Earth-to-space) 5.494 5.495 5.496	**12.5-12.75 GHz** FIXED-SATELLITE (space-to-Earth) 5.484A 5.484B (Earth-to-space)	FSS uplinks (VSAT/SNG) 12.5 – 12.75 GHz Aeronautical Earth Stations/ESV/ESIM Applications NGSO FSS Fixed Links	Article 9.12 applies Res. 155 (WRC-195) applies

Currently the KU-Band is occupied with FIXED, FIXED-SATELLITE and MOBILE (except aeronautical mobile). There has been interference cases between the Fixed-Satellite Services and Fixed Services. DTH is operated under Fixed-Satellite Services(space-to-earth). We are aware that Starlink(space-to-earth is also operated in this KU-band frequencies(10.7 to 12.75 GHz). This can offer additional interference challenges. It is important for us that ICASA address the issue of interference with Starlink should the license be awarded to operate the service in the KU-band using non-geostationary satellites in the Low Earth Orbit (LEO).

Information sources
DRM Handbook (www.drm.org)
ICASA NRFP 2020
WRC 23 Final acts