Huawei Technologies South Africa (Pty) Ltd

Tel: +27 (0) 11 -517 9800

Huawei Office Park, Building 17, 124 Western Services Road,
Woodmead EXT.20, Johannesburg, 2191
South Africa

www.huawei.com/za

The Independent Communications Authority of South Africa (ICASA)
350 Witch-Hazel Avenue, Eco Point Office Park
Eco Park, Centurion
South Africa

Attention:
Mr Davis Kgosimolao Moshweunyane
Email: dmoshweunyane@icasa.org.za

and

Mr Manyaapelo Richard Makgotlho
Email: rmakgotlho@icasa.org.za

11 December 2025

Re: Response to ICASA´s Second Draft National Radio Frequency Plan

Dear Sirs,

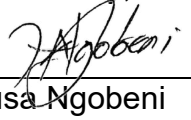
Huawei would like to thank ICASA for the opportunity provided to the company to provide additional comments on the **the Second Draft National Radio Frequency Plan**, published in the Government Gazette No. 53637 dated 7 November 2025.

In our view, ICASA has done a commendable job in capturing the decisions of WRC-23 in the document. We also note that ICASA has referred to IMT Spectrum Roadmap for Africa (ATU-R Recommendation 008-0) of JULY 2025.

Huawei is the leading supplier of infrastructure equipment for the telecommunications industry globally and in South Africa, as well as being a major manufacturer of mobile handsets and other electronic consumer goods.

Huawei welcomes the opportunity to submit the following comments for your consideration and requests the opportunity to make an oral presentation. Please feel free to contact us if you have any question or require any further clarification.

Yours sincerely,



Mr. Musa Ngobeni — 11 December 2025

Mr. Musa Ngobeni — Date

Solution Manager
Mobile: +27834830955
Email: musa.ngobeni1@huawei.com

Registration No. 1999/010578/07

Comments from Huawei on ICASA's Second Draft NRFP 2025

Huawei fully supports ICASA's ongoing efforts to update the National Radio Frequency Plan in line with the outcomes of WRC-23. We appreciate the opportunity to contribute to this important regulatory process and hereby submit our comments on selected spectrum bands for ICASA's consideration.

1. Comments on existing IMT bands in the draft:

1 427-1 518 MHz (L-Band)

Huawei notes that 3GPP has identified the L-band for multiple IMT configurations, including Time Division Duplexing (TDD), Frequency Division Duplexing (FDD), and Supplemental Downlink (SDL), each supporting specific deployment and traffic scenarios. Based on global developments, ecosystem maturity, and regional recommendations, Huawei strongly recommends that ICASA identify and allocate the 1427–1518 MHz band for IMT Supplemental Downlink (SDL).

Globally, more than ten countries primarily in Europe, including the United Kingdom, Germany, Italy, the Netherlands, and Switzerland have allocated the L-band for IMT SDL since 2008 to address growing downlink traffic demand and enhance mobile broadband capacity. This trend continues to expand; in 2025, Thailand's regulator (NBTC) adopted SDL for L-band in alignment with global spectrum harmonization and the mature device ecosystem. By contrast, no country has adopted IMT TDD in the L-band, and only Japan has implemented an IMT FDD configuration, with a limited and isolated ecosystem.

The industry chain for IMT SDL in the L-band is now well-established, with more than 1,000 device types across 4G/5G mobile handsets and home and industrial CPE already commercially available. According to the ATU IMT Spectrum Roadmap, the number of L-band SDL 4G/5G device types has surpassed 1,000, further confirming the maturity and continued strengthening of the L-band SDL ecosystem. This provides South Africa with immediate benefits from a proven, scalable, and globally supported ecosystem. Conversely, no IMT TDD ecosystem exists for this band, and IMT FDD support remains confined to Japan.

Huawei further recommends that ICASA align the national L-band framework with the IMT Spectrum Roadmap for Africa (ATU-R Recommendation 008-0 of July 2025), which endorses a downlink-only approach for the 1427–1517 MHz range. Consistent with this guidance, Huawei proposes that ICASA adopt:

• A downlink-only (SDL) band plan in the 1427–1517 MHz range, or the applicable subset considering guard band requirements, using a 5 MHz channelization raster; and
• Technical conditions consistent with ITU Recommendation RM.2159-0[1] and ECC Decision (17)06[2] for inclusion in national regulations.

In conclusion, Huawei recommends that ICASA identify and allocate the 1427–1518 MHz L-band for IMT SDL to align with global spectrum practice, accommodate future broadband demand, and leverage an already mature and cost-effective device and network ecosystem.

6425-7125 MHz (U6 GHz)

Huawei appreciates ICASA's recognition that Resolution 220 (WRC-23) applies to the Upper 6 GHz band and its intention to align the channel plan with ITU-R Recommendation M.1036-7. We also note and welcome ICASA's consideration of the ATU-R Recommendation 008-0 (IMT Spectrum Roadmap for Africa, July 2025).

In our earlier submission on the First Draft NRFP, Huawei welcomed ICASA's clear indication that the 6 425–7 125 MHz band would be utilized for IMT, consistent with the progressive direction taken at WRC-23. This reflected South Africa's longstanding leadership in advocating for IMT identification in this band and its commitment to advancing broadband capacity, network modernization, and national digital transformation.

Since then, global momentum behind IMT use of the Upper 6 GHz band has accelerated. Countries across Latin America, Asia, and the Asia-Pacific have revised their positions to allocate this band to IMT. In November 2025, Europe's Radio Spectrum Policy Group (RSPG) endorsed allocating 540 MHz of the U6 GHz[3] band to IMT, with further decisions expected post-WRC-27. Several countries in the Middle East and Asia have already assigned U6 GHz fully to IMT. By comparison, jurisdictions moving toward assigning both lower and upper 6 GHz to Wi-Fi represent only approximately 8% of the global population.

[1] https://www.itu.int/dms_pubrec/itu-r/rec/m/R-REC-M.2159-0-202312-I!!PDF-E.pdf

[2] https://docdb.cept.org/download/1471

[3] https://radio-spectrum-policy-group.ec.europa.eu/document/download/1436dce2-8160-470e-9db0-0b70ec9e7a74_en

With mobile data demand rising rapidly, the Upper 6 GHz band provides a critical opportunity to enhance 5G capacity and build the foundation for 6G. Against this backdrop, Huawei respectfully expresses concern regarding the changes introduced in the Second Draft NRFP, where WAS/RLAN is listed as a typical application across 6 425–7 125 MHz.

This proposed shift is misaligned with South Africa's established position before and during WRC-23, where the country together with the broader African region played a leading role in achieving IMT identification for Region 1. It is also inconsistent with the ATU-R Recommendation 008-0 and the updated Africa Spectrum Allocation Plan (AfriSAP, July 2025). Technical studies from CEPT (ECC Report 366) further demonstrate that IMT and WAS/RLAN cannot coexist effectively in this band, and dual application listings risk creating uncertainty regarding the intended national use of the spectrum.

Huawei therefore respectfully requests that ICASA reconsider the inclusion of WAS/RLAN as a typical application in the following ranges:

- 6 425–6 429 MHz
- 6 429–6 700 MHz
- 6 700–7 075 MHz
- 7 075–7 145 MHz

We recommend that ICASA maintain its earlier position to designate the Upper 6 GHz band for licensed IMT deployment. This approach delivers the greatest economic value, addresses anticipated mobile network capacity constraints, and strengthens national broadband performance, thereby supporting economic growth and digital inclusion.

We acknowledge and commend ICASA's commitment to tracking key Region 1 developments in the preparation of RFSAPs for this band. With CEPT having taken a clear decision in favor of IMT, we look forward to working with ICASA to establish conditions that advance South Africa's long-term broadband and digital transformation objectives.

2. **Comments on new IMT bands in the draft:**

4 800-4 990MHz

We commend ICASA for indicating IMT as a typical application in this band as well as undertaking to develop a Radio Frequency Spectrum Assignment Plan (RFSAP) for the band.

3 300-3 400 MHz

Huawei notes that this band has been identified for IMT in South Africa following WRC-15. We recommend that ICASA finalizes the development of the Radio Frequency Spectrum Assignment Plan (RFSAP) for this band.

3 600-3 800 MHz

Huawei notes with appreciation for the progressive allocation of the 3.6 GHz band for primary mobile services in region 1 and its subsequent identification for IMT for South Africa at WRC 23. This refined designation represents a pivotal milestone in modernizing the nation's mobile communications infrastructure, solidifying the band's strategic importance to broadband connectivity and economic empowerment.
In recognition of its far-reaching impact, we recommend that ICASA to consider developing a comprehensive Radio Frequency Spectrum Assignment Plan (RFSAP) for the 3.6 - 3.8 GHz band. We believe that implementing this plan will ensure a transparent and efficient framework for spectrum management, facilitate robust network expansion, and nurture innovation in mobile services. This initiative will ultimately, drive South Africa's digital transformation and spur broader socio-economic development.

3. Comments on potential spectrum needs for public good:

Public Protection and Disaster Relief (PPDR):

The need for spectrum suitable to support the emerging broadband applications for Public Protection and Disaster Relief (PPDR) has been recognized for many years. Notably there would be coexistence of the existing PPDR narrow band communications technologies with technologies that require broadband for new services such as broadband data which includes but is not limited to mobile video reporting from field locations, body worn cameras and drone cameras as well as geographic location maps etc. To enable the provision of a secure, reliable, resilient, and dedicated radiocommunication network, the allocation of spectrum for broadband PPDR services, including the necessary quality of service required for PPDR applications should be considered.

Power Distribution Networks:

Globally, regulators have increasingly allocated spectrum to support a nation's energy grid and ensure the evolution of the power distribution networks. The allocation of spectrum for power utilities should be considered to allow South Africa to better manage the growing energy demands, integrate renewable resources, and monitor key infrastructure in real time.

Future Railway Mobile Communication System (FRMCS):

The global transport sector is accelerating toward digital, data-driven operations, requiring a modern and resilient railway communications framework. With 2G and 3G technologies reaching end of life, GSM-R built on those legacy standards can no longer support the advanced operational, safety, and efficiency requirements of contemporary rail systems. Future Railway Mobile Communication System (FRMCS), based on 5G New Radio (NR) principles, delivers the necessary broadband capability, low latency, enhanced security, and assured reliability needed for train control, real-time telemetry, high-definition video, remote diagnostics, and next-generation signaling.

To ensure South Africa's rail infrastructure remains competitive, safe, and future ready, a dedicated national pathway for FRMCS adoption is essential. This should include: identifying and securing suitable spectrum bands for mission-critical rail operations; establishing prioritization and protection mechanisms for railway communications; defining technical, operational, and interoperability requirements aligned with global standards; and implementing a structured transition plan that enables seamless migration from GSM-R while promoting regional and cross-border harmonization.

This forward-looking approach will position South Africa to modernize its rail operations, enhance safety and efficiency, and align with global best practice in transport digitalization.