

17<sup>th</sup> April 2025

The Manager  
Spectrum Licensing Policy  
Australian Communications and Media Authority  
PO Box 13112  
Law Courts  
Melbourne VIC 8010

**RE: Draft Five-year spectrum outlook (FYSO) 2025-30 and 2025-26 work program**

Dear Sir/Madam,

The Global Satellite Operators Association ("GSOA") sincerely appreciates the opportunity to submit a response (see attachment 1) to the Australian Communications and Media Authority's ("ACMA") Consultation Paper, *"Five-year spectrum outlook 2025-30 and 2025-26: Draft for consultation"* ("FYSO"). As government spectrum planning is integral to the availability of Satellite service and business in Australia, GSOA applauds ACMA's efforts to develop a transparent spectrum management work program with public participation.

*Background on GSOA*

GSOA is the global non-profit association of the entire satellite ecosystem that brings members together and serves as the premier platform for worldwide collaboration. As the world's only CEO-driven satellite association, GSOA takes the lead in addressing global challenges, seizing opportunities, and providing a unified voice for the satellite industry. GSOA is widely recognized as the representative body for satellite operators by international, regional, and national entities, including regulators, policymakers, standard-setting organizations like 3GPP, and international organizations such as the International Telecommunications Union (ITU) and the World Economic Forum (WEF).

GSOA has published a number of documents that may be useful to the ACMA when developing its work programs and consultations, links to some that may be of use are:

- [The Socio-Economic Value of Satellite Communications](#)
- [Satellite Solutions for Universal Service: Bridging the Digital Divide](#)
- [The Future of Satellite Connectivity: Various Approaches to Direct-to-Device Services](#)
- [New Satellite Technologies for Transformative Connectivity](#)

*Comments on the FYSO*



GSOA is appreciative of the following items included in the latest FYSO, and provides additional information in the section on band planning below:

- “To progress considerations on WRC-27 agenda item 1.7, we will also undertake relevant studies towards possible IMT identifications in the 4400–4800 MHz frequency band, parts of the 7125–8400 MHz and the 14.8–15.35 GHz frequency bands”;
- “we will shortly complete an update to our satellite filing procedures to improve how we file satellite networks through the ITU in the Australian interest”;
- “enable consumer mobile smartphones to communicate directly with satellite systems (direct-to-mobile services), as well as their supporting regulatory frameworks”;
- assist the government and stakeholders on LEOsat and related spectrum management aspects relevant to the UOMO reform and note the recommendation of the recent Senate Standing Committee on Rural and Regional Affairs and Transport Senate committee’s report on its inquiry into the shutdown of 3G to prioritise the rollout of satellite direct-to-mobile services. In this regard GSOA notes that direct-to-mobile services may be accommodated in MS spectrum already allocated to terrestrial operators, and in dedicated satellite spectrum
- Spectrum Access System (SAS) to enable sharing spectrum between mobile WBB services and incumbent services in the 3550–3700 MHz band (also known as the Citizens’ [Broad]band [sic] Radio Service (CBRS)).
- GSOA remains concerned that the increasing use of Area-Wide Licensing (AWL) approaches for authorizing satellite earth station (ES) receivers in the 3950–4000 MHz band introduces significant economic and operational challenges for fixed-satellite service (FSS) operators. This approach risks creating an uneven regulatory playing field that favors highly localized wireless broadband (HL WBB) services, potentially leading to the erosion of satellite services in affected areas.

In contrast, maintaining a location-specific, apparatus-based licensing model for FSS ES receivers would provide a more spectrum-efficient outcome. It enables coordinated co-existence and ensures that FSS receivers—often deployed at critical infrastructure sites—are not placed at a systematic disadvantage. This licensing method also supports ongoing service continuity and investment in satellite infrastructure without unduly impacting HL WBB deployment.

### *Comments on Band Planning*

#### *Monitoring Stage*

#### **Bands being studied for a possible IMT identification under WRC-27 agenda item 1.7; 4400–4800 MHz, 7125–8400 MHz and 14.8–15.35 GHz**

As these bands are the subject of much debate in ITU-R and regional fora, the APT Preparatory Group for WRC-27 in particular, it is premature to consider national planning issues prior to the satisfaction of WRC-27 Agenda item 1.7. Furthermore, as satisfaction of a WRC-27 agenda item is not the only pre-requisite leading to economically efficient use of a band for a particular technology (e.g. IMT-2030). The development of a vendor, operator, device and network ecosystem must also be on track for widespread use, and the economic and social benefits of incumbent satellite use must clearly be expected to be exceeded before regulatory frameworks



for other uses are developed. GSOA encourages the ACMA to keep these bands firmly in the monitoring stage until after WRC-27, and the clear emergence of a suitable ecosystem develops.

*Preliminary replanning stage*

**1.5 GHz (1427–1535 MHz) - Q3 2025: release outcomes paper and begin implementation:**

The 1.5 GHz band (1427–1535 MHz) is at the preliminary planning stage, and GSOA notes that the frequency band overlaps with the 1518 – 1535 MHz band that is allocated globally for satellite services. The topic of terrestrial and satellite coexistence in and around the 1518 MHz boundary was the subject of an extended (by many years) work item within the ITU-R, in 2024 this work item was completed and [insert reference to L-band sharing report]. GSOA invites the ACMA to consider this report, and considering the emergence of D2D applications suitable for use in L-band, the expected demand for generic satellite spectrum for expansion of traditional satellite applications of GSOA's members.

*Initial investigation stage*

Thanks to advances in antenna technology, compact and efficient Earth Stations in Motion (ESIM) can now operate safely in the Ku-band without causing harmful interference. These terminals are key to meeting growing connectivity demand across aviation, maritime, and land transport sectors.

WRC-23 approved the use of A-ESIMs and M-ESIMs in the 12.75–13.25 GHz band under Appendix 30B, with clear technical and regulatory safeguards to protect other services. Allowing ESIM operations in this band will support Australia's aviation and maritime sectors, enhance passenger experience, and unlock economic value from improved mobile broadband services.

GSOA encourages Australia to enable ESIM use in this band in line with Resolution 121 (WRC-23), ensuring both service growth and spectrum protection.

*Implementation stage*

**2 GHz MSS (1980–2010 MHz and 2170–2200 MHz) Q4 2025:** ACMA to consult on allocation instrument (subject to the outcomes of the planned Q2 2025 further consultation of allocation, licensing and technical matters) **Q2 2026:** commence allocation process (subject to timing of outcomes of technical frameworks).

GSOA notes the delay in the status of the ACMA consultation on the 2 GHz MSS band technical framework and allocation design now to be released in Q2/2025, and that the delay is due to (unstated) competing priorities.

GSOA is concerned about this delay which comes after several prior related ACMA consultations, especially as the band may be utilized in Australia for 3GPP Rel. 17 compliant NTN technologies, and other satellite providers are already able to provide service in other bands allocated in Australia for terrestrial use, without regulatory intervention. This situation provides a skewed competitive environment for the provision of satellite direct-to-device (D2D) services



across different bands. Furthermore, GSOA requests that the ACMA prioritizes and accelerates the provision of its consultation papers for the 2 GHz MSS band so that the aforementioned inequality for D2D is remedied.

GSOA also notes that the ACMA preliminary view for the 2 GHz MSS band continues to be that a price-based allocation mechanism may be utilized for licensing the band. GSOA has a long standing opinion that auction of satellite spectrum does not lead to allocative efficiency and early provision of services. In brief, satellite spectrum, including that for MSS, is allocated in standardised frequency bands by the ITU-R for global use, and should be assigned administratively to ensure equitable access, for national or area wide coverage within each country.

### *Forward looking planning*

#### **Higher-power 6 GHz band RLAN Consideration of approaches for standard power RLANs in the 6 GHz band consultation paper (Q3 2025)**

As has been recorded in prior submissions from the satellite service providers to the ACMA, the 6 GHz band includes a primary allocation to the Fixed Satellite Service and a footnoted primary allocation for feeder links in support of the Mobile Satellite Service (MSS). GSOA invites the ACMA to consider these uses and to thoroughly examine/test the ability of terrestrially deployed standard power technologies to avoid causing harmful interference to existing and planned satellite technologies.

GSOA notes the ACMA's intention to explore the potential introduction of higher-power RLANs and Automated Frequency Coordination (AFC) systems in the broader 6 GHz band (5925–6585 MHz), with a consultation planned for Q3 2025. We encourage the ACMA to assess this matter carefully, especially regarding spectrum sharing implications with the Fixed-Satellite Service (FSS), and in particular, with FSS uplink operations in the upper portion of the band (6425–6585 MHz).

While AFC mechanisms may help manage coexistence, the introduction of standard-power Wi-Fi or high-power RLANs in this band still poses a tangible risk of interference to GSO FSS uplinks. Importantly, due to the nature of satellite receive antennas and their visibility over large portions of the Earth's surface, a GSO satellite can experience interference not just from terrestrial deployments in Australia, but from emissions generated across approximately one-third of the globe.

This wide footprint of potential aggregated interference must be a key consideration in any regulatory decision involving terrestrial deployments in bands used for FSS uplinks. GSOA encourages ACMA to adopt a precautionary and globally harmonized approach to ensure that satellite services—critical for connectivity, broadcasting, and emergency communications—remain protected and sustainable in the evolving 6 GHz ecosystem.



*Summary*

GSOA supports the ACMA's development of a transparent, predictable spectrum management regime based on public consultations, and supported by the FYSO and its associated work program. GSOA puts forward the above points for the ACMA's use when evolving the FYSO and work program.

Areas of specific interest to GSOA in the FYSO 2025-30 and 2025-26 work program, include non-exhaustively; bands under consideration by WRC-27 under WRC-27 agenda item 1.7, the 1.5 GHz L- and 2 GHz S- bands, the 6 GHz band, and the 13 GHz band for ESIMs, and we expect to provide input to the ACMA's consultations as appropriate.

Should you require additional information or clarification of any of the above please contact GSOA's APAC committee via [REDACTED] (mailto: [REDACTED]).

Sincerely

[REDACTED]

[REDACTED]

Isabelle Mauro  
Director General, GSOA

