

LoRa Alliance response to the ACMA consultation on “Satellite direct-to-mobile services: regulatory issues”

1. Is the current spectrum management framework fit-for-purpose to manage these new satellite services? This includes spectrum-licensed bands and other bands covered by the LIPD class licence.
2. If not considered fit-for-purpose: What are your concerns? What is your proposed solution? What next steps should be taken?
3. Are there any other commercial, regulatory, or public-benefit implications we should take into account?¹

Addressing the potentialities of the current spectrum management framework for emerging satellite services, encompassing not only direct-to-mobile communication using consumer smartphones but also Low-Interference Potential Devices (LIPD), necessitates a thorough analysis. The LoRa Alliance expresses gratitude to ACMA for the opportunity to share perspectives once again on the subject of direct-to-satellite communication in non-satellite bands.

Recognizing the advantages of satellite systems in enhancing the coverage of LIPD systems within the 915-928 MHz range, particularly for sparsely populated areas, and with a commitment to maintaining interference management standards, the LoRa Alliance posits that the existing framework may not adequately accommodate the evolving technology of new satellite Space-to-Earth transmissions. This could potentially result in a suboptimal utilization of spectrum resources.

While current regulations permit uplink Earth-to-Space transmissions for standard SRD devices without a satellite allocation, the recent WRC-23 concluded that commercial satellite systems cannot be prohibited under Article 4.4. However, the inflexibility in the current framework concerning Space-to-Earth LIPD communication poses a potential obstacle to swiftly adapting to emerging technologies and market needs, especially in vast regions or countries like Australia.

A proposed solution is to adapt LIPD regulations to harness the significant benefits of satellite direct-to-device transmissions in license-exempt bands. The preliminary study results of CEPT in Europe show that the impact of satellite transmissions on SRDs (LIPD) in the 862-870 MHz range is extremely low.

National and regional regulatory bodies suggest that a common Power Flux Density (PFD) limit in Europe is viable, which could also be used to reduce the impact of such transmissions on existing users in Australia (e.g. radio astronomy). While the PFD limits as suggested in Europe will not meet the PSD limits defined in RALI MS 32, it might be imaginable to allow a limited number of satellite

¹ https://www.acma.gov.au/consultations/2023-11/satellite-direct-mobile-services-regulatory-issues?utm_medium=email&utm_campaign=ACMA_consults_on_satellite_direct-to-mobile_services&utm_content=ACMA_consults_on_satellite_direct-to-mobile_services+CID_44fb5582bd982fe7104b64c7faf125b6&utm_source=SendEmailCampaigns&utm_term=available_on_the_ACMA_website

systems in the LIPD bands operating at such PFD levels to enable the use of LPWAN technology in regions that have previously not been connected.

The LoRa Alliance extends an invitation to ACMA to collaborate on defining a similar PFD limit in Australia and the Asia-Pacific region, working jointly with the Alliance and all users of the 915-928 MHz spectrum in Australia.