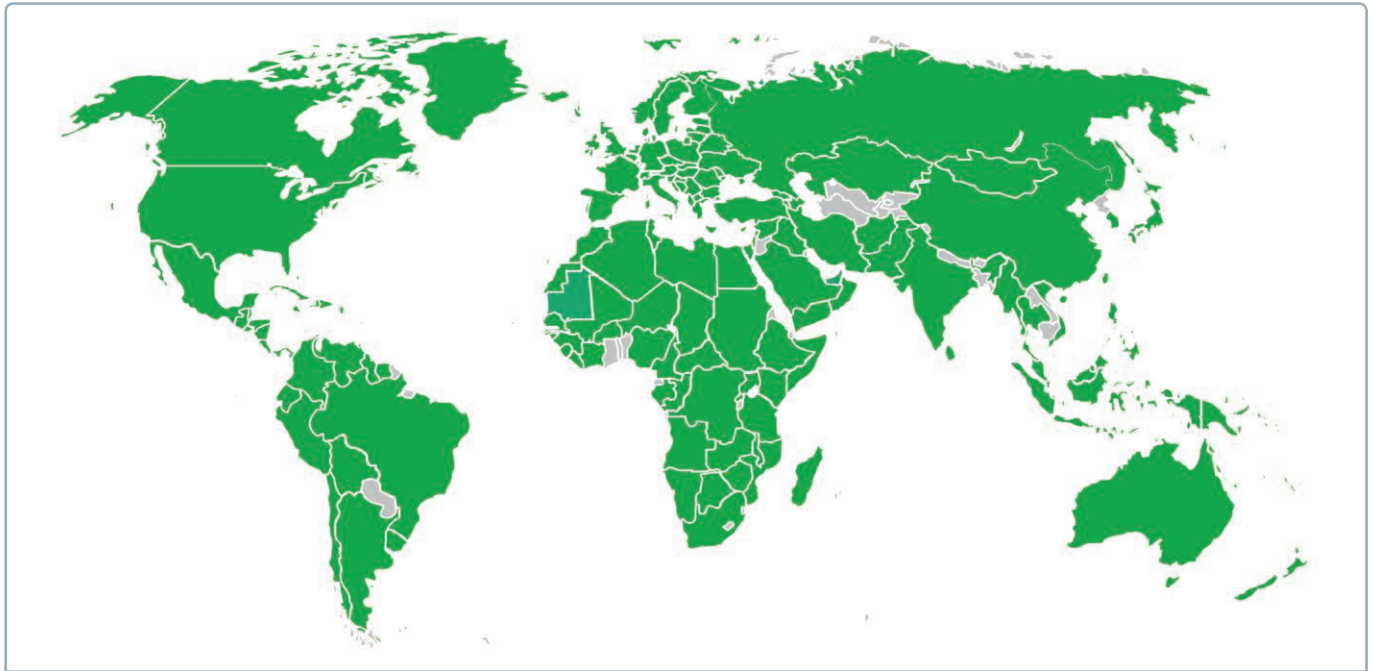


THE IMPACT OF SATELLITES OPERATING IN THE 28/18 GHZ BAND

Satellite delivers broadband using the 28/18 GHz band worldwide.¹

FSS services are licensed and operating in the 28/18 GHz band in most countries



Note: This map does not show the even broader FSS use of the globally-harmonized FSS spectrum 29.5-30/19.7-20.2 GHz.

The satellite industry invested tens of billions of dollars in 28/18 GHz satellites and critical infrastructure relying on long-term regulatory certainty of access to the 28/18 GHz bands.

This investment now permits hundreds of millions of satellite broadband connections, helping citizens build nations and societies, extending education and healthcare, improving food production, serving emergency responders, connecting all means of transportation, supporting countless high paying jobs and raising national GDPs.

Governments at WRC-15 therefore:

- ▶ Declined to study introduction of terrestrial 5G/IMT in the 28 GHz band
- ▶ Reaffirmed the critical need for satellite communications in the 28 GHz band
- ▶ Proposed expanding use of the 28 GHz and 18 GHz bands for satellite broadband service to airplanes, buses, trucks, trains, cars and ships under WRC-19 Agenda Item 1.5 (Earth Stations in Motion (ESIM))

Since 2015, even more investment has gone into new satellite systems using the 28 GHz band.

¹ The 28/18 GHz band refers to the 27.5-29.5 GHz uplink and 17.7-19.7 GHz downlink in ITU Region 1, and the 27.0-29.5 GHz uplink and 17.7-19.7 GHz downlink in ITU Regions 2 and 3.

Global Momentum exists for Satellite Broadband in 28/18 GHz, not for 5G/IMT

Global momentum exists for expanded satellite use of the 28 GHz and 18 GHz bands for fixed and mobile satellite broadband services worldwide, not for 5G/IMT. Most countries are following the WRC-15 decision and oppose any 5G/IMT in the 28 GHz band.

CEPT Roadmap for 5G/IMT - 48 countries	The 28 GHz band is for satellite broadband, including aeronautical connectivity, and not for 5G/IMT
ATU	Supports expanding satellite broadband use of the 28 GHz band and ensuring that satellite networks have full access to spectrum in the 28 GHz frequency band
ASMG	No Support for 28 GHz for IMT-2020
RCC	Strong support for satellite broadband use of the 28 GHz band, not 5G/IMT
Other major markets: China, India, Brazil, Indonesia, Australia	Recognized the importance of preserving the 28 GHz band for existing satellite broadband services

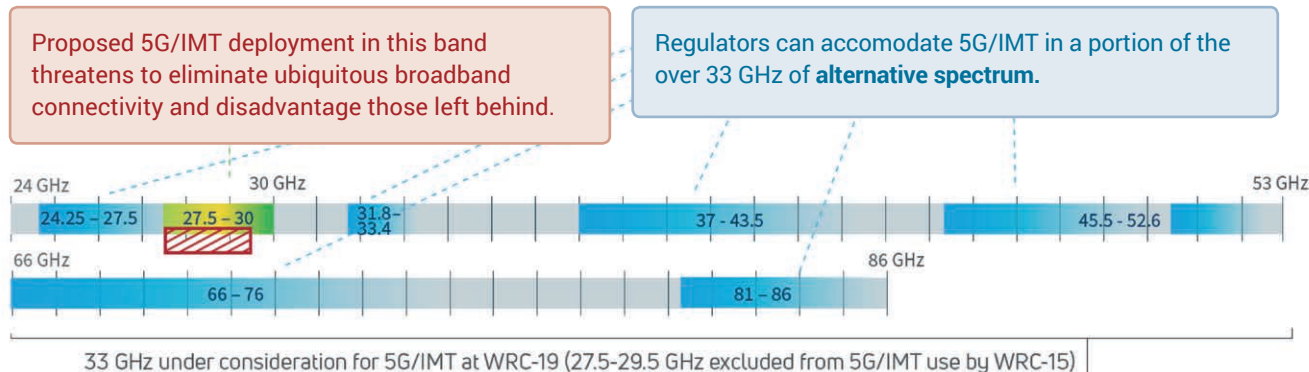


Recently, the Mexican government confirmed that Mexico, is maintaining its current spectrum policy on the 28 GHz band to protect and maintain it for satellite services, like most countries in the Americas region.

With over 4.3 billion people represented by China, Europe, Brazil, Indonesia, Nigeria, Mexico and India alone, preserving the 28 GHz band for satellite and not adopting it for 5G/IMT, it is clear that there is no solid foundation on which to develop the necessary economies of scale for successful 5G/IMT deployment.

The total number of countries supporting continued satellite use of the 28 GHz band is over 120 and growing.

The 18 GHz band is a critical downlink spectrum anchored with the 28 GHz band for satellite broadband networks and therefore must be preserved.



The GSC recommends

- ▶ That administrations ensure that satellite networks have full access to spectrum and operational flexibility in the 28 GHz band (Earth to space), and to the paired 18 GHz band (Space to earth), to provide ubiquitous fixed and mobile satellite broadband services.
- ▶ That administrations do not identify the **28 GHz or 18 GHz** band for terrestrial 5G/IMT on a national or international basis, as studies have shown that the terrestrial 5G/IMT systems being proposed are incompatible with satellite services in the same band.

5G/IMT identification in the 28 GHz band would broaden the digital divide by restricting satellite services that bridge it.

- ▶ There is more than enough separate millimetre wave spectrum to meet any realistic 5G/IMT spectrum requirements outside the 28/18 GHz bands.
- ▶ Vast amounts of low and mid-band spectrum is already available or is expected to be made available for terrestrial 5G/IMT.