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# Licensed-exempt access to the 6 GHz band in Brazil

In February 2021  
Anatel took the  
decision to open the  
entire 6 GHz band  
for WAS/RLANs,  
authorizing low  
power indoor and  
very low power use.

## The DSA congratulates Brazil

Posted On 26 Feb 2021 By Martha Suárez In Uncategorized

Yesterday, the 25<sup>th</sup> of February, the board of commissioners of ANATEL has decided to open the complete 5925-7124 MHz band (6 GHz band) for unlicensed access by restricted radiation devices. This decision places Brazil in a leadership position worldwide, as a hub for development of new technologies, enabling innovation, new use cases and considerable benefits for Brazilians and the national economy. DSA celebrates this decision and is convinced that unlicensed access to the 6 GHz band will benefit Brazilian businesses and consumers by providing sufficient Wi-Fi capacity for data intensive video applications, 4G and 5G (data) offloading, and for allowing users to take full advantage of the new applications enabled by the large channel sizes available with the new Wi-Fi-6E generation of equipment.

By 2030, Brazil will see huge economic benefits, through optimising the use of the 6 GHz band. According to the study requested by the DSA, the economic value of enabling unlicensed access to the 5925-7125 MHz band in **Brazil** will increase to \$163.5 billion. Furthermore, Latin American countries in general could also see those benefits, according to the latest studies they could be \$150.27 billion in **Mexico** and \$40.42 in **Colombia**. These last two countries, as well as Honduras, Costa Rica, Canada, Peru and Argentina already had public consultations about the future of the 6 GHz band and regulatory decisions are expected this year.



Image by David Peterson from Pixabay



# The economic value for Brazil of licensed-exempt use in the 6 GHz band

There are direct and indirect economic benefits associated with authorizing licensed-exempt access to the spectrum (even if there are no licensing fees).

In Brazil, the decision to enable licensed-exempt access to the entire 6 GHz band will add \$ 163.36 billion USD to the Brazilian economy by 2030\*.

To wait until 2024, would have led to the loss of this economic contribution and had an opportunity cost of \$ 16.94 billion USD.

There are also societal benefits for Brazilians not captured by this economic study.



# The decision will add \$163.36 billion USD to the Brazilian economy by 2030

## ECONOMIC VALUE OF DESIGNATING 1200 MHZ IN 6 GHZ BAND (2020-2030)



**GDP IMPACT**  
\$ 112.14 billion

Enhance coverage, improve affordability, increase broadband speeds, accelerate deployment of the Internet of Things (IoT), and support the augmented reality/virtual reality (AR/VR) market



**PRODUCER SURPLUS**  
\$ 30.03 billion

Savings on enterprise wireless traffic and margins related to sales of IoT and AR/VR equipment



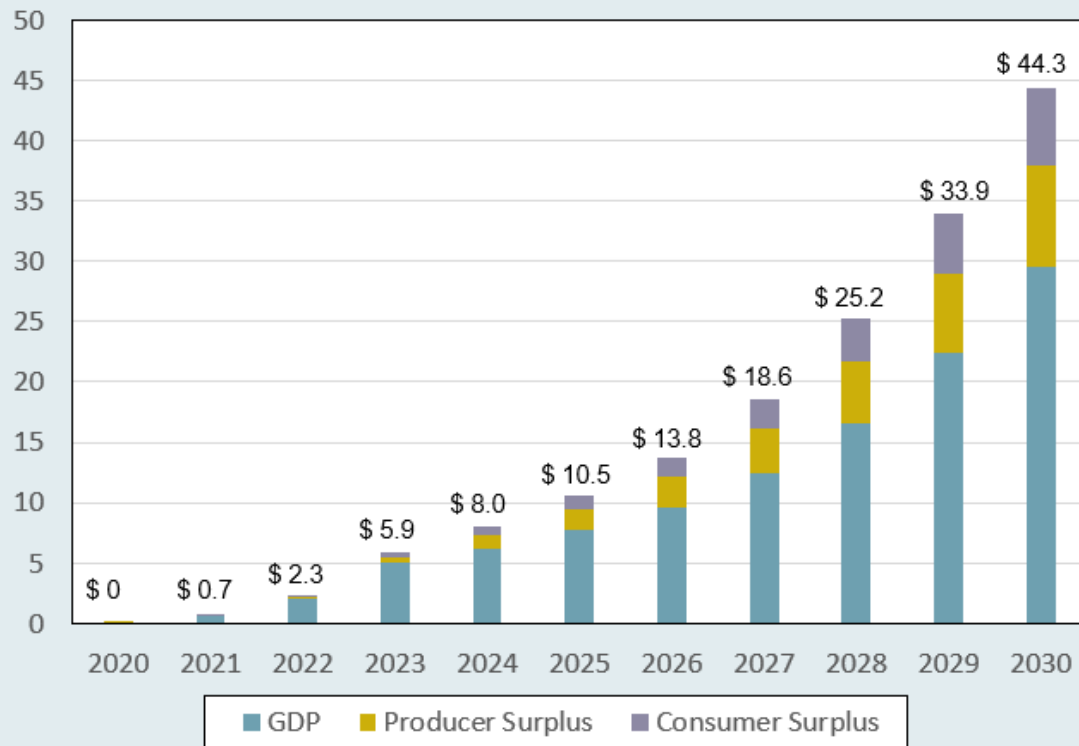
**CONSUMER SURPLUS**  
\$ 21.19 billion

Willingness to pay increased from faster broadband speeds



# The economic value for Brazil of licensed-exempt use in the 6 GHz band

## Annual Economic Value



## Cumulative Economic Value

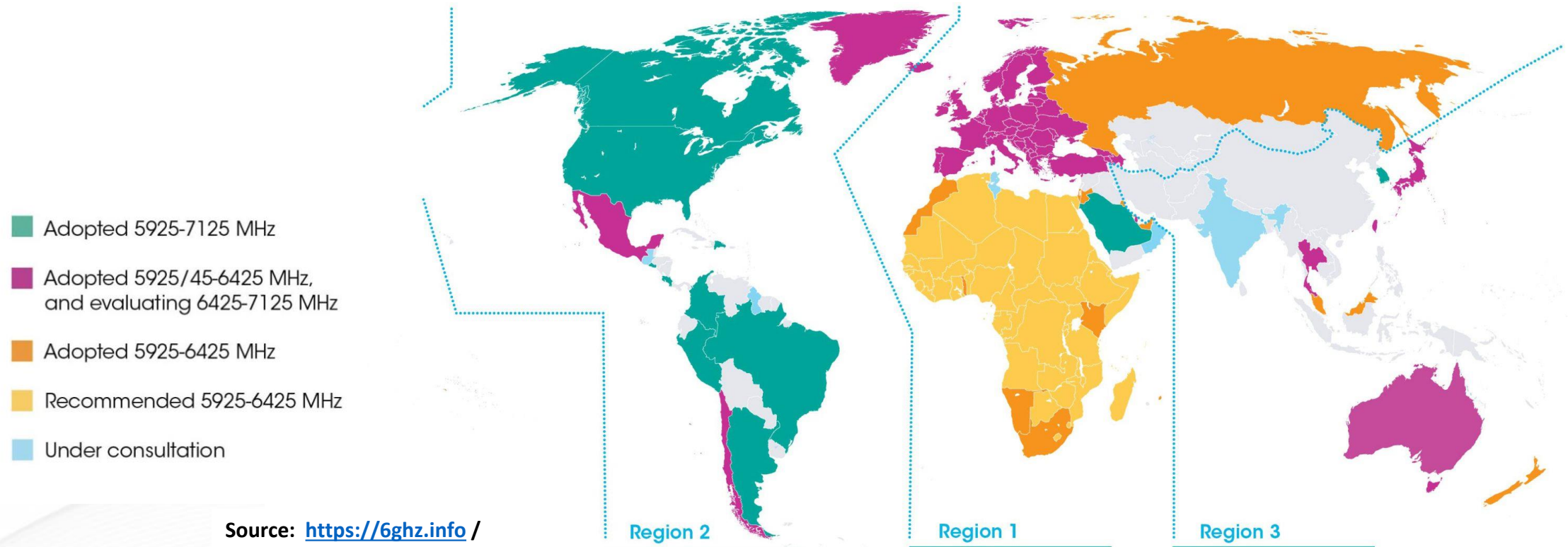


# Some studies indicate that 2 GHz of spectrum is needed in mid-band for IMT – Assumptions

- Some studies make assumptions with activity factor for human users and other uses such as connected vehicles, smart city, camera etc. well above the network sharing factor or contention ratio, as presented in ITU ICT Infrastructure business planning toolkit.
- Regarding Brazil case, it was considered that Brazil would have less spectrum than available in low and mid bands, without including spectrum for private networks implementing IMT.
- Regarding millimeter wave bands some studies considered that 1.6 GHz was available and responsible for 20% of offload traffic. Only in 26 GHz there are 3.2 GHz available in Brazil, and there is also spectrum in 40 GHz, 46 GHz and 48 GHz available.
- Studies do not consider the positive impact of making 6 GHz available for outdoor and indoor NR-U. This technology will also permit throughputs higher than 100 Mbps helping to offload traffic.
- Mobile operators should prove the need for additional spectrum in Brazil, specially in remote areas.



# Global progress towards licensed-exempt access to 6 GHz



- Countries representing more than 30% of the global gross domestic product (GDP) and greater than 92% of the GDP in the Americas have already opened the full 6 GHz band for licence-exempt use.



# CITEL Positions for WRC-23

- 6 GHz band: The Inter-American Proposal (IAP) on World Radiocommunication Conference 2023 (WRC-23) Agenda Item 1.2, Bands 4 and 5, proposes no change, underlined (NOC), to the Table of Frequency Allocations in the band 6425-7125 MHz globally, in order to harmonize license-exempt use of the band. It means CITEL opposes any changes to the Table of Frequency Allocations for this band.
- CITEL submitted a Future Agenda Item (FAI) proposal for WRC-27 to study some additional bands for a possible IMT identification. This proposal excludes the 6 GHz band but includes frequencies in the 7-15 GHz band.





# WRC-23 (A.I.1.2 Bands 4 and 5) – WRC-27



- The upper part of the 6 GHz band (6425-7025 MHz) – Band 4 – was only studied in Region 1 for WRC-23.
- Regional Groups for Region 2 and 3 decided at WRC-19 not to study the 6 425 – 7 025 MHz segment for WRC-23.
- Although, all three regions are studying the 7025-7125 MHz segment for WRC-23 – Band 5 - an IMT identification might only occur in Regions 1 and 3.
- Regional Groups for Regions 2 and 3 don't have any regional common proposal to study the future of the 6 GHz band for WRC-27.



# WRC-23 (A.I. 1.2 Bands 4 and 5) – WRC-27

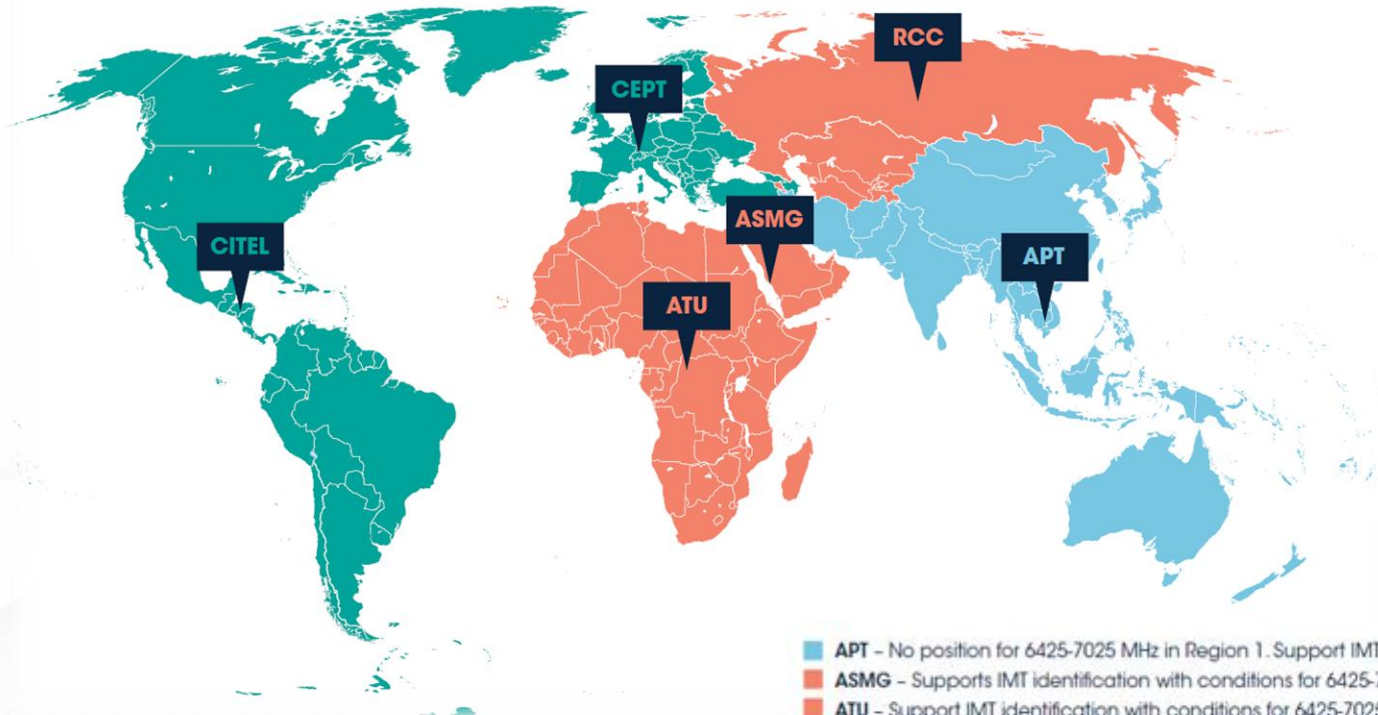
CITEL	APT
<p>No change to the Table of Frequency Allocations in the band 6 425-7 125 MHz in order to harmonize license-exempt use of the band. Regulatory harmonization will create economies of scope and scale and produce a robust equipment market, benefitting consumers and national economies worldwide.</p> <p>Given the existing mobile allocation, administrations may deploy and operate systems and applications of the mobile service (e.g. IMT or RLAN) based on their national priorities and requirements while ensuring the protection of existing services.</p>	<p>ITU's Region 3 WRC-23 preparatory group, Asia-Pacific Telecommunity (APT), did not develop a regional common proposal for WRC-23 regarding an IMT identification in the 6425-7025 MHz band for Region 1.</p> <p>Regarding band 5, there is a common proposal supporting IMT identification, with conditions that protect incumbents, using Method C in the 7025-7125 MHz band.</p>

**AFTER 4 YEARS OF STUDY CYCLE THERE IS NOT A REGIONAL FUTURE AGENDA ITEM FOR WRC-27 PROPOSING TO STUDY 6425-7025MHZ FOR A POSSIBLE IMT IDENTIFICATION**



# WRC-23 (A.I. 1.2 Bands 4 and 5) - WRC-27

SUMMARY OF REGIONAL POSITIONS ON WRC-23 AGENDA ITEM 1.2  
FOR THE FREQUENCY BANDS 6425-7025 MHZ AND 7025-7125 MHZ



**REGION 1 IS DIVIDED**

- APT** - No position for 6425-7025 MHz in Region 1. Support IMT identification with conditions for 7025-7125 MHz globally.
- ASMGS** - Supports IMT identification with conditions for 6425-7025 MHz in Region 1 and for 7025-7125 MHz globally.
- ATUs** - Support IMT identification with conditions for 6425-7025 MHz in Region 1 and for 7025-7125 MHz globally.
- CEPT** - Support No Change (not underlined) - Neither proposing nor supporting an IMT identification but could accept it if all its five conditions are met.
- CITELE** - Support No Change (underlined) - Opposing an IMT identification for 6425-7025 MHz in Region 1 and for 7025-7125 MHz globally.
- RCC** - Support IMT identification with conditions for 6425-7025 MHz in Region 1 and for 7025-7100 MHz globally.

Source: <https://6ghz.info/>





More information available at:

[www.dynamicspectrumalliance.org](http://www.dynamicspectrumalliance.org)  
[www.6GHz.info](http://www.6GHz.info)

