# A Brief Presentation on WRC-23 Agenda Item 1.15.

Presented by Preetam Meena

Date: July 13, 2023

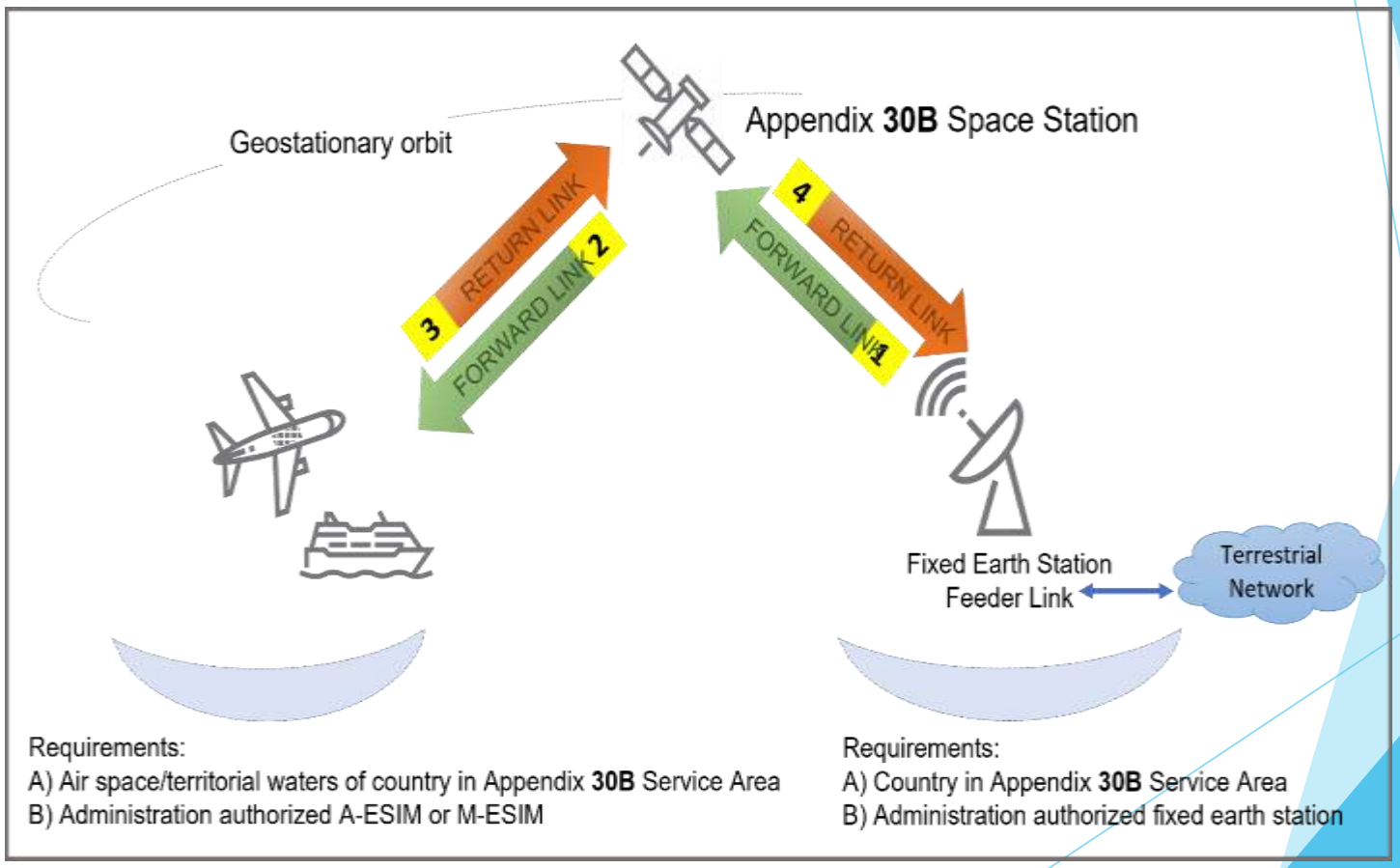
# WRC-23 Agenda Item 1.15

- Harmonization of the Use of the Frequency Band 12.75-13.25 GHz (Earth-to-Space) by Earth Stations on Aircraft and Vessels Communicating with Geostationary Space Stations in the Fixed-Satellite Service Globally.

# Introduction

- The frequency band 12.75-13.25 GHz is currently allocated to the FIXED, FIXED SATELLITE and MOBILE services in India.
- Use of 12.75-13.25 GHz by geostationary-satellite networks in the FSS is subject to RR Appendix 30B.
- Use of this band for ESIM is limited, due to the lack of harmonization between different countries.
- This agenda item proposes to harmonize the use of this band globally, which would allow for the provision of greater coverage and reliable communications services to aircraft and vessels.

# System operation in the context of operation under RR Appendix 30B



# Background

- WRC-19 adopted Resolution 172, which called for the harmonization of the use of the frequency band 12.75-13.25 GHz (Earth-to-space) by earth stations on aircraft and vessels communicating with geostationary space stations in the fixed-satellite service globally.
- WRC-23 agenda item 1.15 calls for studies on the possible operation of A-ESIM and M-ESIM communicating with geostationary space stations in the fixed-satellite service in the frequency band 12.75-13.25 GHz (Earth-to-space).

# Methods identified during the discussions to satisfy this agenda item

- Method A

This method proposes no changes to the RR and suppression of Resolution 172 (WRC 19)

- Method B

This method proposes to add a new footnote No. 5.A115 in RR Article 5 and a reference to a new WRC Resolution.

# The Benefits of Harmonization

- Harmonization of frequency band 12.75-13.25 GHz would provide Increased capacity available for uplink communications from aircraft and vessels.

- By allowing for efficient use of the band, harmonization would help in more reliable and seamless communication and this will help in better interference resolution mechanism.

# The Challenges of Harmonization

- There are a number of challenges to harmonization of the 12.75-13.25 GHz band, including:
  - The need for explicit agreement between notifying countries and the countries authorising the ESIM.
  - an administration may at any time exclude its territory from the service area of an RR Appendix 30B assignment which creates uncertainty about the availability of network for 100% of the time.
  - There is no consensus on the interference resolution mechanism to be adopted.
  - In India this band is also used for FS and resolution of interference could become a big issue if there is no clarity on the interference mitigation process as India is surrounded by sea, there is a possibility of interference from the M-ESIM to the terrestrial network.

# General views of the stakeholders

- The sanctity of Plan providing equitable access to all the member countries should not be touched.
- Considering the crowded GSO arc coordination in non-plan Ku band is next to impossible.
- Therefore only option available now for new/existing countries to acquire/augment capacity for meeting the national requirement is only Plan bands.

# Conclusion

- Considering that the frequency band 12.75-13.25 GHz is subject to Plan under AP-30B this band should not be used for harmonisation for use of A-ESIM and M-ESIM.
- Further, there are already bands available in the non-plan bands in FSS where the same service could be provided .

# Preliminary views of India

- India supports Method A- No changes to the Radio Regulations and suppression of Resolution 172 (WRC-19).

# Thank You