

Geostationary Orbit and its Utilization and Applications

Madam Chair and Distinguished delegates,

India is one of the growing digital economy and the demand for bandwidth is increasing with the proliferation of applications. From enabling global connectivity in remote and underserved areas to supporting critical applications like disaster management, in-flight and maritime communication, the role of satellite communication is substantial.

Madam Chair,

India has a fleet of communication satellites operating over the region with communication transponders in C-band, Extended C-band, Ku-band, Ka/Ku band and S-band. Presently, the 19 satellites in orbit provide 317 operational transponders and 73 Gbps High Throughput Satellite (HTS) capacity. The nation has built advanced High Throughput Satellites adopting multiple spot beams proving user links in Ku and Ka band.

These have played a significant role in meeting country's requirements in various sectors such as communication, broadcasting, meteorology, navigation, disaster warning and search & rescue data services. SATCOM network in the country consist of more than 38 teleport operators with 72 Teleports, 32 VSAT operators with 60 VSAT Hubs and about 2.87 Lakh VSAT terminals, 5 DTH operators, 1 HTS operator and 47 DSNB operators of different sizes and capabilities. The flagship Digital India programme and BharatNet which are focussed to enhance the digital connectivity to village level, are also well supported by the communication satellites.

Madam Chair,

India has launched exclusive satellites for meteorological applications. At present, two satellites namely INSAT-3DR and INSAT-3DS are in operation providing the meteorological data in different bands. During the year 2024, tropical cyclones Remal, Asna, Dana were monitored with INSAT-3DR and INSAT-3DS.

Madam Chair,

Bhutan, The Maldives and Bangladesh are getting benefit of South Asia Satellite which was launched in 2017 by India for the benefit of neighbouring South Asian countries.

Madam Chair,

India is a member of the international COSPAS-SARSAT programme for providing distress alert and position location service satellite system. Satellite aided Search and Rescue payload is carried on 3 of our GSO satellites, INSAT-3DS (82°E), INSAT-3DR (74°E) and GSAT-17 (93.5°E) operating in 406 MHz band. During 2024, Indian Mission Control Centre (INMCC) provided search and rescue support to 11 distress incidents in Indian service area.

Madam Chair,

The Mobile Satellite Service (MSS) Service through GSO satellite provides the communication to the portable and hand-held devices. ISRO has developed a MSS based solution for tracking of fishing vessels/ boats which go into deep sea for days and sending emergency messages about natural disasters such as cyclone, tsunami, etc. It is being implemented in about 100,000 marine fishing vessels & boats. Using MSS services, an indigenous solution has been developed and implemented to enhance the safety & efficiency of train services. So far about 8000 trains are covered with this feature of real-time tracking.

Madam Chair,

Government of India has opened the space sector for larger participation of non-government players. This enables and encourages the private initiatives to build, own, operate and provide space based services from both GSOs and NGSOs. With this, it is expected that the capacity will be augmented substantially for supporting socio-economic development.

Madam Chair,

India is effectively utilising the geostationary orbit slots for operation of communications & meteorological satellites towards socio-economic development and risk mitigation.

Thank You Madam Chair and Distinguished delegates.