

# India

## **Agenda item17:**

### **Geostationary orbit and its utilization and applications**

#### **Madam Chairperson and Distinguished delegates,**

A comprehensive GSO systems and associated ground segments have been developed by India over the past four decades. These have played a significant role in meeting the country's requirements in various sectors and thereby contributing to national development. These satellites have ensured continued communication, broadcasting and data services on assured basis for governmental, commercial and societal applications. The meteorological satellites have imaging capabilities in visible, infrared and water vapour bands of the electromagnetic spectrum which helped the country in forecasting weather and cyclones.

#### **Madam Chair,**

India has a fleet of (17) 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 17 satellites in orbit provide 299 operational bent-pipe transponders and 25 Gbps high throughput satellite (HTS) capacity.

The operational communication satellites support the broadcasting, communication and societal services. The major users of the communication transponders are telecom sector, TV broadcasters, DTH operators, radio broadcast, government users, public sector units, private VSAT operators, banking & financial institutions. The satellite capacity is also used for societal applications such as Tele-medicine, Tele-education and Disaster Management services.

#### **Madam Chair,**

Satellite links are the primary means of connectivity to islands, remote, and difficult to access regions of the country. They also play the role of backup links for large number of services on terrestrial connectivity.

1534 Satellite Earth Stations of different size belonging to different user sectors are in operation. About 2,70,000 VSATs of various size and capabilities are being used for supporting satcom services.

**Madam Chair,**

ISRO has launched exclusive satellites for Meteorology applications. Currently 2 of these satellites Insat-3D and Insat-3DR are in operation providing the meteorological data. Satellite images are taken at every 15 minutes for the applications of weather forecasting and disaster management services over Asian region.

**Madam Chair,**

Potential of space technology applications in governance and development has witnessed increased acceptance. Government of India has taken measures to further enhance the GSO based Space technology and applications in the various activities of Central Ministries/ Departments and State Governments. The societal programmes like Telemedicine, Tele-education and Disaster Management Support (DMS) Programmes which are solely for national development with an aim to address specific requirements at different strata of the society.

**Madam Chair,**

GSO Satellite based Telemedicine is one of the unique application of space technology that is being utilised for the benefit of the society at large. Telemedicine technology utilises Information & Communications Technology (ICT) based system consisting of customised Telemedicine software integrated with computer hardware and medical diagnostic instruments connected to the Very Small Aperture Terminal (VSAT). Under Telemedicine programme various remote & rural medical colleges & hospitals and mobile units are connected to major super specialty hospitals in cities and towns using satellite communication. Presently, about 230 telemedicine centers are in operation.

**Madam Chair,**

India has built and launched 'Satellite for South Asia' in 2017 to provide satellite communication services to individual South Asian nations. India has further demonstrated the application possibilities in Afghanistan, Bangladesh, Bhutan, Maldives and Nepal, and Sri Lanka. The transponders in this satellite could be used for television/ Direct-to-Home service, VSAT Services, eGovernance, Banking, Cellular backhaul, disaster management support, Telemedicine and Tele-education. A few transponders in this satellite are allocated to provide common applications across south Asian region.

**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 (SAR) payload is onboard 3 of our GSO satellites, INSAT-3D (82°E), INSAT-3DR (74°E) and GSAT-17 (93.5°E) operating in 406 MHz band. This system is operational for the past 28 years.

During the past one year, the Indian Mission Control Centre (INMCC) provided search and rescue support to 7 distress incidents in Indian service area and contributed in saving 51 human lives.

**Madam Chair,**

The meteorological satellite data is processed and disseminated by INSAT Meteorological Data Processing System (IMDPS) of Indian Meteorological Department (IMD). The output generated by the processing systems was used for efficient and successful forecasting of major cyclones such as SAGAR, MEKUNU, DAYE, LUBAN, TITLI, GAJA, PHETHAI & PABUK. Cyclone warnings were disseminated, which resulted in minimum loss to human life.

**Madam Chair,**

Indian Regional Navigation Satellite System (IRNSS) also known as Navigation with Indian Constellation (NavIC), has been realized to establish an indigenous regional space based navigation system. Seven spacecraft's in the IRNSS constellation, in GSO, currently provide space based navigation services. The IRNSS achieves high positional accuracy in the Indian region and in the region extending about 1500 km beyond Indian geo-political boundary.

A unique fishermen alert messaging application using Android based App through NavIC enables the dissemination of emergency alert about natural disasters like Cyclone and Tsunami. It also helps in providing information on Potential Fishing Zones to the fishermen at Sea. It also alerts them about approaching international water boundaries.

**Madam Chair,**

In conclusion, the Indian delegation would like to convey this esteemed gathering that India has developed the necessary expertise to take the benefits of GSO satellites to the grass root level and demonstrated the same through various application projects. India is committed to share her experience with all the member nations.

**Thank You Madam Chair**