

Agenda Item – 10

Global Navigation Satellite Systems

Mr. Chairman and Distinguished delegates,

Indian delegation is happy to note the importance attached to the topics related to global navigation satellite system by this subcommittee, and by the General Assembly. On this occasion, the Indian delegation would like to update this sub-committee on the progress of India's satellite navigation programme since the last session.

Mr. Chairman,

India pursues two paths as part of its Satellite navigation programme, viz., GAGAN and NavIC. GAGAN (GPS Aided GEO Augmented Navigation) is a satellite based augmentation system (SBAS), while NavIC (Navigation with Indian Constellation) is an independent regional navigation system.

GAGAN has been established by Indian Space Research Organisation (ISRO) in association with the Airports Authority of India (AAI) to provide increased position accuracies required for civil aviation applications. NavIC has been implemented as an independent regional satellite based navigation service. Signal-in-Space (SIS) Interface Control Document (ICD) of NavIC has been placed in public domain to enable the production of user receivers. The capabilities of the system have been successfully tested and demonstrated in various sectors. Currently, more than 35 mobile phone models released in India having NavIC capability and this number is expected to increase with the introduction of 5G enabled phones.

Mr. Chairman,

NavIC L5 band was incorporated in Radio Technical Commission for Maritime Services (RTCM) standard 10403.3 amendment-2 in 2020. In August 2022, NavIC S band was incorporated in RTCM standard 10403.3 amendment-3. Thus both the bands of NavIC are now a part of differential GNSS standard, opening up the way for inclusion in high accuracy receivers. During 2022, India has worked towards the development of International Electrotechnical Commission (IEC) standard 61108-6 for NavIC based shipborne receiver equipment. IEC working group member states have

reviewed and approved the new standard and we are hopeful for a formal release soon. India also collaborated with European Union to develop common SBAS IEC standard including GAGAN and EGNOS.

Mr. Chairman,

NavIC-based safety-of-life alert dissemination system has been in operation for fishermen to provide alerts on impending disasters. There is now a national-level initiative to disseminate alerts for terrestrial disasters also like landslides, earthquakes, floods, heavy rains, avalanches, etc. through the NavIC system. Appropriate updations are being done in the NavIC messages to cater to this important societal need.

India appreciates the excellent work carried out by the UN Office on Outer Space Affairs (UNOOSA), as the Executive Secretariat for the International Committee on GNSS (ICG) and for the Providers' Forum. These efforts are helping to bring synergy among the global players in satellite navigation. India participated in 16th meeting of the ICG at Abu Dhabi in October 2022. India also actively participated in the 25th and 26th meetings of Providers Forum held in June and October 2022 respectively.

In the area of capacity building, ISRO is conducting masters' programme in GNSS with participants from 6 countries. The course-work started on 15th September 2022 and will continue till June 2023. This will be followed by one-year project in the respective parent organisation.

Mr. Chairman,

In conclusion, the Indian Delegation assures its continued commitment to this sub-committee and to the ICG global forum in addressing the issues of common interest for satellite navigation system providers and also in taking the benefits of GNSS to all countries, especially to the developing countries.

Thank you Mr. Chairman and distinguished delegates.