

GOVERNMENT OF INDIA
DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 1641

TO BE ANSWERED ON THURSDAY, MARCH 13, 2025

DEVELOPMENTS IN SPACE TECHNOLOGY

1641. SHRI. HARBHAJAN SINGH:

Will the PRIME MINISTER be pleased to state:

- (a) whether Government has any strategy for expanding India's satellite network to improve communication, weather forecasting, and remote sensing capabilities, especially in rural and underserved area, if so, the details thereof; and
- (b) whether steps are being taken to address the growing issue of space debris, and what measures are being implemented to ensure the safety and sustainability of India's space missions?

ANSWER

**MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC
GRIEVANCES & PENSIONS AND IN THE PRIME MINISTER'S OFFICE**

(DR. JITENDRA SINGH):

- (a) A fleet of 19 communication satellites are operational over India and these satellites support the services like television broadcasting, DTH television, telecommunication, VSAT services, radio networking, strategic communications, In flight and maritime connectivity, Cellular Backhaul, Tele-education, Tele-medicine, Rural & Island connectivity, Weather Data collection, Search & Rescue and Disaster Management applications. In addition, foreign satellites are also used for augmenting capacity for television broadcasting, DTH television, VSAT services, In flight and maritime connectivity and Cellular Backhaul services.

The space sector reforms has enabled larger participation of non-government entities for building/leasing, owning and operating the satellite systems for providing satellite-based services. More than 10 satellite operators have shown interest and applied for authorization for providing the satellite capacity over India. With more players the

entire country would get the enhanced satellite capacity and the competitive price advantage.

In line with reforms in Space Sector, demand driven regime is implemented by the Government in realising space infrastructure. Space Applications Management System (SAMS) framework was formed in 2021 to dwell into the need aspects of satellite missions and applications, aligned with national imperatives, benefiting the rural and underserved areas too. Through the SAMS mechanism, three satellite missions are realised, and four are in the plan, with multi-ministerial funding support, for natural resources & disaster management, and ocean & weather services.

The Indian Space Policy 2023 (ISP-2023) provides level playing field for the Non-Government Entities (NGEs) to undertake end-to-end activities in space sector through establishment and operation of space objects, ground-based assets and related services, such as communication, remote sensing, navigation, subject to guidelines/regulations as prescribed by the Indian National Space Promotion & Authorisation Centre (IN-SPACe). IN-SPACe also promotes the participation of NGEs in space sector activities, including realisation of satellite missions

DoS has implemented the Disaster Management Support Programme, for facilitating the use of satellite technology for disaster management by the respective nodal agencies with reference to various disasters such as floods, cyclones, forest fire, landslides and earthquakes. DoS also conduct training and capacity building programmes for the officials in the Central and State disaster management organisations on the use of space-based inputs. These efforts are done at national level, benefiting rural and remote regions also.

- (b) The Department of Space has Safe and Sustainable operations management area, which acts as nodal agency for all debris management. In case of any probable close approach, collision avoidance manoeuvres are carried out for collision avoidance. For geo-stationary orbit, satellites are moved to graveyard orbit (300 km above GEO belt) and passivation is carried-out. For Low-Earth orbit (< 2000 km), satellites are de-orbited to lower altitude, so that their post-mission orbital life is reduced by increased atmospheric drag effects within 25 years.
