

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE**

LOK SABHA

UNSTARRED QUESTION NO. 2976

TO BE ANSWERED ON WEDNESDAY, AUGUST 05, 2026

COLLISION AVOIDANCE MANOEUVRES (CAMs) EXECUTED BY ISRO

2976. SHRI HARISH CHANDRA MEENA:

Will the PRIME MINISTER be pleased to state:

- (a) the total number of active Indian satellites currently classified under the category of high risk collision with space debris along with the updated details of Collision Avoidance Manoeuvres (CAMs) executed by the Indian Space Research Organisation (ISRO) during the years 2025 and 2026, year-wise;**
- (b) whether IN-SPACE has finalised the liability and insurance framework for private Indian satellite operators in case of debris-related collisions in line with international space liability conventions and if so, the details thereof;**
- (c) the details of India's current contribution/commitment to global space debris mitigation guidelines including the indigenous debris tracking capabilities developed under the Network for Space Object Tracking and Analysis (NETRA); and**
- (d) whether any biomedical/life-support research related to the Gaganyaan Mission is being adapted for telemedicine**

application in remote/under-served hospitals in the country particularly in Rajasthan and if so, the details thereof?

ANSWER

**MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PUBLIC GRIEVANCES & PENSIONS AND IN THE PRIME MINISTER'S OFFICE
(DR. JITENDRA SINGH):**

- (a) The satellites operating in Low Earth Orbit (LEO) (less than 2000 km altitude) are more vulnerable to collision risks due to denser space object population in this region. 20 active Indian satellites in LEO, out of total 22 active satellites, are at higher risks.**

Indian Space Research Organisation (ISRO) executed 20 Collision Avoidance Manoeuvres (CAMs) in year 2025 and till date 9 in year 2026.

- (b) Yes. The “Policy framework and guidelines addressing State’s Liability towards third party damages arising due to Indian Space Objects” formulated by IN-SPACE addressing the liability & insurance aspects, is presently under consideration.**
- (c) India is an active participant in international cooperation frameworks on space debris management, such as the Inter-Agency Debris Coordination Committee (IADC), United Nations Working Group on Long Term Sustainability (UN-LTS), Expert Group of Space Situation Awareness (SSA), International Academy of Astronautics (IAA) Space Traffic Management (STM) Working Group (WG), International Astronautical**

Federation (IAF) space debris WG, which are involved in technical and policy related deliberations for space debris mitigation.

ISRO has contributed substantially to the revised IADC space debris mitigation guidelines and provided inputs based on technical studies. As part of commitment to mitigate space debris, India's intent for Debris Free Space Mission (DFSM) initiative has been announced in 2024. ISRO aims to achieve the goal of zero debris by all Indian actors, government as well as private, in the foreseeable future.

Currently the multi-object tracking radar (MOTR) at Sriharikota is capable of tracking large objects in Low earth Orbit and has been utilised to track objects. The upcoming optical telescope at Hanle (Ladakh) under the Network for Space Object Tracking and Analysis (NETRA) project is nearing completion and will be capable of tracking objects of size 30 cm or bigger at GEO altitude.

- (d) Biomedical and Life Support Systems are among other major technologies being developed for the first time for the Human Spaceflight Programme requirements. These technologies are under various phases of development and ground testing. Further, these technologies will be validated through various Gaganyaan Missions. Subsequent to successful demonstration of new technologies for Human Spaceflight Missions, identified technologies can be considered for societal applications.**
