

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE**

LOK SABHA

UNSTARRED QUESTION NO. 2191

TO BE ANSWERED ON WEDNESDAY, MARCH 12, 2025

FOREIGN DIRECT INVESTMENT IN THE SPACE SECTOR

2191. SHRI K SUDHAKARAN:

Will the PRIME MINISTER be pleased to state:

- (a) whether the Government has revised Foreign Direct Investment (FDI) limits in the space sector and if so, the details and expected benefits thereof along with the rationale therefor;**
- (b) the status of India's human spaceflight Gaganyaan mission including delays and cost escalations;**
- (c) whether the Government has established a mechanism to ensure technology transfer from ISRO to private space start-ups and if so, the details thereof;**
- (d) the steps being taken to develop indigenous satellite manufacturing capabilities and reduce dependency on foreign suppliers; and**
- (e) whether the Government plans to set up a dedicated spaceport for private satellite launches and if so, the details thereof along with the expected timeline for its operationalization?**

ANSWER

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

(DR. JITENDRA SINGH):

(a) The union cabinet in its meeting held on 21.02.2024 has approved the amendment in Foreign Direct Investment (FDI) in the space sector. Consequent to amended FDI policy in space sector, Department of Economic Affairs (DEA), Ministry of Finance issued the gazette notification No. CG-DL-E-16042024-253724 dated 16.04.2024 for amending the Foreign Exchange Management (Non-Debt Instruments) Rules, 2019, in Schedule I, in the table for Sl. No.12 following has been substituted, namely:

(1)	(2)	(3)	(4)
12	Space Sector		
12.1	(a) Satellites- Manufacturing and Operation (b) Satellite Data Products (c) Ground Segment and User Segment	100%	Automatic up to 74% Government route beyond 74%
12.2	(a) Launch Vehicles and associated systems or sub-	100%	Automatic up to 49% Government

	systems (b) Creation of spaceports for launching and receiving spacecraft		route beyond 49%
12.3	Manufacturing of components and systems or sub- systems for satellite, ground segment and user segment	100%	Automatic

(b) The following is the status, reasons for delay and revision in cost for the Gaganyaan Programme:

The status of the progress of Gaganyaan programme is as follows:

- ❖ **Human Rated Launch Vehicle :Ground testing of propulsion systems stages, including solid, liquid and cryogenic engine, towards human rating of the launch vehicle have been completed.**
- ❖ **Crew Module Escape System: Design & realization of five types of Crew Escape system solid motors completed. Static testing of all five types of solid motors completed. First Test Vehicle mission (TV-D1) for the performance validation of crew escape system (CES) and parachute deployment has been successfully accomplished.**

- ❖ **Orbital Module Systems: Design & realisation of Crew Module and Service Module structure has been completed .Various Parachute Systems have been tested through Integrated Main parachute Air drop Test and Rail Track Rocket Sledge Tests . Ground test programme towards human rating of Crew Module & Service module Propulsion System have been completed. Characterization of Thermal Protection System has been completed.**
- ❖ **Gaganyatri Training: Two out of three semesters of the training programme completed .Independent Training Simulator and Static Mockup Simulators realized.**
- ❖ **Major Ground Infrastructure: Orbital Module Preparation Facility, Gaganyaan Control Centre at ISTRAC, Gaganyaan Control facility at SDSC SHAR, Crew training facility and modifications of Second Launch pad have been completed.**
- ❖ **Gaganyaan First Uncrewed mission :Launch campaign for first uncrewed mission has commenced on December 18, 2024 and assembly of one of two solid motor has been completed. Liquid Propulsion Stages and Cryogenic stage are ready .Crew Module and Service Module structure realization completed .Flight integration activities are in progress.**

Major reasons for the delay:

- ❖ **Avionics components production was severely affected due to COVID-19 pandemic. Supply chain disruption resulted in irregular supply of raw materials and consequent delay in**

realisation of hardware. The deliveries were shifted/re-scheduled delaying the programme.

- ❖ Global shortage in the supply of space grade and EEE components.**
- ❖ Major design revision in orbital module to contain overall mass within HLVM3 capability.**
- ❖ Longer cycle time for the indigenous development of life support system being new technology, since procurement through external route couldn't materialise.**

The total funding for Gaganyaan Programme has been enhanced to ₹20,193 Crore to address the programmatic requirements as per the revised scope which includes new developments for Bharatiya Antariksh Station & precursor missions, and additional requirements to meet the ongoing Gaganyaan Programme.

(c) Yes sir, IN-SPACE has instituted a mechanism for transfer of ISRO's technology to Indian industries, wherein, a list of technologies available for transfer to Industry has been listed in the IN-SPACE portal. The technologies are also broadcasted to about 500 industries registered with IN-SPACE. As on 31 December 2024, about 75 technology transfer agreements have been signed.

(d) The Department has a mechanism to identify and enable the indigenisation of various components that are required for satellites. This mechanism has resulted in the indigenisation of systems such as Travelling Wave Tube Amplifier, Atomic clocks and other components used for various sub systems such as relays, connectors, heaters, thermistors, crystal oscillators etc.

(e) No Sir. However, Non-Governmental Entities (NGEs) are encouraged to utilise the facilities built by DoS/ISRO as per the Indian Space Policy -2023.
