

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
LOK SABHA
STARRED QUESTION NO. 42**

TO BE ANSWERED ON WEDNESDAY, JULY 20, 2022

PROGRAMMES OF DEPARTMENT OF SPACE

***42. SHRI GUMAN SINGH DAMOR:**

Will the PRIME MINISTER be pleased to state:

- (a) the details of the major programmes of the Department of Space along with its role in the Defence and Agricultural sector;**
- (b) the number of Satellites/Gaganyaan launched under the Space Mission during the last three years and the number of such launches which have been successful/failed.**
- (c) The reasons for the failed launches.**
- (d) The number of foreign satellites launched under the Space Mission alongwith the details of foreign exchange earned through these launches;**
- (e) Whether the Department of Space is likely to provide its space-related services to international customers on commercial basis in the future; and**
- (f) 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) to (f) A Statement is laid on the Table of the House.

STATEMENT LAID ON THE TABLE OF THE LOK SABHA IN REPLY TO STARRED QUESTION NO. 42 REGARDING “PROGRAMMES OF DEPARTMENT OF SPACE” ASKED BY SHRI GUMAN SINGH DAMOR FOR ANSWERING ON WEDNESDAY, JULY 20, 2022.

(a) The major programmes of the Department of Space include:

- 1. Space Applications Programme comprising of design and development of tools to address the needs of national imperative and priorities of Government in the areas of socio-economic security, sustainable development, disaster management and citizen-centric governance. Once operationalized, these application-based tools are transferred to the user departments/ministries for institutionalization therein.**
- 2. Satellite Programme in order to enable the above downstream applications, comprising of (i) Earth Observation Satellites for natural resources monitoring, cartographic applications, Oceanography, meteorology, disaster management support etc., (ii) Communication Satellites for telecommunication, television broadcasting, tele-education, tele-medicine etc., (iii) Navigation with Indian Constellation (NavIC) for providing Position, Navigation and Timing services over India and its neighborhood, and (iv) Space science and planetary exploration Satellites for studying outer space and interplanetary exploration.**
- 3. Launch Vehicle Programme in order to place the above satellites in outer space, comprising of Polar Satellite Launch Vehicle (PSLV), Geosynchronous Satellite Launch Vehicle (GSLV) and Geosynchronous Satellite Launch Vehicle MkIII (GSLV Mk-III) for launching satellites of national, commercial and special users.**

4. Gaganyaan Programme to demonstrate capability to send humans to space and bring them back to Earth safely.

The design, development and launch of satellites by DOS with required payloads is intended for peaceful use of outer space. With regards to agricultural sector, the applications of space technology include monitoring and inventory of agricultural crops, mapping & assessing soil conditions and land degradation, appraisal of irrigation infrastructure and assessment of crop damage due to disasters events such as drought, flood, cyclone & hail storm. The meteorological satellites in geostationary orbits provide frequent state of weather parameters for enabling weather forecasting and helps in agricultural operations in the country.

- (b) During the period (01/01/2019 – till date), ISRO has launched 13 Indian satellites for various applications such as Communication, Earth Observation, Experimental Disaster Management, Planetary Observation etc., the details of which are attached as Annexure - 1. No Gaganyaan launches have taken place in the past 3 years. Out of the above launches, launch of 1 satellite (EOS-03) was unsuccessful.**
- (c) GSLV-F10 launch carrying the Earth Observation Satellite [EOS-03] took place on August 12, 2021. However, the mission couldn't be accomplished as intended due to the failure of the launch vehicle GSLV-F10. The reason for the failure was found to be an anomaly in the Cryogenic Upper Stage, that caused the onboard computer to abort the mission at 307 seconds into the flight, leading to mission failure.**
- (d) Starting from 1999 till date, Indian Space Research Organization (ISRO), through its commercial arm, has successfully launched 345 foreign satellites from 34 countries on-board Polar Satellite Launch**

Vehicle (PSLV). Total Foreign Exchange revenue earned through launching of these foreign satellites amounts to approx. 56 Million USD and 220 Million Euros.

- (e) Yes, Sir. NewSpace India Limited (NSIL), a CPSE under Department of Space (DOS), will be commercially providing space related services to international customers.**

- (f) The Space-related services that NSIL provides to International customers are in the areas of (i) Launch Services for international customer satellites on-board ISRO's launch vehicles viz. PSLV and GSLV-MKIII; (ii) Building Earth Observation/ Communication satellites for International customers, and (iii) Providing Mission Support Services for tracking customer launch vehicle/ satellites using ISRO/ other international ground stations.**

Annexure -1

Sl. No.	Satellite	Launch Date	Mission	Application	Launch Status
1	<u>INS-2TD</u>	Feb 14, 2022	<u>PSLV-C52/EOS-04 Mission</u>	Experimental	Launch Successful
2	<u>EOS-04</u>	Feb 14, 2022	<u>PSLV-C52/EOS-04 Mission</u>	Earth Observation	Launch Successful
3	<u>EOS-03</u>	Aug 12, 2021	<u>GSLV-F10 / EOS-03</u>	Earth Observation	Launch unsuccessful
4	<u>CMS-01</u>	Dec 17, 2020	<u>PSLV-C50/CMS-01</u>	Communication	Launch Successful
5	<u>EOS-01</u>	Nov 07, 2020	<u>PSLV-C49/EOS-01</u>	Disaster Management System, Earth Observation	Launch Successful
6	<u>GSAT-30</u>	Jan 17, 2020	Ariane-5 VA-251 (Procured)	Communication	Launch Successful
7	<u>RISAT-2BR1</u>	Dec 11, 2019	<u>PSLV-C48/RISAT-2BR1</u>	Disaster Management System, Earth Observation	Launch Successful
8	<u>Cartosat-3</u>	Nov 27, 2019	<u>PSLV-C47 / Cartosat-3 Mission</u>	Earth Observation	Launch Successful
9	<u>Chandrayaan2</u>	Jul 22, 2019	<u>GSLV-Mk III - M1 / Chandrayaan-2 Mission</u>	Planetary Observation	Launch Successful

Sl. No.	Satellite	Launch Date	Mission	Application	Launch Status
10	<u>RISAT-2B</u>	May 22, 2019	<u>PSLV-C46 Mission</u>	Disaster Management System, Earth Observation	Launch Successful
11	<u>EMISAT</u>	Apr 01, 2019	<u>PSLV-C45/EMISAT MISSION</u>		Launch Successful
12	<u>GSAT-31</u>	Feb 06, 2019	Ariane-5 VA-247(Procured)	Communication	Launch Successful
13	<u>Microsat-R</u>	Jan 24, 2019	<u>PSLV-C44</u>		Launch Successful
