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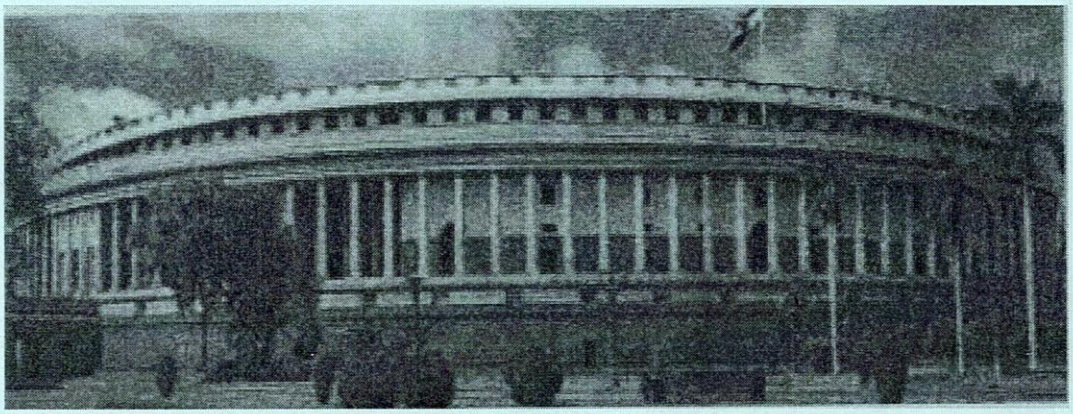
GOVERNMENT OF INDIA
DEPARTMENT OF SPACE

"SPACE IN PARLIAMENT"



MONSOON SESSION OF PARLIAMENT 2021
(JULY - AUGUST 2021)

COMPILATION OF REPLIES GIVEN IN PARLIAMENT DURING 2021

Government of India
Department of Space
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PARLIAMENT QUESTIONS – MONSOON SESSION OF PARLIAMENT 2021

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

LOK SABHA

UNSTARRED QUESTION NO. 1445

TO BE ANSWERED ON WEDNESDAY, JULY 28, 2021

CHANDRAYAAN 3

1445. SHRI THIRUNAVUKKARASAR SU:

Will the PRIME MINISTER be pleased to state:

(a) whether the launching of Chandrayaan 3 has been further delayed;

(b) if so, the details thereof along with the proposed functions thereof; and

(c) the time by which it is likely to be launched?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) Realisation of Chandrayaan-3 is in progress. The launch of Chandrayaan-3 has been rescheduled.

(b) The realization of Chandrayaan-3 involves various process including finalization of configuration, subsystems realization, integration, spacecraft level detailed testing and a number of

special tests to evaluate the system performance on earth. The realization progress was hampered due to COVID-19 pandemic. However, all works that were possible in work from home mode were taken up even during lockdown periods. Chandrayaan-3 realisation resumed after commencement of unlock period and is in matured stage of realization.

(c) Chandrayaan-3 is likely to be launched during third quarter of 2022 assuming normal work flow henceforth.

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

LOK SABHA

UNSTARRED QUESTION NO. 1454

TO BE ANSWERED ON WEDNESDAY, JULY 28, 2021

COMMUNICATION OF ISRO

1454. SHRIMATI MAHUA MOITRA:

Will the PRIME MINISTER be pleased to state:

(a) the details of technologies of ISRO that have been commercialized since 2014 including the additional technologies that are currently slated for commercialization and the commercialization roadmap determined; and

(b) the details of technologies which had the most impact for the benefit of citizens?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) 60 technologies have been commercialized since 2014 through Indian industries. Currently 61 technologies are identified for further commercialization. These technologies are proposed to

be commercialized by M/s Newspace India Ltd, a CPSE under administrative control of Department of Space (DOS).

(b) The following technologies have made most impact on the benefit of citizens:

I. NavIC Messaging Receiver,
II. Artificial Polyurethane foot
III. Automatic weather station
IV. Distress alarm system
V. Lithium ion Battery
VI. ISROSIL (Silica cloth)

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

LOK SABHA

UNSTARRED QUESTION NO. 1521

TO BE ANSWERED ON WEDNESDAY, JULY 28, 2021

LIQUID OXYGEN

1521. SHRI N. REDDEPPA:
SHRI MAGUNTA SREENIVASULU REDDY:
DR. BEESETTI VENKATA SATYAVATHI:
SHRI LAVU SRI KRISHNA DEVARAYALU:

Will the PRIME MINISTER be pleased to state:

(a) **whether ISRO had provided Liquid Oxygen continuously on a large scale to several State governments from their own manufacturing facilities during the pandemic time;**

(b) **if so, the details thereof of the total quantities of liquid oxygen supplied along with the state-wise break-up thereof;**

(c) **whether ISRO had transferred the technology of Oxygen Concentrators and Ventilators developed in-house to Indian Industry for mass manufacture; and**

(d) **if so, the details thereof and the number of companies that had signed a Transfer of Technology Agreement with ISRO for the same and a state wise break up of these companies?**

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ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) Yes, Medical grade liquid oxygen were supplied to Tamil Nadu, Kerala & Andhra Pradesh based on the request.

(b) Total 551 MT of medical grade Liquid Oxygen supplied as follows:

- **10MT during November, 2020 and 454MT from May to June, 2021 continuously to Tamil Nadu.**
- **57MT from May to June, 2021 to Kerala.**
- **30 MT from May to June, 2021 to Andhra Pradesh in three lots.**

(c)

- **Yes, Medical Oxygen Concentrator ("SHWAAS") Technology was transferred to 59 Indian Industries.**
- **52 Industries are shortlisted for transferring ventilators (three categories) technology.**

(d) State wise break-up for Technology Transfer of Medical Oxygen Concentrator:

Sl. No.	State/UTs	No. of Industries
1.	Andaman & Nicobar Islands	1
2.	Delhi	5

Sl. No.	State/UTs	No. of Industries
3.	Gujarat	9
4.	Haryana	5
5.	Karnataka	8
6.	Kerala	5
7.	Maharashtra	5
8.	Odisha	1
9.	Punjab	2
10.	Rajasthan	1
11.	Tamil Nadu	8
12.	Telangana	5
13.	Uttar Pradesh	3
14.	West Bengal	1
	Total	59

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

LOK SABHA

STARRED QUESTION NO. 232

TO BE ANSWERED ON WEDNESDAY, AUGUST 04, 2021

SPACE PROGRAMMES

***232. SHRI NAMA NAGESWARA RAO:**

Will the PRIME MINISTER be pleased to state:

(a) the details including the number of satellites launched by India during the last three years;

(b) the details of funds allocated and spent by the country on these space programmes, programme-wise;

(c) the details of revenue earned by the Government through launching of satellites of other countries during the above said period;

(d) the details of the space programmes planned for execution by the end of 2021; and

(e) whether the Government proposes to involve private sector through Public Private Partnership (PPP) mode in the Indian space sector, if so, the details thereof and if not, the reasons therefor?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) to (e) A Statement is laid on the Table of the House.

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STATEMENT LAID ON THE TABLE OF THE LOK SABHA IN REPLY TO STARRED QUESTION NO. 232 REGARDING "SPACE PROGRAMMES" ASKED BY SHRI NAMA NAGESWARA RAO FOR ANSWERING ON WEDNESDAY, AUGUST 04, 2021.

(a) & (b)

The details of the number of satellites launched by India during the last three years (2018-19, 2019-20 and 2020-21), funds allocated and cumulative expenditure on these projects till March 2021, are given programme-wise in the following table:

(Rs. in Crores)

Sl. No	Satellite Name	Launch date	Approved cost	Cumulative Expenditure (up to Mar-21)
1.	Communication Satellite Programme			
(a)	GSAT-29	14.11.2018	175.63	164.79
(b)	GSAT-11	05.12.2018	583.50	578.95
(c)	GSAT-31	06.02.2019	959.50$	511.05
(d)	GSAT-30	17.01.2020		
(e)	CMS-01	17.12.2020	200.00	162.93
2.	Navigation Satellite Programme			
(a)	IRNSS-1I	12.04.2018	1420.00#	1407.99
3.	Earth Observation Satellite Programme			
(a)	Cartosat-3	27.11.2019	351.16	300.08
4.	Space Science Programme			
(a)	Chandrayaan-2	22.07.2019	603.00	598.36
($) Approval for three satellites (GSAT-30, 31 & 32). Launch of two satellites have been completed.				

(#) Approval for nine satellites. Completed the launch of all the satellites.
During the above period, the Department has also launched seven User funded satellites, 105 Commercial satellites and five student satellites.

(c) During the period from January 2018 until March 2021, the revenue earned by the Government through launching of Satellites is 34 Million USD and 43 Million Euros.

(d) The details of the space programmes planned for execution by 2021 are as follows:

- GSLV F10 / EOS-03: GSLV F10 is scheduled to launch EOS-03, an earth observation satellite in the 3rd quarter of 2021.
- PSLV-C52 / EOS-04 Mission: PSLV-C52 is scheduled to launch EOS-04, an earth observation satellite in the 3rd quarter of 2021.
- Small Satellite Launch Vehicle / EOS-02: The first developmental flight of Small Satellite Launch Vehicle, SSLV-D1 is scheduled to launch EOS-02, an earth observation satellite in the 4th quarter of 2021.
- PSLV-C53 / EOS-06: PSLV-C53 is scheduled to launch EOS-06, an earth observation satellite in the 4th quarter of 2021.

(e) Creating a successful public private partnership to develop technology for enhanced throughput requirements of satellites and launch vehicles in the country needs to be supplemented by a sound legal and policy framework. The Government has opened up

(11)

the space sector for private players with the announcement of space sector reforms and the formation of IN-SPACe, an independent body housed on Department of Space which will regulate and promote private sector activities. Private players are gradually expected to move up the value chain from being vendors to independent players which is expected to ultimately pave way for a Public Private Partnership in space sector.

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

LOK SABHA

UNSTARRED QUESTION NO. 2644

TO BE ANSWERED ON WEDNESDAY, AUGUST 04, 2021

SPACE RACE

2644. SHRI S. JAGATHRAKSHAKAN:

Will the PRIME MINISTER be pleased to state:

(a) whether India still lags behind in the space race when compared to the US, China and Russia;

(b) if so, the steps taken by the Government to ensure that India become a competitive space market and also to ensure that the benefits of the space programme reach the poorest;

(c) whether the Government provides a level-playing field to private companies in satellites, launches and space-based services; and

(d) if so, the details thereof and if not, the reasons therefor?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) Space programme offers variety of services beneficial to any country in various domains of its development work. Therefore, the thrust and importance of selected space programme depends on the priority of that particular country. India has its

own priority in selected domains of space programme and is doing relatively good in its space programmes.

(b) There are several steps taken by Government of India to create a space industry ecosystem in India as mentioned below:

- A national level autonomous Nodal Agency namely Indian National Space Promotion and Authorization Centre (IN-SPACe) is being established under Department of Space (DOS) for promoting, handholding, authorising and licensing private players to carry out Space Activities.
- Access to DOS facilities and expertise are extended to private entities to support their space activities.
- Announcement of Opportunities were done offering challenges in new domains of space technology.
- Government of India is encouraging the transfer of technologies developed in the field of space to Indian industries.
- Apart from this, Government of India is bringing in new sector policies and guidelines and also revising existing policies.
- With the space sector reforms, private sector including academic institutions, start-ups and industries is expected to participate in end-to-end space activities to expand the national space economy, generate more employment opportunities and create better manufacturing facilities.

(c) Yes Sir.

(d) The space sector reforms were made with the intention to provide level playing field for private companies and enable them to carry out end-to-end space activities.

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GOVERNMENT OF INDIA

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LOK SABHA

UNSTARRED QUESTION NO. 2704

TO BE ANSWERED ON WEDNESDAY, AUGUST 04, 2021

INDIAN REGIONAL NAVIGATION SATELLITE SYSTEM

2704. SHRI N.REDDEPPA:

Will the PRIME MINISTER be pleased to state:

(a) whether the Indian Regional Navigation Satellite System (NaviC system) has seen an increase in usage of its services since its launch in 2012;

(b) if so, the details thereof along with the details of categories of civilian use and restricted use by authorised defence personnel;

(c) whether the NaviC has emerged as a strong alternative to Google Maps or other non-Indian Global Positioning Systems and if so, the details thereof; and

(d) the measures taken by the Government to incentivize the use of NaviC by civilians?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) & (b)

Yes Sir. The usage of NavIC services has increased since its launch, in the sectors like transportation and personal mobility. Ministry of Road Transport and Highways (MoRTH) has mandated

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fitting NavIC-based AIS-140 compliant vehicle trackers in all the public and commercial vehicles. There is also an increase in the number of NavIC enabled smart mobile phone models in the Indian market. The authorised defense labs have realized NavIC enabled receiver modules for strategic applications.

(c) Google Maps is an application which uses location data from Global Navigation Satellite System (GNSS). Like any other GNSS, NavIC provides the location data to the map application like Google Maps. NavIC performance is on par with other non-Indian Global Positioning System and is a strong alternative to the non-Indian Global Positioning Systems within the coverage area.

(d) NavIC civilian signals are free-to-air. Currently, the Government has not taken any measure to incentivize the use of NavIC by civilians.

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O.I.H.

GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 434

TO BE ANSWERED ON THURSDAY, JULY 22, 2021

PROPOSAL FOR INVESTMENT FROM PRIVATE INVESTORS

434. SHRI MAHESH PODDAR:

Will the PRIME MINISTER be pleased to state:

(a) the number and types of proposals received by Government for investment from private investors so far after according an approval for private investment in space technology, the details thereof;

(b) the total amount of revenue likely to be generated from the proposal received by Government so far, along with the expected number of employment opportunities to be created thereon; and

(c) the kinds of benefits likely to the population and economy of the country from the private investment in the space technology and by when these projects are likely to be completed?

ANSWER

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

(a) 27 proposals from private entities were received so far for undertaking various space activities in India. The types of proposals include building and launching of Launch vehicles, building, owning and operating Satellites, providing Satellites based services, establishing Ground segments, Research Partnerships and providing Mission services.

(b) The global space economy is poised to grow over a trillion USD in the next two decades. With the space sector reforms, Indian Private Space Industry is slated to contribute to the core elements of global space economy — space-based services, launch services, manufacturing of launch vehicles and satellites, establishment of ground segment and launch infrastructure — to a considerable extent.

(c) Participation of private sector including academic institutions, start-ups and industries in end-to-end space activities is expected to expand the national space economy, generate more employment opportunities and create better manufacturing facilities.

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 435

TO BE ANSWERED ON THURSDAY, JULY 22, 2021

INVOLVEMENT OF PRIVATE SECTOR IN SPACE PROGRAMME IN INDIA

435. SHRI DEREK O' BRIEN:

Will the PRIME MINISTER be pleased to state:

(a) whether Government has any plans to float tenders or involve private players in space programme in India;

(b) if so, the details of the same including any plans already in progress; and

(c) total investment Year-over-Year (YoY) in the space programme of India for the last five years and achievements of the same?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) & (b)

NewSpace India Limited (NSIL), a Central Public Sector Enterprise (CPSE) under Department of Space (DOS), as part of one of its mandates "to build launch vehicles through Indian Industry", has already floated a Request for Proposal (RFP) for end-to-end realisation of 5 nos. of Polar Satellite Launch Vehicle (PSLV) through Indian Industry partners. Currently, the Indian Industry partners are in the process of preparing and submitting their response to the RFP.

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(c) The funds allocated and actual expenditure for space programme for the last five years are as given below:

Financial Year	Allocation (RE) (Rs. in crores)	Actual Expenditure (Rs. in crores)
2016-17	8045.28	8039.99
2017-18	9155.52	9127.15
2018-19	11200.00	11192.66
2019-20	13139.26	13033.29
2020-21	9500.00	9490.05

During the last five years i.e. from April 2016 to March 2021, 25 launch vehicle missions, 27 Satellite missions and 3 Technology demonstrator missions were successfully accomplished by the Department. The major achievements during the period include operationalization of India's heavy lift Launch vehicle, GSLV Mk III; successful insertion of Chandrayaan-2 orbiter in to Lunar Orbit; Launch & operationalization of High Throughput communication Satellite (HTS), GSAT-11; Launch of advanced Cartography Satellite, Cartosat-3; all-weather day and night Radar Imaging Satellites; and technology demonstrator missions like Scramjet engine - TD, Re-Usable Launch Vehicle-TD, Crew Escape System – TD.

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 436

TO BE ANSWERED ON THURSDAY, JULY 22, 2021

USE OF SPACE APPLICATIONS FOR DIGITAL EDUCATION

436. DR. SASMIT PATRA:

Will the PRIME MINISTER be pleased to state:

the steps being undertaken to use space applications for digital education in the country?

ANSWER

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

Satellite communication is being used for beaming the educational contents in digital mode by 19 States and A&N Islands under Tele-education Programme. Further, the Bhaskaracharya National Institute for Space Applications and Geo-informatics (BISAG-N) is also beaming 51 educational channels using satellite communication.

Apart from this, Indian Institute of Remote Sensing is actively involved in training beneficiaries (such as UG/PG and Doctorate students, working professionals, academicians, school teachers and school students) on Space Technology and its Applications using digital platforms. During the last one year, about 2.42 lakh participants benefitted from these programmes.

The Space Sector is opened up for larger participation of non-governmental entities which is expected to bring in wide opportunities to provide space based applications including digital education.

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 1224

TO BE ANSWERED ON THURSDAY, JULY 29, 2021

LAUNCH OF EARTH OBSERVATION SATELLITE

1224. SHRI SAMBHAJI CHHATRAPATI:

Will the PRIME MINISTER be pleased to state:

(a) whether Government has plans to launch an Earth Observation Satellite to have real-time images of the borders and to quickly monitor natural disasters;

(b) the details of other important observations the satellite is capable to record;

(c) whether Earth Observation Satellite is proposed to be followed by Small Satellite Launch Vehicle shortly, and

(d) how far the technology of SSLV is different from PSLV and comparatively cost effective?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) ISRO has realized a Geo-imaging satellite; "EOS-03", for Earth Observation from Geostationary Orbit, and is scheduled for launch in third quarter (Q3) of 2021. EOS-03 is capable of imaging the whole country 4-5 times daily, and would enable near-real time monitoring of natural disasters like floods & cyclones.

(b) In addition to natural disasters, EOS-03 would also enable monitoring of water bodies, crops, vegetation condition, forest cover changes etc.

(c) Yes, Sir. The first developmental flight of Small Satellite Launch Vehicle or SSLV is scheduled in the fourth quarter of 2021 from Satish Dhawan Space Centre, Sriharikota.

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(d) ISRO's vast experience in Solid propulsion and heritage of proven design practices has enabled SSLV to be developed as a cost-effective, three stage, all-solid launch vehicle with a payload capability of 500 kg to 500 km planar orbit or 300 kg to Sun Synchronous Polar Orbit. SSLV is ideal for on-demand, quick turn-around launch of small satellites. The major technologies developed as part of realization of SSLV are flexible nozzle control with electro-mechanical actuators for all stages, miniaturized avionics and a velocity trimming module in the upper stage for precise satellite injection.

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

(23)

RAJYA SABHA

UNSTARRED QUESTION NO. 1225

TO BE ANSWERED ON THURSDAY, JULY 29, 2021

COLLABORATION WITH BRAZIL IN SPACE PROGRAMME

1225. SHRI SAMBHAJI CHHATRAPATI:

Will the PRIME MINISTER be pleased to state:

(a) whether Government proposes to have co-operation and collaboration with Brazil in space research including procurement of material and systems for Brazil's launch vehicle programme;

(b) if so, the details thereof;

(c) whether some other countries have also expressed similar interest in the country's space programmes; and

(d) if so, the details thereof?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) & (b)

India is already pursuing cooperation with Brazil in the field of space mainly in sharing of earth observation satellite data. However, there is no proposal of collaboration in procurement of materials and systems for Brazil's launch vehicle programme.

(c) & (d)

A few countries, including Colombia, Dominican Republic, Luxembourg and Romania have expressed interest for space cooperation with India by entering into framework arrangement in peaceful use of outer space. However, no country has expressed interest in collaboration in procurement of materials and systems for their launch vehicle programmes.

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 1226

TO BE ANSWERED ON THURSDAY, JULY 29, 2021

PRIVATE SECTOR PARTICIPATION IN SPACE SECTOR

1226. SMT. VANDANA CHAVAN:

Will the PRIME MINISTER be pleased to state:

(a) Timeline for introduction of Space Activities Bill for regulation and promotion of private players in space sector;

(b) the steps that Government is taking to encourage private participation in indigenous production of space technologies, services and devices;

(c) the steps that Government is taking to ensure security of ISRO installations when allowing access to private entities; and

(d) the details of public and stakeholder consultations that have been undertaken for addressing requirements of private entities in space sector, and if not, the reasons therefor?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) The Space Activities Bill is under active consideration of the Government which will include aspects pertaining to regulation and promotion of private playes in space sector.

(b) The Government of India is in the process of creating an ecosystem to encourage more private participation in indigenous production of space technologies, services and devices.

Government of India has announced space sector reforms in June 2020. The Indian National Space Promotion and Authorization Centre (IN-SPACe) was created as an independent nodal agency under the Department of Space with the mandate of promoting, handholding, licensing, authorization and monitoring of private space activities in India.

Access to Department of Space (DOS) facilities and expertise are extended to private entities to support their space activities.

Announcement of Opportunities were done offering challenges in new domains of space technology.

Government of India is encouraging transfer of technologies developed in the field of space to Indian industries.

Apart from this, Government of India is bringing in new sector policies and guidelines and also revising existing policies.

(c) IN-SPACe which is under creation will have Safety and Security Directorate to ensure security of ISRO installations when allowing access to private entities.

(d) Public consultations were done and the relevant Departments and Ministries were consulted. An exclusive webinar in 'Unlocking India's potential in space sector' consisting of four sessions covering the four vertical of space programme were organised with the participation of Industralist/Academia/Start-ups as well as general public. All suggestions have been taken into consideration and appropriately addressed.

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 2049

TO BE ANSWERED ON THURSDAY, AUGUST 05, 2021

LIBERALIZATION OF SPACE SECTOR

2049. SHRI K.J. ALPHONS:

Will the PRIME MINISTER be pleased to state:

(a) the steps that Government has taken to encourage private players to invest in planetary exploration and outer space travel after opening up of the space sector;

(b) in what manner Government would ensure a level playing field to the private firms so that they can also contribute to India's space sector;

(c) the requirements which are needed to be fulfilled by the private firms to procure the license to use the facilities and infrastructure at the ISRO; and

(d) in what manner Government is planning to implement its liberal geospatial data policy which will benefit tech entrepreneurs to use satellite data?

ANSWER

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE

(DR. JITENDRA SINGH):

(a) Government of India has announced space sector reforms in June 2020. A National Level autonomous Nodal Agency namely Indian National Space Promotion and Authorization Centre (IN-SPACe) is being established under DOS for promoting, handholding, authorising and licensing private players to carry out Space Activities. ISRO will also identify areas to offer challenges to industries in new domains of technology and Announcement of opportunity will be made for selected science and exploration missions to private industries.

(27)

(b) The space sector reforms were made with the intention to provide level playing field for private companies and enable them to carry out end-to-end space activities through the following:

- Authorizing and monitoring private sector's space activities as per regulatory provisions.
- Access to DOS facilities and expertise are extended to private entities to support their space activities.
- Announcement of Opportunities were done offering challenges in new domains of space technology.
- Government of India is encouraging transfer the technologies developed in the field of space to Indian industries.
- Apart from this, Government of India is bringing in new sector policies and guidelines and also revising existing policies.

(c) The requirements for giving permission for access to facilities and infrastructure at ISRO will be worked out by Indian National Space Promotion and Authorization Centre (IN-SPACe), a national level autonomous Nodal Agency under DOS which is being established.

(d) Department of Space has drafted a new Remote Sensing Policy-2021 which has already undergone public consultation and is now under the government approval process. This policy is open, liberal and forward looking, which will provide several opportunities to the Indian industries to participate in the earth observation program of the country.

The Indian industries and startups will be able to bring in better and innovative solutions for public good and improve business prospects. It is intended to make available all IRS satellite data having 5 meter and coarser resolution, all the past IRS data and satellite derived thematic maps on 'free of charge' basis through web. An easy access of space based remote sensing data and information shall enable unfolding of knowledge based solutions and 'ease of data access' which would certainly benefit tech entrepreneurs and geospatial industry in building friendly ecosystem for developmental planning, decision making and use of satellite data.

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GOVERNMENT OF INDIA

DEPARTMENT OF SPACE

RAJYA SABHA

UNSTARRED QUESTION NO. 2050

TO BE ANSWERED ON THURSDAY, AUGUST 05, 2021

IoT FOR INDUSTRIES

2050. SHRI SANJAY RAUT:

Will the PRIME MINISTER be pleased to state:

(a) whether it is a fact that many private commercial space technology companies are launching 35 plus 5G satellites to build 5G speed network connections and Internet of Things (IoT) functionalities for industries in the country;

(b) if so, the details thereof indicating precautionary measures taken thereon;

(c) whether the Ministry is also prepared to launch such technology in various parts of the country; and

(d) if so, the details thereof indicating target fixed for the next two years?

ANSWER

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

(a) & (b) Many international private satellite operators are launching Non-Geo-Stationary Orbit (NGSO) satellite constellations for providing connectivity for global coverage including India. Such satellite systems are expected to provide connectivity for broadband services and Internet of Things (IoT). The uses of such systems in the country are governed through service licenses and regulatory clearances from Government of India Ministries/Authorities.

(c) & (d) Department of Space does not have plans to launch NGSO satellite constellations for communication services in the near future. However, High Throughput Satellites (HTS) to provide connectivity for broadband services from Geo-Stationary Orbit (GSO) are already in operations.

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