

**GOVERNMENT OF INDIA
DEPARTMENT OF SPACE**

Sub: Monthly Summary of Department of space for the month of June, 2024

PART- I (Unclassified)

I. Important policy decisions taken and major achievements during the Month

A. Space Transportation:

- The third & final autonomous runway landing experiment of the Reusable Launch Vehicle (RLV LEX-03) was conducted successfully on June 23, 2024 at the Aeronautical Test Range (ATR) of DRDO, located at Chitradurga, Karnataka.

Experimental data from this mission will further aid the developments towards the orbital re-entry mission of the winged Reusable Launch Vehicle.

- Third & fourth short duration (2.5 seconds each) ignition tests were successfully conducted on June 05, 2024 & June 21, 2024 on a Pre-Burner Ignition Test Article (PITA) at Semi-cryo Integrated Engine Test facility (SIET), and smooth & sustained ignition of the preburner was demonstrated.
- Integration activities of the second stage of GSLV i.e., GS2 stage required for the GSLV-F15 mission is completed and dispatched to SDSC, Sriharikota on June 12, 2024 for further activities.

B. Space Applications:

I. Earth Observation:

- 'Bhuvan Panchayat (Ver.4.0)' portal for Panchayat level developmental planning and "National Database for Emergency Management (NDEM Ver. 5.0)" for disaster risk reduction, consisting of relevant database and decision support tools were released by Hon'ble Union Minister Dr. Jitendra Singh, on June 28, 2024. Atlas on Space based Information Support for Decentralized Planning (SISDP) project was also released by the Hon'ble Minister on this occasion.
- Meghalaya Forest Fire Information System (MeFFIS), a web portal and mobile application for recording forest fire incidents at the ground, developed by NESAC, was launched by Hon'ble Chief Minister, Meghalaya.
- Agriculture Technology project (for State governments): Cropping intensity for Maharashtra state is mapped for the year 2023-24. Machine learning based crop yield estimation were carried out for Wheat, Gram and Mustard crops in Madhya Pradesh.
- Development of hydro-informatic products and services for MoJS: GLOF modelling for Masartal Glacial Lake in Uttarakhand (Ganga Basin) for various scenarios is completed.

- Urban Waterbody Information System (UWaiS, for MoH&UA): Land Use / Land Cover change assessment has been completed for selected (prioritized) waterbodies in 48 towns.

II. Disaster Management Support:

- NDEM V5.0: A web page is designed & developed for disseminating alerts of Landslide Assessment & Alerts System (SILAAS) project.
- 23 flood inundation maps/ value added satellite images covering floods in Assam, Manipur and West Bengal were disseminated to the concerned States.
- Flood Early Warning System (FLEWS, Assam): 19 flood alerts were issued to the Assam State Disaster Management Authority.
- Operational near real time forest fire alerts generation and dissemination is in progress for fire season 2024.
- 20 IRS data products were disseminated to Sentinel Asia and International Charter for Disaster Management Support.
- Cataloguing of fresh landslide events is carried out in North-Eastern region (NER) and total 30 landslides were catalogued.

C. Human Spaceflight:

- For Gaganyaan G-1 mission, propellant & gas bottle and deck plates & feedlines have been realized for crew module (CM) propulsion system. Water calibration for propulsion system is also completed.
- Completed generation of interfaces for CM propulsion system, Crew Module Service Module - Connect Disconnect Systems, sensors, ballast mass & harness for TV- D2 Mission.
- For Crew Escape System (CES), the 3rd static test & vacuum firing test for CES Jettisoning Motor, vacuum testing of igniter for Low Altitude Escape Motor and integrated structural test for CES Aft-end structures at VSSC is successfully completed.
- Cryo arm retraction trials with inter tank structure completed on Second Launch Pad at SDSC for induction of C32 stage in HLVM3.

D. Space Sciences:

- A study was carried out to investigate the aspect sensitive characteristics of 205 MHz stratosphere--troposphere radar located at a tropical station Cochin (10.04°N, 76.3°E) using volume scanning experiment.

The study demonstrated the capability of the Very High Frequency Stratosphere-Troposphere Radar to estimate the three-dimensional turbulence parameters in the troposphere and lower stratosphere.

E. Capacity Building:

- As part of the Learners Week-2024, a series of lectures were organised from 24th - 28th June, 2024 across all DOS/ISRO Centres/Units.

Programme was inaugurated by Secretary, DOS / Chairman, ISRO in the presence of Chairman, Capacity Building Commission & ISRO Centre Directors.

- During the month, two patents & one Copyright were granted and three patent application were filed at IPO.

F. Training:

| SI No | Name of the course | Duration of the training | Number of participants |
|---|--|---------------------------------|---|
| 1 | One - week certificate course on 'Geoinformatics for Range Forest Officers (RFOs) from Odisha Forest Rangers College, Angul | June 10-14 2024 | 46 |
| 2 | One-week course on 'RS & GS for environmental studies' for school students | June 10-14 2024 | 87 |
| 3 | Centre for Space Science & Technology Education in Asia and the Pacific (CSSTEAP) organized a Two week course on SAR-RS for land reformation studies | June 03-14 2024 | 27 participants from 13 countries |
| DLP/online virtual mode courses and programmes | | | |
| 4 | Geospatial Technology for digital agriculture | June 24-28 2024 | 3062 participants from 425 network institutions |
| 5 | Online training on 'Space technology and applications ' for school teachers | June 10-14 2024 | 1750 participants |

G. Safe & Sustainable Space Operations:

- Daily SOPA (Space Object Proximity Analysis) and re-assessment of close approach situation were performed for 24 LEO and 30 GSO satellites.
- Atmospheric re-entry predictions were carried out for 54 large objects. Electrical passivation was carried out for INS-2B before its atmospheric re-entry.
- PMD (post mission disposal) of Scatsat-1 is in progress through a sequence of perigee reduction manoeuvres.

H. International Cooperation:

- An Indo -Switzerland technical meeting on space collaboration was organised on June 26, 2024 and discussed collaboration opportunities in space science, earth observation and space situational awareness.
- Ambassador Extraordinary and Plenipotentiary of the Kingdom of Thailand to the Republic of India, H.E. Ms. Pattarat Hongtong, met Shri Somanath S., Chairman, ISRO/Secretary, Department of Space at the U R Rao Satellite Centre (URSC) in Bengaluru on June 25, 2024.

- Second ISRO – MRIC (Mauritius Research and Innovation Council) Joint Working Group meeting was held on Jun 28, 2024. The Project Plan Document for realizing the India – Mauritius joint satellite was approved.
- The 9th review meeting for SARAL satellite mission was organized on June 21, 2024 and decided to extend the satellite operation till end 2025.
- ISRO hosted the 43rd annual meeting of SFCG (Space Frequency Coordination Group) at Bengaluru during June 4-12, 2024. 78 delegates from 15 space agencies and 2 observer groups participated in the deliberations.
- The Chandrayaan-3 Mission Team has been selected by International Academy of Astronautics (IAA), Paris for the award of ‘2024 Laurels for Team Achievement’. This will be conferred to Team ISRO at the IAA Award Ceremony scheduled on October 13, 2024 in Milan, Italy.
- A Four member ISRO/DOS delegation led by Scientific Secretary, ISRO participated in the 67th session of UNCOPUOS held during June 19-28 at Vienna, Austria. The delegation delivered national statements and made technical presentations during this session.

I. IN-SPACE Activities:

- IN-SPACE- Industry meet 2024 was held on June 06, 2024 at Ahmedabad. Around 200 delegates from industries, start-ups, academia, Government and investors participated in the meet.
- Pre-Incubation Entrepreneurship (PIE) programme module, Model Rocketry module, CANSAT India Student Competition 2024 module released and registration started.
- MoU signed between IN-SPACE and Ministry of Posts, Telecommunication and Information Technology, Govt. of Bangladesh for collaboration on a Joint Small Satellite Project, during the visit of the Hon'ble PM of Bangladesh to India, on June 22, 2024.
- IN-SPACE issued authorization towards
 - establishment and operations of an earth observation satellite.
 - provisioning of on-board satellite capacity over India for providing communication services.
- IN-SPACE has registered 02 additional Indian Entities who wish to disseminate/sell the primary data pertaining to Indian territory and Ground Sampling Data (GSD) > 30 cm commercially from the Earth Observation / Remote Sensing satellites.
- Three ISO standards have been cleared for adoption in BIS:
 - ISO 24917:Space Systems-General test Requirements for Launch Vehicles
 - ISO 15864:Space Systems-General test methods for Spacecraft, subsystems and units
 - ISO 14303: Space Systems – Launch vehicle to Spacecraft interface

J. NSIL Activities:

- The pre-bid meeting for the production of LVM3 launch vehicles under a Public-Private Partnership (PPP) model has been successfully conducted.
- NSIL signed dedicated Launch Service Agreement (LSA) with M/s Space Machines Company, Australia for launching their satellite 'Optimus' onboard SSLV during 2026.
- Pre-Shipment Review (PSR) for GSAT N2 has been completed.
- NSIL received the requirement of HTS capacity from VSAT operator to meet their satellite connectivity.
- NSIL signed migration Amendment with users for the transfer of user network from GSAT-8 to other satellites.
- NSIL initiated IRS data Dissemination to foreign customers on 'commercial' basis.
- NSIL processed more than 111 domestic orders through Bhoonidhi-NSIL Interface.
- NSIL is in process of signing 10 Technology Transfer Agreements (TTAs) with Indian industries.

2. No of Cases of 'Sanction of Prosecution' pending for more than three months: NIL

3. Particulars of cases in which there has been a departure from the Transaction of Business Rules or established policy of the Government: NIL

4. Status of ongoing Swachhta Abhiyan (progress under Special Campaign):

As per the guidelines of Government, Department has chalked out an action plan for implementation of Swachhta Pakhwada 2024 during 1st to 15th February, 2024 and communicated to DDWS and uploaded on Swachhta Samiksha portal.

Based on this action plan, DOS/ISRO Centres/ Units/ ABs/ CPSEs have observed Swachhta Pakhwada 2024 from 1st to 15th February, 2024 with active participation of senior officials, employees, housing colony residents, CIFS personnel, etc. The photograph of events carried out during Pakhwada were uploaded on Swachhta Samiksha Portal.

5. Status of Rationalisation of Autonomous Bodies:

EMC has recommended that NARL be governmentalized. The recommendations of the committee in respect of NARL is under review.

All the AB's under the Department namely, IIST, PRL, NARL & NESAC have been brought under Treasury Single Account.

6. Vacancy position of senior level appointments in the Ministry/Department including Autonomous Bodies/PSUs:

The detailed status regarding all the posts pertaining to Department of Space has been updated on AVMS. The status of updation of vacancy as on 30.06.2024 is as follows:

- Total number of posts required to be entered on AVMS: - 25
- Number of posts filled as on date: - 18
- Number of posts totally vacant as on date: - 07
- Number of posts under premature repatriation – 00
- Number of posts under additional charge arrangement: - 01
- Number of posts that would fall vacant during the next 06 months: - 01

7. List of cases in which ACC directions have not been complied with :- NIL.

* * *