

**GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE**

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**Sub: Monthly Summary of Department of space for the month of  
December 2021**

**PART- I (Unclassified)**

**1. Important policy decisions taken and major achievements during the month**

**A. Satellite Missions:**

**I. PSLV-C52 / EOS-04 Mission:**

PSLV-C52 is scheduled to launch EOS-04, an earth observation satellite in the 1<sup>st</sup> quarter of 2022. Launch vehicle and satellite integration and testing activities are in progress

**II. PSLV-C53/ EOS-06:**

PSLV-C53 is scheduled to launch EOS-06, an earth observation satellite in the 1<sup>st</sup> quarter of 2022. Launch vehicle and satellite integration and testing activities are in progress

**III. 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 1<sup>st</sup> quarter of 2022.

**B. Earth Observations:**

- **National Hydrology Project (for MoJS):** National level daily simulated water balance components & daily snow cover maps over Indian Himalaya were generated, web-published and shared with Ministry of Jal Shakti. Open Path Eddy Covariance systems are made operational at 7 flux tower locations.
- **Monitoring Watersheds Using Geospatial Technologies (IWMP, for MoRD):** 500 High resolution data satellite scenes of 2019-20 have been shared with respective States for monitoring the impact of watershed development interventions.
- **Agriculture Technology Project (for Govt. of Maharashtra):** Methodology developed for semi-automated mapping of harvest area progress and validated for kharif 2021 harvest.
- **Crop Insurance Decision Support (for AICIL):** Crop health index generation for paddy crop for all the 22 districts of West Bengal is in progress.
- **Bhuvan Panchayat Web Portal (for M/o Panchayati Raj):** Development of geospatial tool for planning Panchayat level amenities is in progress.
- **Biodiversity characterization at community level in India using Earth observation data (for DBT):** Community level vegetation classification completed for Chandoli National Park and Biligirirangan Wildlife Sanctuary.

- **Active-Passive algorithm for estimating Soil Moisture over cropland (for utilisation by MoA&FW, and MoJS):** was implemented to generate soil moisture at 500m using SMAP-ALOS2 PALSAR, SMAP-Sentinel-1 and SMAP-NovaSAR, as pre-cursor to the launch of RISAT-1A.
- **Soybean crop yield estimation (for MoA&FW):** Methodology for space input based yield estimation is validated in 15 districts of Maharashtra using DES reported mean yield
- **Geoportals- Bhuvan :** (i) Bhuvan Wiki application is made live (ii) Bhuvan API is updated with Time Series Land Use/ Land Cover statistics (iii) 70K user account were generated for Yuktdhara – Planning Portal users for panchayat level planning. **Bhoonidhi:** (i) Design and development of Bhoonidhi On Demand Processing (ODP) framework is in progress (ii) Full resolution satellite data visualization is enabled **MOSDAC:** Near-real time update provided for Cyclone JAWAD in Indian Ocean.
- **Disaster Management Support Programme (for MHA, NDMA, SDMAs):**
  - **Near Real Time Flood Mapping & Monitoring:** Flood inundated areas were mapped and monitored in the states of AP, Odisha, Karnataka, Tamil Nadu and West Bengal using multi-mission satellite data.
    - 12 inundation maps/ value added products were generated and disseminated to MHA, NDMA, SDMAs, etc.
  - **Flood Hazard Atlas:** Preparation for Uttar Pradesh and West Bengal states are in progress.
  - **Forest Fire :** Daily near real time operational active forest fire alerts (entire India) are generated and disseminated.
  - **International Charter (IC)/ Sentinel Asia:**
    - IRS Satellite datasets were processed and uploaded to Sentinel Asia webserver pertaining to 2 emergency observation requests of Indonesia & Philippines.
- **Satellite Data Acquisition and Dissemination:** 2,033 satellite passes were acquired and archived. 3,16,692 satellite data products were disseminated; including 2,251 products through data supply chain and 3,14,441 as free downloads through MOSDAC & Bhuvan.

### C. Capacity Building:

1.	Geo- informatics for Biodiversity conservation planning” (06-17 Dec, 2021)	9788 participants from 4097 Institutes
2.	Geospatial modelling driven urban hazard and risk analysis (Dec 21)	6173 participants from 962 Institutes

#### **D. International Cooperation:**

- **Technology Protection Agreement** signed on December 01. between the Government of India and the Government of the Russian Federation to enable cooperation in research and use of outer space for peaceful purposes, building and operation of launch vehicles and ground-based space infrastructure.
- Two **Technical Implementing Plans (TIP)** signed on December 16 between ISRO and European Space Agency (ESA) to avail ESA's ground station support for ISRO's ADITYA-L1 and Chandrayaan-3 missions.

#### **2. Compliance of CoS Decisions:**

No of CoS decisions pending for compliance	Proposed action plan/time lines for compliance of CoS decisions	Remarks
3942/12 5205/5	Under implementation	—
4600/8 5205/1 5205/2 5205/3 5205/6 5291/1 5313/2	Under consideration	

3. **No of Cases of “Sanction for Prosecution” pending for more than three months :- NIL**
4. **Particulars of cases in which there has been a departure from the Transaction of Business Rules or established policy of the Government: - NIL**
5. **Status of implementation of e-Governance**

Total No. of files	Total No. of e-Files
1307	818

#### **6. Status of Public Grievances:**

No. of Public grievances readdressed during the month	No. of Public Grievances pending at the end of the month.
16	130

**7. Status of Compliance of ACC's directions on ACC Vacancy Monitoring System.**

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 31.12.2021 is as follows:

- Total number of posts required to be entered on AVMS: - 26
- Number of posts filled as on date: - 21
- Number of posts totally vacant as on date: - 05
- Number of posts under premature repatriation - 00
- Number of posts under additional charge arrangement: - 02
- Number of posts that would fall vacant during the next 06 months: -03

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