



## Indian Space Policy 2023

**For Prelims:** Indian Space Policy 2023, NewSpace India Limited, IN-SPACe, SAMVAD Program, Defence Space Agency (DSA), Starlink-SpaceX, Space debris, Weaponization of outer space, Project NETRA.

**For Mains:** Challenges Related to Space Sector, Enhancing Space Self-Defence Capacities, Space 4Women in India.

### Why in News?

The **Indian Space Policy 2023** was approved by the **Cabinet Committee on Security**. The policy **seeks to institutionalise [private sector participation in the space sector](#)**, with ISRO focusing on **research and development of advanced [space technologies](#)**.

### What are the Major Provisions of Indian Space Policy 2023?

#### ▪ About:

- The policy will pave the **way forward with much-required clarity in space reforms** and augment private industry participation to drive the space economy opportunity for the country.

#### ▪ Delineation of Roles:

- The policy delineates the roles and responsibilities of **[Indian Space Research Organisation \(ISRO\)](#)**, **space sector PSU [NewSpace India Limited \(NSIL\)](#)**, and **[Indian National Space Promotion and Authorization Center \(IN-SPACe\)](#)**.
- **Strategic activities related to the space sector will be carried out by NSIL**, which will work in a demand-driven mode.
- **IN-SPACe** will be the interface between **ISRO and non-governmental entities**.
- **ISRO will focus its energies on developing new technologies**, new systems and research and development.
- The operational part of ISRO's missions will be moved to the **NewSpace India Limited**.

#### ▪ Entry of Private Sector:

- The policy will allow the **private sector to take part in end-to-end space activities** that include building satellites, rockets, and launch vehicles, data collection and dissemination.
- The **private sector can use ISRO facilities** for a small charge and is encouraged to invest in creating new infrastructure for the sector.

#### ▪ Impact:

- The policy will help India increase its share in the global space economy substantially from less than **2% to 10% in the future**.

### What is the Current Status of India's Space Sector?

#### ▪ About:

- The **Indian Space Sector has been globally recognised for building cost-effective satellites**, and now India is even taking foreign satellites to space.

- As part of **India's commitment to the [Geneva Conference on Disarmament](#)**, the country continues to advocate peaceful and civilian use of outer space and oppose any weaponization of space capabilities or programs.
- ISRO is the **6<sup>th</sup> largest space agency in the world** and holds an exceptional success rate.
  - With over **400 private space companies**, India ranks fifth globally in no. of space companies.
- **Recent Developments in India's Space Sector:**
  - **Defence Space Agency:** India has recently set up its [Defence Space Agency \(DSA\)](#) supported by the **Defence Space Research Organisation (DSRO)** that has the mandate to create weapons to **"degrade, disrupt, destroy or deceive an adversary's space capability"**.
    - Also, the Indian Prime Minister launched the **Defence Space Mission** at the Defence Expo 2022, Gandhinagar.
  - **Expanding Satellite Manufacturing Capabilities:** India's satellite-manufacturing opportunity **will reach USD 3.2 billion by the year 2025** (in 2020 it was USD 2.1 billion)
  - **SAMVAD Program:** To encourage and nurture space research among young minds, ISRO launched its **Student Outreach Program called SAMVAD** at its Bengaluru facility.

## What are Current Major Challenges Related to the Space Sector?

- **Lack of Regulations on Commercialisation:** The **commercialization of outer space** is accelerating due to the development of private satellite expeditions for **Internet services ([Starlink-SpaceX](#)) and for [space tourism](#)**.
  - It is possible that if **no regulatory framework is put in place**, rising **commercialisation may lead to monopolisation in the future**.
- **Rising Space Debris:** As outer space expeditions increase, **more [space debris](#) will accumulate**. Because objects orbit Earth at such high speeds, **even a small piece of space debris can damage a spacecraft**.
- **China's Space Leap:** Compared to other countries, the Chinese space industry has grown rapidly. It has **successfully launched its own navigation system, [BeiDou](#)**.
  - It is very likely that China's Belt Road Initiative (BRI) members will contribute to or join the Chinese space sector, **solidifying China's global position and may lead to [weaponization of outer space](#)**.
- **Increasing Global Trust Deficit:** An **arms race for weaponization of outer space** is creating an **environment of suspicion, competition, and aggressiveness** across the globe, potentially leading to conflict.
  - It would also **put at risk the entire range of satellites as well as those involved in scientific explorations** and communication services.

## Way Forward

- **Defending India's Space Assets:** In order to effectively defend its space assets, including **debris and spacecraft**, India needs **reliable and accurate tracking capabilities**.
  - [Project NETRA](#), an **early warning system** in space to detect debris and other hazards to Indian satellites is a good step in this direction.
- **Permanent Seat in Space:** India should take the **initiative to cooperate with international bodies** and plan for a **planetary defense program and joint space missions in the long term**.
  - Also, with the [Gaganyaan mission](#), **ISRO has begun to focus on manned space flight** as part of its rethinking of India's space presence.
- **Replicating Space4Women in India:** [Space4Women](#) is a **United Nations Office for Outer Space Affairs (UNOOSA)** project that promotes gender equality and women's empowerment in the space sector.
  - It would be beneficial to **initiate space awareness programmes at the rural level in India**, and **College-ISRO Internship corridors can be built specially for female students** to introduce them to the possibility of stretching their wagon beyond earth.
  - [AzaadiSAT](#), made by **750 schoolgirls** from India is a firm step in this direction.
- **Technological Intervention for Cleaner Space:** Technologies like **self-eating rockets, self-**

**vanishing satellites and robotic arms** to catch space debris can make India an explorer cum problem solver in the space arena.

## UPSC Civil Services Examination, Previous Year Question (PYQ)

### ***Prelims***

**Q.1 In the context of space technology, what is “Bhuvan”, recently in the news? (2010)**

- (a) A mini satellite launched by ISRO for promoting the distance education in India
- (b) The name given to the next Moon Impact Probe, for Chandrayaan-II
- (c) A geoportal of ISRO with 3D imaging capabilities of India
- (d) A space telescope developed by India

**Ans: (c)**

### ***Mains***

**Q.1** What is India’s plan to have its own space station and how will it benefit our space rogramme? **(2019)**

**Q.2** Discuss India’s achievements in the field of Space Science and Technology. How the application of this technology helped India in its socio-economic development? **(2016)**

**Source: BS**

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