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The Big Picture : Draft Spacecom Policy and India's Space Sector

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Why in News?

The Union government has permitted for the reforms in the space sector by allowing private players' participation, the **Indian Space Research Organisation (ISRO)** has released the draft of a new **Spacecom Policy 2020**.

- The policy will regulate the commercial use of satellites, orbital slots, and ground stations for communication needs. The policy also details how private players can get authorization for setting up new communication satellites and ground stations.

- The private players in the space communication sector will also enable India to keep pace with the growing demand for satellite-based broadcasting, network connectivity, and global mobile personal communication.

Key Points

- The space policy has been drafted in the form of spacecom for reforming the Indian space sector.
- The policy will regulate the commercial use of satellites, orbital slots, and ground stations for communication needs.
- The private players in the space communication sector will enable India to keep pace with the growing demand for satellite-based broadcasting, network connectivity, and global mobile personal communication.
- The government wants private players to participate in the space sector not as a vendor but as a partner.

The Policy

- The **Spacecom Policy - 2020** enables the activities of space based communications under five major statements.
- Spacecom Policy-2020 states that the Government of India shall:
 - Adopt measures to **monitor and authorize use of space assets** for communication to or from Indian territory.
 - **Ensure protection of space assets** already put in place and adopt measures to bring in more space assets under the administrative control for enhancing ability to utilize space based communication for national needs.
 - Promote increased **participation of commercial Indian industry** to provide space based communications both within the country and outside.
 - Concentrate on **realization of space based communication systems** for addressing the requirements that **cannot be effectively, affordably and reliably satisfied by the commercial Indian industry** either because of national security concerns or economic factors.
 - **Provide a timely and responsive regulatory environment** for the commercial Indian industry to establish and operate space based communication systems.

The Salient Features

- **Governs industries:** The policy will govern the commercial use of orbital slots, satellites, and ground stations used for communication.
- **Facilitating the private companies:** The policy has been framed to help the private players do the job in the most efficient manner with ease.

It will also boost the actions of private players in doing business in the space communication sector, in India as well as doing business outside India.

- **Allowance to only Indian entities:** Only Indian entities will be allowed to seek authorization for orbital slots for new satellites, services based on existing satellites and setting up new ground stations.
There are no restrictions in terms of satellite owning, ground session setup and providing services to the common people.
- **Owning satellites and responsibilities:** Private industries are allowed to use the ISRO satellites and they can also have their own satellites as well.
The policy also says that any company sending a communication satellite in space will also be responsible for any damages to other objects in space and the environment.
- **India and the global spacecom sector:** The new policy will enable India to meet the growing demand for satellite-based broadcasting, network connectivity, and global mobile personal communication, and will help India attain a significant position in the global space communication sector.

Why Private Companies in the Space Sector?

- ISRO is over burdened by its regular operations such as launch of satellites, construction of launching vehicles etc which are becoming hurdles in ISRO's way for working in new projects. Hence, ISRO wants these regular operations to be conducted by private players.
- **Role of Private Players:** The Private players can participate in setting up of ground stations for space crafts which constitute 48% of the space sector budget and also in application of space technology which result in 45% of space economy.

ISRO and its Projects

- **Gaganyaan:** Sending humans in space and bringing them safely back to earth.
- **Chandrayaan 3:** To land safely on the moon, Chandrayaan-3 is likely to be launched in early 2021.
- **Propulsion system in the satellite:** ISRO is working on launching vehicles with "Electric Propulsion System" so that large satellites can be sent into space by the agency.
- **Heavy lift launcher:** ISRO is conducting preliminary research for the development of a super heavy- lift launch vehicle which is planned to have a lifting capacity of over 50-60 tonnes Geosynchronous Transfer Orbit (GTO).

Coordination with Other Space Agencies

- **NASA-ISRO Synthetic Aperture Radar Mission (NISAR):** NASA's first global Search And Rescue (SAR) mission, in partnership with ISRO, providing data for studying hazards, changes in glaciers and ice sheets, and global environmental.

- **TRISHNA:** ISRO, and the French space agency **CNES** have partnered in developing advanced upgradation satellites like TRISHNA to monitor the water cycle to help in finding out proper ways to utilize it.
- **Gaganyaan project:** The four Indian astronauts training in Russia for the Gaganyaan project – India’s first manned space mission.
- **Lunar Polar Exploration Mission (LUPEX):** Collaboration between ISRO and Japan Aerospace Exploration Agency (JAXA) to have a combined mission, to send a lunar rover and lander to explore the south pole region of the Moon in 2024.
- **Duchifat 3:** Last year, a small remote sensing satellite weighing 2.3 kilogram, built by students in Israel, was part of the nine commercial satellites launched by ISRO along with its own earth observation satellite.

Challenges

- The major concern is to make sure that this high precedent technology should not go in the wrong hand.
- The rules regarding use of images taken by a spacecraft for domestic purposes and for other purposes are very stringent and there is need to have very flexible rules for the private people to do the job, at the same time making sure that it is not used in a wrong way.
- ISRO is not fully self-sufficient in its launch vehicle. For bigger satellite launches, ISRO is still dependent on foreign countries.
- The novel coronavirus pandemic has affected ISRO programs, due to which many programs of ISRO have been delayed including the launch of Chandrayaan-3.

Way Forward

- **Preventing the misuse of technologies:** The government should make laws regarding the operation of private players in both the commercial as well as the strategic part of the space sector, so that technology can't be misused.
- **Encouraging the young talent:** Ensuring more opportunities for the youngsters to study science and take part in the space sector.
Their enthusiasm and talent should be used in an effective and holistic manner.

Conclusion

- With the new Spacecom Policy 2020, Private players are not only going to serve the country but they are also going to have a big share from the International market.
- It is important for all the stakeholders to take India as a technical powerhouse at the global level so that very soon India can lead the global community in the technological area.