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New Space Policy for New Space Age

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This article is based on **Let's go further in our tryst with outer space, A home in space, Soaring to the moon.** It talks about the need for India's Space programme to evolve into a space power and develop its space private sector.

Recently, the **Indian Space Research Organisation** (ISRO) had announced that nearly 20 space missions will be launched in the near future like **Chandrayaan-3, Gaganyaan** etc. For four decades since its inception in the 1969 ISRO apart from building its capacities, focused primarily on harnessing space technologies for societal and scientific benefits.

However, as developments in Artificial Intelligence (AI) and big data analytics have led to the emergence of the **new space age**, India's space programme needs to take two additional leaps i.e. foster a private space industry and start work on a space force.

Planned Space Projects of ISRO

- After the mission to Moon (Chandrayaan 1 and 2) and Mars (Mangalyaan), the government has proposed a manned space flight (Gaganyaan) before 2022.
- ISRO would be undertaking many prolonged space exploration projects and sending many astronauts into space. In this pursuit, ISRO has declared its intention to build a permanent space station for itself, possibly in the next five to seven years.
- Aditya-I will be India's first solar mission scheduled to be launched in 2020. Similar project is planned for Venus.

Need to Develop Private Capacity in Space

- **Space tourism** is one among several opportunities that Indian businesses may be keen to explore.

A policy framework to enable private participation in this sector, of course, would have to be formulated by the government.

- **Small satellite revolution** is underway, globally, 17,000 small satellites are expected to be launched between 2020 and 2030.
A strong private sector in space will help India to tap into this lucrative commercial space launch market.
- **Increasing space competitiveness**
 - Singapore is offering itself as a hub for space entrepreneurship based on its legal environment, availability of skilled manpower and equatorial location.
 - New Zealand is positioning itself as a location for private rocket launches.
 - China, too, has changed its rules to allow private commercial space activity.
- ISRO has been a genuine **global pioneer of aerospace cost compression** on several fronts. Cost-effectiveness has given the agency a distinct edge in the commercial arena of satellite launch services.
With such a valuable base of expertise within the country, it is only natural to expect the emergence of a private space industry that could prove globally competitive.

Significance of Becoming a Space Power

- Space is emerging as a **potential fourth arm of the country's defence setup**.
- With US, Russia and China already in pursuit of becoming a Space power, India will need to equip itself appropriately to meet emerging security challenges.
- Space power has the ability to use space while denying reliable use to any foe.
 - India already has significant ability to use space. But its ability to deny space use to an adversary is, understandably, negligible.
 - When it comes to satellites, India has a handful of military satellites in operation, compared to over 40 civilian ones. Our first dedicated military satellite was launched only in 2013.
- However, India has made some progress in pursuit of becoming a space power.
 - Recently conducted Mission Shakti has demonstrated India's capability to target enemy satellite.
 - Newly instituted **DSA (defence space agency)** will be supported by a defence space research organization (DSRO) has the mandate to create weapons to "degrade, disrupt, destroy or deceive an adversary's space capability".

Way Forward

- India needs to structurally separate the regulatory, commercial and scientific research elements of the space programme.
Funding on Space Research and development must be enlarged and ISRO & private research institutions should work be encouraged to work in tandem.

- India needs a **new space policy**—one that aims to harness space as a growth sector for the economy, attracts private investment and creates jobs, even as it promotes scientific breakthroughs and helps leapfrog developmental challenges.
- There is need to establish an **independent regulator** that governs both ISRO and new space operators on a level playing field.
- In order to **effectively defend our space assets**, India must have reliable and accurate capabilities to track space objects, from debris and spacecraft to celestial bodies.

Since **accurate tracking** forms the basis of almost every conceivable action in space, therefore, this crucial capability must be developed indigenously.

- For space defence to be effective, India must acquire a **minimum, credible capacity** across the various types of space weapons, physical, electronic and cyber.

Failures of the space missions can build an overall perception about wastage of money and time. Losses in space missions can seriously impact the future of cooperation between space powers. Therefore, in the new space age, India's space policy must acquire a new seriousness that can tap into the creative energies of private entrepreneurs and bolster India into a space power.

Drishti Mains Question

Discuss the significance of becoming a space power for India.