ISRO’s Path to 100th Satellite Launch

Why in news?

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With the recent launch of ISRO's 100th satellite, it is imperative to know the strengths and track its progress over the years.

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Institution building is a key to great power making

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What is the recent launch?

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- ISRO recently launched its 100th satellite Cartosat-2, a weather observation satellite.
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- The PSLV carried along with this, 30 other satellites from its spaceport of Sriharikota in Andhra Pradesh.
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- They include two satellites from India and 28 satellites from six countries - Canada, Finland, France, Korea, the UK and the US.
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How has ISRO evolved?

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- The Indian National Committee on Space Research was constituted by the Indian government in 1962, with Vikram Sarabhai as its chairman.
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- This was mandated to look into the possibility of having a national space

programme.
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- ISRO started with the launch of Nike-Apache Sounding rockets from Thumba way back in 1963.
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- The “leapfrogging” for India came with the famous SITE (Satellite Instructional Television Experiment) launch in 1975.
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- This was an experimental satellite communication project to provide educational television programmes on agriculture and farming.
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- Jointly developed by ISRO and NASA’s cooperation, it helped both farmers and Indian space scientists to gain technical expertise.
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- Thereafter ISRO has made strides with many of its successes and is now a major player in the field of outer space.
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What are its strengths?

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- **Personnel** - ISRO has always believed in the “homegrown” talent and has provided them enough chances and platform.
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- Most of its engineers and scientists come from departments of basic sciences from India's universities.
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- **Objective** - When Soviets launched the Sputnik-1 in the late 1950s, a cold war of space rivalry began between them and the Americans.
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- Being a newly independent nation and facing resource scarcity, India never saw outer space as a battleground for supremacy.
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- The primary idea with ISRO was to use space technology for developmental purposes.
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- The Indian space programme, since its inception, has primarily been a “civilian” space programme.
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- **Institution** - ISRO, as an institution, started functioning only from August 15, 1969.
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- As an institution, it has been a standing proof for the age-old proverb - “institution building is a key to great power making”.
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- It started delivering successfully almost every time and even after some failures, ISRO has come out stronger every time.
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What were the challenges?

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- The National Committee on Space Research was constituted in 1962, the same year when India lost a costly war to China.
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- The then condition of India’s finance was not conducive for any space goals and determinations.
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- Thus, engineers and scientists in Indian space programme were always under a burden of lot of expectations to prove the purpose.
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- There were critics arguing against spending on “elite” things like outer space when millions were toiling hard under poverty.
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- However, the resolve of ISRO and political will of the ruling dispensation in the 1960s made India take forward its space dreams.
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- ISRO still works within very low budgets, as compared to the huge budgets of NASA and other space programmes.
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Source: Financial Express

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Quick Fact

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Thumba

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- Thumba is a suburb of Thiruvananthapuram, the capital of Kerala.
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- The Thumba Equatorial Rocket Launching Station (TERLS) is an Indian spaceport operated by the ISRO.
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- Thumba is located very close to the *magnetic equator* of the Earth, making it the ideal location to conduct atmospheric research.
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- It is ideal for low-altitude, upper atmosphere and ionosphere studies.
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- It is currently used by ISRO for launching sounding rockets/research rocket (an instrument-carrying rocket to take measurements and perform scientific experiments during its sub-orbital flight).
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Magnetic Equator

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- The magnetic equator is defined as the line around the earth where the magnetic field is horizontal, or parallel to the earth’s surface.
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- It does not circle the earth as a smooth line like the geographic equator, but instead it meanders north and south.
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