

India To Get It's New Spaceport in Kulasekarapattinam, Tamil Nadu

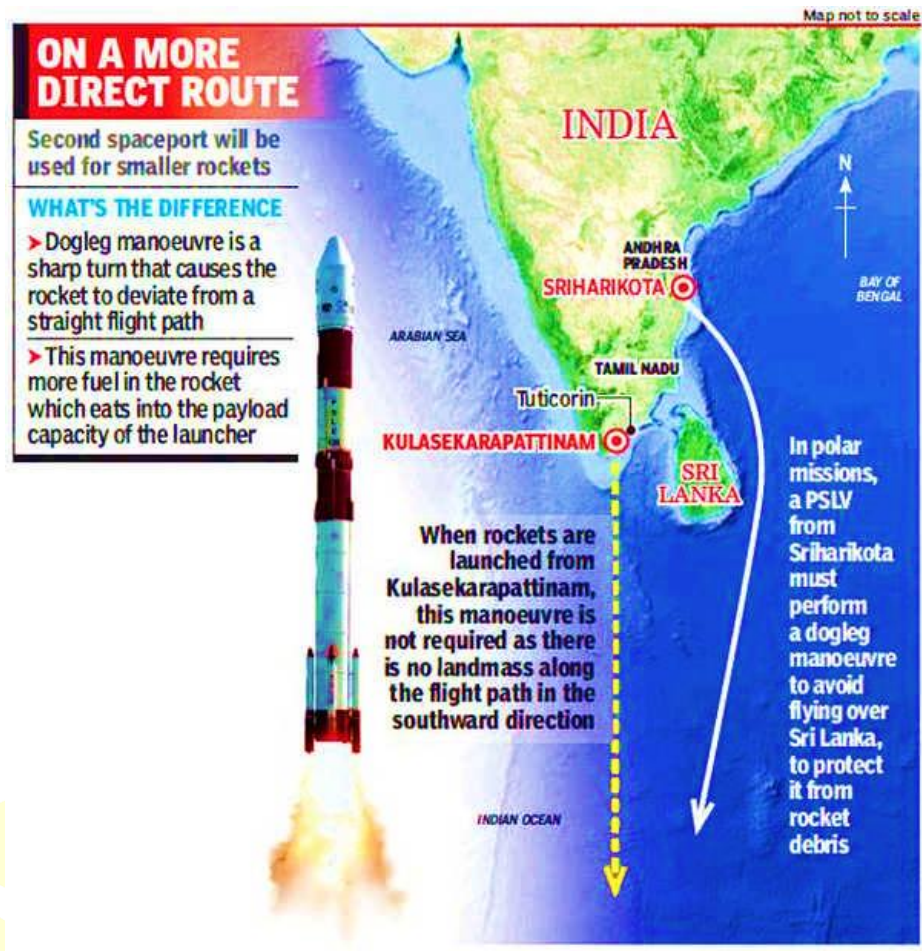
Why In News

- Prime Minister Narendra Modi will lay the **foundation stone for Indian Space Research Organisation's second spaceport** coming up at Kulasekarapattinam in the district on February 28. The ISRO has commenced land acquisition for its second launchpad in Kulasekarapattinam, a **town in the Thoothukudi** (Tuticorin) district of Tamil Nadu.



Need For Another Launchpad

- The **PSLV is designed to launch satellites** into pole-to-pole, or polar, orbits around Earth.
- However, it can't enter into such an orbit straightaway after launch because its trajectory **needs to avoid flying over Sri Lanka**, protecting its popular centres from any debris from the rocket.
- So once the **rocket lifts off from Sriharikota**, it flies further east to avoid Sri Lanka and then steers itself back towards the South Pole.
- This **manoeuvre requires more fuel**, and for a smaller rocket like the SSLV, the addition could eat into its already limited payload capacity and reduce the rocket's value for Antrix, ISRO's commercial operator.
- By setting up a spaceport in **Kulasekarapattinam the SSLV will** lift off over the Lakshadweep Sea and won't have to swerve around Sri Lanka as it climbs to higher altitudes.



Significance Of Thoothukudi's Location:

- **Proximity to the seashore** makes Thoothukudi ideal for “straight southward” launches. From Sriharikota, such southward bound launches are not possible as the rockets have to fly around Sri Lanka.



- **Nearness to the equator:** Like the Sriharikota spaceport in the Satish Dhawan Space Centre, Thoothukudi was selected as a spaceport due to its nearness to

the equator. A rocket launch site should be on the east coast and near the equator.

- ISRO has its **Liquid Propulsion Systems Centre (LPSC)** at **Mahendragiri** in Tirunelveli district, where it assembles the second and fourth stage engines for the PSLV. Instead of transporting the second and fourth stages to Sriharikota from Mahendragiri, it would be easier to shift them to the launch pad if it is built in Kulasekarapattinam, which is around 100 km away.



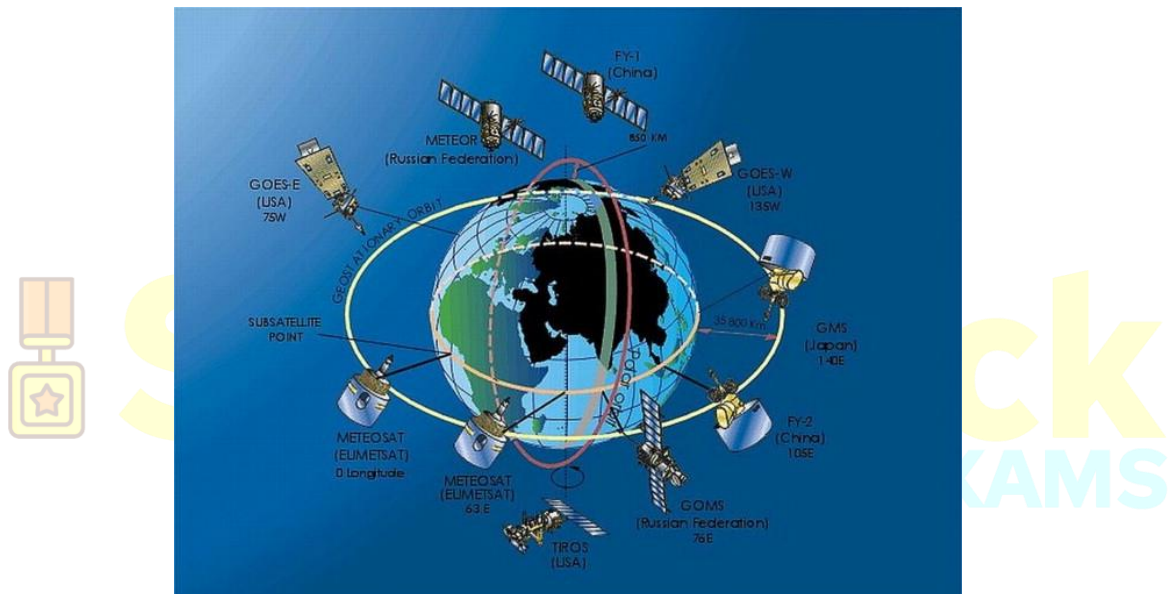
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All you Need To Know

- ISRO's first and only spaceport, the **Satish Dhawan Space Centre (SDSC)**, is located in Sriharikota, about 100 km north of Chennai, in the state of Andhra Pradesh.



- The organisation launches its **PSLV and GSLV rockets** from here.
- The **SDSC, setup in 1971**, currently has two active launchpads.
- The second spaceport at **Kulasekarapattinam is expected** to provide an important advantage to ISRO's upcoming **Small Satellite Launch Vehicle (SSLV)**, a smaller counterpart of the PSLV.
- While the existing space centre at Sriharikota will continue to launch **heavier satellites** to the predetermined orbits with its launch vehicles for a range purposes, the new facility coming-up on 2,233 acres of land at Kulasekarapattinam near Tiruchendur will initially concentrate on launching smaller payloads like **nano and micro satellites**.



- The Prime Minister, after **addressing a BJP rally to be organised** at Tirupur on February 27, to mark the conclusion of the party's State president K. Annamalai's State-wide yatra, will leave for Thiruvananthapuram.
- He will reach VOC Port, Thoothukudi, the next day by helicopter to lay the **foundation stone for the new facilities** to be created in the seaport including mechanisation of north cargo, establishment of 5 million litres a day desalination plant and the much-awaited outer harbour development to be taken-up on an outlay of over ₹7,000 crore.
- Since the ISRO has already started constructing compound wall around the **2,233 acres of land acquired** for the Kulasekarapattinam spaceport, Mr. Narendra Modi will lay the foundation stone on the occasion to mark the commencement of physical work of the satellite launch facility.

- ISRO scientists said the Kulasekarapattinam spaceport will **help save fuel** as **satellites launched** from here can directly travel towards south unlike those launched from Sriharikota which fly in the southeast direction after liftoff from the Sathish Dhawan Space Centre to avoid flying over Sri Lanka and takes a sharp manoeuvre towards the South Pole.
- ISRO chief S Somanath had in January said that the new spaceport will give the **space agency higher payload capability** capability and enable lower turnaround time for the launches.



- With the **global small satellite market** projected to grow at a rapid pace across the globe, the state government will launch the Space Industrial and Propellants Park to attract space-related manufacturing and research and development (R&D) firms.
- **Accounting firm KPMG undertook** a detailed study on behalf of the Tamil Nadu Industrial Development Corporation (TIDCO) to explore the feasibility for setting up the new park.
- The new spaceport and the proposed Space park are expected to provide job opportunities to locals and infuse development in and around the coastal town.