

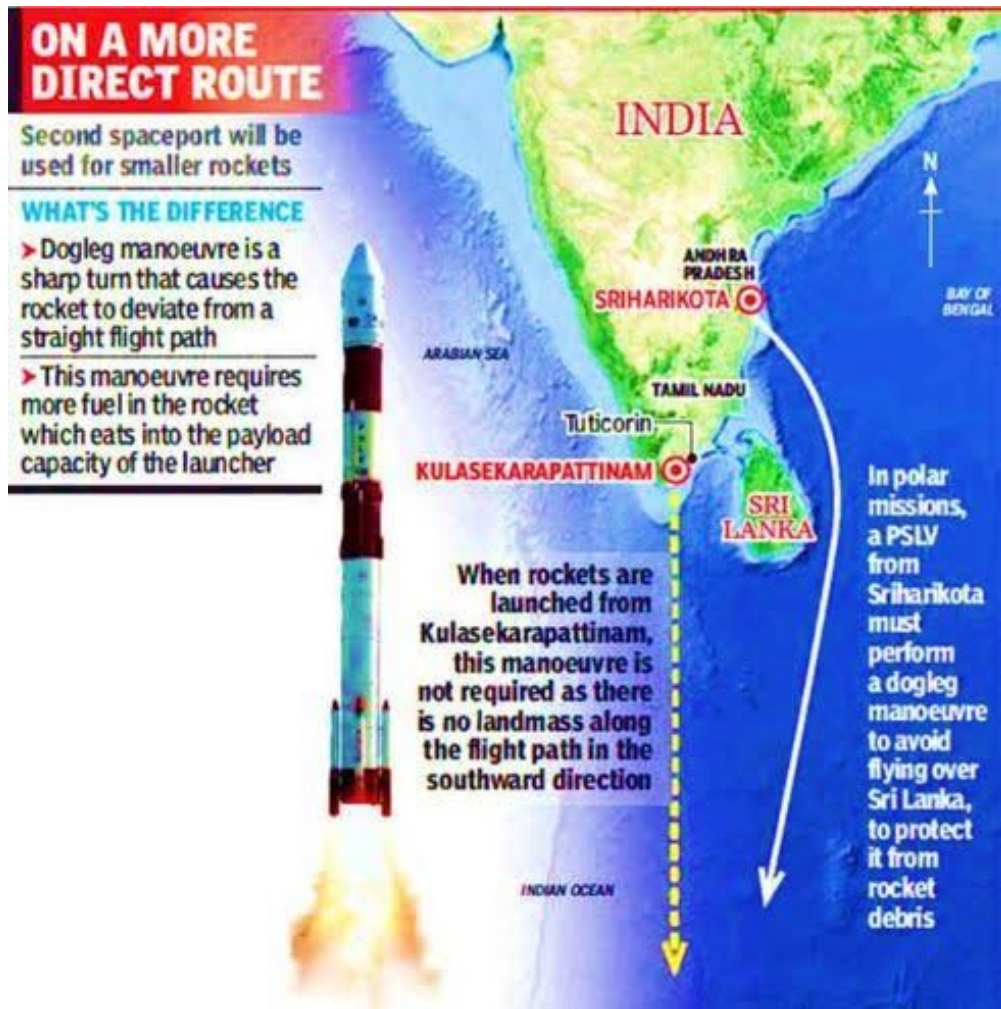
## Kulasekarapattinam Spaceport

*Prelims - Current events of National and International Importance| Space Technology.*

### Why in News?

Recently, the Union Ministry of Science and Technology shared the current status of infrastructure development at the Kulasekarapattinam spaceport.

- **Geographical Location** - It is a ***new spaceport*** coming up at Kulasekarapattinam, a coastal village near Tiruchendur in Thoothukudi district in Tamil Nadu.
- **Objectives** - To enable efficient launches of Small Satellite Launch Vehicles (SSLVs) to Sun-Synchronous Polar Orbits (SSPOs) by providing a direct southward launch path.
- To eliminate the fuel-intensive dogleg manoeuvre required at Sriharikota.
- To enhance payload capacity and reduce launch costs for small satellites, micro and nano class.
- **Financial outlay** - Funds allocated to Kulasekarapattinam spaceport - Rs. 985.96 Crore.
- Fund utilized for the project so far is Rs. 389.58 Crore. (As on 31st July'25).
- **Commission plan** - Targeted in ***Fiscal Year 2026-27***.
- **Advantages in payload capability** - It will enhance the payload capability of ISRO's Small Satellite Launch Vehicle (SSLV), while launching satellites to polar orbits.
- Launches to ***Sun-Synchronous Polar Orbits (SSPO)*** from Sriharikota require complex rocket manoeuvres to avoid spent stages falling over landmasses.
- This will reduce the payload capability.
- The payload capability of the SSLV to SSPO is about 300 kg when launching from Kulasekarapattinam, whereas the capability is inadequate for a useful payload when launching from Sriharikota.



- **Economic advantages** - It encourages non-government entities (NGEs) to conduct commercial launches, supporting India's space economy and generating satellite launch-related services.
- The Kulasekarapattinam launch site is close to ISRO's Propulsion Research Complex in Mahendragiri, Tamil Nadu, making it easier and faster to transport rocket components and reduce costs.

### Quick Facts

<b>Polar satellites</b>	<ul style="list-style-type: none"> <li>• They are placed in polar orbits, moving in a north-south direction across the equator, and are typically launched either southward or northward.</li> </ul>
<b>Sun-Synchronous Orbit (SSO)</b>	<ul style="list-style-type: none"> <li>• It is a type of polar orbit where the satellite passes over the same area at the same local time daily, typically at 700-800 km altitude.</li> <li>• It is ideal for satellites needing consistent sunlight, like those used in remote sensing.</li> </ul>
<b>Small Satellite Launch Vehicles (SSLVs)</b>	<ul style="list-style-type: none"> <li>• They are designed to launch light-weight satellites less than 500 kg into the lower earth orbit at low costs.</li> </ul>

## Reference

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