

4. PSLV (Polar Satellite Launch Vehicle)-C55/TeLEOS-2

Why in News?

- ISRO (Indian Space Research Organization) has recently launched the PSLV (Polar Satellite Launch Vehicle)-C55/TeLEOS-2 mission from the Satish Dhawan Space Centre, Sriharikota in Andhra Pradesh

Highlights

- This is the 57th flight of PSLV and 16th mission using the PSLV Core Alone configuration (PSLV-CA).
- It is a dedicated commercial mission through NSIL (NewSpace India Limited) with TeLEOS-2 as primary satellite and Lumelite-4 as a co-passenger satellite, both belonging to Singapore.
- The scientists used PSLV Orbital Experimental Module-2 (POEM-2) as an orbital platform to carry out the scientific experiments through non-separating payloads carried by it.
- It is an Earth Observation Satellite (EOS) and will be the primary satellite being carried by the rocket.
- In 2015, ISRO launched TeLEOS-1, which was launched into a low Earth orbit for remote sensing applications. ISRO has so far launched nine satellites belonging to Singapore.
- TeLEOS-2 carries a Synthetic Aperture Radar (SAR) payload capable of imaging at 1m full-polarimetric resolution. It will be able to provide all-weather day and night coverage.
- SAR is a type of active radar imaging technology that uses the motion of the radar antenna to create a high-resolution 3D image of the target area.
- It is an advanced 12U satellite developed for the technological demonstration of the High-Performance Space-borne VHF Data Exchange System (VDES).
- “12U” refers to a standardized form factor for CubeSats, which are small satellites with a modular design.
- In the 12U form factor, the CubeSat measures 24 x 24 x 36 cm and has a volume of 20.7 liters.
- It aims to augment Singapore’s e-navigation maritime safety and benefit the global shipping community.
- It is the co-passenger satellite being sent along with TeLEOS-2