

Hyper-Spectral Satellite (HysIS)

Imaging

December 14, 2018

Manifest Pedagogy

ISRO is excelling as both a scientific and a commercial body. Its PSLV prowess is another highlight. Its international collaboration is helping India to grow as a soft power. Hence, ISRO is becoming a big topic in preparation. Despite, weighing its risk to reward ratio, an aspirant has to cover ISRO holistically.

In news

ISRO successfully launched HysIS and 30 customer satellites.

Placing it in syllabus

Science and Technology- developments and their applications and effects in everyday life.

Awareness in the fields of Space

Achievements of Indians in science & technology

Static dimensions

1. Hyper-Spectral Imaging Satellite (HysIS)
2. Electromagnetic Spectrum

Current dimensions

1. ISRO's latest launches
2. ISRO's commercialization and International Collaboration

Content

Primary Goal of the Hysis

The primary goal of Hysis is to study the earth's surface in both the visible, near infrared and shortwave infrared regions of the electromagnetic spectrum.

Key highlights

- The **PSLV-C43** lifted off from the **First Launch Pad** and injected India's Hyper-Spectral Imaging Satellite (Hysis) into the 645 km **sun-synchronous polar orbit**.
- 30 foreign satellites were injected along with Hysis into their intended orbit.
- Hysis is an earth observation satellite built around ISRO's Mini Satellite-2 (IMS-2) bus weighing about 380kg. The mission life of the satellite is five years.
- Satellites from Australia, Columbia, Malaysia and Spain were flown aboard PSLV for the first time.
- Hysis is the country's **first- ever innovative satellite that shall provide hyper spectral imaging for advanced earth observation** which will be an added advantage in watching over from space varied sectors like defence, agriculture and mineral exploration.

Usage of the satellite

Data from the satellite will be used for a wide range of applications including;

1. Agriculture
2. Forestry
3. Soil/geological environments
4. Environmental monitoring
5. Coastal zones and
6. Inland waters

Test yourself: Mould your thoughts

How the payloads on PSLV-43 project ISRO as both a scientific and commercial body? Also, discuss the utility of HysIS.