

# Hyper-Spectral Satellite (HysIS)

# Imaging

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## 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.