

## TRISHNA Mission

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### TRISHNA Mission

The Indian Space Research Organisation (ISRO) is collaborating with the French Space Agency on a new satellite mission called **TRISHNA**.



[Ref: Business Today]

### **About TRISHNA Mission:**

- The Indian Space Research Organisation (ISRO) has teamed up with the French Space Agency (CNES) to launch a new satellite mission named **TRISHNA**.
  - This partnership aims to advance our understanding of **Earth's environment**.
- **TRISHNA** will operate in a **Sun-synchronous orbit** at an altitude of **761 km**.
- It follows an **8-day repeat cycle**, allowing for regular monitoring of the same location on Earth.

### **Primary Payloads:**

- **Thermal Infra-Red (TIR) Payload:** Supplied by CNES, this payload is crucial for **mapping the Earth's surface temperature and emissivity** with high resolution.
- **Visible and Near Infra-Red/Short Wave Infra-Red (VNIR/SWIR) Payload:** Developed by ISRO, this payload focuses on **detailed surface reflectance mapping**.

### **Objectives of the TRISHNA Mission:**

- **Monitoring and assessing the Earth's surface temperature and emissivity** with high precision.
- **Evaluating water and energy budgets** to improve environmental management.
- Enhancing our understanding of **water stress, irrigation efficiency, and crop productivity** to support agriculture.
- **Mapping urban heat islands** to aid in mitigation planning.
- **Detecting thermal anomalies**, which can indicate volcanic activity and geothermal resources.
- **Monitoring the quality of coastal and inland waters**, including detecting pollution and algae blooms.
- Observing cryospheric changes, such as **snow cover and glacier dynamics**, which are critical for climate studies.
- Conducting **atmospheric observations** to track cloud cover and water vapor content, essential for weather forecasting and climate research.

