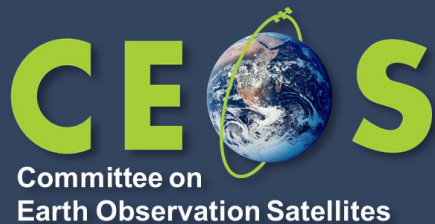




# *ISRO Agency Report*

Updates on Earth Observation  
Missions and ISRO Data  
Portals

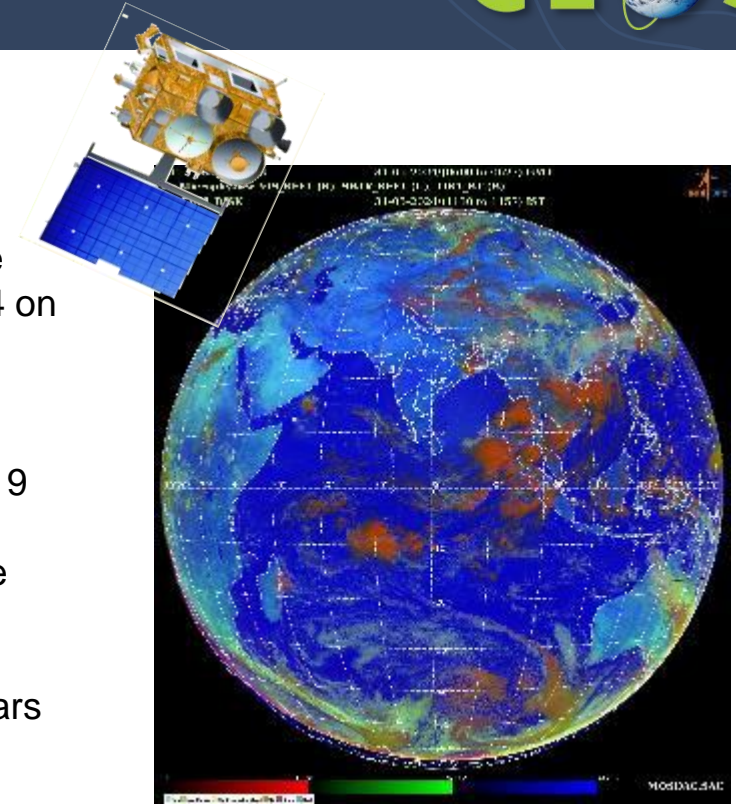


**Sai Kalpana. T  
& Nitant Dube  
ISRO  
Agenda Item B.1  
WGISS / WGCV Joint Meeting  
15 & 18 October 2024  
Sioux Falls, South Dakota,  
USA**

# INSAT-3DS

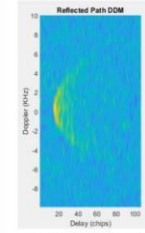
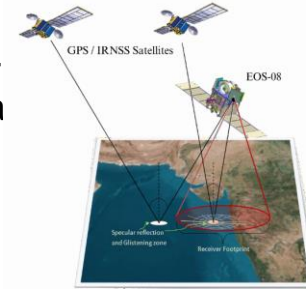


- INSAT-3DS is the third Generation Indian Meteorological Satellite launched by GSLV-F14 on February 17, 2024 and placed at 82°E
- INSAT-3DS contains 6 Channel Imager and a 19 Channel Sounder
- INSAT-3DS will provide continuation of meteorological data services for next 10 years

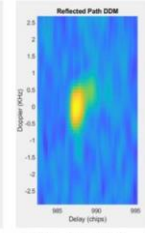




- The SSLV-D3 flight launched EOS-08 Satellite on 16-Aug-2024 and has 3 payloads
- **Electro Optical Infrared Payload (EOIR)** is to image in Mid-Wave IR (MIR) band and in Long Wave IR (LWIR) band during day and night
- **Global Navigation Satellite System- Reflectometry payload (GNSS-R)** is to demonstrate the capability using GNSS-R based remote sensing
- **SiC UV Dosimeter** is to monitor the UV irradiance

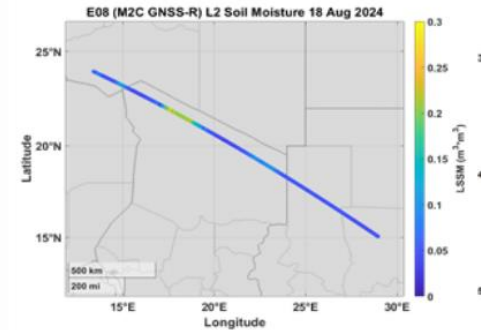


DDM of GPS Signals reflected over Ocean



DDM of NavIC signal over Sahara Desert

Delay Doppler Maps (DDM)

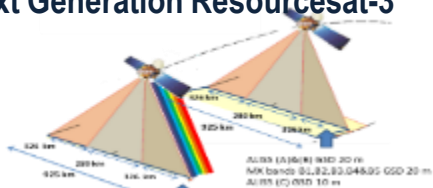


Soil Moisture over North Africa

# Upcoming EO missions



## Next Generation Resourcesat-3



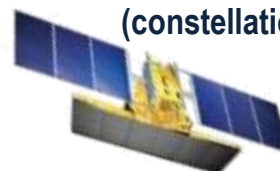
Wide Swath imaging with improved spatial resolution

## High resolution Stereo Resourcesat-3S



Concurrent Stereo & MX imaging

## RISAT-1 Series (constellation)



All-weather; Day & Night Imaging

## HRSAT 1,2,3



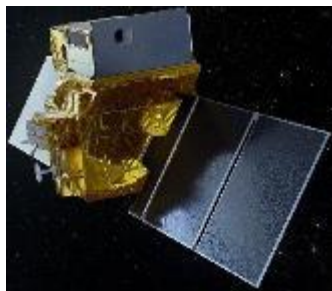
Daily re-visit of Area of Interest

## L & S Band SAR (NISAR)



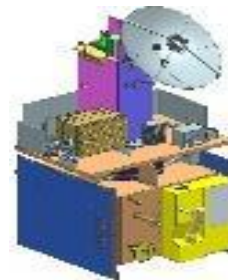
All-weather; Day & Night Imaging

## High res. TIR & VSNIR (TRISHNA)



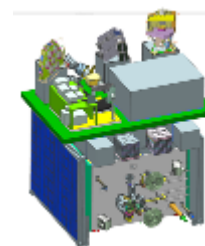
Thermal Imaging

## Oceansat-3A



Ocean Color & Wind vector – Continuity + SST

## G20 Satellite



Environment & climate change

10/10/2024

# Recent Updates on MOSDAC



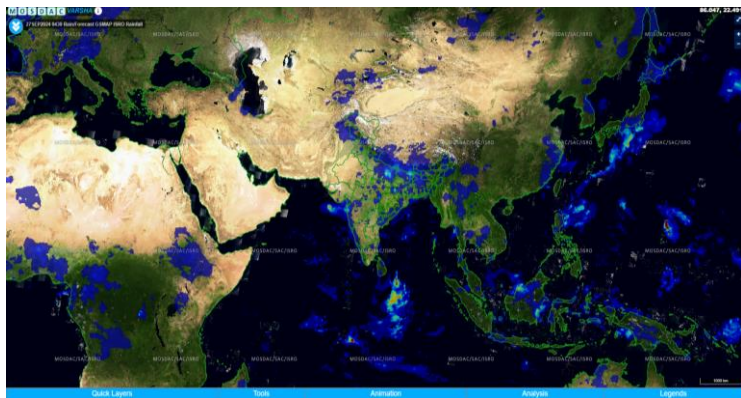
M O S D A C

<https://mosdac.gov.in>

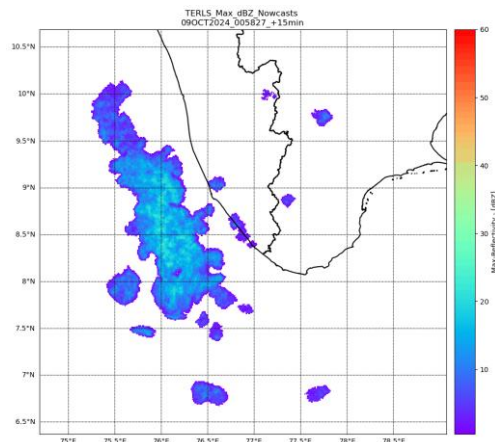
## Meteorological & Oceanographic Data Archival, Analysis and Dissemination

- Store for Indian Meteorological and Oceanographic Satellite Data
- Near Real time Visualization and Analysis

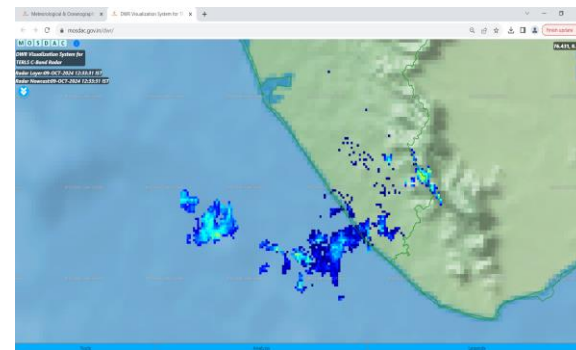
### GsMap ISRO Rainfall product ISRO-JAXA Joint Development



### DWR based Rainfall Now casting



### Radar data visualization on Web GIS platform



# Recent Updates on Bhuvan



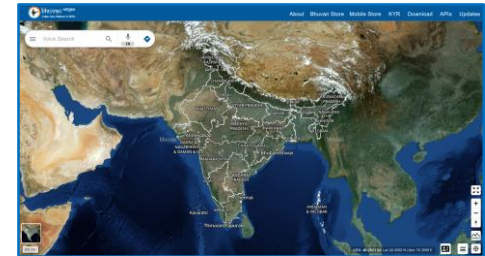
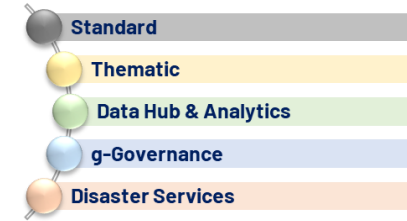
## Advanced Geospatial Data and Services

- Visualize Satellite Imagery & Maps
- Create & Download
- Advanced Analytics
- Supports Specialized Users

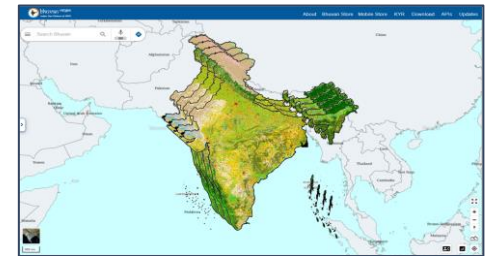
Bhuvan has launched **Bhuvan NextGen**, an advanced geoportal that brings together tools, data, and services. This unified platform provides rich visualizations of satellite and thematic data, along with powerful analytical tools.

### **Bhuvan NextGen** Supports 5 Modes

- Standard
- Thematic
- Data Hub and Analytics
- G-Governance
- Disaster Services



Standard Mode

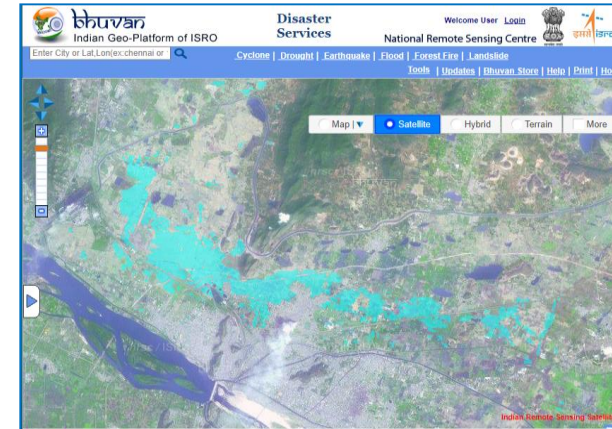
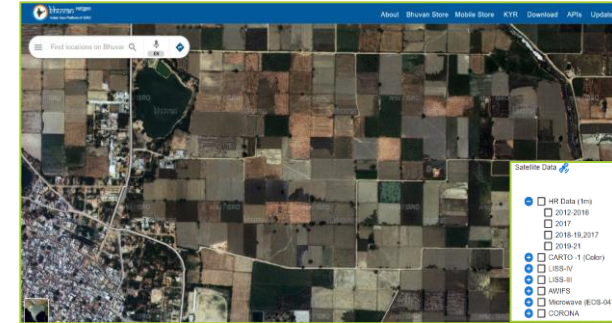


Thematic Services

# Bhuvan NextGen – Key features



- Enriched user interface with SOTA libraries.
- Improved Search for Pol and Thematic Data
- Voice enabled search supporting 4 languages.
- Submeter Satellite data for entire India
- Vector tiles for thematic data filtering
- AI/ML driven value added services
- Enriched thematic mode with statistics, trends.
- Seamless radiometry across varied sensor resolutions
- OCM mosaic as Satellite global base layer.
- 10 themes of natural resources information on a single click.
- Immersive 3D view with fly-through features.
- Free Data Downloads as per NGP 2022.
- Unified gateway to navigate 190+ g-Governance applications
- Visualization of Base layers, Administrative boundaries, Infrastructure & Pol data.



Bhoonidhi



Browse & Order

<https://bhoonidhi.nrsc.gov.in>

## Data Portal and Services

**Bhoonidhi** is data repository of remote sensing satellites including India and Foreign remote sensing sensors, facilitates the dissemination of satellite data products to online users on web.

### ❖ *STAC – Spatio Temporal Assets Catalogue*

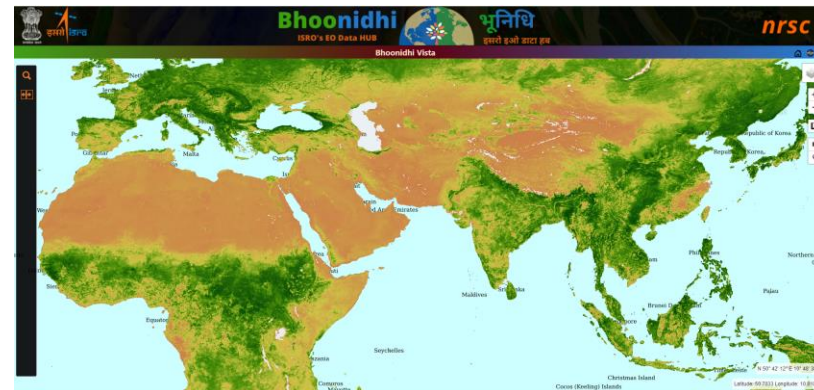
Standardized way to expose satellite data collections, enhances EO data search, accessibility as well as interoperability with other international space agencies

### ❖ *Bhoonidhi API - Beta Version*

API for machine to machine data access

### ❖ *Priced Data Ordering through NSIL*

From 01-May-2024, all commercial activities with respect to IRS satellite data and products finer than 5m resolution are being handled by NSIL. Bhoonidhi continues to be the data dissemination platform.



EOS-06 OCM GAC 8-day composite

## New Data Products Released

**2.5m posting Cartosat-1 DSM Products for nominal price**

**EOS-06 OCM-3 GAC 1km 8-day NDVI Product (Globe)**

**EOS-06 OCM-3 LAC 360m 8-day NDVI Product (India)**

**EOS-06 - rolling 4km 8-day GAC global - Chlorophyll (CHL), Aerosol Depth (AOD), Diffused Attenuation (DA), Total Suspended Matter (TSM)**

**EOS-06 -rolling 500m 8-day LAC India - Chlorophyll (CHL), Aerosol Depth (AOD), Diffused Attenuation (DA), Total Suspended Matter (TSM)**

**Cartosat-3 PAN Sharpened and PAN product at 45 cm resolution**

**EOS-04 500m Soil Moisture Data Products**

**EOS-04 Polarimetric Data products**

**EOS-04 level-2B Terrain Normalized (ARD) Product**

**Resourcesat-2 AWiFS - 5-day, 15-day Full India Image Composites at 100m**

**Resourcesat-2 AWiFS - 30-day Full India Image Composites at 100m**

**Resourcesat-2 AWiFS NDVI 15-day (Full India Image Composites at 100m)**



# Thanks