VEDAS

Visualisation of Earth Observation Data & Archival System

ISRO's EO data visualisation and analysis platform.

ved/s https://vedas.sac.gov.in/
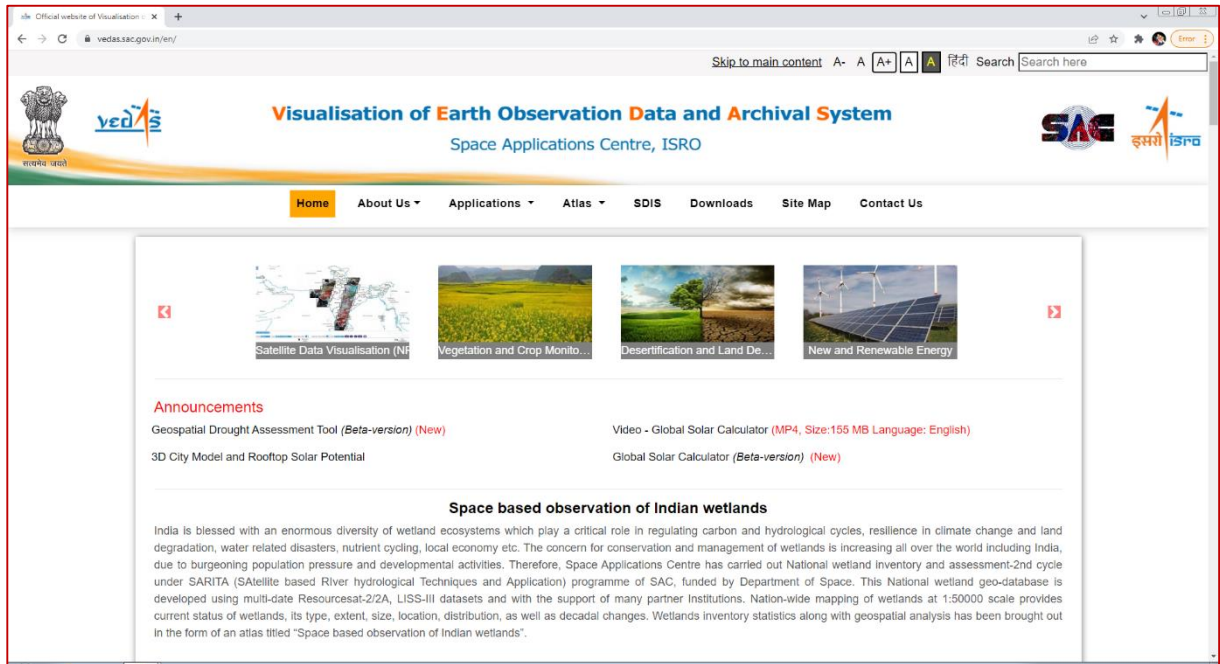
The portal provides

➢ **2D & 3D visualisation of thematic data generated by scientists in various fields of applications.**
➢ **Web based geo-processing tools for analysis.**
➢ **Platform for Big Data analytics & AI/ML applications.**
➢ **Web Map Service (WMS) & APIs for all datasets.**
➢ **Services and infrastructure to the government and non-government agencies, start-ups, academia and students.**

One Portal, Many Applications

Satellite Data View	Vegetation Monitoring	Land Degradation	Renewable Energy	Air Quality Monitoring	Hydrological Science
Wetlands	Urban Sprawl	Energy Map	Snow & Glaciers	Coastal Environment	Forest Biomass

AI/ML Derived Products on VEDAS

❖ VEDAS showcases Artificial Intelligence/ Machine Learning (AI/ML) technology derived products such as natural colour composite from OCM, snow cover detection from AWiFS, NDVI forecast, built-up area detection from IRS-L4 and building footprint detection from Cartosat-3.
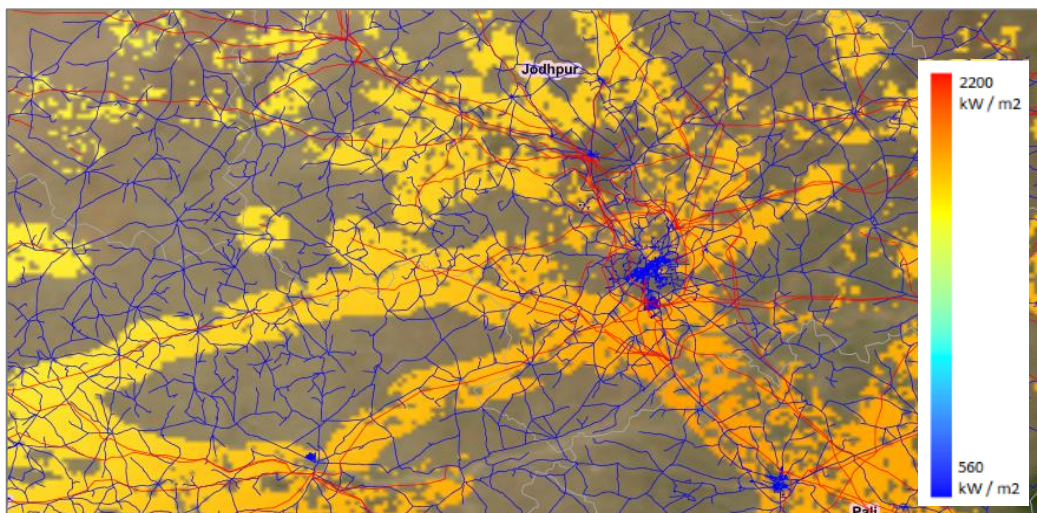
Roads Blocked by Snow[*]

Snow-cover derived from AWiFS data acquired on June 5, 2021

Geo-processing on Web

❖ VEDAS provides interactive web-based multi-criteria decision-support tools and Scripting Environment (like GEE).

### Solar Energy Potential and Multi-criteria Site Suitability[**]

**Criteria: (1) Land use / Land cover, (2) Slope, (3) Solar Insolation, (4) Distance from Road and (5) Distance from Transmission Line*

Spatio-temporal Analysis on Web

❖ The archival of historical data on VEDAS enables time series data analysis on web, such as difference of Normalized Difference Vegetation Index (NDVI) image of two dates, RGB compositing, classification using multi-date NDVI, geospatial query tools, and long-term statistical analysis of data.

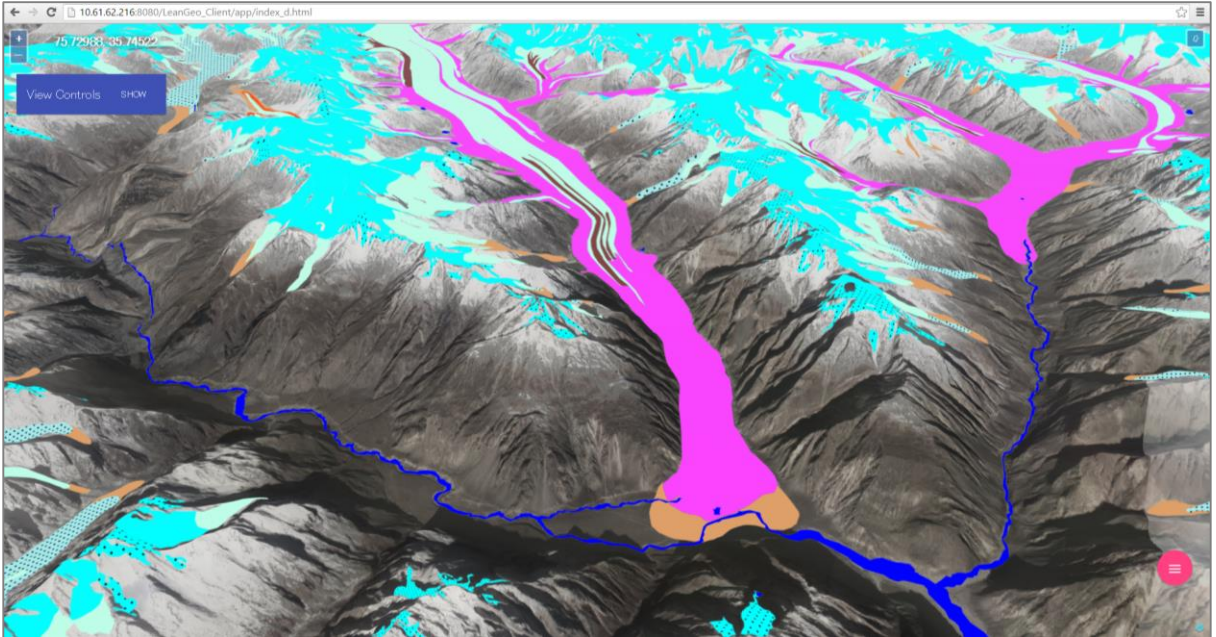### NDVI Difference (October 25, 2022 and 2023)
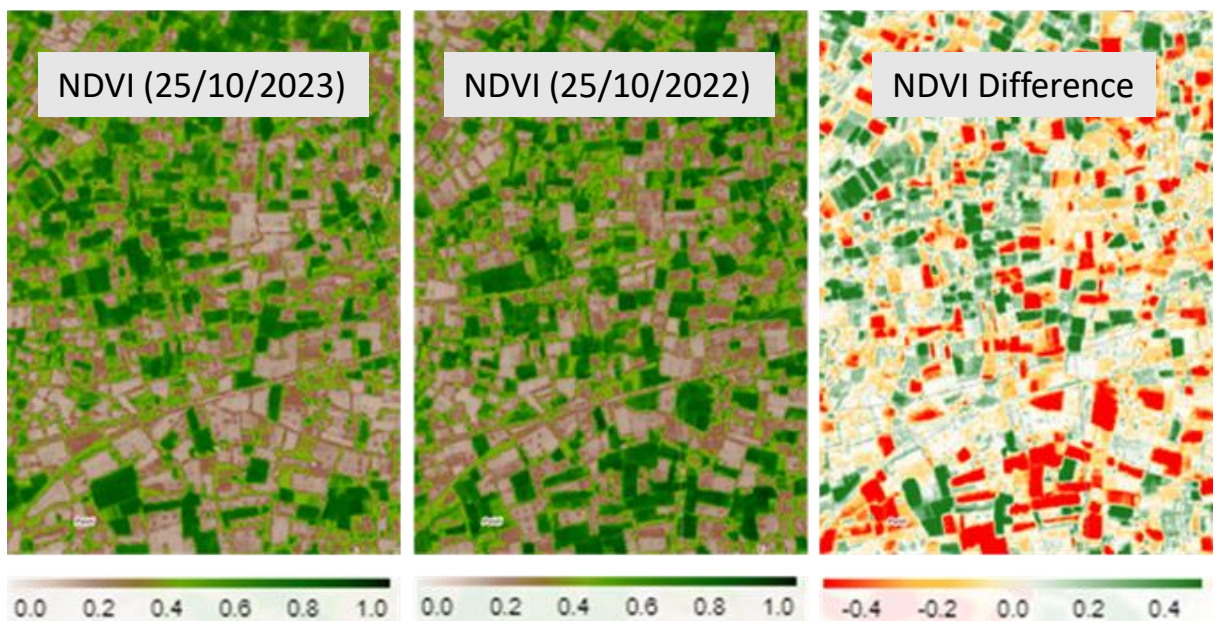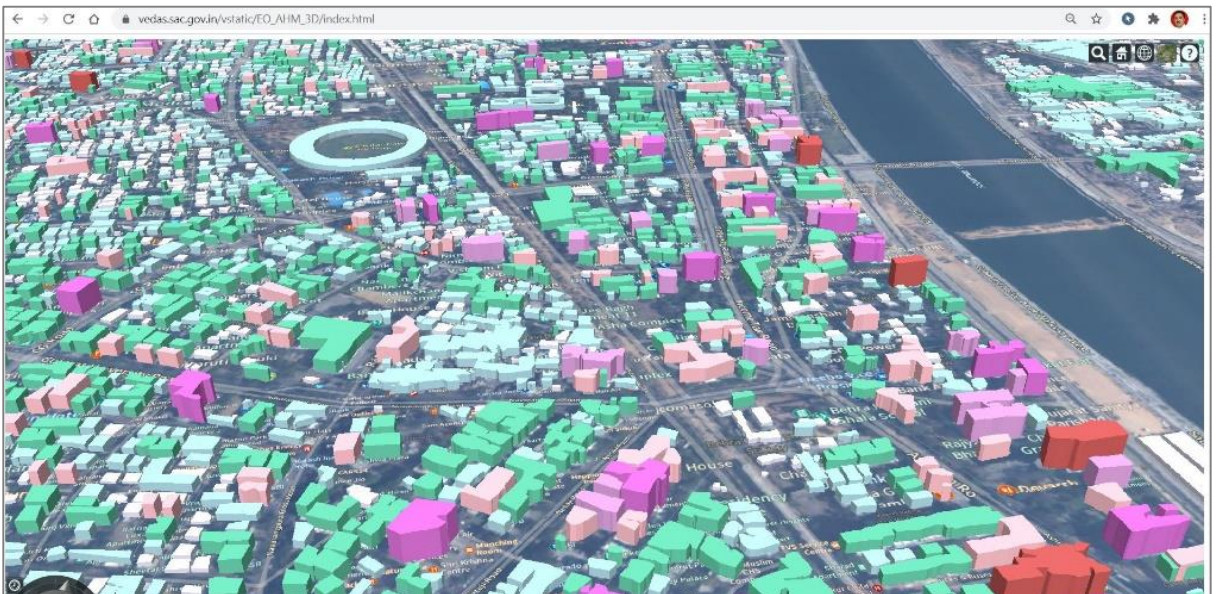

Long-term Trend Analysis of NDVI
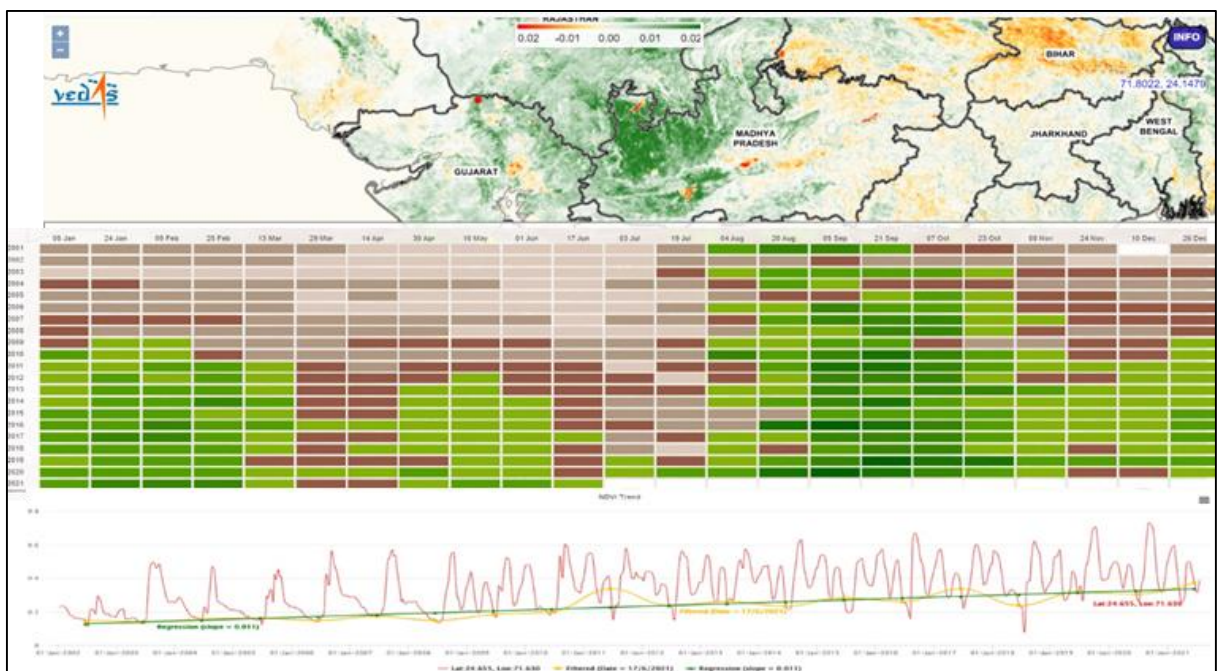
Visualisation of Thematic Data

Himalayan Glaciers Overlaid on Cartosat-1 DEM

3D City Model of Ahmedabad

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