

# Geographic Information System Applications



**POWER GRID CORPORATION OF INDIA LIMITED**

(A Government of India Enterprise)

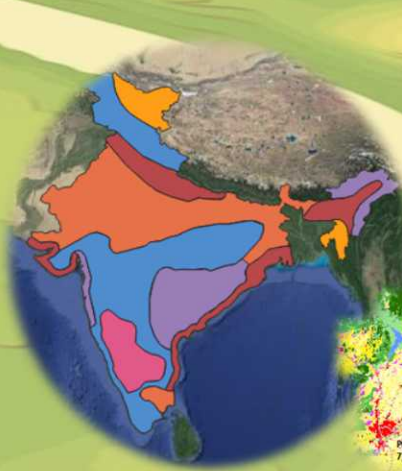
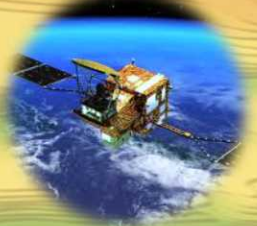
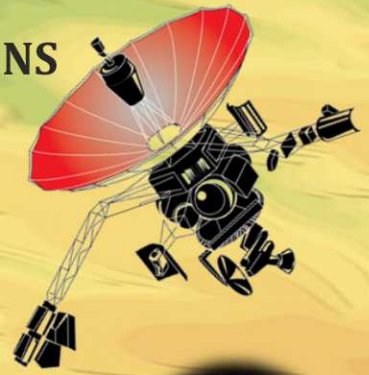
# GEOGRAPHIC INFORMATION SYSTEM APPLICATIONS

## SPACE TECHNOLOGY AND GIS TOOLS CAN BE USED FOR:

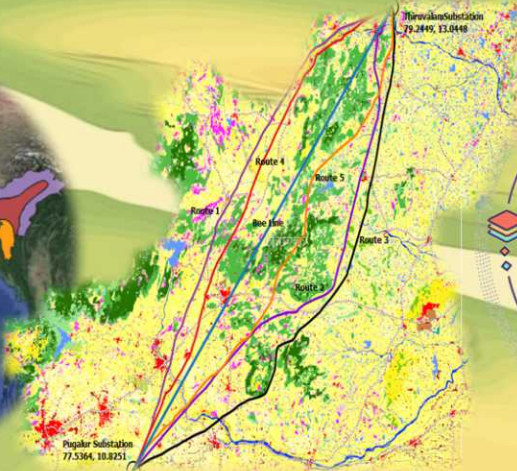
- Preliminary Transmission Line Routing
- Asset Mapping and Vulnerability Assessment

## PRELIMINARY TRANSMISSION LINE ROUTING:

- Estimation of project cost with more accuracy
- To increase the accuracy of the survey in areas which are not easily accessible.
- Reduce the man power and man-hour delay in line survey.
- To reduce conventional walk-over survey for transmission lines routing
- Lower maintenance cost of line by avoiding vulnerable areas like wildlife sanctuaries, dense forests etc.
- Better disaster management, damage assessment and restoration planning
- Increase in efficiency at planning stage - Length of line, number of angle towers etc. can be optimized with higher accuracy and with less effort using GIS tools



Different Wind Zones



Transmission Line Routing

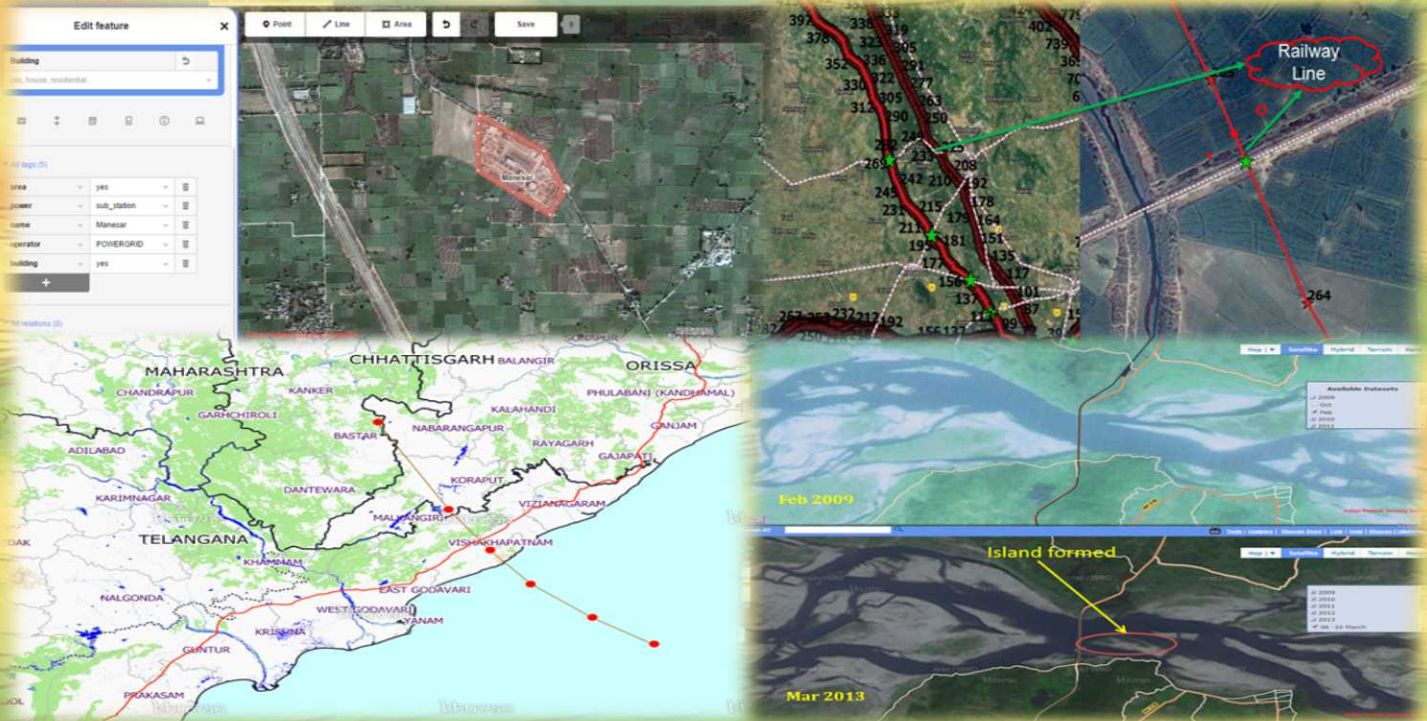


GIS Layers

## ASSET MAPPING AND VULNERABILITY ASSESMENT:

- For keeping the transmission-infrastructure healthy, requires a common platform where all the transmission asset can be mapped and Geotagged.
- All the transmission lines, tower etc. can be mapped and Geotagged on utility's own network where all the asset can be viewed form any of the region/place of utility.
- With GIS mapping of each Transmission Tower, many aspects of vulnerability assessment and maintenance task planning can be optimized and improved.
- High-resolution satellite-imagery provides information on Brick Kilns, polluting industries etc., whose presence near a transmission infrastructure can cause tripping due to increased pollution levels.

- Bhuvan Node (from NRSE/ISRO) installed at PARTeC Manesar for better utilization of the indigenous GIS services and to overcome constraints in the data loading and data security problems.



Asset Mapping and Vulnerability Studies

**TRAININGS:**

- Hands-on Training Facilities on use of "Geographical Information System (GIS) tools and Application for Transmission Line Routing, Asset Mapping and Vulnerability Studies".



Hands on Training to Executives Involved in preliminary survey and BoQ estimation



## पावर ग्रिड कॉर्पोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)

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