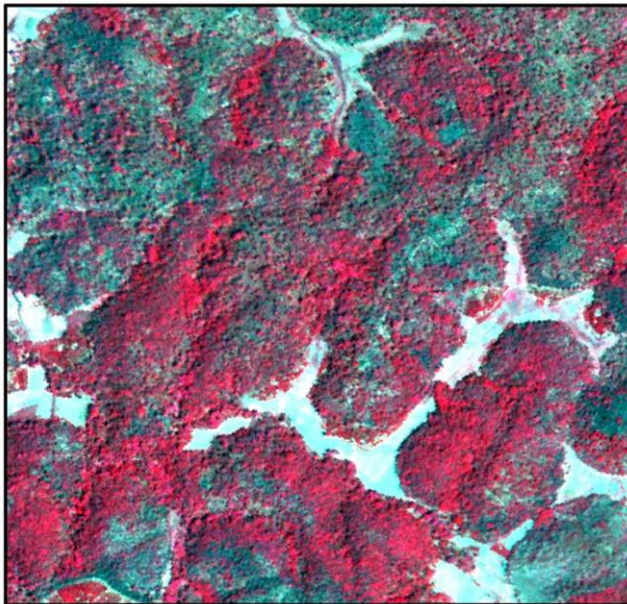


# Image Classification

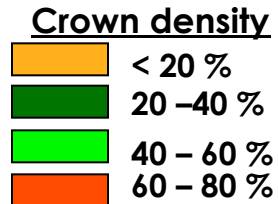
By: Dr. Abdullah Barat

# Forest Crown density mapping using IRS P6 Satellite Data

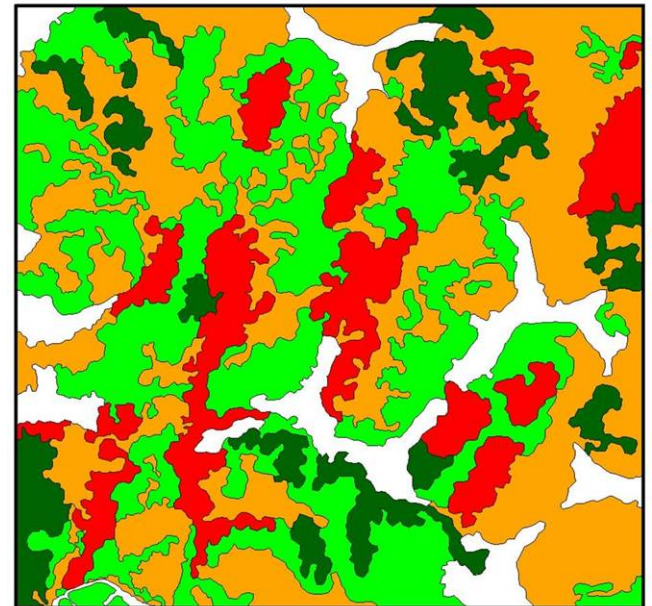
IRS P6 LISS-IV FCC  
(Parts of Mudumalai Wildlife Sanctuary,  
Tamil Nadu)



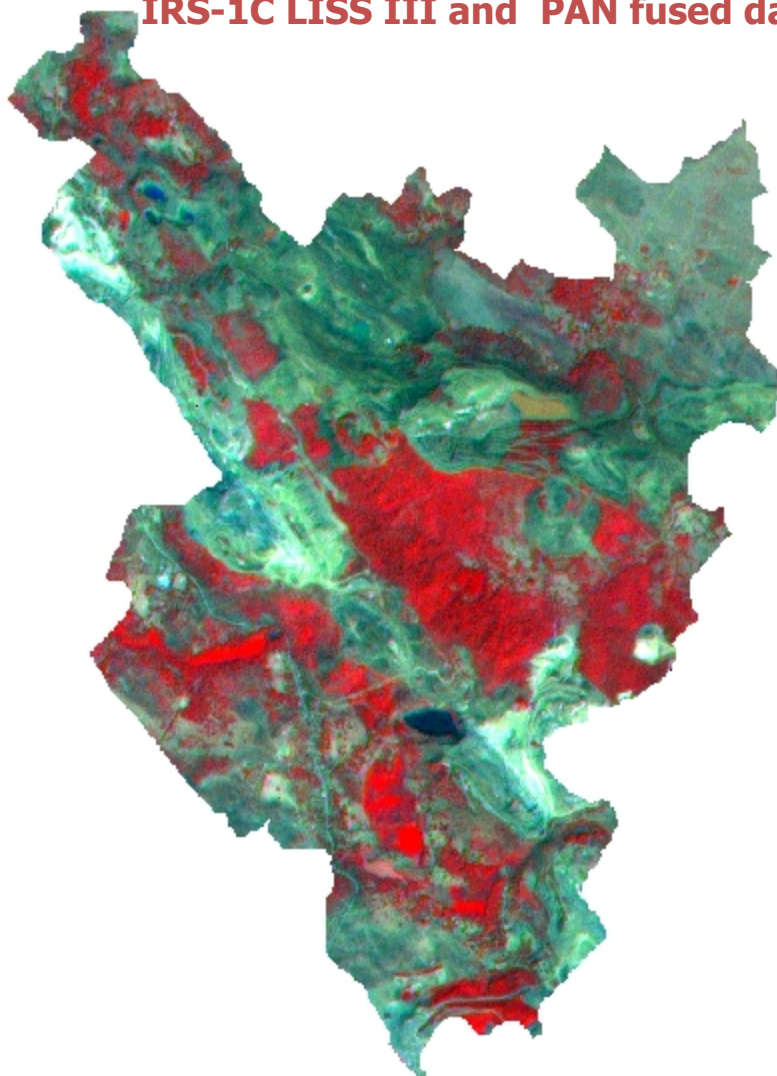
IRS P6 LISS-IV data of  
MAR 2004



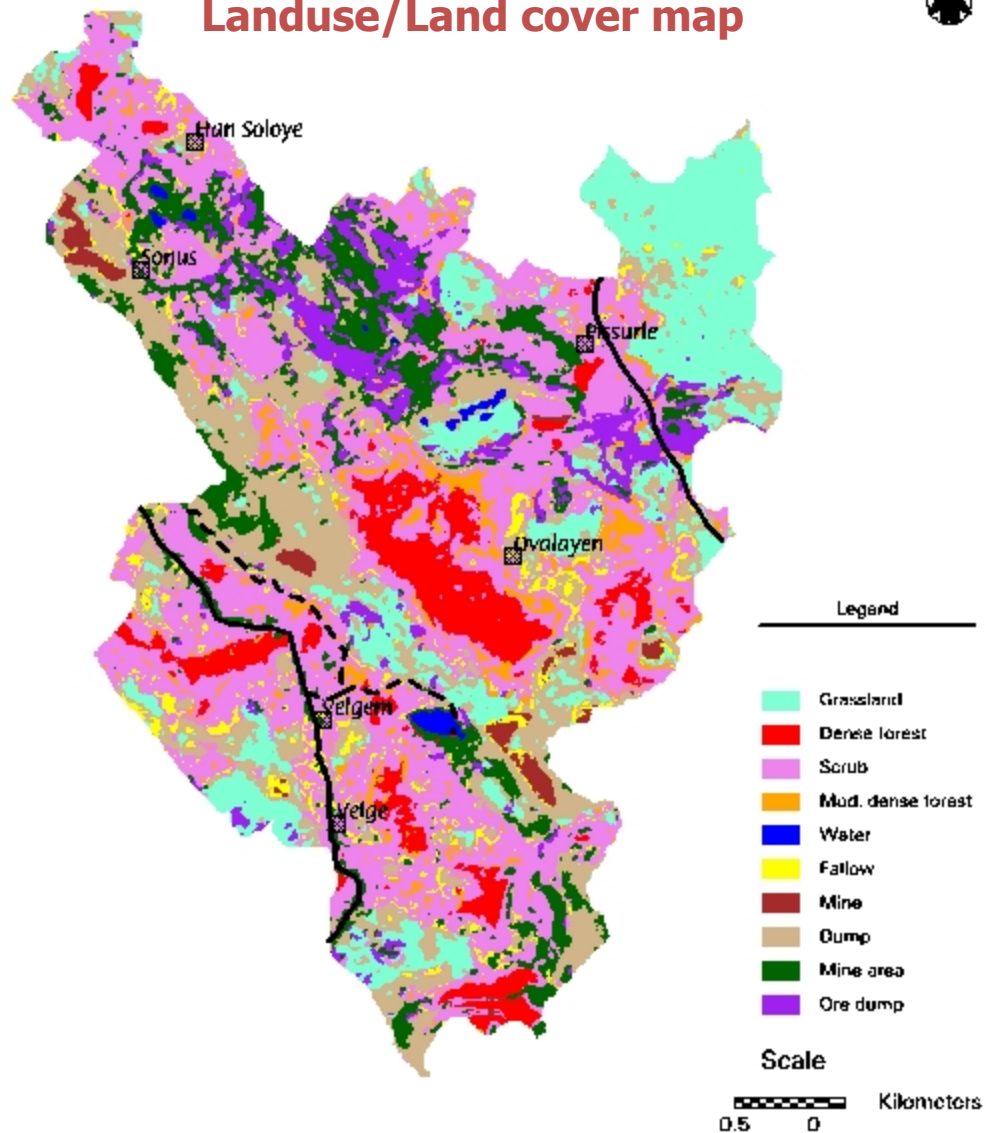
Crown density map



IRS-1C LISS III and PAN fused data

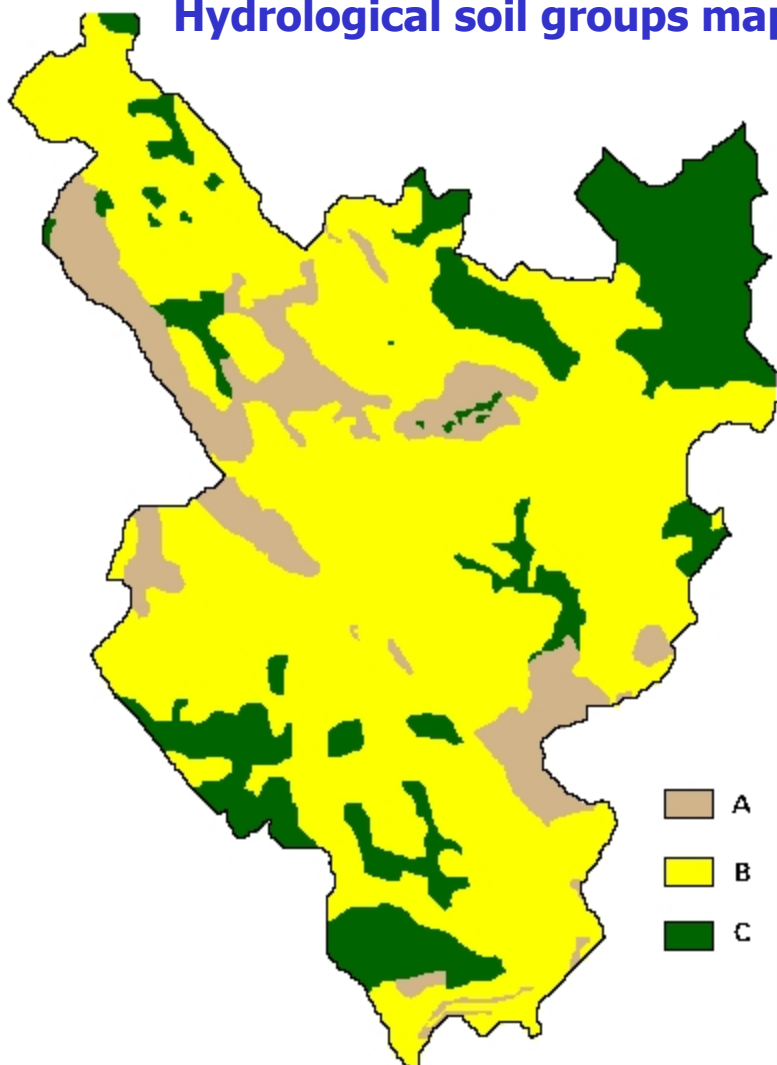


Landuse/Land cover map

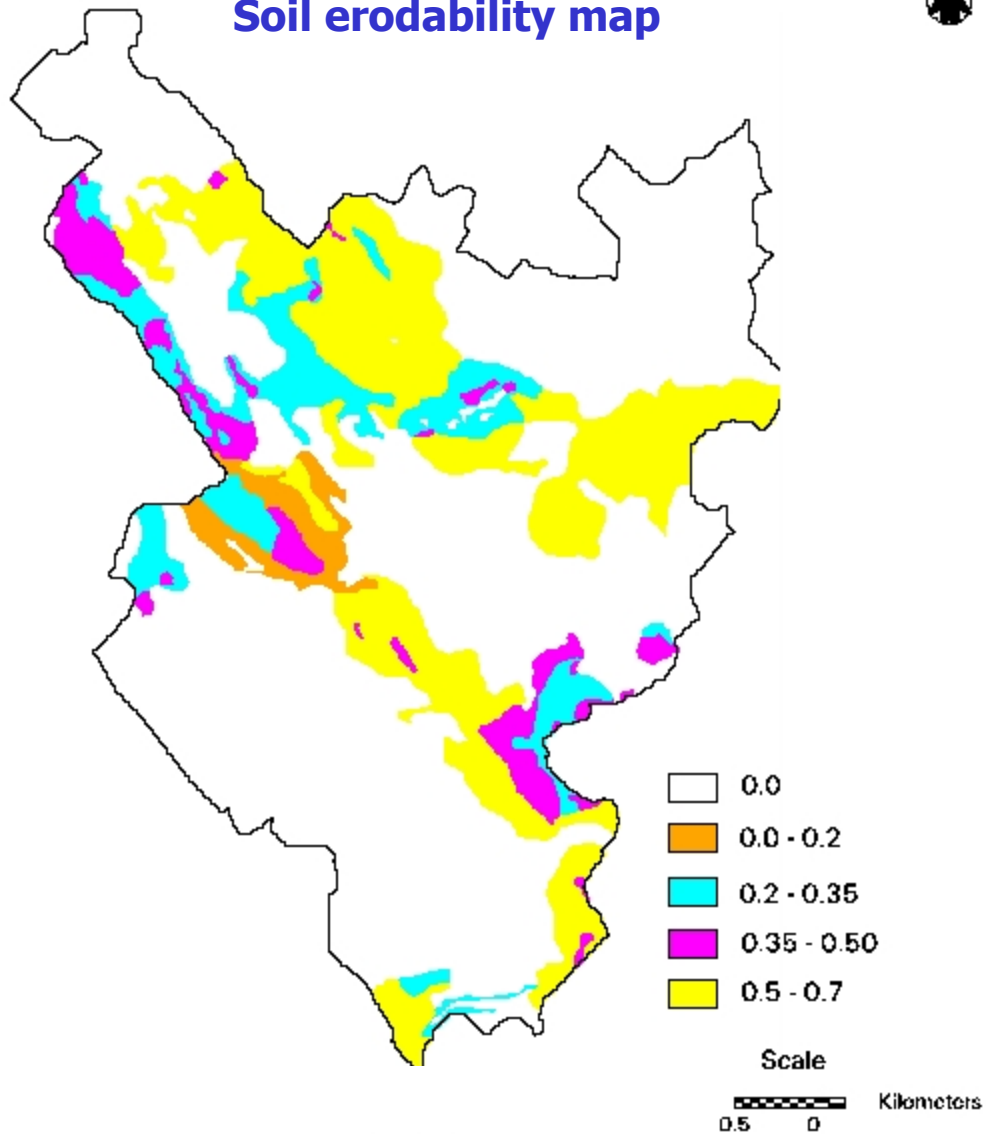




**Hydrological soil groups map**

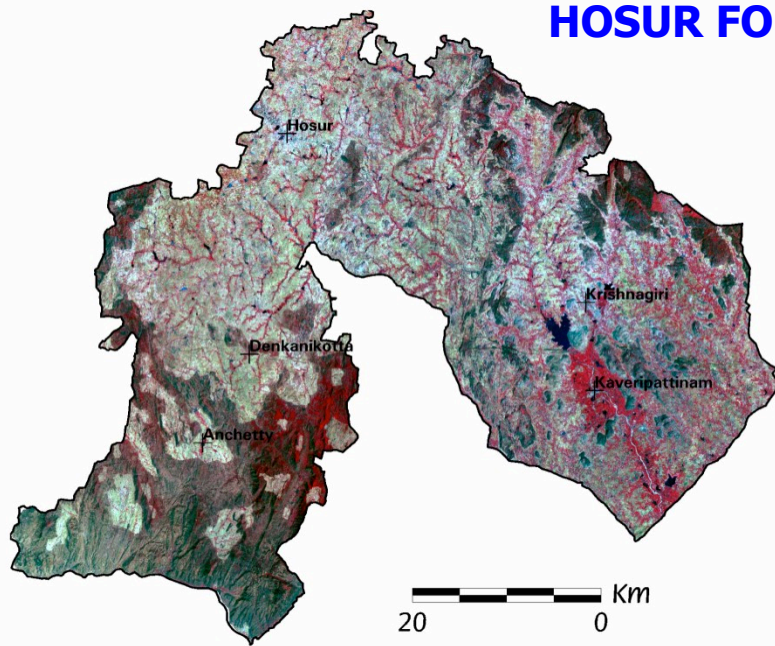


**Soil erodability map**

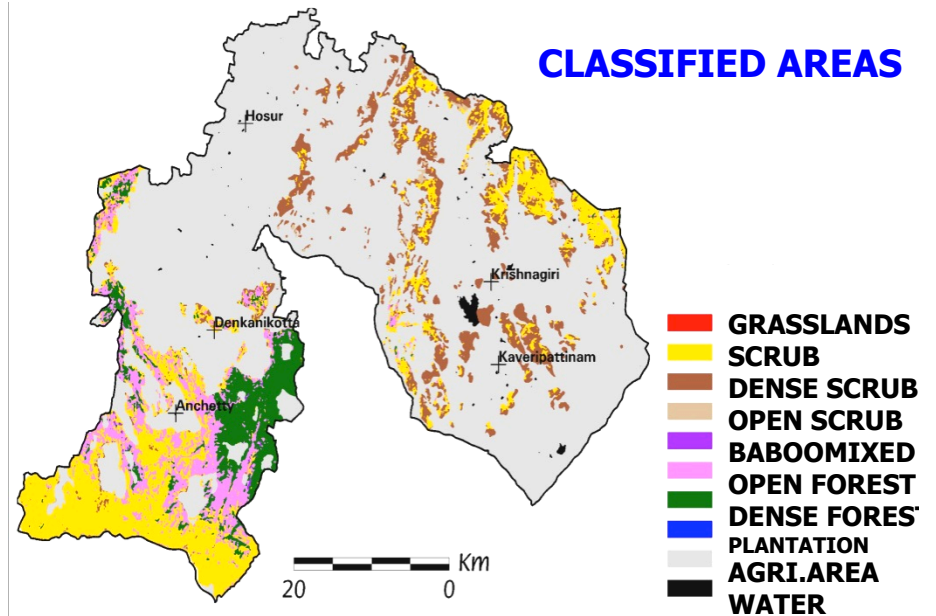




# HOSUR FOREST DIV DHARMAPURI ( TN)



**THICK UNDER GROWTH OF GRASS COVER**





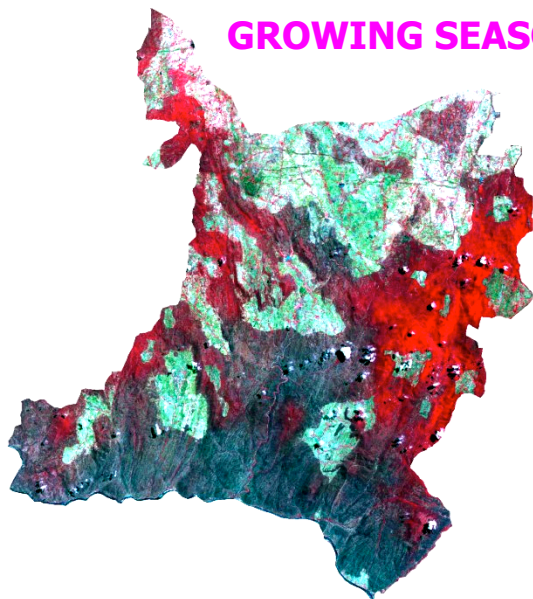
Multi Temporal Satellite Data  
March 2000

**DRY SEASON**



Multi Temporal Satellite Data  
July 99

**GROWING SEASON**



Multi Temporal Satellite Data  
December 99

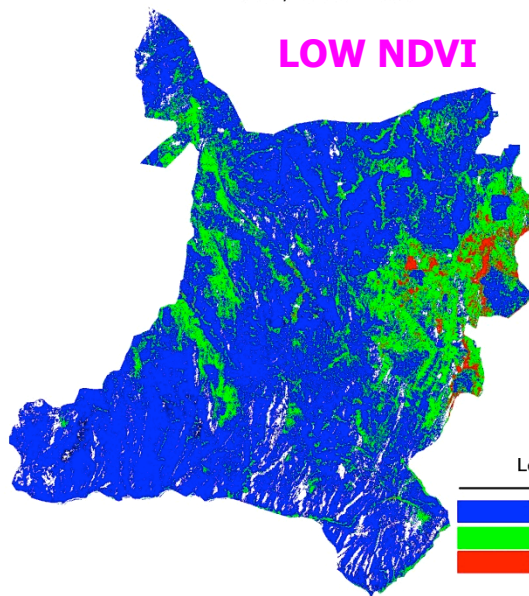
**OPTIMUM SEASON**



## NDVI GROWTH PROFILES FOR PRODUCTIVITY

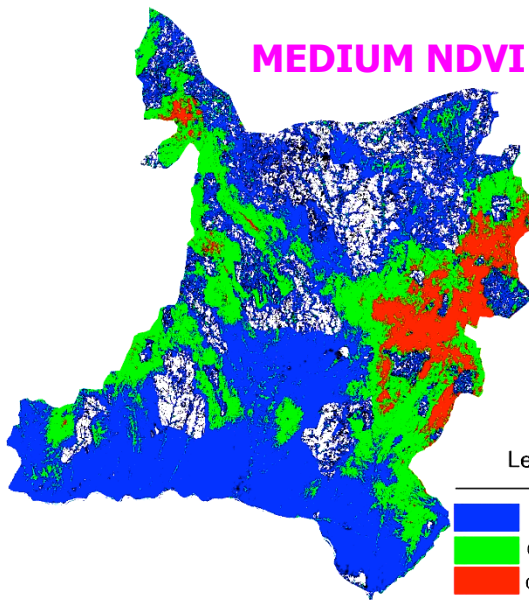
NDVI, March 2000

**LOW NDVI**



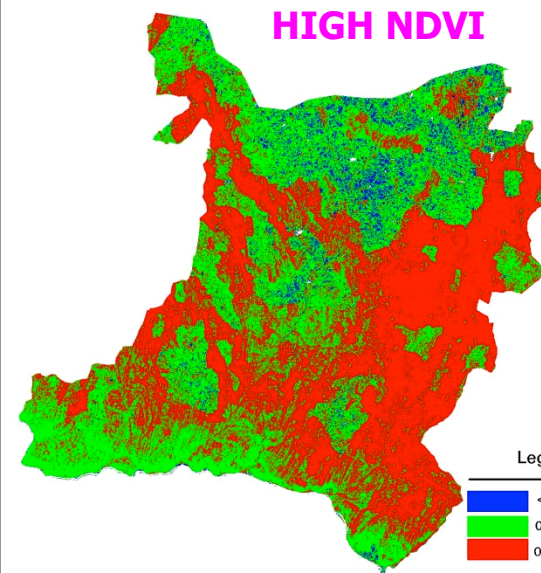
NDVI, July 2000

**MEDIUM NDVI**



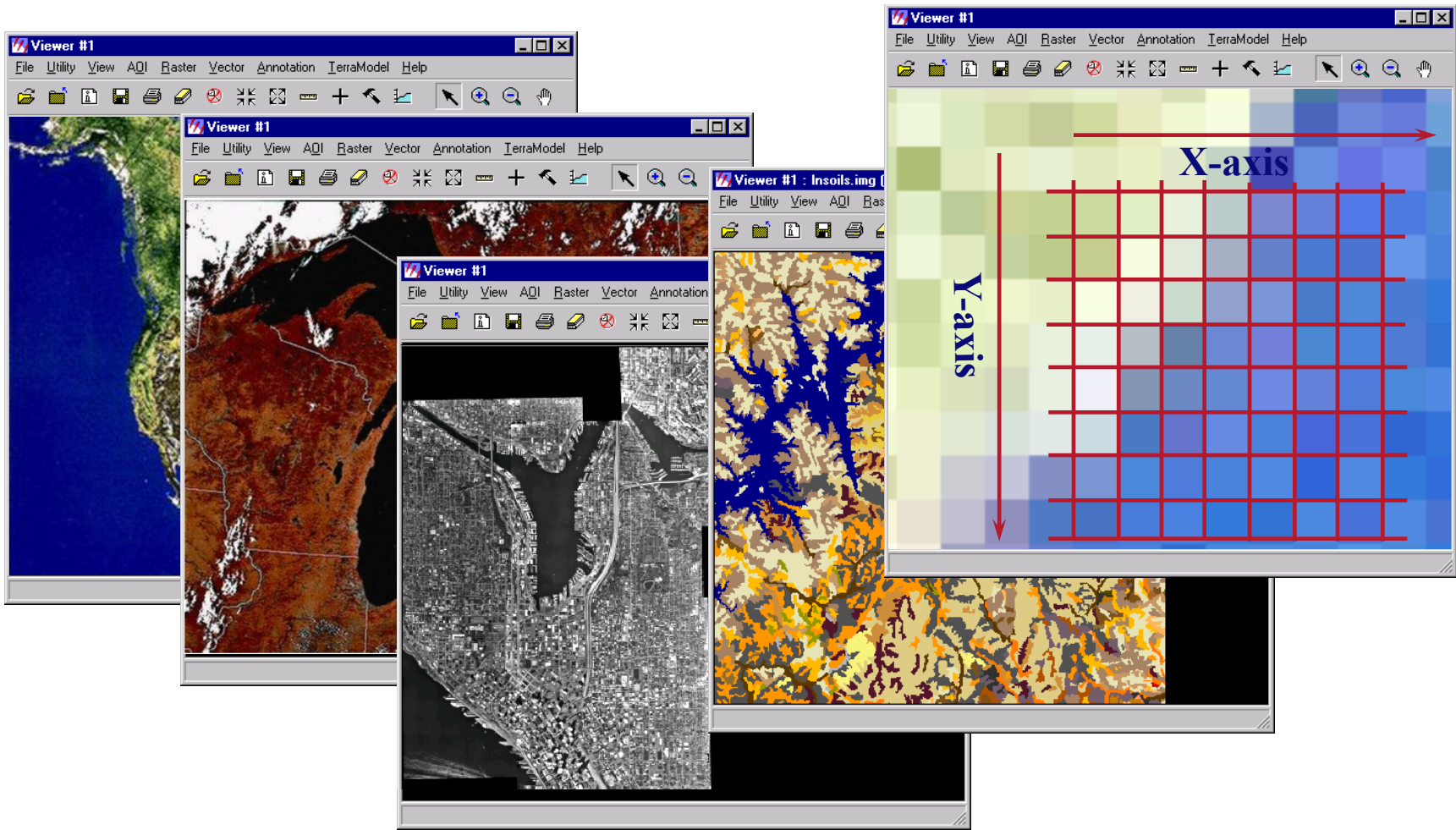
NDVI, December 2000

**HIGH NDVI**



# What is an image?

- Data that are organized in a grid of Columns and rows
- Usually represents a geographical area





# SATELLITE REMOTE SENSING APPLICATIONS

## WATER RESOURCES

- SNOWMELT RUNOFF FORECASTING
- RESERVOIR SEDIMENTATION

## OCEAN APPLICATIONS

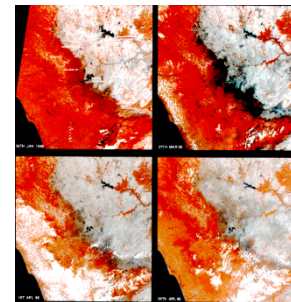
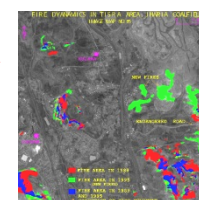
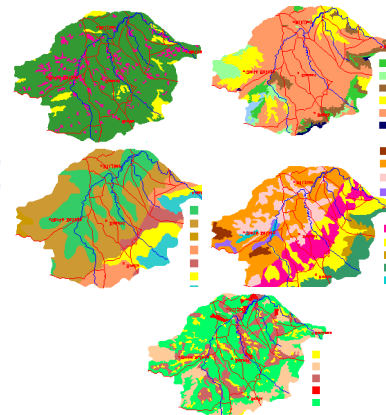
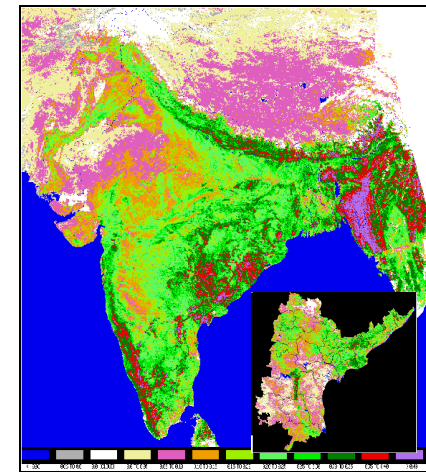
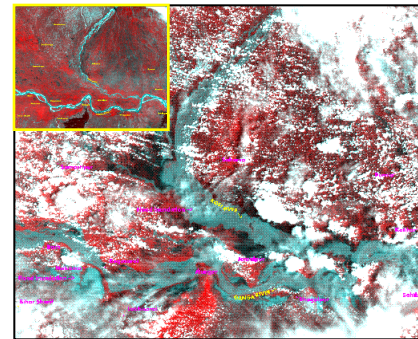
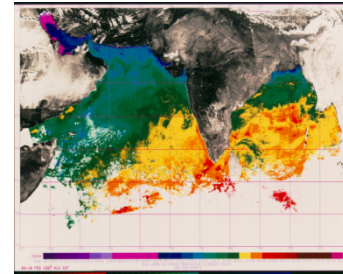
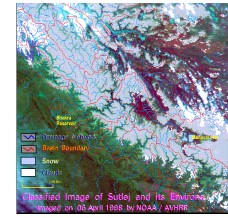
- COASTAL ZONE MAPPING
- POTENTIAL FISHING ZONE (PFZ) MAPPING
- CORAL REEF MAPPING

## DISASTER ASSESSMENT

- FLOOD / CYCLONE DAMAGE ASSESSMENT
- AGRICULTURAL DROUGHT ASSESSMENT
- VOLCANIC ERUPTION, UNDERGROUND COAL FIRE
- LANDSLIDE HAZARD ZONATION
- FOREST FIRE AND RISK MAPPING

## INTEGRATED MISSION FOR SUSTAINABLE DEVELOPMENT

- SUSTAINABLE WATERSHED DEVELOPMENT





# SATELLITE REMOTE SENSING APPLICATIONS

## AGRICULTURE

- CROP ACREAGE AND PRODUCTION ESTIMATION

## SOIL RESOURCES

- SOIL MAPPING
- LAND CAPABILITY, LAND IRRIGABILITY
- SOIL MOISTURE ESTIMATION
- MAPPING WATER-LOGGED AREAS
- SALT-AFFECTED SOILS, ERODED LANDS, SHIFTING CULTIVATION

## LANDUSE/LAND COVER

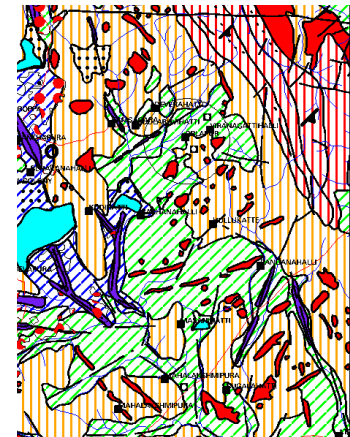
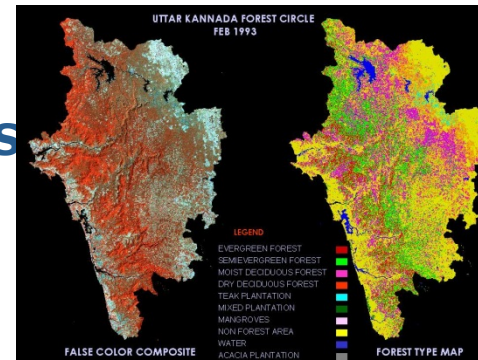
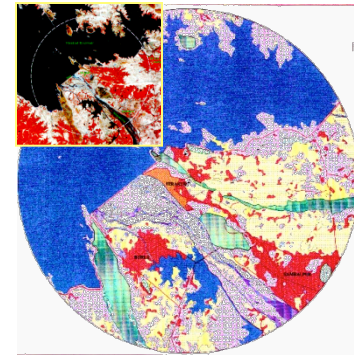
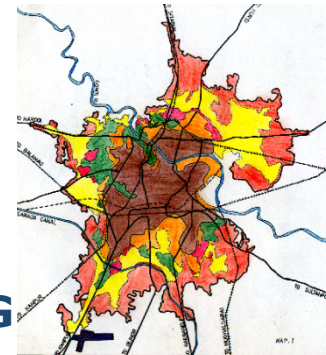
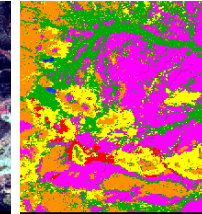
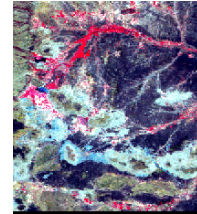
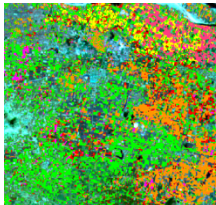
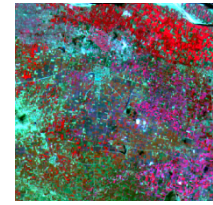
- LAND USE/LAND COVER MAPPING
- WASTELAND MAPPING
- URBAN SPRAWL MAPPING

## GEOSCIENCES

- GEOLOGICAL / GEOMORPHOLOGICAL MAPPING
- GROUND WATER POTENTIAL ZONE MAPPING
- MINERAL TARGETTING

## FORESTRY AND ENVIRONMENT

- FOREST COVER MAPPING
- FOREST MANAGEMENT PLAN - RS INPUTS
- BIODIVERSITY CONSERVATION
- ENVIRONMENTAL IMPACT ASSESSMENT
- GRASSLAND MAPPING



Thanks