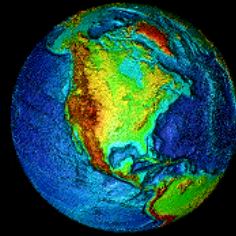


# Applications of RS



**M.H. Mohamed Rinos**  
Lecturer in GIS

# Spatial Information Technologies

Geospatial technology is a multi-disciplinary activity which deals with

- **Remote Sensing**
- **Geographical Information Systems**
- **Global Positioning Systems**



**ENVIRONMENT**



**LANDUSE**



**WATER**



**AGRICULTURE**

# APPLICATIONS OF REMOTE SENSING

**SOILS**



**FORESTS**



**GEOSCIENCES**



**OCEANS**



# **APPLICATIONS OF REMOTE SENSING**

## **- Sun synchronous**

**Resources status on Global, regional and local level**

**Agriculture**

**Forestry and Biodiversity**

**Geology, Structure and minerals**

**Landform**

**Land use/land cover**

**Soil**

**Water Resources**

**Disaster**

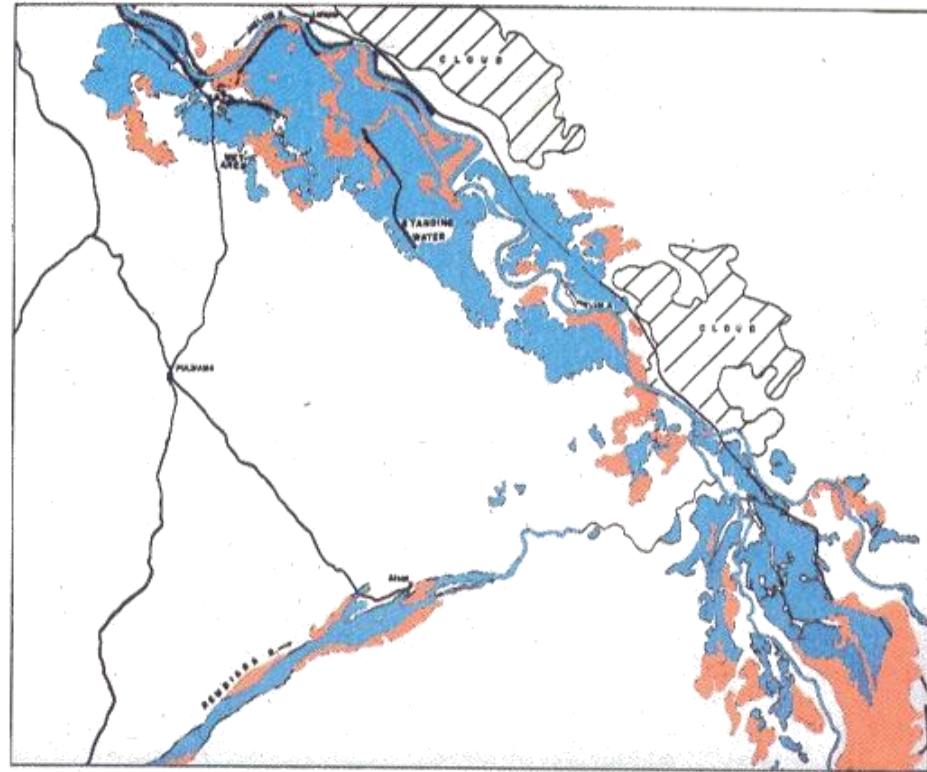
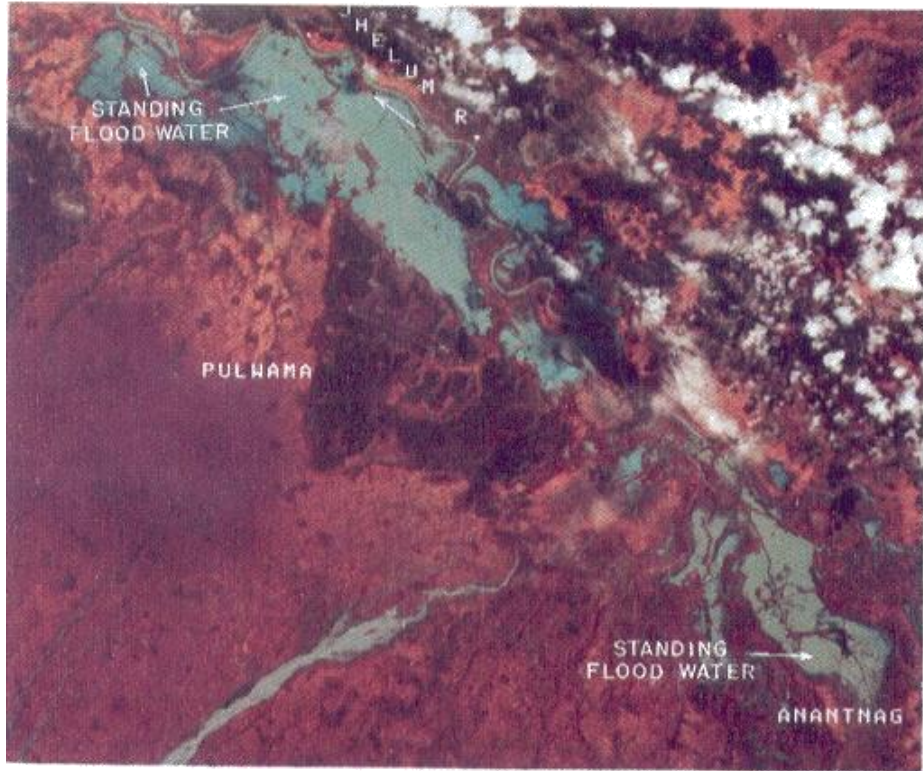
**Urban planning**

# APPLICATIONS OF REMOTE SENSING

- Geo-stationary

**Weather forecasting**

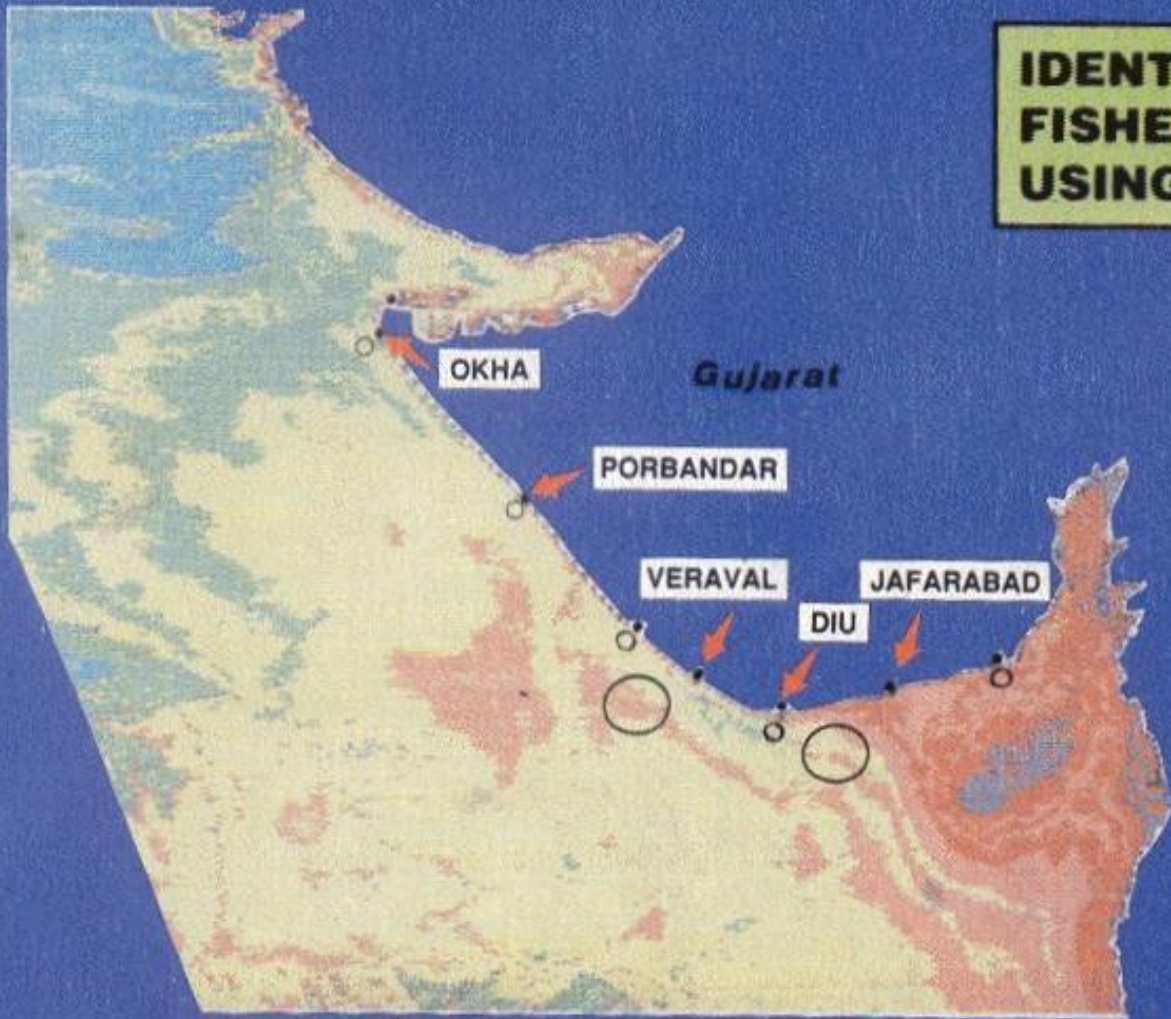
**Communication and broadcasting**



**FLOOD MAPPING - JAMMU & KASHMIR (13 SEPT., 1992)**

□ STANDING WATER   □ WET AREA

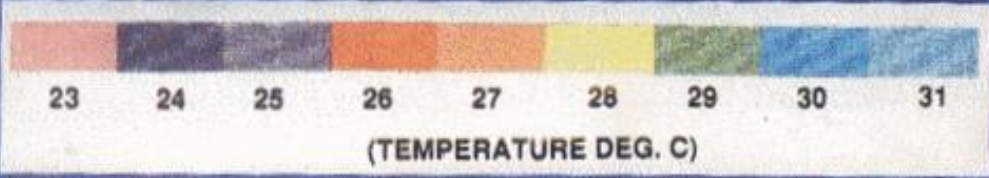
# IDENTIFICATION OF FISHERIES POTENTIAL USING THERMAL FEATURES



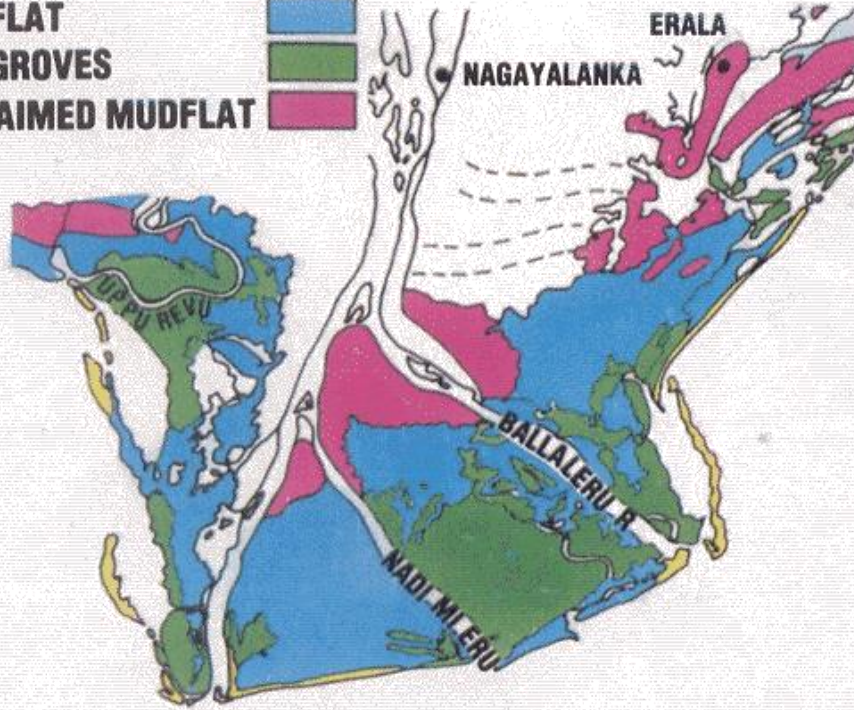
RANK*	SYMBOL
EXCELLENT	○
VERY GOOD	○
GOOD	○
FAIR	○
POOR	○

---

\*FISH CATCH



**SANDY BEACH**  
**MUDFLAT**  
**MANGROVES**  
**RECLAIMED MUDFLAT**



**COASTAL WETLAND MAPPING  
(KRISHNA DELTA, ANDHRA PRADESH)**



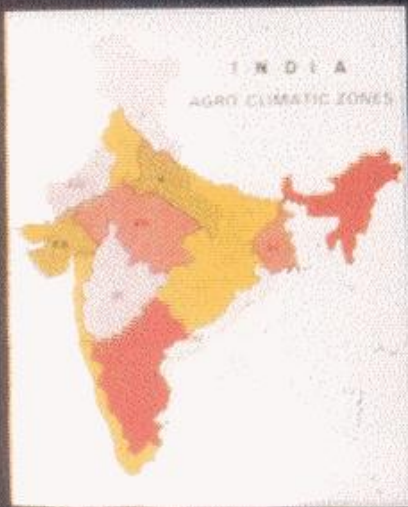
# ALL INDIA AGRO CLIMATIC ZONES

LANDUSE/LAND COVER  
PLANNING

BASED ON IRS LISS-I DATA

1:250,000 SCALE

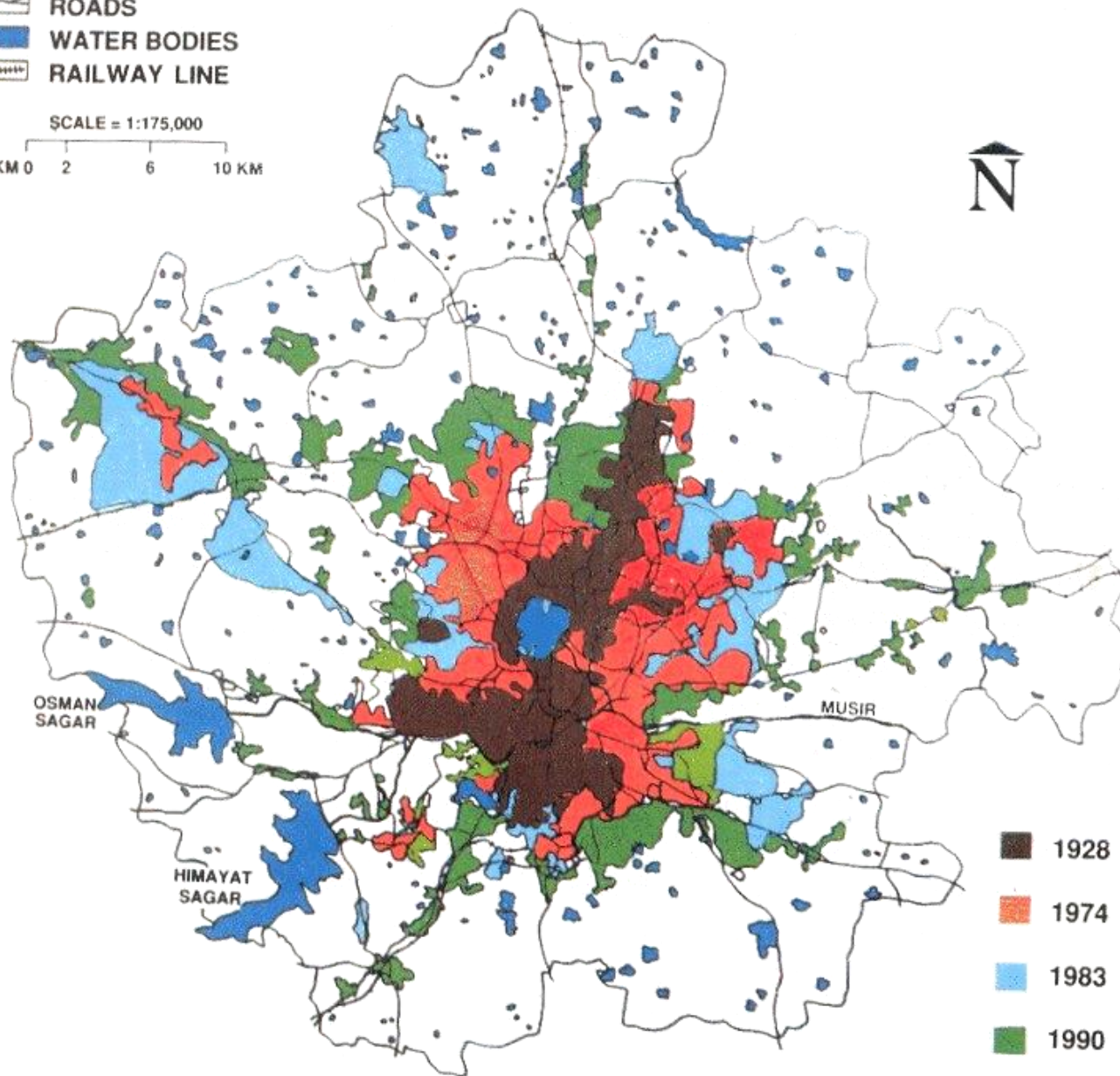
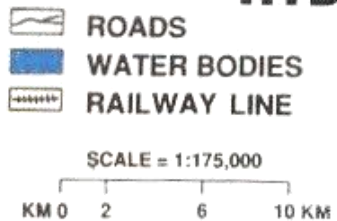
SAWAI MADHOPUR DISTRICT  
RAJASTHAN



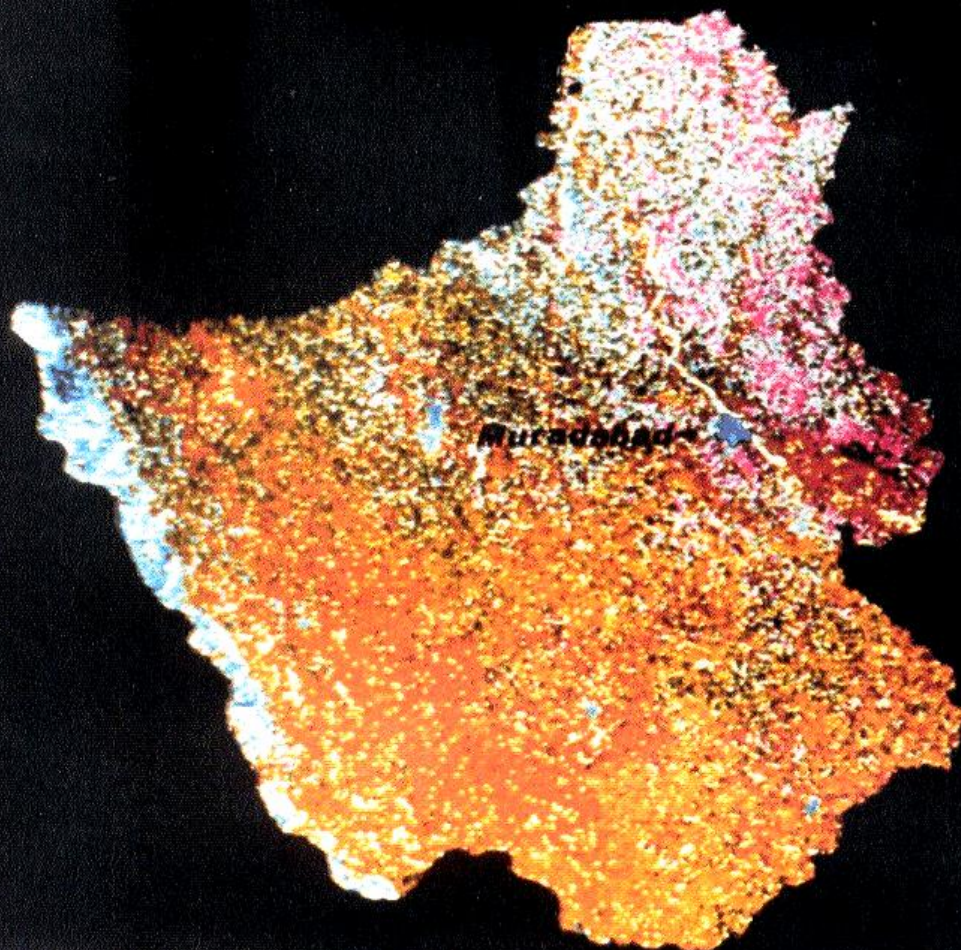
## LENGEND

BUILT UP AREA	RED
AGRICULTURE	YELLOW
FOREST CLASSES	GREEN
WASTE LAND	PINK BROWN
WATER	BLUE BLACK

# HYDERABAD CITY URBAN SPRAWL



# CROP ACREAGE - MURADABAD DISTRICT, U.P.



- RICE
- SORGHUM
- S-CANE
- FOREST
- WLOG
- SCRUB
- SAND

# Golden Coast Resort: A Historical Perspective



QuickBird Natural Color Image  
January 1, 2004

# Golden Coast Resort: Morning of the Tsunami



# Damage Assessments: Coastal Village (Before)



QuickBird 60-cm Natural Color Image  
April 12, 2004

# Damage Assessments: After the Tsunami



# Damage Assessments: Hurricanes and Typhoons





# Damage Assessments

- Emergency relief is provided by the US Army Corps of Engineers to homeowners with damaged roofs.
- Blue plastic tarps provide a temporary repair until permanent repairs can be made
- QuickBird imagery can readily identify those homes that have been repaired



Damaged Homes Covered  
With Blue Tarps

QuickBird 60-cm Natural Color Image  
Pensacola: 21 September 2004

# Damage Assessments: Forest Fires



QuickBird Natural Color Image



QuickBird Color Near-Infrared Image

# Agriculture Applications

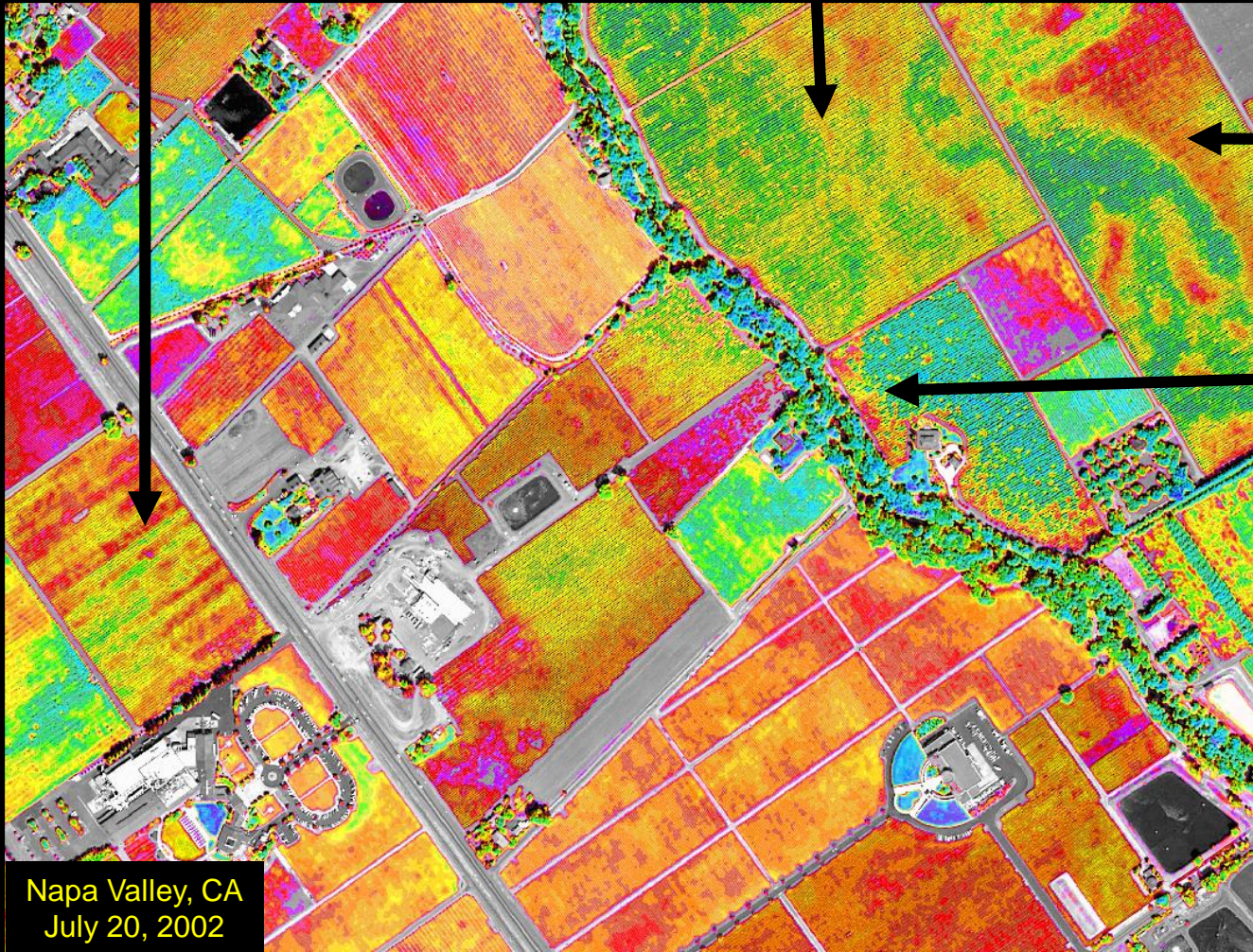
## • Finding New Methodologies to Solve Age-Old Problems

### Irrigation Problems

- An overview of what is really happening

### Old Field Boundaries

- The real cause of these differences



### Soil Differences

- blame it on mother nature

### Diseases

- who pays for the vines to be removed?

#### Dense Vegetation

GVI Color	GVI Index
Dark Blue	95-100
Blue	90-94
Light Blue	85-89
Light Cyan	80-84
Cyan	75-79
Green	70-74
Light Green	65-69
Yellow-Green	60-64
Yellow	55-59
Light Yellow	50-54
Yellow-Orange	45-49
Orange	40-44
Red-Orange	35-39
Red	30-34
Dark Red	25-29
Purple	20-24
Light Purple	15-19
Pink	10-14
Light Grey	5-9
Dark Grey	0-4

Blue colors show the densest canopy  
Grey colors indicate bare soil

Napa Valley, CA  
July 20, 2002