

Remote Sensing Laboratory
Lab Assignment # 2
High Resolution Remote Sensing

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1. OBJECTIVE

The main objective of this exercise is to be acquainted with the high-resolution remote sensing data and compare characteristics types of each data set

2. DATA PROVIDED

The data sources used are from following satellites/sensors;

2.1. Landsat 7:

Data provide is that of Pathumthani province of Thailand with its upper left corner Long./Lat. of 100° 26' 13.88" E, 14° 03' 14.38" N. Although ETM+ sensor provides data in 8 bands but the data provided is of 6 bands. The Panchromatic (Band 8) and Thermal (Band 6) is not provided.

2.2. ASTER:

The location of image is not specified in header file. The Spatial resolution is 15m. Out of 14 Bands of ASTER, only 3 are provided i.e. NIR, Red & G while 6 bands of SWIR & 5 bands of TIR are not provided. Long./Lat. are also not mentioned.

2.3. IRS 1D LISS III and IRS 1D Panchromatic:

LISS-III sensor data for band 2, 3 & 4 are provided and Band 5 (SWIR) is not provided. Also Band 1 (Panchromatic) data is provided. Long./Lat. of upper left corner are 98° 45' 19.54" E, 7° 41' 40.35" N. The location of image is not known.

2.4. IKONOS:

The data provided is that of Edward Airbase, USA with its Long./Lat. of upper left corner 98° 06' 38.15" E, 34° 57' 17.47" N, The 1m spatial resolution data is provided in Red, Green & Blue, while NIR band is missing.

2.5. Quickbird:

The image provided is recorded on 07/11/2002. It contains a band of Panchromatic and four bands of MSS i.e. NIR(4) Red (3) Green (2) & Blue(1). The Long./Lat. of upper left corner is 100° 33' 32.72" E, 13° 43' 36.27" N.

3. METHODOLOGY

The Envi-4.2 of Research Systems, Inc. USA is utilized to view and differentiate various types of high resolution remote sensing images. Also Topographical features like 3D surface and topographical modeling have been utilized in this exercise.

4. RESULT

5. DISCUSSION AND CONCLUSION:

5.Result (II): Characteristic of all sensors both of spatial and spectral information.

Satellite	Sensor	Spatial Resolution	Spectral Resolution	Altitude	Swath	IFOV (μrad)	Repeat Interval	Cost (Seller)	Minimum Price
LANDSAT 7	ETM+								
	Panchromatic								
IRS 1D	LISS-III								