

Digital Processing of IRS - 1B, LISS - II Data for Urban Landuse of Lucknow City and its Surroundings

Year of Starting: 1992

Year of Completion: 1992

Funding Agency & Funds Received: In-house plan project.

Objectives: The main objectives of the study were to obtain latest information on different category of urban landuse of Lucknow city and its surrounding and also to evaluate different digital techniques for Urban landuse mapping.

Study Area: Part of Lucknow district.

Data Used: IRS - 1B LISS - II digital data of February, 1992.

Salient Results:

- Band combination 4,2,1 was proved better than conventional combination of 4,3,2 for FCC generation in discrimination of urban features.
- FCC generated from the combination of band 4, 1/4 and 2/4 ratio images and band 1, 2/4, 1/4 ratio images have further increased the interpretability.
- PC1 image contains maximum over all information as compared to PC2 and PC3.
- Supervised classification with maximum likely hood algorithm has given the maximum information. Various landuse classes obtained by supervised classification are as follows.

Sl. No.	Category	Area in ha	% to total study area
1.	Densely Built-up Areas	3057.78	5.75
2.	Moderate to Sparsely Built-up Areas	2162.12	4.06
3.	Sparsely Built - up Areas	265.55	0.50
4.	Built - up Areas with Vegetation	1336.66	2.51
5.	Vacant Lands	3675.46	6.92
6.	Cropped Land	24676.35	46.43
7.	Orchards	407.46	0.77
8.	Forests	801.19	1.51
9.	Degraded Forest	3425.33	6.45
10.	Salt-affected Land	5681.41	10.69
11.	Water logged Area	24.88	0.04
12.	Scrubland	5763.58	10.85
13.	Water	387.37	0.73
14.	Unclassified	1486.38	2.80
TOTAL		53150.52	

Recommendation/Special Achievement: It was recommended that for urban areas, supervised classification with maximum likely hood algorithm is the best technique when digital processing is attempted.

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