

Comparative Study of Accuracy of Land Cover/Land Use Mapping Using Medium Resolution Satellite Imagery: A Case Study

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Abstract : Classification of satellite imagery is very important for the assessment of its accuracy. In order to determine the accuracy of the classified image, usually the assumed-true data are derived from ground truth data using Global Positioning System. The data collected from satellite imagery and ground truth data is then compared to find out the accuracy of data and error matrices are prepared. Overall and individual accuracies are calculated using different methods. The study illustrates advanced classification and accuracy assessment of land use/land cover mapping using satellite imagery. IRS-1C-LISS IV data were used for classification of satellite imagery. The satellite image was classified using the software in fourteen classes namely water bodies, agricultural fields, forest land, urban settlement, barren land and unclassified area etc. Classification of satellite imagery and calculation of accuracy was done by using ERDAS-Imagine software to find out the best method. This study is based on the data collected for Bhopal city boundaries of Madhya Pradesh State of India.

Keywords : resolution, accuracy assessment, land use mapping, satellite imagery, ground truth data, error matrices

Conference Title : ICBSE 2014 : International Conference on Building Science and Engineering

Conference Location : Sydney, Australia

Conference Dates : December 15-16, 2014