

Potential Use of High Resolution IRS-1C Satellite Data and Detection of Urban Growth in and around of Tiruchirapalli City, Tamil Nadu State, India

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ABSTRACT

The Tiruchirapalli City is situated at the bank of Cauvery River, constitute the densest part of urban environment. It is centrally located in the Tamil Nadu State of India. The present study is to investigate the rate of urban growth in the Tiruchirapalli City on the basis of several villages. For this purpose of determination of visible surface topography with high spatial frequency and precision, the IRS- 1A & 1C (1989, 1997) data, Aerial Photographs (1979) and Survey of India topographic maps (1928, 1971) were used. The urban change analysis and prediction, image interpretation techniques such as supervised classification and change detection techniques were used. The results show that Tiruchirapalli has lost agricultural land to urban uses during a period of 60 years. The artificial areas grew since 1971 up to 1998 very strong with nearly linear rate. The biggest development between 1986 and 1998 happened at east, south and west directions of the Tiruchirapalli City. These changes are due to very big increase in residential a surface, that is from 1921 up to 1980, on all places residential area was created around the existing old structures. The increase of residential and business area forces the loss of agricultural fields and water tanks. This has been largely observed along the east dimension of growth of city where the development-axes of artificial increase. There is no great change in the development of transport network but, the notable changes in road development are observed around the newly developed urban areas. These changes are due to the knowledge of unplanned developments in the urban areas of Tiruchirapalli City and can be planned well.

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