

Identifying Areas of Forest Change with the help of Analysis of Zonal Statistics: A RS-GIS Approach

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Abstract:

Regular monitoring of changes in forest areas is crucial for sustainable management of the resource. Due to vast and wide spread of the forests, it is difficult to know about every site of forest degradation in its entire spread, based on the mechanism of field observations by the field forest staff alone. It is also very important that the system of monitoring of forest is objective as well as cost and time efficient and is based on complete scan of the forest cover in a given area.

Remote sensing and GIS based approach of monitoring forest cover meets all the desirable requirements of such a system and is cost effective also. The need for a robust forest monitoring system has been amplified in the recent times with the advent of new incentive based mechanisms of arresting forest degradation and deforestation like CDM and REDD+. In this study, a new approach of monitoring forest degradation based on analysis of zonal statistics derived from the raster layers of certain vegetation indices applied on remotely sensed data with the help Arc GIS software (version 10.0) has been presented. The study also paves way for quantified monitoring of changes in the forest areas.

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