

## STRATIFICATION FOR FOREST CARBON ASSESSMENT : A GEOSPATIAL APPROACH

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### Abstract

In the times when the impacts of climate change are becoming increasingly evident in the form of extreme events, sea level rise, melting of glaciers, change in rainfall pattern, increasing frequency of draughts etc, forest has emerged at the center stage of mitigation and adaptation strategies for combating climate change world over. Focus on forests for its conservation, sustainable management and enhancement of carbon stored in it has necessitated measurement of forest biomass and carbon as essential requirement for implementing various mechanisms including REDD+, CDM etc. Vast spatial expanse, remoteness and diversity of species along with difficult terrain conditions pose great challenges in measurement of biomass and carbon stock in forests.

Remote sensing data and application of geospatial technological tools have been found very useful in identifying homogeneous forest strata for forest inventory. Stratification of forests not only provide cost effective and time efficient methodology but also lead to higher accuracy in estimation of growing stock and carbon in forests. In this paper, an approach of forest inventory based on stratification has been presented in which Arc GIS software has been used for spatial analysis leading to inventory design.