Object based image analysis of satellite imageries- A new frontier for the assessment of forest biodiversity

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Biodiversity and its conservation are important issues as the rate of habitat and species' destruction continue to rise due to increasing climate change and anthropological factors. In order to design meaningful conservation strategies, comprehensive information on the distribution of species and its temporal change are required. Recently, the remote sensing and biodiversity communities have started coordinating their research issues, problems and their solutions on single platform. The possibility of such co-operations has been substantially increased with the advancements in satellite remote sensing technology in last years. This interdisciplinary research has enabled to capture satellite data at regional and local scale to provide information about changes in species distribution, habitat degradation and fine-scale disturbances of forests. This article investigates the development and application of Object Based Image Analysis (OBIA) using satellite imageries for the assessment of forest biodiversity. Satellite data can provide reliable information related to forest cover, its species type and density, which are important indicators of biodiversity. Further, this article covers the various OBIA applications and innovative techniques for forest parameter estimation, tree crown estimation and forest land cover change, which proves that the OBIA approach is becoming a new frontier in the field of forest biodiversity based studies.

Biography
Siddhartha Khare is pursuing his Ph.D from Indian Institute of Technology Roorkee, Roorkee, India since January 2013. He has completed his MTech from Indian Institute of Technology Roorkee, Roorkee, India in June 2012. He has worked as an Assistant Professor from July 2012 to October 2012. He has published 4 papers in international conferences. He is also working as Nominee Member in Sahayog India Foundation research organization.

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