

LCLUC Abstract

Towards Methodologies for Global Monitoring of Forest Cover Characteristics with Coarse Resolution Data

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This proposal addresses the need to develop prototype methodologies for global monitoring of forest cover with coarse resolution data in the context of Global Observations of Forest Cover activities. We propose to build on previous research to develop methodologies for characterizing forest cover and changes in forest cover independent of the often varying thresholds of canopy cover considered to be "forest." By developing a training and validation data set based on *in situ* measurements as well as high resolution Landsat data, we propose to develop a prototype product for the conterminous United States using coarse resolution data (AVHRR and MODIS when available). The methodology for combining *in situ*, high resolution, and coarse resolution data will serve as a prototype that can be extended to other parts of the world. We will also examine the ability of the methodology to identify changes in forest cover by applying it to individual years and assessing the extent to which differences represent actual change. Until several years of MODIS data are available, this part of the project will use AVHRR 1km data. We also propose to address the need within GOFC for methodologies that are automated and repeatable. A number of techniques such as automated noise reduction for training data, feature selection, and enhancements to decision tree classifiers will be assessed for their potential to automate the procedures.

Web Address data sets available through <http://glcf.umiacs.umd.edu>