

AN OVERVIEW OF METHODOLOGIES FOR MAPPING ECOLOGICAL SYSTEMS VEGETATION CLASSES FOR THE PIEDMONT REGION OF THE SOUTHEASTERN US

Jason Lee, Kevin Samples, and Liz Kramer
Natural Resources Spatial Analysis Laboratory
College of Environment and Design
University of Georgia, Institute of Ecology
Athens, GA 30602

ABSTRACT

The Piedmont region of the Southeastern US is a highly fragmented landscape heavily dominated by human influenced activities with small patches of natural and semi-natural vegetation. We are mapping the area as part of the Southeast GAP regional Program. Forest vegetation classification from Landsat ETM+ data of the southern US piedmont beyond general land cover classes is hampered by the limited variation in spectral signatures of tree species. We were able to use classification and regression tree analysis (CART) to derive a general land cover classification (deciduous, mixed, evergreen forest types). However, for separating out additional vegetated classes, alternate methods had to be developed. Since matrix, large patch and linear ecological systems of the Southern Piedmont are mostly topographically driven, we developed alternatives that included landform mapping and other topographic modeling procedures. This paper presents an overview of mapping and modeling techniques used to develop vegetation maps for the piedmont region.

[Abstract Only]

In Prisley, S., P. Bettinger, I-K. Hung, and J. Kushla, eds. 2006. Proceedings of the 5th Southern Forestry and Natural Resources GIS Conference, June 12-14, 2006, Asheville, NC. Warnell School of Forestry and Natural Resources, University of Georgia, Athens, GA.