



ECOSYSTEM SERVICES BASED SILVICULTURE A McIntire - Stennis Supported Project

Silviculture is the art and science of sustainably growing trees for the benefit of people. Historically, silviculture was focused on the production of wood fiber for consumptive use; however, there is increasing interest in non-timber benefits provided by forests as well as the trade-offs that emerge from managing forests for these different purposes. Novel applications of silviculture and new metrics for assessing desired outcomes are necessary to maximize benefits and minimize trade-offs that best meet the diverse needs and values of landowners and society on a sustainable basis.



Ecosystem services models provide a theoretical foundation for a silviculture research program focused on how forest ecosystems impact the outflow of multiple values and benefits. This research tests the strength of assumptions in the ecosystems service model while using it to assess benefits and trade-offs between diverse needs and values in response to silvicultural interventions.



COLLABORATION

In addition to Mississippi State, this project includes, the University of Tennessee, Louisiana Tech, Portland State University, and Auburn University. Private forest industry is also actively involved. Twelve individuals have been tied to this project as collaborators, participants, or project directors.

ABOUT MCINTIRE-STENNIS

The McIntire-Stennis program, a unique federal-state partnership, cultivates and delivers forestry and natural resource innovations for a better future. By advancing research and education that increases the understanding of emerging challenges and fosters the development of relevant solutions, the McIntire-Stennis program has ensured healthy resilient forests and communities and an exceptional natural resources workforce since 1962.



IMPACTS



There are more than **200 million acres of forest** in the southeastern U.S.



This project will **train two graduate students** over the next two years.



Silviculture aimed at **increasing ecosystem services in biomass plantations** could reduce biofuel selling price by 10%.