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Provisional title: Landscape Design Approach for Assessing Sustainability of Pellet Production from Southeast United States Forest Residues

Provisional abstract:

Wood biomass for energy from woody residues and thinning operations in the southern United States (SE US) is the fastest growing part of the bioeconomy in 2014. Conditions that might promote progress toward environmental, social and economic sustainability are considered for the increased wood pellet production in SE US. This assessment includes identification of suitable sustainability indicators for wood-based bioenergy in the SE US that have been previously developed and discusses how their use might influence tradeoffs in management decisions. The woody residues being transported to the ports of Chesapeake, Virginia, and Savannah, Georgia, are used as two separate case studies. The study focuses on feedstock availability from the SE US from 2010 to 2030 at annual time steps. The feedstock supply is primarily woody residues and thinnings that are a byproduct of forest operation for timber, pulp and paper. The study also considers how forestry-based best management practices and forest certification programs are being used and might be adapted or expanded to foster bioenergy sustainability of biomass feedstock. This approach will be useful for the decision makers across the supply chain who need to determine ways to address and analyze sustainability issues in the wood pellet market in the US.

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