

# Overview of the pellet industry in the Southeastern US

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## ABSTRACT

The use of woody biomass for energy from forestry operations in the Southeastern United States (SE US) has grown rapidly over the past decade. From 2012-2014, exports of wood pellet exports to Europe more than doubled. We are identifying conditions that might promote progress toward environmental, social and economic sustainability 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, and then to Europe are used as two separate case studies. The feedstock supply is primarily woody residues and thinnings that are a byproduct of forest operation for timber, pulp and paper. Data collected under USDA's Forest Inventory Analysis (FIA) are used to characterize changes in timberland and associated carbon. Our preliminary findings suggest that (a) controversies and potential market barriers are linked to biodiversity, carbon balance accounting, certification schemes acceptable to European nations, and terminology (e.g., waste, residue, thinning, whole tree, natural forest, wetlands); (b) ecological objectives can be achieved with wood-derived bioenergy ; (c) the selection of sustainability indicators, definitions, and choice of a "reference system" are critical factors influencing assessment results, and (d) since the rise in pellets exports, timber harvests decreased in the Chesapeake fuelshed and increased in the Savannah fuelshed, but the rise in plantation area and the decline in natural forest stands were less than prior trends, and net carbon in both fuelsheds is increasing. We are using a landscape design approach to determine conditions that promote continual improvement and to provide a platform capable of addressing concerns about social, environmental and economic sustainability of woody biomass for energy. This approach should 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 and other energy systems.