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Southern Group of State Foresters Policy Brief: **Forest Sustainability and Wood Pellets in the Southeastern United States**

The Southern Group of State Foresters (SGSF) represents the interests of the state foresters from across a 13-State area of the southern United States. In each of their states, the state forester is charged by state government with monitoring and ensuring the sustainability and vitality of the state-owned and private forest resources. As an association, the SGSF mission is to provide leadership in sustaining the economic, environmental, and social benefits of the South's forests, and thus we are very interested in the potential impacts of a growing wood pellet industry on the forests and forest owners within this region, as well as any discussions surrounding southern forest sustainability.

The forest landscape in the southern United States is markedly different from that found in the European Union. The crux of this difference lies in the fact that the majority (86%) of forest land in the South is under private ownership, with 66% of that owned by non-industrial private forest (NIPF) owners¹. This means that any conversation on forest policy and environmental or sustainability outcomes must inherently center on discussion of how those NIPF owners currently manage their land, and how incentives and markets might change that management into the future. Research indicates that the vast majority (over 70%) of NIPF owners own land for reasons of nature protection and beauty/scenery, with water protection and wildlife habitat also ranking high on the priority list². This indicates a strong desire to be good stewards of the land and for their forests to be well-managed, making it in their best interest to make informed decisions about their land before any active management.

The United States, and in particular the South, has a strong system of monitoring, reporting and regulating the sustainability of its forest landscapes. The Clean Water Act, Clean Air Act, Endangered Species Act, and many other federal and state regulations are in place to guide sustainable outcomes on private forest landscapes. Additionally, through Federal, State and Tribal investments in forest inventory monitoring, harvest tracking, public lands conservation, and State-driven efforts at Best Management Practices and State Forest Action Plans, monitoring is ongoing regarding the impacts of all harvesting activities, including bioenergy harvesting, as well as processes for addressing any sustainability challenges if they emerge. Monitoring data and reports from the national Forest Inventory and Analysis program and other efforts are subject to ongoing quality assessment and are publicly available, allowing robust real-time public dialogue and policy responses to advance the sustainability of forest management.

Forestry Best Management Practices (BMPs)

BMPs exist in every southern state to minimize impacts to water quality and other resources from silvicultural activities. Categories of activities for which BMPs exist in most states include harvesting, site preparation, forest roads, stream crossings, and streamside management zones. State

¹ Wear, D.N. and Greis, J.G. 2013. Southern Forest Futures Technical Report, http://www.srs.fs.fed.us/pubs/gtr/gtr_srs178.pdf

² Butler, Brett J. et al., 2021. Family Forest Ownerships of the United States, 2018. Gen. Tech. Rep. NRS-199. <https://www.nrs.fs.fed.us/pubs/62180>

forestry agencies developed BMPs starting in the 1970s, and they have been actively evaluated, tested, revised, and adapted over time. The Clean Water Act recognizes BMPs as the most viable pathway to address nonpoint source pollution that originates from various land management activities. Each state implements BMP programs according to its unique landowner characteristics, ecological conditions, forest industries, and socio-political norms, and conducts BMP effectiveness monitoring to track environmental outcomes. The approaches range from regulatory (forest practices law or silvicultural BMP legislation) to non-regulatory (voluntary adoption and promotion of the use of BMPs through training and education); however, research has shown that all program structures are equally successful at achieving environmental outcomes.³

SGSF and its members track BMP implementation rates on a state-by-state basis, as well as rolled up at the regional level. The most recent synthesis report in 2019 indicates that BMP implementation across the South is very high at 93.6%, and that implementation has been steadily increasing over the past two decades⁴. In particular, logger training and certification programs have proven to be a key element in strengthening the acceptance, adoption, and use of forestry BMPs. The ongoing process of BMP monitoring is something that SGSF and its partners are committed to in showing implementation of sustainable harvest practices, and will continue to use to track environmental outcomes into the future.

Forest Inventory and Analysis (FIA)

The FIA program, conducted regionally by the US Forest Service Southern Research Station in partnership with the states, provides the backbone of data used to monitor trends in forests and forest products across the South. Through a network of on-the-ground plot measurements (1 plot every 6,000 acres) and rigorous data processing and analysis, FIA is able to answer the tough questions that scientists and policymakers alike ask about the South's forest resource – Is it growing or shrinking in size? Are there changes in species composition or geographic distribution? Are there issues with regeneration? FIA is the go-to source for information on these questions. Annual state-level reports and the ability for any member of the public to access the most recent field data on-line create a robust, transparent, and timely structure for monitoring changes in southern forests.

Data analysis is consistently being done by USFS analysts as well as state and private entities to monitor the sustainability of forest resources, forest use, and forest health. Dozens of southern region FIA publications can be found at the SRS website (<https://www.fs.usda.gov/srsfia/>) which when taken together show current regional sustainability. FIA data shows that in the 9-state area where pellet mills have appeared on the landscape, forests are currently growing more than twice the amount of volume than is being harvested, and 60 percent more volume than is being removed through all causes including harvest, insects & disease, and wildfire⁵. As an industry such as wood pellet production grows, FIA analysis is able to track changes on the landscape and highlight if there are specific regions of concern for the forest resource. FIA data is also used by industries and states in siting a facility to ensure that there is the forest supply base to economically and ecologically support it in advance of beginning operations. This capability of FIA program data to paint a clear picture of the present status of forests, as well as to look forward and backward with respect to forest trends, makes the potential development of new sustainability tracking systems redundant.

³ National Association of State Foresters. 2019. Protecting the Nation's Water: State Forestry Agencies and Best Management Practices. <https://www.stateforesters.org/wp-content/uploads/2019/12/NASF-2019-BMP-Final.pdf>

⁴ Southern Group of State Foresters Water Resources Committee. 2018. Implementation of Forestry Best Management Practices: 2018 Southern Region Report. <http://www.southernforests.org/resources/publications/SGSF%20BMP%20Report%202012.pdf>

⁵ FIA State Fact Sheets for Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Virginia; https://public.tableau.com/views/FIA_OneClick_V1_2/StateSelection Accessed 5/5/2022

The Southern Forest Futures Project

The Southern Forest Futures Report, as well as associated subregional outlooks, examines potential futures of southern forests in response to a variety of factors, both natural and anthropogenic. This report represents the most comprehensive analysis of how southern forests could change on the macro-level. Using computer modeling and cutting-edge scientific analysis, the report presents a range of plausible futures or scenarios for the South's forests based on a variety of influences such as urbanization, bioenergy, climate change, land ownership changes, and invasive species. It does not attempt to predict the singular path forward, but instead delivers a range of possible outcomes to inform policy and land management decisions.

Regarding forest biomass-based energy, the report⁶ finds that “*While woody biomass harvest is expected to increase with higher prices, forest inventories would not necessarily decline because of increased plantations of fast growing species, afforestation of agricultural or pasturelands, and intensive management of forest lands*” (Technical Report, pg. 213). While the report recognizes the potential for high demand for woody biomass energy to affect harvest levels and create impacts to ecosystem services such as water and wildlife, research findings indicate that these effects can be mitigated at the local level through management considerations and use of BMPs (Technical Report, pg. 250).

In addition to documenting the current status of forests in the South, the resources highlighted above also emphasize future threats. They note that the greatest threat to southern forests is conversion to other uses, most notably development and agriculture, with between 11 and 23 million acres of forest loss to conversion projected by 2060. The current economic reality is that the majority of private forest owners have to constantly reassess the best value of their land. Forestry is competing with agriculture, development and other uses for that land. Good forest policy must incentivize these private forest owners to keep their forests as forests, and support markets that return to them an investment for their land. Modeling has shown that sustainably managed pellet markets can do just that, with a resultant increase in forested acres across the South⁷. Policy that instead creates financial and procedural hurdles for these owners to access markets and actively manage their lands can be counterproductive to the end goal of forest health and forest retention across the South.

Summary

Taken collectively, the information presented here conveys two important points. First, there is no data that suggests southern forests are in decline or are being harvested unsustainably at the regional level. On the contrary, FIA data shows that in the 9-state area where pellet mills have appeared on the landscape, forests are currently growing 60 percent more volume than is being removed through all causes including harvest, insects & disease, and wildfire. Second, while some modeling suggests that a growing biomass industry could indeed stress the southern forest resource in the future, there is in place a robust monitoring system, including silvicultural BMPs, FIA data, and multiple forest certification methods (Sustainable Forestry Initiative, Forest Stewardship Council, and American Tree Farm System), that work in concert to assess those effects and inform policy modification as needed. We don't believe the evidence supports a need to enact preventive policy at the expense of non-industrial private forest owners. Encouraging those forest owners to keep their land in forests, including through supporting strong wood products markets that are crucial in helping keep our forests on a sustainable trajectory, is the chief concern in the South today.

⁶ Wear, David N.; Greis, John G., eds. 2013. The Southern Forest Futures Project: technical report. Gen. Tech. Rep. SRS-178. Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 542 p.

⁷ Galik, C. S. and Abt, R. C. 2015, Sustainability guidelines and forest market response: an assessment of European Union pellet demand in the southeastern United States. GCB Bioenergy. doi: 10.1111/gcbb.12273