

Bound for the EU, American-made biomass checks the right boxes

October 29 2020



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In 2009, the European Union's Renewable Energy Directive (EU RED) established goals to produce more energy from renewable sources, triggering exponential growth in the solid biomass trade. By 2018, the

EU was trading over 18 million tons of wood pellets, with a third imported from the southeastern United States.

But what effect does this large, new industry have on southeastern US forests? Until now, European policymakers could only infer that the region's wood pellet industry was compliant with EU RED rules through [case studies](#), land use projections, and literature reviews. This first-of-its-kind study gives a more definite confirmation of compliance.

From 2005 to 2017, an international team conducted a systemic assessment of 123 areas where wood pellet mills managed vast swaths of forest. Composed of researchers from the Swedish University of Agricultural Sciences, University of Missouri, and Resources for the Future, the team found the following trends:

- Overall, there was a net expansion in the amount of carbon stored in southeastern forests—which means that current production is compliant with EU trade requirements calling for the preservation of carbon stocks in biomass sourcing areas.
- The amount of carbon stored in the soil of southeastern forests decreased with each year of milling operations. There were no significant changes in the amount of carbon stored in live or standing-dead trees, but the [carbon](#) was concentrated in fewer but larger trees.
- There was a downward trend in the number of standing-dead trees.

"All in all, our analysis suggests some positive areas but possible concerns if some trends were to continue. We examined 12 years of data, but that is only a small window of time to assess sustainable forestry," lead author Francisco Aguilar said. "Monitoring using the best-available data shall continue. And it must be observant of other co-localized factors that can significantly alter [forest](#) conditions. For

instance, systematic assessments must also take into consideration population changes, expansion in wood fiber demand from other competing sectors, and extreme weather."

The researchers also note that the US Department of Energy suggests a 21% increase in domestic electricity generation using wood by 2030 may also signal a further increase in demand—and that future monitoring is warranted.

"This research provides the first comprehensive assessment of changes to US timberlands induced by demand in the EU for pelletized wood for energy production," coauthor and RFF Darius Gaskins Senior Fellow Dallas Burtraw said. "The findings provide cautious support for the sustainability of US forests, with ongoing monitoring, as demand for [wood](#) pellets is likely to increase."

More information: Francisco X. Aguilar et al, Expansion of US wood pellet industry points to positive trends but the need for continued monitoring, *Scientific Reports* (2020). [DOI: 10.1038/s41598-020-75403-z](#)

Provided by Resources for the Future (RFF)

Citation: Bound for the EU, American-made biomass checks the right boxes (2020, October 29) retrieved 27 June 2024 from <https://phys.org/news/2020-10-bound-eu-american-made-biomass.html>

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