https://doi.org/10.7250/CONECT.2026.089

COSTS OF MEETING THE EU'S LULUCF TARGET THROUGH HARVEST RESTRICTIONS

Maarit KALLIO*

Norwegian University of Life Sciences, Faculty of Environmental Sciences and Natural Resource Management, PO Box 5003, N-1432 Ås, Norway

* ***Corresponding author.*** *Email address: Maarit.Kallio@nmbu.no*

Abstract – The EU regulation on greenhouse gas emissions and removals from land use, land-use change, and forestry (LULUCF) is part of the European Union's (EU) 2030 climate change mitigation framework. To meet policy goals, the carbon sinks in managed forests must be enhanced. Owing to the short time span of the policy, reducing roundwood harvests is the only means of substantially contributing to this goal. Enhancing forest sinks in managed forests is often described as a low-cost option for mitigating climate change. Hence, calls to reduce roundwood harvests have increasingly emerged in public debates. However, several studies have indicated that restricting harvests in certain regions is an ineffective policy measure. If harvests in the EU are limited below levels driven by the global demand for wood products, a considerable share of roundwood and forest industry production that would otherwise take place in the EU would be replaced by increased production elsewhere. This study evaluated the costs that could occur if EU Member States restricted their harvests to meet their LULUCF targets instead of following market-driven baseline development. Data on forest sector production were based on recently published simulations using a global forest sector model. A study with leakage mechanisms similar to those in these scenarios suggests that the carbon leakage rate from the EU to the rest of the world (RoW), resulting from environmental policies, would exceed the harvest leakage rate. Therefore, using harvest leakage as a proxy for carbon leakage should not overstate the mitigation costs. Applying national economic multipliers to the change in production in the policy versus baseline scenarios, Germany, France, Finland, and Sweden face the highest costs, amounting to several billions of euros annually in these countries in 2026–2035. A few EU countries gain modestly. The United States, Canada, Brazil, and Russia are the biggest economic gainers. The cautious estimate for the policy costs for the EU countries ranges from 700 €/t CO_2 to 1400 €/t CO_2, depending on whether the decrease in the carbon sink in harvested wood products and the increase in emissions due to a shift toward more carbon-intensive materials are accounted for when calculating the global net change in greenhouse gas emissions. The cost is higher than that associated with many other climate-change mitigation measures. The substantial welfare transfer to the RoW raises the question of whether this policy, which burdens the EU forest bioeconomy, is meaningful.

Keywords – Carbon costs; climate policy; environmental policy; forest sector, harvested wood products; harvest leakage; LULUCF

ACKNOWLEDGEMENT

This work has been supported by the Finnish Forest Foundation within the project "Costs of meeting the EU's LULUCF target through restrictions on forest management".