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Where does the wood come from? A physical accounting model to trace the origin of wood-based products

T2.21 Pathways towards sustainable and circular forest-based bioeconomies: Advances in research to address challenges and realize opportunities

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Abstract: In today's globalized world wood-based products are often imported from countries other than those where the wood was grown. Bilateral trade statistics are thus only of limited help for getting a better understanding of how production-related environmental impacts are caused by consumption elsewhere. This study presents a novel physical accounting model that allows flows of wood-based products to be traced along international supply chains, therefore making it possible to consistently relate the consumption of wood-based products to the origin of roundwood. In comparison to previous studies, the proposed method covers entire supply chains, including finished wood and paper products, such as furniture and printed matter, and also accounts for flows of processing residues and recovered paper. The main results of the accounting model are detailed country-by-country matrices indicating the locations of origin of the products consumed in a given nation. For instance, it is revealed that out of the finished wood products consumed in the USA in 2018, 75.6% originated domestically, 10.7% from neighbouring Canada and the remaining 13.7% from other countries.