

Project *brief*

Thünen Institute of Forestry

2025/01a

Tracing paper products and their associated sustainability effects in the countries of origin

Paola Pozo¹, Matthias Bösch, Jörg Schweinle

- Around 113 million cubic meters wood fibre equivalents of finished paper products were consumed in the EU in 2018, of which 35% originated from other countries outside the EU (especially the USA, Brazil and Uruguay).
- Employment, value added and global warming potential associated with EU consumption of paper products were evaluated for one of the main suppliers, Uruguay.

Background and objectives

In a globalized bioeconomy, wood is traded along complex supply chains and over large distances. This makes the final consumers rarely aware of the sustainability effects in the countries of origin of production. In a first step towards monitoring sustainability effects of wood as one of the main elements of the EU biomass supply, a novel approach combining a physical tracing model with a material flow–life cycle assessment approach was used to trace the wood's place of origin and associated sustainability effects.

Approach

The physical tracing model was used to trace the wood origin for the consumption of finished paper products within the EU in 2018, considering the current 27 EU Member States (i.e., without the UK). The material flow analysis–life cycle assessment approach was used to assess the sustainability effects in the producer countries, with Uruguay serving as a case study.

Results

In 2018, 112.8 million m³ of finished paper products were consumed in the EU. 65% of the wood contained in these products was sourced domestically and 35% originated from other countries outside the EU. The most important countries of origin outside the EU (Fig. 1) were the USA (11%), Brazil (10%) and Uruguay (4%). We used Uruguay as a case study for an important country supplying wood pulp to assess the associated sustainability effects. The total value added in Uruguay related to exports to the EU represented around USD 675 million, while the total employment accounted for around 4120 people in the full-time equivalent (Fig. 2).

Conclusions

The approach provides a step forward in monitoring the sustainability impacts of the EU wood supply in the countries

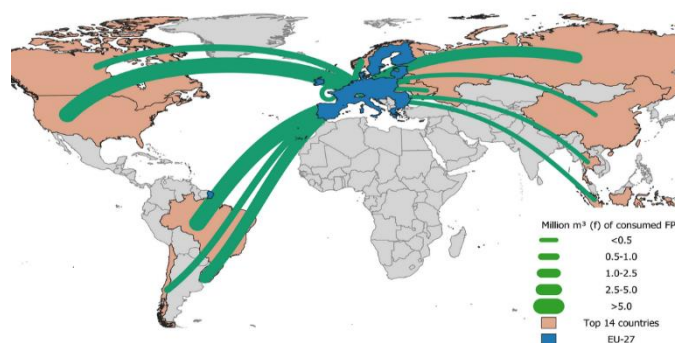


Fig. 1. International wood origin contained in finished paper products in the EU (Source: own calculations).

of origin. The example of Uruguay shows, the spillovers that emanate from the EU demand for wood commodities should be accounted for. Results reveal effects in employment, value added and GHG emissions and highlight the need to analyze different dimensions of sustainability in order to have a more holistic overview.

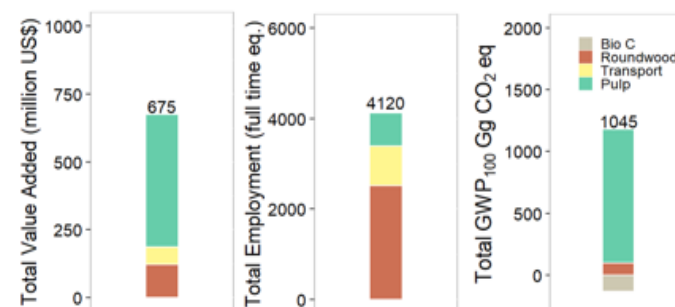


Fig 2. Socio-economic and environmental impacts in Uruguay linked to EU demand (value added, employment, global warming potential) - (Source: own calculations).

Further Information

Contact

¹ Thünen Institute of Forestry
paola.pozo@thuenen.de
www.thuenen.de/en/wf

Run time

11.2021 - 10.2024

Project-ID

2437

Publications

Pozo P, Bösch M, Schweinle J.
 Monitoring the Sustainability of the EU Biomass Supply: A Novel Hybrid Approach Combining Tracing and Selected Sustainability Impacts. *Land*. 2024; 13(9):1366.

Funding



DOI: 10.3220/PB1736502250000