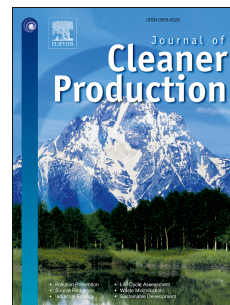


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Carbon footprint of a university in a multiregional model: the case of the University of Castilla-La Mancha

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HIGHLIGHTS

- A University carbon footprint is measured by a hybrid environmentally extended MRIO
- Twofold Hybridization: uses regional and international less aggregated coefficients
- The analysis compares the effect of applied abatement measures to alternative ones
- The 9 years period shows the evolution of regional and sectoral origin of CO₂e
- Results highlight the relevance of energy generated emissions, directly and embodied

ABSTRACT

The increasing concern about the environmental performance and sustainability of firms and organizations also involves educational institutions. If universities aim to become leaders in sustainability aspects, they must adopt strategies that involve the entire university system. As a useful tool for this purpose, the objective of this study was to calculate the carbon footprint for the University of Castilla-La Mancha for the period 2005-2013. The calculation of the university carbon footprint was accomplished through a hybrid environmentally extended input-output model in a multiregional framework, which constitutes a novelty of the analysis. The proposed tool also allows the calculation of the potential for emissions reduction of abatement measures. The carbon footprint induced by the consumption of university employees' wages is also undertaken as a way to increase awareness and university outreach to society. The results show the relevance of both imports and indirect emissions and highlight the significance of energy-related emissions enabled by sectors such as renting, electrical and optical equipment, manufacturing or even services.

KEYWORDS

University carbon footprint, Consumer responsibility, Input-output, Procurement emissions.

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