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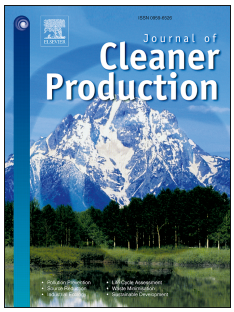

The emerging role of water footprint in supply chain management: A critical literature synthesis and a hierarchical decision-making framework

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The emerging role of water footprint in supply chain management: A critical literature synthesis and a hierarchical decision-making framework

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Abstract

Freshwater overexploitation and scarcity have led to extensive shifts in demand patterns for water-friendly products. As several agricultural and industrial activities are closely intertwined with water consumption, the availability of sufficient freshwater resources constitutes a significant precondition for covering global consumer needs. In this context, the design and management of sustainable supply chains in terms of freshwater resources' preservation have emerged as major challenges in the corporate agenda. As such, the concept of water footprint as a key performance indicator of freshwater utilization has been introduced at national, corporate and product levels. In this manuscript, we first provide a critical literature synthesis concerning product water footprint assessment in order to map the state-of-the-art research related to freshwater consumption and pollution in the agricultural and industrial sectors. Our analysis demonstrates that although water footprint assessment is a rapidly evolving research field, scientific publications focusing on a holistic approach concerning freshwater exploitation at a supply chain extent are rather limited. The findings further verify that the agrifood sector dominates global water use. In this respect, we analyse both corporate and academic literature in order to identify emerging issues on freshwater resources'

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