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Developing sustainable supply chains in the UK construction industry: A case study**P. Dadhich^a, A. Genovese^{b*}, N. Kumar^b, A. Acquaye^c**

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Abstract

In recent years, increased concerns over pollution and greenhouse gas emissions have initiated a wave of policy change in both governmental, industry and non-governmental organisations in order to reduce the overall environmental impact and ensure a sustainable future. The UK Green Building Council for instance has identified construction as one of the most emission-intensive industries, accounting for around 50% of greenhouse gas production in UK. In this study, a hybrid life cycle assessment (LCA) technique is used to analyse the plasterboard supply chain; the most commonly used product in the UK construction industry of one of the Europe's leading distributor and contractor of building materials. This study demonstrates how emission 'hotspots' across the lifecycle of products can be identified and analysed using different intervention options in the supply chain in an attempt to reduce greenhouse gas emissions. For the plasterboard supply chain, the implementation of cross-docking principles and use of renewable sources of energy in warehousing were determined to be major decarbonization interventions.

Keywords

Sustainable supply chain, Life cycle assessment, Greenhouse gases, Construction industry, Case study

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