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Opportunities for Improving Eco-Friendliness and Efficiency in Intermodal Transport: A European Union Perspective

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Abstract

Intermodal Transport is at the core of European Union's sustainability agenda, presenting potential solutions to reduce environmental impact and while improving freight movement efficiency. This study explores the opportunities to make EU's intermodal transport more sustainable and operationally efficient. The study identifies opportunities such as adoption of green technologies, infrastructural enhancements and supportive regulatory measures by investigating policy frameworks, technological developments and market trends. The transformative potential of technology is mainly highlighted by developments such as electric and hybrid vehicles, digital platforms for route optimization and energy efficient containers. For intermodal transportation to be seamless, modernisation of infrastructure which includes railway ports and urban logistics hubs is essential. Furthermore, the regulatory backbone for sustainability activities is provided by the supportive policies such as carbon pricing mechanisms, harmonized laws and subsidies for green initiatives. Collaboration among stakeholders through public-private partnerships and industry consortia is another important factor that propels advancement. To take advantage of these opportunities and promote a sustainable ecosystem in the EU, practical recommendations are provided for policymakers, industry stakeholders and practitioners. This research emphasises the importance of coordinated efforts to overcome obstacles and take advantages of opportunities for more sustainable, greener and efficient future in intermodal transport.

Keywords: Sustainability; Transport efficiency; Green logistics; Low carbon transportation; Logistics optimization