

# Chapter 3

## Sustainable Supply Chain Management: Reducing the Environmental Impact of Production and Distribution Processes

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### ABSTRACT

*This chapter explores the emerging issues in sustainable supply chain management and aims to understand its impact on reducing the environmental footprint of production and distribution processes. The methodology employed includes a critical review of academic journals and other articles, with content analysis as the analytical approach. The findings highlight reducing waste and emissions through more efficient production processes, optimizing transportation routes, and utilizing cleaner energy sources significantly to reducing the environmental impact. The study concludes that sustainable supply chain management necessitates a holistic approach that considers the environmental impact throughout the entire supply chain. In summary, this research emphasizes the importance of sustainable supply chain management in achieving environmental sustainability and offers practical insights for businesses seeking to reduce their environmental footprint and foster a more sustainable future.*

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## **1. INTRODUCTION**

### **1.1 Background and Context of Sustainable Supply Chain Management**

Sustainable supply chain management is an undoubtedly essential topic in the 21<sup>st</sup> century (Liu, Song & Liu, 2023). Grdic *et al.* (2020) defines sustainable supply chain management as the integration of environmental, social, and economic considerations into all aspects of the supply chain, from product design and sourcing to transportation and delivery. According to Gupta and Palsule-Desai, (2011), sustainable supply chain management is as a set of managerial practices such as environmental impact as an imperative, consideration of all stages across the entire value chain for each product, and a multi-disciplinary perspective, encompassing the entire product life-cycle. In the same assertion Kazancoglu *et al.* (2018) views sustainable supply chain management as an approach to managing the flow of goods and services from the point of origin to the point of consumption, with the aim of reducing the environmental impact of production and distribution processes. The authors are in agreement that sustainable supply chain management focuses on cost reduction, improvement of quality, and increased efficiency must be balanced with a consideration of the environmental and social impacts of supply chain activities.

Sustainability has become an increasingly important issue for businesses in recent years due to concerns about climate change, resource scarcity, and social inequality (Theeraworawit & Suriyankietkaew, 2022). The recent years have also witnessed environmentally aware consumers are increasingly demanding that companies act responsibly and ethically, which has led to growing interest in sustainable supply chain management. Furthermore they have been an increase in the number of environmental pressure groups and governments have also incanted environmental laws to protect the environment. More so many governments have created regulatory bodies that are now working as watch dogs for environmental issues. In support of the governments, pressure groups and regulatory bodies initiatives. Balda and Singh (2022) highlight that the goal of sustainable supply chain management is to create a more sustainable future by reducing the negative impact on the environment, while still meeting customer demand and business objectives. According to Sajjad *et al.* (2020) sustainable supply chain management involves a range of practices, including reducing carbon emissions, minimising waste and pollution, promoting ethical labour practices, and ensuring the responsible sourcing of materials. In the same vain, Oelze (2017) argues that sustainable supply chain management also involves collaborating with suppliers and other stakeholders to identify improvement opportunities and drive positive social and environmental outcomes. There are many benefits to adopting sustainable supply chain management practices, including cost savings, enhanced reputation, and brand value, and improved relationships with stakeholders. However, implementing sustainable supply chain management can also be challenging, as it requires significant changes in organisational culture, processes, and systems and collaboration across the entire supply chain.

## **2. METHODOLOGY**

This chapter employed a systematic literature review on documentary evidence to appreciate the emerging issues in sustainable supply chain management. The methodology involved identifying, evaluating and analysing existing journals, organisational reports, websites, and reports from the print and electronic media for the purposes of gathering data. It further made use of critical review of academic journals

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