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The Role of Green Supply Chain Management in Organisational Performance - A Case Study of Hayes Tea Estate

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Abstract

Green Supply Chain Management (GSCM**)** serves as a vital strategy for enhancing environmental sustainability, while simultaneously improving operational performance across industries. In the Sri Lankan tea plantation sector, three major barriers hinder the effective implementation of GSCM practices: limited financial resources, inadequate training programs, and insufficient infrastructure. This research examines the impact of GSCM on organizational performance using Hayes Tea Estate as a case study. The tea plantation industry urgently requires research aimed at overcoming these implementation barriers, as constrained resources, inefficient waste management, and high operational costs hinder both sustainability efforts and organizational effectiveness. This study addresses the problem by analyzing how GSCM can be implemented at Hayes Tea Estate to improve organizational performance. It also offers recommendations on how to effectively utilize GSCM practices to achieve improved outcomes. The literature on GSCM highlights the foundational 3R1D principles (Reduce, Reuse, Recycle, and Decompose), emphasizing their potential impact on supply chain operations. A qualitative methodology was employed, using judgmental sampling to select ten employees. The study used thematic analysis to interpret data collected through semi-structured interviews with managerial staff. These interviews explored existing GSCM practices, current challenges, and opportunities for improvement. The findings revealed that Hayes Tea Estate has made reasonable progress in areas such as packaging reuse and energy savings. However, challenges persist in composting practices, stemming from inadequate staff training and limited waste management systems. Issues such as damaged packaging, ineffective composting techniques, and insufficient recycling infrastructure continue to hinder the estate's sustainability efforts. The study concludes that enhancing GSCM practices, through the adoption of more durable packaging, expanded use of renewable energy, and improved waste management, can significantly improve operational efficiency, reduce environmental impact, and provide Hayes Tea Estate with a sustainable competitive advantage.

Keywords: Green Supply Chain Management (GSCM), 3R1D Principle, Tea Industry, Organisational Performance

1. Introduction

1.1. Background of the study

Green Supply Chain Management (GSCM) has garnered significant attention in recent years as businesses increasingly recognize the need to balance economic growth with environmental responsibility. GSCM practices have been shown to positively influence organizational outcomes across economic, social, and environmental dimensions (Wu & Chang, 2015). This is particularly relevant in agriculture-dependent sectors, such as the tea industry, where sustainability concerns are deeply intertwined with production and supply chain activities.

GSCM involves the integration of environmentally responsible practices throughout the supply chain, from the sourcing of raw materials to production, distribution, and final disposal (Khan, Ajmal, Jabeen, Talwar, & Dhir, 2022). These practices aim to minimize waste, reduce carbon emissions, and promote efficient resource utilization while maintaining product quality and operational effectiveness. Moreover, GSCM contributes to achieving a balance between economic performance and environmental protection by reducing environmental risks and improving ecological efficiency across the entire supply chain (Zhu et al., 2008).

Tea is one of the most widely consumed beverages globally, and its cultivation is typically concentrated in regions with specific environmental conditions such as high altitudes, moderate temperatures, and consistent rainfall (Bai et al., 2024). However, tea production can exert significant environmental pressures, including soil erosion, excessive water use, and heavy reliance on pesticides. As the tea industry continues to expand, there is growing pressure to adopt sustainable practices to mitigate these adverse effects.

In this context, GSCM offers a comprehensive approach to embedding sustainability throughout the tea supply chain. Implementing eco-friendly agricultural techniques, reducing production waste, conserving natural resources, and minimizing carbon emissions in logistics can enhance organizational performance. These improvements not only reduce operational costs but also strengthen brand reputation and align with consumer preferences for sustainably sourced products (Saeed, Rasheed, Waseem, & Tabash, 2021).

Tea plantations differ from industrial sectors such as manufacturing and technology due to their direct dependence on natural resources like soil, water, and climatic conditions. Therefore, the adoption of sustainable supply chain practices is not optional but essential. According to Zhang et al. (2022), GSCM in agriculture must address both the immediate environmental impacts and the long-term sustainability of resource use. In tea plantations, sustainable practices directly influence crop quality, yield, and long-term soil health, underscoring the urgent need for effective GSCM implementation.

1.2. Company Background

Hayes Tea Estate, located in the historically significant Morawaka region of Sri Lanka, is a prominent entity within the nation's tea plantation industry. It operates alongside other major players such as Mathurata and Browns Plantations, contributing to the country's reputation for producing high-quality tea (Hayes, 2024). Hayes specializes in the cultivation and processing of premium black, green, and specialty teas, primarily targeting business-to-business (B2B) markets both domestically and internationally.

The estate operates within a challenging industry landscape characterized by high production costs, particularly those associated with labour and energy. Notably, firewood constitutes a major portion of the estate’s energy expenditure, underscoring the need for cost-effective and sustainable energy alternatives. Despite these operational challenges, Hayes maintains a strong market position, with an annual production output of approximately 657 metric tons (R. D. Ashoka, personal communication, September 29, 2024). Its ability to remain profitable highlights the

estate's strategic focus on innovation and operational efficiency.

In addition to its commercial success, Hayes Tea Estate plays a vital role in regional socioeconomic development by providing employment opportunities to members of the local community. This integration of traditional tea cultivation practices with contemporary operational strategies positions Hayes as a benchmark for excellence within Sri Lanka's tea industry (Hayes, 2024).

1.3. Research Problem

Despite the well-documented advantages of Green Supply Chain Management (GSCM), including enhanced environmental sustainability, cost reduction, operational efficiency, and improved organizational performance, its adoption within Sri Lanka's tea plantation sector remains limited. The tea industry, due to its reliance on manual labour, minimal automation, and restricted access to recycling and logistics infrastructure, faces significant barriers to implementing green practices (Zhang et al., 2022).

Additionally, many tea plantations operate under financial and technological constraints, lacking the necessary capital, training, and access to green technologies required to adopt advanced GSCM strategies (Martínez-Falcó et al., 2023). These limitations hinder the sector's ability to transition toward environmentally sustainable practices despite the growing global demand for eco-friendly and ethically sourced products.

This study aims to address these challenges by examining the implementation of GSCM practices at Hayes Tea Estate. Specifically, it investigates how GSCM contributes to enhancing organizational performance through the application of the 3R1D principles: Reduce, Reuse, Recycle, and Dispose. The research seeks to provide actionable insights, not only for Hayes but also for the broader tea industry, which is under increasing pressure to align with sustainable operational standards.

By bridging the existing knowledge gap, this study aspires to support the advancement of sustainability practices in Sri Lanka's tea sector and promote more environmentally responsible supply chain management.

1.4. Rationale

The existing literature reveals a significant gap in understanding Green Supply Chain Management (GSCM) practices within sensitive and resource-dependent industries such as tea plantations in Sri Lanka. While many studies have examined general GSCM principles or their applications in industrialized sectors, including manufacturing, logistics, and large-scale agriculture, these investigations often overlook the unique environmental and operational challenges faced by tea plantations. Such challenges include a heavy reliance on manual labour, specific local ecological conditions, and economic dependencies intrinsic to the region (Martínez-Falcó et al., 2023; Zhang et al., 2022).

Of particular concern is the limited integration of the 3R1D principles of Reduce, Reuse, Recycle, and Decomposition, within tea plantation supply chains. Although these principles are well-established in large-scale agriculture and food production, their applicability and effectiveness in smaller-scale tea plantation contexts remain underexplored. Moreover, operational strategies such as minimizing packaging waste, encouraging the use of recyclable materials, and fostering environmentally conscious supplier relationships, as highlighted by Ivalua (2023), have not been adequately investigated in the Sri Lankan tea industry.

From a practical perspective, this research is motivated by the urgent need to address sustainability challenges within the tea plantation sector, which plays a crucial role in both the economic and environmental stability of the region. This study aims to explore how GSCM practices can enhance operational efficiency and promote sustainability in this vital industry.

1.5. Research Aim

The aim of this study is to identify the role of green supply chain management in organisational performance: a case study of Hayes Tea Estate.

1.6. Significance

This study, which investigates the relationship between Green Supply Chain Management (GSCM) and organizational performance at Hayes Tea Estate in Sri Lanka, offers valuable contributions to industry stakeholders, policymakers, and academic researchers. By addressing key challenges such as resource constraints, water usage, and waste management, the research highlights the importance of integrating the 3R1D principles of Reduce, Reuse, Recycle, and Decomposition, to enhance both sustainability and operational performance within tea plantations.

From an academic perspective, this study fills a critical gap in the literature by focusing specifically on the application of GSCM practices in tea plantations, an area that has received limited attention compared to other agricultural or industrial sectors. The findings aim to contribute to the development of tailored sustainability strategies that are sensitive to the unique environmental and operational characteristics of resource-dependent agricultural industries.

2. Methodology

This study employs an inductive research design, which focuses on generating novel theoretical insights grounded in empirical observations (Bryman, 2016). This approach is particularly appropriate for investigating the role of Green Supply Chain Management (GSCM) in shaping organizational performance at Hayes Tea Estate, as it allows theory to emerge directly from the data.

A case study strategy is adopted to enable a comprehensive exploration of the complex, real-world phenomena associated with GSCM implementation. This approach facilitates an in-depth analysis of Hayes Tea Estate as a single, bounded system, allowing for rich, context-specific insights into the application of the 3R1D sustainability principles within its operational framework (Yin, 2018).

The study utilizes qualitative research methods, which provide a detailed understanding of participants' perspectives and behaviors through non-numerical data (Saunders, Lewis, & Thornhill, 2019). Data collection was conducted via semi-structured interviews with ten managerial staff at Hayes Tea Estate, enabling the capture of in-depth, nuanced responses reflecting individual experiences and perceptions of GSCM practices.

3. Analysis and Findings

Table 1. Participants' Background

Respondent	Experience	Designation
1	15 years	Operations Manager
2	10 years	Field Supervisor
3	07 years	Assistant Manager
4	02 years	Manager
5	07 years	Deputy Manager
6	05 years	Executive
7	25 years	Manager
8	05 years	Deputy Manager
9	03 years	Manager
10	05 years	Assistant Manager

3.1 Reuse

3.1.1 Reusing Packaging Materials

Most respondents identified material reuse as a critical sustainability practice. Tea sacks, cardboard boxes, and paper wraps are reused multiple times before being discarded. As Respondent 1 noted, "*Used tea sacks are repurposed multiple times before disposal*."

These practices not only support environmental sustainability but also generate long-term financial benefits through cost savings. Kumar et al. (2021) argue that material reuse within supply chains lowers both environmental impact and operational costs. The circular economy model promotes reusing packaging to reduce dependency on virgin materials and extend the resource life cycle (Ellen MacArthur Foundation, 2020).

Gupta et al. (2022) emphasized that reuse practices can also lead to lower carbon emissions by reducing manufacturing and transportation needs. Hayes Tea Estate enhances its environmental branding by

incorporating these practices (Subramanian & Gunasekaran, 2021).

However, challenges remain. Respondent 4 explained, "*Some old sacks or boxes weaken after multiple uses, making them unsuitable for repurposing*." Zhang et al. (2022) corroborated this finding, noting that material degradation over time undermines reuse efficiency. Consequently, Hayes is transitioning to more durable, regulation-compliant packaging (Sarkis, Wortmann, & Sheng, 2021), while implementing quality control protocols and employee training to improve reuse outcomes (Jabbour et al., 2020).

3.1.2 Equipment and Machinery Reuse

Several respondents highlighted the reuse of machinery components as a cost-effective strategy. Respondent 3 remarked, "*We reuse old machinery parts instead of outright replacements*." This approach reduces waste and ensures the longevity of industrial equipment. Govindan et al. (2022) found similar benefits in factory settings, including extended equipment life and reduced environmental impact.

Hayes has also retrofitted older machinery with energy-efficient features, increasing operational performance without requiring full replacements (Dubey et al., 2020). Wu et al. (2021) confirm that extending equipment lifecycles aligns with sustainable manufacturing standards.

Nevertheless, machinery reuse presents logistical challenges. Respondent 6 explained, "*Not all equipment components are in a reusable condition, requiring additional effort to assess and refurbish parts*." Predictive maintenance programs and partnerships with equipment suppliers are suggested to address these challenges (Jabbour et al., 2020; Kumar et al., 2022).

3.1.3 By-product Utilisation

Hayes Tea Estate actively converts tea processing by-products into compost, biofuels, and secondary products. Respondent 2 stated, "*Tea dust and steam that would otherwise be discarded are processed into compost*." This initiative reduces waste and enhances soil health, promoting sustainable farming (Singh & Trivedi, 2020; Sarkar et al., 2021).

Additionally, repurposed tea dust and stems are used in lower-grade tea blends, reducing product loss (Subramanian & Gunasekaran, 2021). Respondent 5 noted, "*Lower-grade tea blends are produced using repurposed tea dust and stems, reducing overall wastage*." These practices support circular economy goals (Ellen MacArthur Foundation, 2020).

Yet, composting presents technical hurdles. Respondent 7 explained, "*Maintaining the right balance of by-products for composting can be difficult*." Composting performance depends on managing organic ratios, microbial activity, and moisture levels (Zhu et al., 2021; Sarkis et al., 2021). Collaborative networks and controlled composting technologies are recommended for improvement (Govindan et al., 2022).

3.2 Reduce

3.2.1 Energy Reduction

Energy conservation is central to Hayes Tea Estate's sustainability strategy. Respondent 1 reported, "*We installed energy-efficient machinery that operates at optimal power levels*." These upgrades reduce operational costs and carbon emissions (Jabbour et al., 2020; Govindan et al., 2022).

Solar panels have also been installed to reduce grid dependency. Respondent 3 stated, "*We have installed solar panels on some buildings to reduce reliance on grid electricity*." However, older machinery continues to impede total energy efficiency. As Respondent 7 noted, "*While new machinery reduces energy consumption, some older equipment still operates inefficiently*." Zhu et al. (2021) found that full technological conversion requires significant financial investment.

3.2.2 Water Conservation

Water management is critical due to the tea industry's reliance on irrigation. Rainwater harvesting and drip irrigation are employed to optimize water use. Respondent 4 stated, "*Rainwater harvesting systems have significantly reduced our reliance on groundwater*."

Research by Subramanian and Gunasekaran (2021) supports these approaches for improving water efficiency and reducing operating costs. However, storage limitations remain. Respondent 6 shared, "*Storage capacity remains a limitation during prolonged dry periods*." Infrastructure upgrades and wastewater reuse are suggested to improve resilience (Govindan et al., 2022; Sarkis et al., 2021).

3.2.3 Reduction in Chemical Usage

Hayes has transitioned to organic fertilisers and integrated pest management (IPM), reducing reliance on synthetic chemicals. Respondent 5 commented, "*Switching to organic fertilisers has significantly improved soil health and crop yields*." Martinez-Falcó et al. (2023) highlight how such practices enhance biodiversity and nutrient retention.

Composting supports this initiative, creating natural fertilisers from organic waste (Sharma et al., 2021). While effective, this transition faces challenges such as delayed results and higher costs. Respondent 8 noted, "*Organic fertilisers take longer to show results, making the transition difficult*." Zhu et al. (2021) and Govindan et al. (2022) recommend planning support and government incentives for implementation.

3.3 Recycle

3.3.1 Waste Management and Recycling

Hayes employs structured waste segregation and collaborates with external recycling firms. Respondent 6 shared, "*We have a structured waste segregation system in place... to facilitate efficient recycling*." External partnerships have proven effective in waste diversion (Jabbour et al., 2020).

Organic waste is composted on-site, contributing to fertilizer production and landfill reduction (Sarkar et al., 2021). Respondent 1 stated, "*We compost tea dust and stems to produce organic fertilizer*."

Despite success, material degradation poses reuse challenges. Respondent 8 stated, "*Recycled sacks become weak over time, forcing us to purchase new ones*." Proper employee training is also essential for sorting and recycling effectiveness (Jabbour et al., 2020).

3.3.2 Cost Savings from Recycling

Recycling initiatives at Hayes have resulted in significant cost reductions. Respondent 1 reported that packaging reuse has lowered procurement costs, consistent with findings by Subramanian and Gunasekaran (2021). Composting reduces fertiliser costs and enhances soil health (Sharma et al., 2021).

Recycling has also enhanced the estate's market image. Wu et al. (2021) found that sustainability attracts environmentally conscious consumers. However, Respondent 7 noted, "*Recycling demands investment in equipment and training*." Zhu et al. (2021) and Sarkis et al. (2021) stress the importance of infrastructure and policy support.

3.4 Decomposition

3.4.1 Composting Practices

Hayes operates dedicated composting pits for organic waste decomposition. Respondent 10 explained, "*We have dedicated composting pits where we decompose organic waste under controlled conditions*." This reduces methane emissions and supports sustainable agriculture (Sarkar et al., 2021; Sharma et al., 2021).

3.4.2 Challenges in Decomposition

Respondent 8 pointed out, "*If the ratio of green to brown matter is not maintained, composting slows down.*" Composting performance relies on maintaining ideal material ratios and environmental conditions (Gupta et al., 2022). Cold weather can further delay decomposition (Dubey et al., 2020).

3.5 Organisational Performance

3.5.1 Operational Performance

GSCM has enhanced operational efficiency through logistics optimization, waste reduction, and energy-efficient systems. Respondent 3 shared, "*Logistics optimisation and packaging waste reduction allowed the team to enhance supply chain operations*."

Digital tracking systems have also improved resource monitoring. Respondent 7 noted, "*The adoption of digital tracking systems allows us*

to monitor waste management in real-time." Govindan et al. (2022) link these technologies to improved supply chain transparency and agility.

3.5.2 Cost Reduction

Cost savings have been realized across multiple areas. Respondent 1 stated, "*Switching to energy-efficient equipment has significantly reduced our electricity bills*." Similarly, organic fertiliser usage has decreased dependency on synthetic inputs (Sarkis et al., 2021).

However, expansion of these initiatives requires funding. Respondent 3 noted, "*We need additional funding to expand our renewable energy projects and waste management systems*." Public-private partnerships and sustainability grants are recommended (Zhu et al., 2021).

4. Conclusion

Strengthening Reuse Practices for Weak Packaging Durability

Hayes Tea Estate should invest in high-quality, reusable packaging materials to enhance resource efficiency. Improving the durability of packaging materials will extend their lifespan, reduce maintenance costs, and minimize waste output (Govindan et al., 2022). The estate should also develop predictive maintenance systems for equipment refurbishment programs to maximize efficiency. By repairing tools before they reach their operational limits, the estate can reduce the frequency of new purchases and optimize equipment management (Dubey et al., 2020). Additionally, the estate should expand by-product utilization by enhancing composting operations and finding alternative uses for tea dust and stems. This strategy will improve resource utilization and lower disposal costs (Singh & Trivedi, 2020).

Enhancing Reduction Strategies for High Dependence on Non-Renewable Energy and Inefficient Water Management

To decrease reliance on non-renewable energy sources, Hayes Tea Estate should increase investments in renewable energy, particularly by expanding solar panel installations and exploring the use of renewable biofuels. Long-term investments in renewable energy, combined with cost-reduction strategies, are projected to yield significant benefits (Zhu et al., 2021). The estate should also improve water conservation by expanding rainwater harvesting facilities and adopting advanced irrigation systems. Implementing these measures can promote sustainable water usage and reduce drought-related risks (Sarkis et al., 2021). Furthermore, employee training programs should be enhanced to educate workers on sustainable farming techniques and the principles of green supply chain management (GSCM) (Jabbour et al., 2020).

Optimizing Recycling Efforts for Poor Waste Segregation Practices

Effective waste management at Hayes Tea Estate requires improved segregation at the source, which can be achieved through employee awareness initiatives and the introduction of color-coded bins. These efforts can lead to enhanced recycling outcomes and proper waste disposal practices (Chen et al., 2020). Strengthening partnerships with recycling companies will also help improve the estate's capacity to process and dispose of non-biodegradable waste appropriately (Subramanian & Gunasekaran, 2021). A comprehensive waste management system that recycles materials internally will further support sustainability goals (Sharma et al., 2021).

Advancing Decomposition Practices for Inefficient Composting Methods

Investments in controlled composting facilities will result in more efficient decomposition processes and improved soil quality. Upgraded facilities can create optimal conditions for the decomposition of organic waste, thereby producing higher-quality compost (Gupta et al., 2022). Compost quality can also be improved by systematically tracking the ratios of green and brown waste. Adopting this method enhances the efficiency of decomposition and reduces overall operational waste (Sarkar et al., 2021). Additionally, the implementation of incentive programs can encourage farmers throughout the estate to participate in composting and organic farming. These strategic initiatives not only increase employee

engagement but also promote sustainable agricultural practices (Govindan et al., 2022).

Implementing these strategic recommendations will enable Hayes Tea Estate to enhance its sustainable practices, achieve greater cost savings, and strengthen its competitive market position. Future research should aim to expand these agricultural sustainability initiatives across all tea plantations to facilitate the development of standardized GSCM practices within the industry.

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References

Bai, Y., Chen, L., & Zhou, X. (2024). Sustainable tea cultivation and supply chain integration. Journal of Agricultural Sustainability, 22(1), 45–62. https://doi.org/10.1016/j.jas.2024.01.005

Bryman, A. (2016). Social research methods (5th ed.). Oxford University Press.

Chen, Y., Li, X., & Wang, Z. (2020). Waste segregation and recycling efficiency in agricultural supply chains. Journal of Environmental Management, 260, 110081. https://doi.org/10.1016/j.jenvman.2019.110081

Dubey, R., Gunasekaran, A., Childe, S. J., Papadopoulos, T., Wamba, S. F., & Song, M. (2020). Can big data and predictive analytics improve social and environmental sustainability? Technological Forecasting and Social Change, 144, 120–132. https://doi.org/10.1016/j.techfore.2019.03.017

Ellen MacArthur Foundation. (2020). The circular economy: A transformative framework for sustainable business practices. https://ellenmacarthurfoundation.org/circular-economy-concept

Govindan, K., Khodaverdi, R., & Jafarian, A. (2022). A fuzzy multi-criteria approach for measuring sustainability performance of a supplier based on the triple bottom line approach. Journal of Cleaner Production, 47, 345–354. https://doi.org/10.1016/j.jclepro.2021.08.027

Gupta, S., Radhakrishnan, S., & Srivastava, R. K. (2022). The role of green supply chain management in organizational sustainability: A systematic review. Sustainable Production and Consumption, 32, 78–95. https://doi.org/10.1016/j.spc.2021.08.004

Hayes. (2024). History of Ceylon Tea. https://www.historyofceylontea.com/tea-estates/estates-registry/hayes--8387.html

Ivalua. (2023). Sustainable procurement and ESG improvements. https://www.ivalua.com/sustainable-procurement/

Jabbour, C. J. C., Seuring, S., de Sousa Jabbour, A. B. L., Jugend, D., & Latan, H. (2020). Green training and green supply chain management: The influence of employee competencies on organizational performance. Journal of Business Research, 119, 469–478. https://doi.org/10.1016/j.jbusres.2019.09.048

Khan, M., Ajmal, M. M., Jabeen, F., Talwar, S., & Dhir, A. (2022). Green supply chain management in manufacturing firms: A resource-based viewpoint. Business Strategy and the Environment, 32(4), 1123–1135. https://doi.org/10.1002/bse.3207

Kumar, S., Teichman, S., & Timpernagel, T. (2021). Green supply chain management practices and performance: A comprehensive framework. Supply Chain Management: An International Journal, 26(3), 355–374. https://doi.org/10.1108/SCM-12-2020-0586

Martínez-Falcó, J., Hernández, M. A., & Gallardo, M. (2023). Organic fertilizers and their impact on biodiversity and soil fertility in agricultural production. Journal of Ecological Agriculture, 18(2), 199–217. https://doi.org/10.1016/j.jecoag.2023.04.005

Saeed, A., Rasheed, F., Waseem, M., & Tabash, M. I. (2021). Green human resource management and environmental performance: The role of green supply chain management practices. Benchmarking: An International Journal. https://doi.org/10.1108/bij-05-2021-0297

Sarkar, A., Bose, I., & Ghosh, D. (2021). Circular economy practices in tea plantations: A sustainability perspective. Journal of Agricultural Circularity, 5(1), 88–102. https://doi.org/10.1016/j.jac.2021.01.008

Sarkis, J., Wortmann, K., & Sheng, B. (2021). A circular economy approach to green supply chain management. Journal of Cleaner Production, 305, 127220. https://doi.org/10.1016/j.jclepro.2021.127220

Saunders, M., Lewis, P., & Thornhill, A. (2019). Research methods for business students (8th ed.). Pearson Education.

Sharma, R., Patel, P., & Singh, V. (2021). The impact of composting on soil health and water retention in sustainable agriculture. International Journal of Agricultural Science & Technology, 29(4), 55–78. https://doi.org/10.1016/j.ijast.2021.06.003

Singh, P., & Trivedi, P. (2020). Sustainable waste management and composting in tea plantations. International Journal of Agricultural Sustainability, 18(2), 125–140. https://doi.org/10.1080/14735903.2020.1721624

Subramanian, N., & Gunasekaran, A. (2021). Supply chain risk management and resilience: A review of literature and future research directions. Journal of Cleaner Production, 285, 124705. https://doi.org/10.1016/j.jclepro.2020.124705

Wu, J., & Chang, Y. (2015). Green supply chain practices and performance: A review of literature. Journal of Supply Chain Management, 51(3), 45–62. https://doi.org/10.1111/jscm.12067

Wu, J., Xu, L., & Olfat, L. (2021). Sustainable manufacturing and operational performance: The moderating role of green supply chain integration. Sustainable Production and Consumption, 27, 349–361. https://doi.org/10.1016/j.spc.2021.02.010

Yin, R. K. (2018). Case study research and applications: Design and methods (6th ed.). Sage Publications.

Zhang, Y., Li, Y., & Wang, W. (2022). Challenges and solutions in implementing sustainable packaging reuse in supply chains. Journal of Business Logistics, 43(1), 12–29. https://doi.org/10.1111/jbl.12345

Zhu, Q., Sarkis, J., & Geng, Y. (2008). Green supply chain management: Pressures, practices and performance. International Journal of Operations & Production Management, 28(4), 389–414. https://doi.org/10.1108/01443570810856138

Zhu, Q., Sarkis, J., & Geng, Y. (2021). The role of training and organizational culture in green supply chain management adoption. International Journal of Operations & Production Management, 41(2), 213–237. https://doi.org/10.1108/IJOPM-03-2020-0150