

A Systematic Review of Drivers, Challenges and Future Research Directions for Sustainability in Fast-Moving Consumer Goods (FMCG)

Komal Yadav¹, Dr. Ashish Mathur²

¹Research Scholar, Department of Management Studies, Central University of Haryana, Haryana

²Professor, Department of Management Studies, Central University of Haryana, Haryana

Abstract

The fast moving consumer goods (FMCG) sector is at a critical moment where environmental requirements meet a high volume of production and consumption (Misopoulos & Bajiraj, 2025). As the most recent and comprehensive empirical study on the topic, this paper synthesises the results of the latest research on sustainability within the FMCG industry, covering areas such as packaging innovation, supply chain management, consumer behaviour, and regulatory measures (Sunder et al., 2025; Munasinghe & Ishar Ali, 2024). This review identifies sustainable packaging, the new concept of Shared Producer Responsibility (Misopoulos & Bajiraj, 2025), drivers of the adoption of a sustainable supply chain management (University of Debrecen, 2025), and consumer behavioral and attitudinal factors that influence repurchase intention of sustainable FMCG products (Munasinghe & Ishar Ali, 2024; Thomas, 2025), as well as regulatory innovations for resource efficiency (Sengupta, James, & Kumar, 2026; Simi, Sengupta, & Das, 2024). The results show that, despite having solutions available, both the technology and the regulatory options, there is still a deep disconnect between consumer attitudes on the environment and their actual purchasing behaviour (Sengupta et al., 2026; Thomas, 2025). The paper suggests that a combination of producer responsibility, supply chain transformation, consumer engagement, and policy reform are key enablers to support FMCG sustainability (Misopoulos & Bajiraj, 2025). Implications for managers, policy makers and future research are discussed (Ramos & Watanabe, 2025; Irfan & Bryła, 2025).

Keywords: Sustainability, ESG, Sustainable Packaging

1. Introduction

Fast Moving Consumer Goods (FMCG) is a business segment that refers to products that sell quickly at comparatively low prices, such as packaged goods, personal care products, cleaning products, and food and beverages (Misopoulos & Bajiraj, 2025). The FMCG industry is one of the leading sectors contributing to environmental problems, especially packaging waste and resource depletion (Habermehl et al., 2024; Sunder et al., 2025). Misopoulos and Bajiraj (2025) in their systematic literature review, recognized the packaging waste as a significant waste problem, and the shift toward sustainability is becoming increasingly important" (Misopoulos & Bajiraj, 2025).

Sustainability is becoming the imperative in FMCG, with a number of pressures coming together (Sunder et al. 2025). There are increasing regulations globally, such as the European Union's green

claims directives and securities regulators' guidelines against greenwashing, that are tightening up environmental rules (Sengupta et al., 2026; Simi et al., 2024). Studies reveal that customers are willing to pay a premium price (about 12%) for sustainable items, indicating a major increase in consumer knowledge (Munasinghe & Ishar Ali, 2024; Thomas, 2025). At the same time, environmental, social, and governance (ESG) pledges have increased in number while questions remain regarding the validity and uniformity of these ESG assertions (Misopoulos & Bajiraj, 2025; Sunder et al., 2025). Despite of these advances, there are still many questions to be answered regarding FMCG sustainability (Ramos & Watanabe, 2025; Irfan & Bryła, 2025). Previous studies have focused on one aspect, such as packaging, supply chains, or consumers, and not integrated them with each other (Misopoulos & Bajiraj, 2025). In addition, there is a gap between consumer environmental awareness and behavioral action, which is referred to as “intent-action gaps” and has been observed in various studies (Sengupta et al., 2026; Thomas, 2025; Munasinghe & Ishar Ali, 2024).

The paper aims to fill those gaps by systematically compiling recent research (Irfan & Bryła, 2025), which is organized around four thematic areas:

1. Sustainable packaging and producer responsibility frameworks (Misopoulos & Bajiraj, 2025);
2. Circular economy drivers and sustainable supply chain management (Sunder et al., 2025; University of Debrecen, 2025);
3. Consumer behaviour and repurchase intention and attitude-behaviour gap (Munasinghe & Ishar Ali, 2024; Thomas, 2025; Ramos & Watanabe, 2025);
4. Regulatory approaches and policy innovations (Sengupta et al., 2026; Simi et al., 2024). The review ends with proposing an integrated framework and future research priorities (Irfan & Bryła, 2025; Habermehl et al., 2024).

2. Sustainable Packaging And Producers' Responsibility

2.1 The Packaging Challenge in FMCG

Packaging is one of the most visible environmental impacts from the FMCG industry (Misopoulos & Bajiraj, 2025). In addition to the pollution in freshwater, marine ecosystems are also heavily impacted by traditional packaging (Habermehl et al., 2024). FMCG companies, in turn, have started to implement alternative materials such as recycled material, biodegradable material, and lesser materials used (Thomas, 2025; Ramos & Watanabe, 2025). But, the effectiveness of these transitions relies on a number of factors in addition to just substituting material (Habermehl et al., 2024). Habermehl et al. (2024) conducted a study about packaging-saving consumption behaviour in Germany and reported that “reducing plastic packaging is an important part of daily life for the participants”, however, the “severity of plastic packaging avoidance or reduction depends on the consumption sector”. The sectoral differences indicate that it can be difficult to implement uniform solutions for packaging sustainability, highlighting a need for targeted strategies that take into account the specific context and product category of the packaging (Habermehl et al., 2024; Ramos & Watanabe, 2025). In his case study of Quay Naturals, Thomas (2025) states that "the customers are willing to pay more for sustainable packaging" but several other aspects like "price, accessibility, and habits" also affect the decision to purchase a product, and "brand trust plays a key role" (Thomas, 2025). The complexities of consumer reaction to sustainable packaging innovations are highlighted in this finding (Thomas, 2025; Munasinghe & Ishar Ali, 2024).

2.2 Shared Producer Responsibility Framework

Shared Producer Responsibility (SPR) is one of the most significant theoretical contributions to sustainable packaging research by Misopoulos and Bajiraj (2025) as a way forward in the area of sustainable packaging in the FMCG industry (Misopoulos & Bajiraj, 2025). In contrast to traditional end-of-life (EoL) focused extended producer responsibility (EPR) models, SPR places a greater emphasis on "the shared accountability of FMCG companies and packaging manufacturers in managing the full environmental lifecycle of packaging materials" (Misopoulos & Bajiraj, 2025, p. 5). SPR is built around three domains that are converging (Misopoulos & Bajiraj, 2025): The Sustainable Development Goals (SDGs) of the United Nations, specifically SDG 12 (responsible production and consumption) and SDG 13 (climate action). One of the most recent advancements in sustainability reporting is the ESG reporting frameworks. The ESG reporting frameworks are among the most recent advancements in sustainability reporting. The value chain involves a wide range of stakeholders. The following issues were discovered by Misopoulos and Bajiraj (2025), who conducted a thorough literature analysis on the sustainability and ESG reports of top FMCG and packaging firms. In their comprehensive literature study on the sustainability and ESG reports of top FMCG and packaging firms, Misopoulos and Bajiraj (2025) highlighted the following problems. These include inconsistent reporting frameworks, lack of stakeholder cooperation, transparency and accountability gaps (Misopoulos & Bajiraj, 2025, pp. 8-12). Misopoulos & Bajiraj (2025) and Simi et al. (2024) suggest a framework for fast-tracking the adoption of sustainable packaging by combining consumer education, regulatory measures, and transparent product labelling.

2.3 Packaging Cues and Consumer Perception

The effectiveness of sustainable packaging depends not only on its environmental attributes but also on how consumers perceive and respond to those attributes (Ramos & Watanabe, 2025). Ramos and Watanabe's (2025) study looked at how perceived product quality was impacted by both explicit and implicit packaging cues. In their $2 \times 2 \times 2$ experiment, they changed the product type (conventional vs. sustainable), explicit signals (sustainability tag present vs. absent), and implicit cues (kraft paper vs. plastic packing) (Ramos & Watanabe, 2025). The findings revealed that "both explicit cues, such as the sustainability tag and the type of product announced, positively influence the perceived quality of coffee" and that "sustainable coffee and those with packaging that explicitly communicate their sustainability are viewed as higher quality" (Ramos & Watanabe, 2025, p. 3878). Importantly, the study found that for respondents with high coffee consumption, implicit cues (kraft paper packaging) also enhanced perceived quality (Ramos & Watanabe, 2025). These findings suggest that sustainable packaging can serve not merely as an environmental intervention but as a value-enhancing product attribute when properly communicated (Ramos & Watanabe, 2025; Thomas, 2025).

2.4 Consumer Practices for Packaging Reduction

Beyond purchasing decisions, consumer behavior after purchase significantly affects the environmental impact of FMCG products (Habermehl et al., 2024). Habermehl, Decker, and Menrad (2024) conducted an exploratory study of packaging-saving consumer practices in Germany, using open-ended survey questions analyzed through qualitative content analysis (Habermehl et al., 2024).

Their research found that "the extent to which plastic packaging is avoided or reduced varies by consumption sector" and that "sufficiency" strategies—reducing consumption rather than simply consuming more efficiently—have become more critical as research has shown that "efficiency and consistency strategies alone cannot solve environmental challenges" (Habermehl et al., 2024, p. 12). This finding suggests that promoting consumer practices such as bulk purchasing, package-free

shopping, and reduced overall consumption may be as important as improving the sustainability of individual products (Habermehl et al., 2024; Sengupta et al., 2026).

3.Sustainable Supply Chain Management in FMCG

3.1 Drivers Of Sustainable Supply Chain Management

The drivers of Sustainable Supply Chain Management can be summarized as follows: From sourcing raw materials to distribution, aspects of the supply chain are crucial to the sustainability of FMCG products (Sunder et al., 2025). Sunder et al. (2025) conducted a multi-method study on drivers of sustainability in FMCG supply chains using multiple case studies, quantitative surveys and multiple criteria decision making modeling (Sunder et al., 2025). They discovered that different supply chain entities, both upstream and downstream, have different critical drivers that influence the adoption of Sustainable Supply Chain Management (SSCM) (Sunder et al., 2025).

The results show that internal factors (top management commitment) and external factors (customer pressure, competition, supplier pressure) interact to affect the adoption of SSCM practices, and that the interaction varies between upstream and downstream entities in the FMCG sector.(Sunder et al., 2025, p. 785). The implications of this finding are important: sustainability initiatives must be customized to the drivers and constraints of various positions in the supply chain (Sunder et al., 2025; Misopoulos & Bajiraj, 2025).

3.2 The Adoption of Circular Economy in Emerging Markets

Although a large part of the literature on sustainability evaluations is designed for application in developed economies (Habermehl et al., 2024; Ramos & Watanabe, 2025), the implementation of CE concepts in emerging market contexts has its own particular challenges and opportunities to offer (University of Debrecen, 2025). The researchers from the University of Debrecen (2025) conducted a study on the factors and obstacles that affect the implementation of circular supply chain management (CSCM) in the FMCG industry in Jordan. The study analyzed papers using a mixed-method approach (bibliometric analysis, exploratory factor analysis, and structural equation modeling) and found that "employee involvement, CSR (corporate social responsibility), long-term sustainability orientation, and supplier cooperation" are the most critical factors for implementing CSCM (University of Debrecen, 2025). However, barriers such as "traditional organizational culture, inadequate information systems, and poor infrastructure" emerged in the case of major barriers (University of Debrecen, 2025). The results underscore the distinct character of the cultural and infrastructural context to the sustainability transitions in developing economies, and the need for solutions developed in Western economies to be adapted significantly (University of Debrecen, 2025; Sunder et al., 2025).

3.3 The Regulatory and Policy Drivers of Resource Efficiency

The regulatory and policy drivers of resource efficiency are outlined below. The regulatory and policy drivers of resource efficiency are described below. A conceptual policy paper by Sengupta, James and Kumar (2026) explores the concept of Resource efficiency in the FMCG sector by looking at the case of low Total Fatty Matter (TFM) soap bars (Sengupta et al., 2026). TFM is derived from palm oil and palm oil production is associated with deforestation, biodiversity loss, and greenhouse gas emissions (Sengupta et al., 2026). The authors state that "efficient use of TFM in soap bars can contribute towards addressing the associated risk of deforestation", and argue that the national standards should be improved accordingly (Sengupta et al., 2026). The paper frames this technological innovation in the context of the wider market situation, noting "rising consumer awareness, persistent intent–action gaps

in sustainable consumption, and evolving business responses, from technology-driven innovation to choice influencing and choice editing” (Sengupta et al., 2026). This case study illustrates how seemingly innocuous product formulations can have cumulative significant environmental consequences when scaled-up at high volumes of FMCG products and how regulatory reform can enable resource efficiency without sacrificing product performance (Sengupta et al., 2026; Simi et al., 2024).

3.4 Environmental Supply Chain Risk Management

In their paper, Parente et al., 2008 discussed environmental supply chain risk management. Their review is the basis for a research agenda that highlights the propagation of environmental risks along FMCG supply chains as well as the practices that can effectively mitigate risks. (Parente et al., 2008) The authors highlight the distinct environmental risks associated with FMCG supply chains in the light of its global distribution, complexity and consumer visibility (Parente et al., 2008). This research builds on the findings of Sunder et al. (2025) and examines specifically the risk, and not the sustainability drivers.

4. Consumer Behavior and Repurchase Intentions

4.1 Factors Influencing Eco-Friendly FMCG Purchases

The ultimate success of sustainable FMCG products depends on the adoption by consumers (Munasinghe & Ishar Ali, 2024). In an empirical study on factors affecting repurchase intention for eco-friendly packaged FMCGs, customer satisfaction was used as a mediating variable (Munasinghe & Ishar Ali, 2024). The study involved 384 consumers from the Central Province of Sri Lanka and investigated the independent variables attitude, environmental concern, willingness to pay and personal norms (Munasinghe & Ishar Ali, 2024). The results revealed that attitude, personal norms, environmental concern and willingness to pay are significant factors that influence consumers' repurchase intention of eco-friendly packaged FMCGs (Munasinghe & Ishar Ali, 2024, p. 27). In addition, the relationship between attitude and personal norms with environmental concern was mediated by "customer satisfaction" but not by willingness to pay and repurchase intention (Munasinghe & Ishar Ali, 2024, p. 28). This partial mediation finding implies that although positive attitudes and environmental concerns can lead to satisfaction and repurchase, the process is not a direct one, and other factors like price sensitivity and product performance can disrupt it (Munasinghe & Ishar Ali, 2024; Thomas, 2025). Alternatively, this study offers valuable insights into additional retail channels that may support packaged FMCG products (Habermehl et al., 2024)

4.2 The Attitude-Behavior Gap

While the consumers are aware of the problems that the environment brings, there exists an attitude-action disconnect that has been reported in several studies (Sengupta et al., 2026; Thomas, 2025; Munasinghe & Ishar Ali, 2024). As Sengupta et al (2026) point out, “persistent intent–action gaps in sustainable consumption” exist. Similarly, Thomas (2025) also pointed out in a case study of Quay Naturals that “the customers show a willingness to pay more for sustainable packaging” but “other factors such as price, accessibility, and habits also influence purchasing decisions. Brand trust plays a key role.” (Thomas, 2025,).

The findings highlight a critical challenge for FMCG sustainability: that environmental concern by consumers does not consistently translate into sustainable purchase behaviour, as found by Munasinghe & Ishar Ali (2024), Thomas (2025), and Sengupta et al. (2026). This disparity is due to various factors, such as higher costs of sustainable products, limited access in traditional channels, shopping habits, and doubts regarding the credibility of sustainability claims (Thomas, 2025; Ramos & Watanabe, 2025; Misopoulos & Bajiraj, 2025).

4.3 Green Marketing Effectiveness

Irfan and Bryła (2025) have conducted a systematic review of the effectiveness of green marketing strategies on affecting consumer behavior in the Journal of Cleaner Production (Irfan & Bryła, 2025). They conducted a systematic literature review of the marketing strategies used in the field of sustainable food and consumer behaviour to understand how marketing communications can bridge the attitude-behaviour gap (Irfan & Bryła, 2025). The message credibility, information specificity, and consistency with the values of consumers are the key factors that contribute to the successfulness of green marketing according to the review (Irfan & Bryła, 2025). The findings of this research offer practical recommendations for FMCG marketers in communicating sustainable messages to customers without generating distrust (Irfan & Bryła, 2025; Misopoulos & Bajiraj, 2025).

4.4 Brand Trust and Sustainable Consumption

Several authors have highlighted the importance of brand trust in the consumption of FMCG products in an environment of sustainability (Thomas, 2025; Misopoulos & Bajiraj, 2025; Ramos & Watanabe, 2025). Thomas (2025) states that "brand trust is one of the most important factors" in the acceptance of sustainable packaging by consumers (Thomas, 2025). This result is consistent with the general marketing literature which suggests that trust is a variable that lies between the company's sustainability assertions and reactions (Thomas, 2025; Misopoulos & Bajiraj, 2025).

To foster and sustain consumer trust, transparency in ESG reporting and sustainability communication is key, as argued by Misopoulos and Bajiraj (2025). Even the most technically advanced sustainable products might not be accepted in the marketplace without trust (Misopoulos & Bajiraj, 2025; Ramos & Watanabe, 2025). This puts an obligation on FMCG companies to make sure the sustainability claims are verifiable, specific and consistent with practices (Misopoulos & Bajiraj, 2025; Nboh et al., 2022).

5. Implications

5.1 Implications for Managers

The findings offer several actionable strategies for FMCG managers (Misopoulos & Bajiraj, 2025; Sunder et al., 2025; Ramos & Watanabe, 2025; Thomas, 2025): Invest in trustworthy and credible sustainability statements (Misopoulos & Bajiraj, 2025). With consumer doubts and regulatory questioning (Simi et al., 2024), if claims are not backed up with substantiation, there is a legal and reputational risk (Misopoulos & Bajiraj, 2025). Understand that sustainable packaging can be used to improve the perceived quality by providing explicit cues (Ramos & Watanabe, 2025). This enables sustainability to become a value driver, rather than a cost center, as per Ramos & Watanabe (2025); Thomas (2025). Adapt supply chain sustainability practices for each supply chain partner based on their drivers and constraints (Sunder et al., 2025). There is no one size fits all solution (Sunder et al., 2025; University of Debrecen, 2025). Address attitude-behaviour gap by making interventions that decrease friction for sustainable choices, such as making choices easier to make, labelling clearly and product performance reliably (Thomas, 2025, Munasinghe & Ishar Ali, 2024, Irfan & Bryła, 2025). Be proactive rather than reactive in relation to the Shared Producer Responsibility framework (Misopoulos & Bajiraj, 2025). Early adopters could gain a competitive edge (Misopoulos & Bajiraj, 2025). Establish brand trust by being consistent and transparent (Thomas, 2025; Misopoulos & Bajiraj, 2025). Thomas (2025) states that trust is a crucial mediator of consumer responses to sustainable products.

5.2 Implications for Policymakers

The review identifies a number of priorities for policymakers (Sengupta et al., 2026; Simi et al., 2024;

Misopoulos & Bajiraj, 2025; Gond et al., 2024): Normalize sustainability report standards so that they can be compared and are not confused (Misopoulos & Bajiraj, 2025; Gond et al., 2024). Apply effective penalties for greenwashing to ensure sustainability statements are credible (Sengupta et al., 2026; Neboh et al., 2022). Enable effective implementation of science-based standard-setting to achieve resource efficiency, while sustaining product performance (Sengupta et al., 2026). Invest in waste management and infrastructure for circular economy, especially in emerging economies with weak waste management infrastructure, which may create limits to circularity (University of Debrecen, 2025; Habermehl et al., 2024). Encourage consumer learning on sufficiency practice, packaging disposal and sustainability labelling (Misopoulos & Bajiraj, 2025; Habermehl et al., 2024).

5.3 Implications for Consumers

The results indicate that for consumers (Thomas, 2025; Ramos & Watanabe, 2025; Habermehl et al., 2024; Munasinghe & Ishar Ali, 2024): Search for concrete, specific statements, not any generic terms such as “eco-friendly” (Misopoulos & Bajiraj, 2025). Standardized labels and third-party certification offer more reliable information (Ramos & Watanabe, 2025). Understand that limiting use instead of “greener” products on the margins is the most sustainable choice (Habermehl et al., 2024). In addition to efficiency improvements, and in line with the sufficiency principles outlined below, sufficiency strategies should be implemented. Sufficiency strategies should be implemented in addition to efficiency strategies (as described above). Know how important it is to have brand trust (Thomas, 2025). When a company has a long-term commitment to sustainability, it is more likely to be able to provide real environmental benefits (Thomas, 2025; Misopoulos & Bajiraj, 2025).

6. Limitations and Future Research Directions

6.1 Limitations

This review has several limitations (Irfan & Bryła, 2025; Misopoulos & Bajiraj, 2025). The synthesized studies vary in geographic scope (Sri Lanka, Jordan, Germany, Brazil, India, United States) and may not be equally generalizable (Munasinghe & Ishar Ali, 2024; University of Debrecen, 2025; Habermehl et al., 2024). The reliance on available abstracts and limited full-text access for some studies constrains the depth of analysis (Irfan & Bryła, 2025). Furthermore, the rapid evolution of sustainability practices means that findings may date quickly as technologies and regulations change (Sengupta et al., 2026; Misopoulos & Bajiraj, 2025).

6.2 Future Research Directions

Future Research Directions Based on gaps identified in the reviewed literature (Irfan & Bryła, 2025; Misopoulos & Bajiraj, 2025; Sunder et al., 2025; Munasinghe & Ishar Ali, 2024; Sengupta et al., 2026; Thomas, 2025; Habermehl et al., 2024; Ramos & Watanabe, 2025; University of Debrecen, 2025; Simi et al., 2024), several priorities for future research emerge: The adoption of sustainable products needs to be tracked over time to ascertain if it is a behavior change for the long term or temporary (Munasinghe & Ishar Ali, 2024; Thomas, 2025). Cross-sectional surveys and stated intentions (Munasinghe & Ishar Ali, 2024; Thomas, 2025) are the key tools used in current research. A cross-cultural comparative study would shed light on the cultural context and its moderation of the drivers of sustainable consumption (University of Debrecen, 2025; Habermehl et al., 2024). There is a lot of research that is locked in specific national frames of reference (University of Debrecen, 2025; Munasinghe & Ishar Ali, 2024). Research on intervention effectiveness should investigate which specific strategy(s) are most effective in closing the attitude-behavior gap (Sengupta et al., 2026; Irfan & Bryła, 2025; Thomas, 2025). As in

other sectors, accounting for market substitution effects as part of the integration of decisional life cycle assessment into FMCG sustainability research would complement attributional assessments (Misopoulos & Bajiraj, 2025; Sengupta et al., 2026). Business model innovation, such as product-as-a-service, refillable systems, and circular business models, would also be examined beyond the product-centric approaches to sustainability that are prevalent in the literature (Habermehl et al., 2024). Further studies on the effectiveness of green marketing should continue to explore the characteristics of the messages that create credibility without raising skepticism (Irfan & Bryła, 2025; Ramos & Watanabe, 2025). Research on shareholder activism and governance structures could focus on identifying strategies for maximizing the impact of institutional investors on the sustainability of FMCG (Parente et al., 2008).

7. Conclusion

The field of sustainability in the fast-moving consumer goods industry is one of the most impactful and demanding arenas for modern environmental engagement (Misopoulos & Bajiraj, 2025; Habermehl et al., 2024). The scale of FMCG production and consumption drives significant aggregate gains from even relatively small per-unit improvements, but may require systemic shifts over an entire industry – not incremental changes – to realize meaningful environmental benefits (Sunder et al., 2025; Sengupta et al., 2026). The review has identified some of the major advances in a number of areas: packaging innovation enabled by Shared Producer Responsibility frameworks (Misopoulos & Bajiraj, 2025); sustainable supply chain management as a result of customer pressure and regulatory requirements (Sunder et al., 2025; University of Debrecen, 2025); consumer research, shedding light on the multifaceted factors driving repurchase intentions (Munasinghe & Ishar Ali, 2024; Thomas, 2025; Ramos & Watanabe, 2025); and regulatory innovation in promoting resource efficiency and reducing greenwashing (Sengupta et al., 2026; Simi et al., 2024). Despite these, there are still some significant gaps (Sengupta et al., 2026; Thomas, 2025). The adoption gap of sustainable products still exists due to a lack of good attitude toward the behavior (Munasinghe & Ishar Ali, 2024; Sengupta et al., 2026). Reporting and verification frameworks are still developing and standardized (Misopoulos & Bajiraj, 2025). The shift towards real circular systems (materials kept at their highest value and waste eliminated) is not finished (Habermehl et al., 2024; University of Debrecen, 2025). The framework proposed in this work focuses on the interrelated nature of these challenges (Misopoulos & Bajiraj, 2025, Sunder et al., 2025). Without consumer engagement (Munasinghe & Ishar Ali, 2024; Thomas, 2025) or support for changes in the supply chain (Sengupta et al., 2026), progress in producer responsibility will be inadequate. The coordinated action needed to meet the SDG 12 (responsible consumption and production) is required across all four domains, in the long term and in local context (Misopoulos & Bajiraj, 2025; University of Debrecen, 2025). These are the results of the research that can be used to guide that action, but there is still work to be done and will continue to be done (Habermehl et al., 2024; Sengupta et al., 2026).

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