

# Green practices communication in Malaysian coffee chains: A content analysis of official websites.

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## ARTICLE INFO

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*Article history:*

Received 31 July 2025  
Revised 20 January 2026  
Accepted 01 April 2026  
Online first  
Published 30 April 2026

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*Keywords:*

Green practices  
Green restaurant  
Sustainability  
Implementation  
Challenges

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## ABSTRACT

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This study examines how Malaysian coffee chains communicate their green practices through official websites, addressing a gap in understanding the role of digital platforms in promoting sustainability initiatives. A qualitative content analysis was conducted on the websites of four coffee chains: ZUS Coffee, Gigi Coffee, Starbucks Malaysia, and Gloria Jean's Coffee. The analysis focused on five themes: sustainable sourcing, waste reduction, eco-friendly packaging, energy and water conservation, and community engagement. The findings reveal that sustainable sourcing and community engagement are the most prominently communicated practices, highlighting direct trade partnerships and social responsibility programs. However, waste reduction, eco-friendly packaging, and energy conservation received less emphasis, indicating areas for improvement in green messaging. This study underscores the importance of adopting comprehensive communication strategies that include measurable impacts on underrepresented themes to enhance consumer trust. Limited to website content, the research does not examine other platforms like social media. By offering insights into how coffee chains engage eco-conscious consumers, this study contributes to sustainability communication literature and provides practical recommendations for improving green practices communication in the coffee industry.

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## 1. INTRODUCTION

Sustainability has emerged as a critical priority for businesses globally, particularly for industries with high environmental footprints, such as the coffee sector. The coffee industry involves intensive agricultural practices, long-distance logistics, and substantial resource consumption, making it a significant contributor to global environmental degradation (International Coffee Organization, 2021). Issues such as

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deforestation, water scarcity, excessive use of agrochemicals, and the production of non-biodegradable waste are prevalent across the coffee supply chain. As climate change and ecological concerns gain prominence in public discourse, both consumers and regulators are increasingly demanding that businesses adopt more responsible practices.

Coffee chains, with their widespread presence and high levels of consumer engagement, are uniquely positioned to influence sustainability trends. They act as intermediaries between producers and consumers, allowing them to implement green initiatives and shape sustainable consumption patterns. In response to growing environmental awareness, many coffee chains have initiated practices such as sustainable sourcing, eco-friendly packaging, and waste minimization to reduce their ecological impact (Micheli et al., 2020; Escobar & García, 2023). These strategies not only serve environmental goals but also help brands align with the evolving expectations of eco-conscious consumers, thereby enhancing brand loyalty and competitive advantage (Aboelmaged et al., 2021). The digital transformation of the food and beverage industry has created new avenues for communicating sustainability efforts. Official websites have become strategic tools for organizations to showcase their green practices, providing a platform to detail sourcing policies, certifications, packaging innovations, and community involvement. Unlike social media, which often focuses on real-time updates and consumer engagement, websites offer a more curated space for structured storytelling, data-driven impact reporting, and compliance documentation (Nguyen et al., 2023; Candelo et al., 2019). These sites allow businesses to present sustainability narratives supported by infographics, downloadable CSR reports, and third-party certification logos, contributing to transparency and accountability.

In Malaysia, the specialty coffee market has experienced substantial growth, driven by urbanization, changing consumer preferences, and an increasing emphasis on lifestyle-oriented dining experiences. Local and international coffee chains are competing not just on product quality and service but also on their environmental and social contributions. Malaysian consumers are becoming more aware of global sustainability issues and are beginning to demand higher standards from the brands they support (Kassier, 2024; Mutolib, 2023). As a result, sustainability communication is no longer optional but a key factor in building trust and differentiating in a saturated market. Despite the global momentum in sustainability communication, there is limited research on how coffee chains in Malaysia convey their green practices through digital channels. Most existing studies focus on consumer behavior or corporate sustainability at a macro level, with little attention paid to the specific content and strategies used by companies on their official websites. This creates a knowledge gap regarding how effectively coffee chains in Malaysia engage with sustainability-conscious audiences through curated online communication.

To address this gap, this study conducts a qualitative content analysis of the official websites of four coffee chains operating in Malaysia—ZUS Coffee, Gigi Coffee, Starbucks Malaysia, and Gloria Jean's Coffee. The analysis focuses on five key themes: sustainable sourcing, waste reduction, eco-friendly packaging, energy and water conservation, and community engagement. Accordingly, this study is guided by the following research questions:

RQ1: What types of green practices are communicated by Malaysian coffee chains through their official websites?

RQ2: Which sustainability themes are most and least emphasised in these communications?

RQ3: How do local and international coffee chains differ in their communication of green practices?

RQ4: What gaps exist in current sustainability communication, and how can these be improved?

The findings contribute to sustainability communication literature by identifying dominant themes, highlighting gaps, and offering practical insights for enhancing green messaging strategies within the Malaysian coffee industry.

## **2. LITERATURE REVIEW**

### **2.1 Sustainability in Coffee Industry**

The coffee industry has long been associated with significant environmental and social challenges, ranging from deforestation and biodiversity loss to water depletion, greenhouse gas emissions, and inequality in labour conditions across the supply chain (International Coffee Organization, 2021; Jha et al., 2014). These challenges stem from the industry's large-scale cultivation systems, intensive agrochemical use, long- distance transportation, and waste-intensive retail operations. Addressing these sustainability issues demands an integrated approach that spans agricultural practices, supply chain management, and consumer engagement (Bager & Lambin, 2020; Byrareddy et al., 2019). One area that has gained increasing attention is waste reduction, particularly through the valorisation of spent coffee grounds (SCG). Traditionally discarded as waste, SCG can be repurposed into a wide array of products, including biofuels, compost, bioplastics, construction materials, and even cosmetic and nutraceutical ingredients (Machado et al., 2018; Mussatto et al., 2011; Iriundo-DeHond et al., 2019). These waste-to-resource innovations reflect the principles of the circular economy by extending the lifecycle of materials, reducing landfill reliance, and creating new value streams. Escobar and García (2023) note that valorising SCG not only helps reduce environmental impact but also enhances a company's sustainability credentials, particularly in the eyes of eco-conscious consumers.

The implementation of closed-loop supply chains within the agri-food sector is another effective strategy for reducing environmental impact. Rezaei et al. (2020) emphasize that by incorporating reuse, recycling, and energy recovery practices, food and beverage companies can enhance operational efficiency, meet regulatory expectations, and gain competitive advantage. In the context of the coffee industry, waste reduction practices such as used coffee ground collection and upcycling represent actionable steps toward circularity and improved environmental performance. Equally critical to sustainable coffee production is sustainable sourcing, which encompasses both environmental stewardship and social justice. Ethical sourcing practices are designed to ensure that coffee is grown under conditions that protect ecosystems, promote biodiversity, reduce agrochemical use, and guarantee fair labour practices. Certification systems like Fair Trade, Rainforest Alliance, and UTZ have become standard tools for validating responsible sourcing practices (Raynolds et al., 2007; Valkila, 2014). These certification bodies provide frameworks for evaluating farmer welfare, sustainable land use, and supply chain traceability.

Byrareddy et al. (2019) emphasize that sustainable sourcing is vital to securing the long-term viability of coffee production, especially in regions highly susceptible to climate-related risks such as drought, pests, and erratic rainfall. Through training programs in agroecological farming techniques—such as shade-grown coffee and intercropping—farmers can build resilience and productivity in the face of environmental uncertainties. Rahmah (2023) further highlights the importance of transparency in sourcing, noting that when consumers are informed about ethical practices, they are more likely to develop long-term loyalty to the brand. Consumer preferences are increasingly shaping sourcing decisions. A study by Grabs et al. (2016) found that consumers in Europe and North America actively seek out sustainably sourced coffee

and are willing to pay a premium for products that bear ethical certifications. This trend places pressure on coffee retailers to not only adopt sustainable practices but also to communicate them effectively.

In recent years, attention has also shifted toward eco-friendly packaging, another major contributor to the coffee industry's environmental footprint. Coffee packaging typically involves complex multi-material laminates designed to preserve freshness but often difficult to recycle. With increasing scrutiny from regulators and consumers alike, coffee companies are investing in biodegradable, compostable, or recyclable alternatives (Nguyen et al., 2023; Ellen MacArthur Foundation, 2020). Examples include bio-based plastics made from polylactic acid (PLA), paper-based pouches, and mono-material films. The Ellen MacArthur Foundation's (2020) report on plastic packaging urges the food and beverage sector to adopt design strategies that support reuse and recyclability. The Foundation's "New Plastics Economy" framework offers a roadmap for transitioning toward circular packaging systems. In the coffee sector, brands that adopt these systems can reduce environmental impact while simultaneously enhancing consumer trust and brand image (Pires et al., 2021).

Consumer perception and willingness to act play a critical role in packaging innovation. Samoggia and Riedel (2018) observed that environmentally conscious consumers are more inclined to choose coffee brands with sustainable packaging, especially when supported by visual cues such as eco-labels or third-party endorsements. Moreover, businesses that include sustainability narratives in their packaging—such as "100% compostable," "zero-waste," or "plastic-free"—have a stronger influence on consumer purchasing behaviour (Grankvist & Biel, 2007). Energy and water conservation, although less discussed in popular sustainability narratives, are vital operational concerns in the coffee sector. Coffee cultivation requires significant irrigation, particularly in regions with dry climates or poor rainfall distribution. Furthermore, coffee roasting and brewing processes are energy-intensive. Initiatives such as using renewable energy sources, implementing smart HVAC systems, or harvesting rainwater can substantially reduce resource use and lower carbon footprints (Lachenmeier, 2024; Wolor, 2024).

Starbucks, for instance, has committed to building LEED-certified stores that incorporate energy-saving technologies and efficient water systems. These initiatives not only reduce operational costs but also help companies meet national and international climate goals (Starbucks Global Responsibility Report, 2021). In Malaysia, energy and water conservation in the hospitality sector is gaining traction, supported by government incentives such as the Green Technology Financing Scheme (GTFS) under the MyHIJAU initiative (MGTC, 2021). Finally, community engagement has emerged as a critical pillar of sustainability in the coffee sector. Many coffee-growing communities remain marginalized and vulnerable to economic instability. Coffee chains can foster inclusive development by supporting education, healthcare, infrastructure, and gender equality in sourcing communities (Sundström et al., 2019; Peluso, 2023). At the retail level, community engagement initiatives—such as inclusive hiring, local sourcing, or social entrepreneurship—enhance brand equity and strengthen consumer relationships. For example, programs that support the employment of people with disabilities, youth training schemes, or partnerships with indigenous suppliers represent socially responsible strategies that go beyond environmental metrics. ZUS Coffee's efforts to support hearing-impaired baristas, for example, reflect a strong commitment to social inclusion and align with global sustainability goals related to equity and empowerment (United Nations, 2023).

In summary, the coffee industry's sustainability challenges require a multifaceted response encompassing waste reduction, ethical sourcing, sustainable packaging, resource efficiency, and social

responsibility. Companies that integrate these themes into their core business strategies not only contribute to global environmental goals but also gain competitive advantages in a rapidly evolving marketplace.

## **2.2 The Role of Official Websites in Sustainability communication**

In the digital era, official websites have become indispensable tools for corporate sustainability communication. These platforms allow companies to curate and present their environmental and social initiatives in a centralized, controlled environment, enabling consistency and credibility in messaging (Nguyen et al., 2023; Syahida et al., 2023). For coffee chains, where brand perception and consumer trust play a pivotal role in competitiveness, leveraging websites to communicate sustainability strategies can foster long-term loyalty, differentiate the brand, and reflect broader organizational values. Compared to other digital platforms such as social media or third-party reviews, websites offer greater depth and structure for sustainability storytelling. Coffee companies can elaborate on specific initiatives—such as waste reduction efforts, energy-efficient practices, or community engagement—while also showcasing supporting documentation like certification logos, CSR reports, carbon footprint data, and lifecycle assessments (Candelo et al., 2019; Escobar & García, 2023). The ability to include downloadable sustainability reports and interactive dashboards supports transparency, which research has shown to be strongly associated with consumer trust and corporate legitimacy (Cantele & Zardini, 2018).

One of the most effective strategies employed on corporate websites is visual storytelling. Coffee brands often use photos of coffee farmers, infographics showing reductions in greenhouse gas emissions, and videos documenting recycling programs to make their sustainability narratives more engaging and persuasive (Samoggia et al., 2020; Llácer-Falcón et al., 2026). These visuals not only enhance aesthetic appeal but also allow consumers to emotionally connect with the brand's ethical positioning. Interactive elements further enhance engagement. Features such as carbon footprint calculators, QR code-based traceability tools, and embedded feedback forms encourage two-way communication and participation in sustainability initiatives (Carvalho et al., 2022). Through these tools, consumers can trace the journey of their coffee from farm to cup, verify sourcing practices, or even compare environmental metrics across product lines. These technological advancements create a more informed and empowered consumer base, aligned with contemporary values of accountability and conscious consumption.

Moreover, websites serve a compliance and investor relations function. Many global coffee chains align their online sustainability communication with international standards such as the Global Reporting Initiative (GRI), UN Sustainable Development Goals (SDGs), and the Science-Based Targets initiative (SBTi) (Kassier, 2024). This alignment ensures that their environmental disclosures are not only consumer-facing but also satisfy the expectations of institutional stakeholders, regulators, and civil society organizations. For emerging markets such as Malaysia, the strategic use of websites becomes even more critical, as eco-consciousness among consumers is growing and government policies increasingly emphasize sustainability in business practices. Coffee chains operating in this region must adapt their communication to address local cultural expectations while maintaining global benchmarks. Studies indicate that Malaysian consumers respond favourably to businesses that demonstrate genuine commitment to green practices and articulate these efforts clearly through digital platforms (Mutolib, 2023; Aboelimged et al., 2021). Despite their importance, however, the use of websites for sustainability communication is not without limitations. Not all companies invest equally in website development, leading to inconsistencies in the depth and quality of environmental disclosures. Furthermore, website content may be updated infrequently or lack metrics to substantiate claims, which can undermine the credibility of the messaging.

As Gulati (2021) notes, vague or overly promotional language, without supporting data, often fails to convince sceptical or informed consumers.

In conclusion, official websites are more than promotional tools; they are critical instruments for corporate transparency, stakeholder engagement, and sustainability governance. By clearly articulating efforts across themes such as sustainable sourcing, waste reduction, eco-friendly packaging, energy and water conservation, and community engagement, coffee chains can create a coherent and persuasive green identity. This, in turn, enhances their competitiveness, builds trust with environmentally aware consumers, and supports broader sustainability transitions within the food and beverage sector.

### **3. METHODOLOGY**

This study employed a qualitative content analysis approach to examine how Malaysian coffee chains communicate their green practices through their official websites. The initial sample of 20 coffee chains was derived from publicly available industry listings and market comparisons of coffee chains operating in Malaysia (Khaw, 2024), which provide an overview of prominent brands based on accessibility, pricing, and market presence. From this pool, four coffee chains—ZUS Coffee, Gigi Coffee, Starbucks Malaysia, and Gloria Jean's Coffee—were purposively selected to ensure variation across key analytical dimensions, including brand origin (local versus international), organisational scale, and the maturity of sustainability communication.

ZUS Coffee and Gigi Coffee represent rapidly expanding local Malaysian brands characterised by strong digital engagement and emerging sustainability narratives. In contrast, Starbucks Malaysia and Gloria Jean's Coffee represent established international chains supported by formalised global sustainability frameworks and structured reporting mechanisms. This combination enables a meaningful comparison between locally grounded and globally standardised approaches to sustainability communication. The case selection follows a theoretical replication logic, whereby cases are deliberately chosen to generate contrasting patterns based on differences in organisational resources, communication strategies, and sustainability maturity. Such variation enhances the analytical depth and transferability of the findings beyond the selected cases.

Data collection was conducted from 1 November 2024 to 1 December 2024 through a systematic review of the selected coffee chains' websites. Key sections included "About Us," sustainability or CSR pages, blogs, news updates, and product descriptions. The analysis covered textual narratives, visual elements (e.g., infographics and certifications), and embedded media (e.g., videos). All relevant information was documented using screenshots, URLs, and publication dates to ensure traceability and accuracy. The collected data were analysed using a directed content analysis approach guided by five themes: sustainable sourcing, waste reduction, eco-friendly packaging, energy and water conservation, and community engagement. Content was coded according to these themes, and patterns were examined to identify the relative emphasis placed on different aspects of sustainability. The findings were cross-validated to enhance reliability.

This study focused exclusively on publicly available website content; therefore, ethical approval was not required. Nevertheless, care was taken to ensure accurate representation of all materials. Limitations include the exclusion of other communication channels (e.g., social media) and the time-sensitive nature of website content, which may change after the data collection period. Overall, this methodology provides a

structured and systematic framework for analysing sustainability communication strategies within Malaysian coffee chains.

## 4. FINDINGS

### 4.1 Result

The qualitative content analysis of the official websites of four selected Malaysian coffee chains—ZUS Coffee, Gigi Coffee, Starbucks Malaysia, and Gloria Jean's Coffee—revealed varied approaches and degrees of emphasis on sustainability communication. The analysis focused on five thematic areas: sustainable sourcing, waste reduction, eco-friendly packaging, energy and water conservation, and community engagement. These themes were chosen based on existing literature and their prevalence in sustainability frameworks (Samoggia & Riedel, 2018; Rahmah, 2023).

#### *Sustainable sourcing*

Sustainable sourcing emerged as the most prominently communicated theme across all four coffee chains. Starbucks Malaysia demonstrated a comprehensive approach by emphasizing its adherence to Coffee and Farmer Equity (C.A.F.E.) Practices. According to the company, 99% of its coffee is ethically sourced, guided by social, environmental, and economic criteria developed in collaboration with Conservation International. The website elaborates on partnerships with smallholder farmers, environmental protection programs, and supply chain transparency. Similarly, ZUS Coffee highlighted its partnership with Coffex Coffee to procure Direct Trade Beans. This initiative bypasses traditional intermediaries, ensuring fair pricing and promoting closer relationships with farmers. Gigi Coffee also referenced working directly with farms and cooperatives to improve welfare and sustainability practices, though its communication was comparatively general. Gloria Jean's Coffee, an international chain, emphasized its commitment to Rainforest Alliance-certified coffee, aligning with global sustainability certification standards. These sourcing narratives were often supplemented with images of farmers, cooperative stories, and statistics on ethical procurement. The use of such storytelling reinforces brand authenticity and signals a commitment to traceability and fair-trade practices (Llácer-Falcón et al., 2026; Nguyen et al., 2023).

#### *Waste reduction*

Waste reduction was inconsistently communicated across the chains. Among the four, ZUS Coffee provided the most detailed example of circular economy practices, stating its initiative to upcycle used coffee grounds into biofuel. This effort was described with visual content and clear metrics, showcasing its environmental benefit and operational innovation. Starbucks Malaysia mentioned waste-related initiatives indirectly, including its long-running Bring Your Own Tumbler campaign, which incentivizes customers to reduce disposable cup usage. While this effort aligns with behavioural change approaches to waste reduction, specific data or expansion on back-end waste management was limited. Gigi Coffee and Gloria Jean's Coffee, however, did not include detailed information about waste minimization strategies on their official websites. The absence of clear content on this theme reflects a missed opportunity to communicate efforts that align with growing consumer concern about landfill contributions, food waste, and plastic pollution (Escobar & García, 2023).

### *Eco-friendly packaging*

Eco-friendly packaging was moderately addressed, with Starbucks Malaysia and ZUS Coffee being the most active in this area. Starbucks highlighted its global packaging innovation goals, including the development of recyclable, compostable, and reusable alternatives. In Malaysia, the brand reported on initiatives to reduce single-use plastics and enhance in-store recycling systems. These actions were supported by graphics and links to the company's global sustainability reports. ZUS Coffee emphasized the use of recyclable PET cups and Forest Stewardship Council (FSC)-certified paper sleeves. These details were presented on their product and sustainability pages, demonstrating an effort to integrate environmental design into their customer-facing identity. However, the extent to which these materials are actually recycled or reused by consumers remains unclear, as follow-up strategies were not detailed. In contrast, Gigi Coffee and Gloria Jean's Coffee provided minimal or no content related to packaging sustainability. Given the significance of packaging waste in the food and beverage industry, this lack of information suggests an underdeveloped communication strategy on this theme (Ellen MacArthur Foundation, 2020).

### *Energy and water conservation*

This theme was the least communicated across the analysed websites. Only Starbucks Malaysia made specific reference to energy conservation efforts. The website mentioned energy-efficient store designs and the use of renewable energy sources such as solar power in selected outlets. These initiatives are consistent with Starbucks' global sustainability strategy but were not elaborated with location-specific details for the Malaysian market. None of the other three brands—ZUS Coffee, Gigi Coffee, or Gloria Jean's Coffee—mentioned energy-saving technologies, water-efficient systems, or related infrastructure investments. This gap points to either a lack of implementation or, more likely, a lack of public-facing communication about operational sustainability measures. This is notable given that energy and water conservation are critical for reducing greenhouse gas emissions and resource depletion in retail food services (International Coffee Organization, 2021).

### *Community engagement*

Community engagement was a recurring and well-articulated theme across all four chains. ZUS Coffee showcased several initiatives, including collaborations with Audiolab Hearing Care Centre to provide hearing aids and employment to hearing-impaired baristas. The website framed these actions as part of a broader inclusion and accessibility strategy, which resonates with corporate social responsibility goals. Starbucks Malaysia highlighted partnerships with local artisans and food producers to promote local enterprise, along with its commitment to inclusive hiring practices, particularly of youth and marginalized groups. These stories were conveyed with photographs, testimonials, and impact statements, enhancing emotional resonance. Gigi Coffee's messaging centered on fair treatment of farmers and efforts to improve livelihoods through its sourcing practices, while Gloria Jean's Coffee emphasized livelihood development and charitable programs. However, these were often conveyed in broad terms without measurable outcomes or detailed descriptions. Overall, community engagement was the most socially oriented theme and served as a key pillar of brand identity, especially for companies aiming to appeal to ethically minded consumers (Sundström et al., 2019; Dietz et al., 2019).

Table 1. Green practices communication by coffee chains

<b>Green Practice Category</b>	<b>Gigi Coffee</b>	<b>Gloria Jean's Coffee</b>	<b>Starbucks Coffee</b>	<b>ZUS Coffee</b>
<b>Community Engagement</b>	Focuses on improving the welfare of individuals involved throughout the supply chain.	Engages with community groups to build livelihoods and improve social welfare.	Collaborates with artisans to benefit local communities.	Provides hearing aids to deaf baristas in partnership with Audiolab Hearing Care Centre.
<b>Eco-Friendly Packaging</b>			Expands recycling efforts and develops environmentally friendly cups.	Uses 100% recyclable materials for packaging.
<b>Energy and Water Conservation</b>			Implements energy efficient designs and renewable energy sources in stores.	
<b>Sustainable Sourcing</b>	Sourcing team collaborates closely with farmers and farms to ensure sustainability in coffee production.	Sources coffee beans from diverse farms, ensuring worker welfare and environmental sustainability	99% of Starbucks coffee is ethically sourced, following economic, social, and environmental criteria.	Partnership with Coffex Coffee to procure beans directly from farmers, ensuring sustainability and fair pricing.
<b>Waste Reduction</b>			Offers discounts to encourage customers to use reusable cups.	Converts used coffee grounds into bio-fuel.

Source: Authors' own elaboration.

## 4.2 Discussion

### *Themes in sustainability communication*

The findings indicate that sustainable sourcing and community engagement are the most consistently communicated themes among the four coffee chains studied. This prominence reflects broader industry trends, where ethical sourcing and social responsibility are increasingly recognized as core elements of sustainable business models (Raynolds et al., 2007; Valkila, 2014). By highlighting certifications like Rainforest Alliance, Fair Trade, and direct trade partnerships, brands project credibility, transparency, and alignment with consumer expectations for ethical consumption (Nguyen et al., 2023; Grabs et al., 2016). This emphasis is also consistent with recent research on sustainability communication, which highlights the role of storytelling in enhancing corporate legitimacy (Llácer-Falcón et al., 2026). The presence of farmer imagery, cooperative success stories, and ethical trade references on these websites serves as symbolic capital to reinforce authenticity and brand values.

In contrast, waste reduction, eco-friendly packaging, and energy and water conservation were significantly less emphasized. The limited coverage of waste reduction—apart from ZUS Coffee's biofuel initiative—suggests a disconnect between operational sustainability and consumer communication. This underrepresentation is surprising given that foodservice waste, including spent coffee grounds and

packaging waste, contributes significantly to environmental degradation (Machado et al., 2018; Iriondo-DeHond et al., 2019). Moreover, given the increasing popularity of zero-waste lifestyles and circular economy principles, omitting such themes may reduce the perceived environmental commitment of these brands. Similarly, the scant attention given to eco-friendly packaging by two of the brands overlooks a critical area of concern for environmentally conscious consumers. As Pires et al. (2021) and the Ellen MacArthur Foundation (2020) argue, packaging innovation not only reduces ecological impact but also serves as a competitive differentiator. Starbucks and ZUS Coffee, through their use of recyclable or FSC-certified materials, demonstrated partial alignment with these expectations, but more can be done to quantify impacts and expand communication efforts.

The near absence of energy and water conservation narratives—except for Starbucks Malaysia—highlights another gap. Despite the fact that energy-intensive equipment, HVAC systems, and water consumption for cleaning and beverage preparation are major sustainability issues in cafés, these topics were under-communicated. This omission limits consumer awareness of operational efficiency efforts that could enhance brand credibility. As Rezaei et al. (2020) assert, sustainability communication should encompass the full value chain to reflect systemic environmental responsibility. Overall, these discrepancies suggest that Malaysian coffee chains adopt a selective approach to green messaging, prioritizing consumer-facing narratives over backend operational efforts. This selectivity may stem from either a lack of implementation in certain areas or a strategic focus on more emotionally resonant themes like ethical sourcing and social inclusion.

The underrepresentation of energy and waste-related practices in sustainability communication warrants deeper critical consideration. One possible explanation is the presence of selective or symbolic disclosure, commonly discussed in the literature as greenwashing, where organisations emphasise highly visible and consumer-friendly initiatives while downplaying less developed or operationally complex practices (Delmas & Burbano, 2011). In this context, themes such as ethical sourcing and community engagement are more easily communicated due to their strong narrative appeal and emotional resonance, whereas energy efficiency and waste management—often embedded in backend operations—are less visible and more difficult to translate into compelling marketing content.

Alternatively, the absence of these themes may reflect a genuine lack of implementation, particularly among smaller or resource-constrained firms. As prior research suggests, sustainability initiatives that require significant capital investment, technological upgrades, or long-term operational restructuring—such as renewable energy adoption or advanced waste management systems—are less likely to be prioritised by firms with limited organisational capacity (Revell et al., 2010). This may explain why local chains demonstrate stronger emphasis on socially oriented initiatives, which are comparatively more accessible and immediate to implement.

A third explanation lies in strategic framing within sustainability communication. Companies may deliberately prioritise themes that align more closely with brand identity and consumer expectations, thereby shaping sustainability narratives to maximise reputational benefits (Llácer-Falcón et al., 2026). From this perspective, sustainability communication is not merely a reflection of actual practices but also a curated representation designed to influence stakeholder perceptions. The selective emphasis observed in this study therefore suggests that sustainability communication in the coffee industry operates at the intersection of operational reality and strategic messaging, where certain practices are amplified while others remain under-communicated.

### *Comparison of Local and International Brands*

The comparison between local (ZUS Coffee, Gigi Coffee) and international (Starbucks Malaysia, Gloria Jean's Coffee) brands revealed distinct communication styles and priorities. Local brands emphasized localized efforts such as partnerships with farmers and community-based employment programs. ZUS Coffee's focus on supporting hearing-impaired baristas exemplifies a targeted social sustainability initiative rooted in local needs. Gigi Coffee's mention of direct farm collaborations also reflects proximity-based sustainability strategies, likely facilitated by more agile operations and national supply chains. These localized strategies align with the concept of place-based sustainability, where businesses tailor their social and environmental practices to specific cultural and geographic contexts (Manning & Smith, 2010). This approach fosters authenticity and enhances relevance among domestic audiences.

In contrast, international brands like Starbucks Malaysia and Gloria Jean's Coffee communicated broader sustainability agendas. These included formal certifications, global frameworks (e.g., C.A.F.E. Practices), and references to renewable energy and packaging innovation. Starbucks, in particular, leveraged its global reporting systems to showcase ambitious environmental goals, including energy-efficient store designs and waste reduction programs. This alignment with international standards allows global chains to appeal to both institutional stakeholders and globally conscious consumers (Weder, 2025). The disparity may also be attributed to resource differences. Multinational chains typically have dedicated sustainability teams, access to impact measurement tools, and structured corporate reporting mechanisms. Local chains, while more agile and locally responsive, may face constraints in documenting, implementing, or reporting complex sustainability initiatives (Mutolib, 2023; Winarno & Harijani, 2022). As a result, while their initiatives may be impactful, their visibility and credibility might lag behind global competitors.

### *Opportunities for Improvement*

The study's findings underscore several opportunities for Malaysian coffee chains to enhance their green communication strategies. First, there is a need to broaden the scope of sustainability narratives beyond sourcing and social responsibility. Themes such as energy efficiency, water conservation, and waste reduction—though less emotionally evocative—are essential for environmental stewardship. Integrating these into website content, supported by data or visuals, can create a more holistic sustainability profile. This aligns with the multidimensional sustainability model proposed by Bager and Lambin (2020), which emphasizes the interdependence of ecological, social, and economic outcomes.

Second, coffee chains should adopt quantifiable and transparent reporting mechanisms. Measurable indicators—such as percentage of recycled packaging, kilowatt-hours saved, or liters of water conserved—can substantiate sustainability claims and enhance consumer trust (Samoggia et al., 2020; Candelo et al., 2019). Brands should also consider third-party verification, such as lifecycle assessments (LCAs) or environmental product declarations (EPDs), to further validate their efforts. Third, there is an untapped potential in interactive digital tools. QR codes, sustainability dashboards, and traceability platforms can empower consumers to engage directly with brand values (Carvalho et al., 2022). These tools offer transparency while enhancing user experience and reinforcing brand differentiation.

Fourth, storytelling should evolve from static to dynamic formats. Video testimonials from farmers, progress timelines, and interactive maps can provide immersive narratives that resonate with diverse audiences. As Escobar and García (2023) suggest, storytelling combined with measurable impact is more effective than abstract corporate claims. Finally, brands should engage in stakeholder co-creation. Including consumer feedback, employee insights, and community voices in sustainability communication not only

enriches content but also demonstrates inclusivity. This participatory approach can foster stronger emotional connections and brand loyalty (Sundström et al., 2019).

In summary, while Malaysian coffee chains have laid a strong foundation in green messaging, especially in sustainable sourcing and social initiatives, there remains a need for more balanced, transparent, and multidimensional communication strategies. Addressing these gaps can strengthen both environmental impact and market positioning.

## **5. CONCLUSION**

This study investigated how four prominent coffee chains in Malaysia—ZUS Coffee, Gigi Coffee, Starbucks Malaysia, and Gloria Jean's Coffee—communicate their sustainability practices through their official websites. Using a qualitative content analysis framework, the study explored five thematic areas central to green practices in the coffee industry: sustainable sourcing, waste reduction, eco-friendly packaging, energy and water conservation, and community engagement. The analysis reveals that while certain themes—particularly sustainable sourcing and community engagement—are prominently featured, others such as waste reduction, packaging sustainability, and energy or water efficiency are underrepresented.

The findings show that sustainable sourcing has become a cornerstone of environmental communication across all chains, often highlighted through partnerships with farmers and the use of certifications like Rainforest Alliance or Fair Trade. This trend mirrors the global coffee industry's growing reliance on ethical supply chains as a tool to boost brand reputation and respond to consumer demand for transparency (Raynolds et al., 2007; Valkila, 2014). Community engagement, too, was strongly communicated, especially by local chains like ZUS Coffee and Gigi Coffee, which emphasized employment inclusivity and welfare improvement as central components of their business ethos.

However, the uneven focus across the five sustainability themes reflects a selective communication approach that may limit consumer perception of these brands' holistic commitment to sustainability. Waste management practices, despite their growing relevance in circular economy discourses, were largely overlooked by most chains except ZUS Coffee. Similarly, eco-friendly packaging and operational resource conservation—important markers of environmental stewardship—received limited attention despite being pressing global sustainability concerns (Nguyen et al., 2023; Ellen MacArthur Foundation, 2020).

The comparison between local and international chains further illuminated differences in strategic emphasis. Global brands like Starbucks Malaysia communicated more comprehensive sustainability agendas, leveraging access to structured frameworks, global certifications, and corporate reporting systems. Local chains, in contrast, adopted more localized and socially grounded initiatives, reflective of contextual responsiveness and proximity to their communities. While both approaches have merit, the study suggests that local brands could benefit from adopting more data-driven and transparent reporting mechanisms, while global brands could enhance authenticity by incorporating more place-based narratives.

This research makes several theoretical and practical contributions. Theoretically, it adds to the growing body of literature on digital sustainability communication in the foodservice sector, particularly within emerging markets like Malaysia. It reinforces the notion that official websites are not merely promotional tools but strategic platforms for shaping stakeholder perceptions and demonstrating environmental accountability (Escobar & García, 2023; Samoggia & Riedel, 2018). Practically, the findings

offer actionable insights for coffee brands aiming to improve their sustainability messaging. By broadening the thematic scope, incorporating quantifiable data, and leveraging interactive digital tools, coffee chains can build stronger trust with eco-conscious consumers and align with international sustainability expectations.

Nonetheless, the study has several limitations. First, it focuses solely on website content and does not analyze other influential communication channels such as social media, advertising, or in-store messaging. Given the multi-platform nature of consumer engagement today, future research could adopt a multi-channel approach to provide a more holistic view of sustainability communication. Second, the analysis did not assess consumer perceptions or behavioral responses to the messaging. Follow-up studies involving consumer surveys or experiments could provide deeper insights into the effectiveness of various green communication strategies. Third, this study only included four brands; expanding the sample size could improve generalizability and allow for comparative analysis across more diverse business models.

In conclusion, this study underscores the importance of transparent, balanced, and theme-inclusive sustainability communication in the coffee industry. For Malaysian coffee chains, the path forward lies in integrating underrepresented themes such as waste reduction and energy conservation into their narratives, adopting quantifiable performance metrics, and embracing digital innovation to engage stakeholders meaningfully. As consumers continue to demand accountability and eco-conscious behavior from businesses, coffee brands that communicate their green commitments holistically and authentically will be best positioned to thrive in an increasingly sustainability-oriented market.

## 6. ACKNOWLEDGEMENTS

The authors would like to express their sincere appreciation to Universiti Teknologi MARA (UiTM) for supporting this research. Special thanks are extended to all parties who contributed directly and indirectly to the completion of this study.

## 7. CONFLICT OF INTEREST STATEMENT

The authors declare that there is no conflict of interest regarding the publication of this paper.

## 8. AUTHORS' CONTRIBUTIONS

**Lily Nurainul Ashikin Ishak:** Conceptualisation, methodology, formal analysis, investigation, data curation, visualization, writing—original draft, and project administration; **Chemah Tamby Chik:** Supervision, validation, writing—review and editing, and funding acquisition; **Rasidah Hamid:** Supervision, validation, and writing—review and editing.

## 9. DECLARATION OF GENERATIVE AI IN THE WRITING PROCESS

The authors used generative artificial intelligence (AI) tools (e.g., ChatGPT) to assist in improving language clarity and readability. The AI tool was not used to generate research content, analyse data, or influence the study's findings. All content has been reviewed and approved by the authors, who take full responsibility for the integrity of the work.

## 10. DATA AVAILABILITY/SUPPLEMENTARY MATERIALS

All data analysed during this study are included in this published article. The study is based on publicly available information from the official websites of the selected coffee chains. Supplementary materials, including the list of website URLs, sample screenshots, and the coding framework, are available from the corresponding author upon reasonable request.

## 11. ETHICS STATEMENT

The authors declare that this study did not involve human or animal subjects. All data were obtained from publicly available sources, and the research was conducted in accordance with the institutional research guidelines of Universiti Teknologi MARA (UiTM).

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