

Sustainable Material Choices in Café Design: Enhancing Brand Identity and Environmental Responsibility

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Abstract

The urgency of sustainability has reshaped how public spaces, including cafés, are designed and experienced. Buildings and interiors account for nearly 40% of global carbon emissions, making material choices a critical environmental concern. In Indonesia, cafés have become cultural hubs, amplifying the impact of design decisions. While global advancements in biophilic design, circular material reuse, and green certifications set new standards, few studies examine how sustainable materials influence consumer perception and brand identity in café settings. This study addresses that gap through a mixed-method approach—literature review and a questionnaire with urban café visitors. Results show that natural materials like wood and bamboo enhance both environmental responsibility and emotional appeal, fostering trust, comfort, and modern values. Green features such as recycled finishes and efficient lighting further strengthen brand authenticity. Sustainable materials thus operate not only as ecological solutions but also as experiential branding tools, offering cafés competitive and ethical advantages.

Keywords: Sustainable Interior Design; Eco-Friendly Materials; Café Branding; Consumer Perception; Spatial Experience

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INTRODUCTION

In the midst of escalating global environmental challenges, the design and construction industries have come under increasing pressure to adopt more sustainable practices. Interior design, once primarily concerned with aesthetics and comfort, is now being redefined by environmental ethics and resource consciousness. In recent years, awareness of sustainability issues has surged not only among policymakers and environmental activists but also within creative disciplines such as architecture and interior design. A 2025 industry report by Gitnux reveals that 78% of interior designers routinely prioritize sustainable materials, and 90% believe that eco-friendly practices will become an industry standard in the near future. Academic literature similarly notes a steady increase in sustainability-oriented design efforts from 2013 to 2023, demonstrating a paradigmatic shift toward environmentally conscious interiors (Gitnux, 2025).

This shift is particularly relevant in the context of public and commercial spaces—especially cafés. In urban centers, cafés have transformed into multifunctional social nodes where people work, interact, and express lifestyle preferences. In Indonesia, this trend is strongly embedded in youth and urban culture, where cafés serve not only as spaces for refreshment but also as informal workplaces, social arenas, and identity markers (Putra, 2016; Purnama & Ilyas, 2020). The growing popularity of "nongkrong" (hanging out) culture and the third-wave coffee movement has turned café interiors into curated environments that must convey more than comfort—they must communicate value, meaning, and brand ethos.

In this context, the urgency of sustainable design in café interiors cannot be overstated. Buildings and interiors account for nearly 40% of global energy-related carbon emissions and remain among the largest generators of material waste (Liu et al., 2022). As urban café culture expands rapidly across Indonesia, the environmental consequences of material choices in this sector multiply at an accelerated rate. At the same time, consumer expectations are shifting quickly—particularly among Gen Z, who increasingly demand visible alignment between the brands they support and their environmental values. For café owners and designers, delaying the adoption of sustainable materials not only deepens ecological risks but also jeopardizes brand credibility in a competitive market where authenticity and responsibility are becoming decisive factors.

Recent advancements in sustainable design highlight innovative approaches such as biophilic interiors, circular material reuse, and global green building certification systems (e.g., LEED,

Greenship) that set new benchmarks for environmentally responsible spaces (Siregar et al., 2021; Liu et al., 2022). Hospitality and retail sectors have also begun experimenting with these strategies, with initiatives like Kopi Nako's *Daur Baur* branch demonstrating how reclaimed wood and recycled plastics can embody both ecological and cultural values (Cleanomic, 2023). At the academic level, emerging studies explore how design aesthetics influence consumer emotion and behavior (Motoki et al., 2021; Octaliana et al., 2024), reflecting a growing awareness that interiors must resonate experientially as well as ethically.



Figure 1. Kopi Nako “Daur Baur”
Source: manual.co.id/directory/kopi-nako-daur-baur/, 2025

As demonstrated by Kopi Nako's Daur Baur initiative, sustainable interior design not only minimizes environmental harm but also communicates brand values that align with ethical consumerism. This supports the hypothesis that material choices contribute directly to consumer perception and engagement.

However, despite this momentum, the state-of-the-art literature still treats sustainable materials largely in terms of ecological performance, durability, or cost-efficiency. Far fewer studies investigate how material selection communicates brand values, fosters trust, or shapes consumer perception in café environments—spaces that are increasingly central to urban culture and identity-making. This research positions itself within that frontier: by examining sustainable materials not only as functional components but as narrative devices, it extends the discourse of sustainable interior design into branding, psychology, and experiential strategy.

This evolution presents an opportunity to embed sustainability into a widely consumed and socially visible space. Sustainable interior design in cafés—through the use of sustainable materials such as bamboo, reclaimed wood, low-VOC paints, and natural lighting—can serve as both a marketing advantage and an environmental statement (Kim & Heo, 2021). These materials reduce environmental impact while also strengthening brand narratives aligned with consumer values. In Indonesia, this has been exemplified by Kopi Nako's “Daur Baur” franchise, which incorporates reclaimed teak wood and recycled plastic panels into its interior elements, reinforcing its commitment to circular design and ethical spatial branding (Cleanomic, 2023). Such implementations demonstrate that sustainability is no longer a niche aesthetic but a tangible strategic asset in consumer-facing spaces.

Research confirms that physical environments influence emotional experiences and decision-making; design aesthetics, tactile finishes, and spatial configuration can shape customers' impressions, behavior, and loyalty (Motoki et al., 2021; Budiman & Dananjoyo, 2021). Moreover, contemporary studies highlight that well-designed spaces positively influence user comfort, spatial satisfaction, and purchasing behavior (Octaliana et al., 2024; Veronica et al., 2023). Cafés that successfully combine atmospheric design with sustainable materials are more likely to generate longer stays, repeat visits, and stronger consumer attachment. In this context, interior design becomes a powerful tool not only for environmental advocacy but also for creating immersive brand experiences that align with sustainability-minded consumers.

From the perspective of the construction and design industry, the urgency to adopt sustainable materials is no longer optional. Buildings and interiors significantly contribute to carbon emissions, energy consumption, and material waste. Green building certifications such as LEED and Greenship advocate for the use of environmentally friendly materials that are durable, locally sourced, recyclable, and non-toxic (Siregar et al., 2021; Liu et al., 2022). Scholars have identified materials like bamboo (Sutrisno et al., 2020), certified wood (Veronica et al., 2024), and recycled steel (Yahia et al., 2024) as key contributors to reducing environmental burdens while enhancing aesthetic and functional value. However, these materials also serve a symbolic function in space-making—conveying care, ethics, and future-oriented design.

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Despite growing attention to sustainable practices, academic investigations that specifically explore how sustainable materials shape consumer perceptions in café environments remain limited. Much of the current discourse addresses green materials in terms of their ecological performance or cost-efficiency but falls short in connecting these design choices to branding and consumer psychology. Although the hospitality and retail sectors have begun integrating sustainability into their operations, little is known about how these efforts materialize through specific material choices and how they influence consumer perception on both spatial and experiential levels.

To address this critical research gap, this study investigates the communicative power of sustainable materials in café interiors. By focusing on material selection not only as a construction decision but as a communicative design strategy, this research aims to (1) identify the types of sustainable materials commonly used in café interior design, (2) analyze their influence on consumer perception and brand identity, and (3) provide actionable recommendations for café owners and interior designers to create spaces that are environmentally responsible, aesthetically appealing, and commercially effective.

METHODOLOGY

This study employs a mixed-method approach, combining a qualitative-descriptive framework with quantitative data collection, to understand how eco-friendly material selection in café interiors shapes consumer perception and contributes to brand identity. The research is based on the premise that spatial design decisions—particularly those involving sustainable materials—can communicate environmental values and influence emotional experience and user behavior.

A comprehensive literature review was conducted to establish the conceptual framework, drawing from both global and local studies that explore the intersections of interior design, sustainability, and user psychology. Prior research by Manurung et al. (2022), Liu et al. (2022), and Sutrisno et al. (2020) informed the discussion on material sustainability, while insights from Octaliana et al. (2024), Motoki et al. (2021), and Veronica et al. (2023) provided evidence on how interior space influences user experience and decision-making.

To complement the literature review, empirical data were collected through a closed-ended questionnaire distributed to visitors of cafés located in urban areas of Indonesia. The cafés were selected using purposive sampling, based on their known application of eco-friendly materials such as bamboo, recycled wood, low-VOC finishes, and daylight-maximizing layouts. Respondents—aged 18 and above—were eligible if they had recently visited one or more of the selected cafés and were likely to be aware of and influenced by design elements.

The questionnaire consisted of four primary measurement constructs—perceived aesthetic appeal, emotional comfort, environmental awareness, and brand credibility—identified from the theoretical framework and prior studies on spatial perception. The use of structured questions ensured consistency in responses and enabled efficient aggregation of user perceptions. This approach aligns with similar studies that assess user experience in designed environments (e.g., Wijaya & Kusumaningrum, 2024; Budiman & Dananjoyo, 2021).

The data analysis combined basic descriptive statistics and thematic interpretation. Responses were first tabulated to identify frequency patterns and average ratings across the key variables. These patterns were then interpreted in relation to themes from the literature, enabling a synthesis of user feedback with existing academic discourse. This method allowed the researcher to connect material selection, spatial atmosphere, and brand perception—bridging the technical, emotional, and symbolic dimensions of interior design. By combining theoretical insights with real-world user input, this study provides a holistic understanding of how sustainable materials not only support environmental goals but also shape consumer experience and loyalty in the café context.

RESULTS AND DISCUSSION

The results of this study, obtained from structured questionnaires distributed to café visitors in urban areas of Indonesia, provide meaningful insights into the relationship between sustainable interior design and consumer perception. Demographically, 72% of the respondents were students, followed by 20% freelancers and 8% employees. A significant majority were born between 2000 and 2004, placing them in Generation Z—a demographic widely recognized for their attunement to lifestyle aesthetics, environmental awareness, and authenticity in branding. These findings are consistent with previous studies by Putra (2016) and Purnama and Ilyas (2020), which identify cafés as multifunctional urban spaces that support social interaction, identity expression, and cultural experience.

Regarding interior design, 56% of respondents described it as very important in shaping their café experience, while 16% identified it as extremely important. This supports the findings of Octaliana et al. (2024), who emphasize that interior environments influence emotional engagement, spatial satisfaction, and consumer behavior. Additionally, 40% of participants reported spending 1–2 hours per café visit, suggesting that atmosphere, comfort, and aesthetic design are key to prolonged engagement and return visits.

Although interest in sustainability is rising, the study reveals that its visual communication within cafés remains limited. Only 12% of respondents consistently recognized the presence of sustainable materials, while 28% noticed them often and 44% only sometimes. This suggests that sustainable elements, though potentially integrated, are not always prominent or clearly interpreted by users. However, interest in sustainability is steadily growing. A combined 52% of participants expressed a preference for environmentally conscious cafés—28% with a strong preference and 24% with a moderate preference—indicating alignment with Gitnux's (2025) projection that sustainability will become a standard value in design and consumer expectations. This limited recognition underscores the urgent need for more visible and deliberate communication of sustainability within café interiors. Without clear signals, the environmental value of design choices risks being overlooked by consumers despite their growing awareness.

Aesthetic impact was identified as a significant factor influencing consumer perception of sustainable interior design. Although 44% of respondents agreed that sustainable materials enhanced the visual quality of café interiors, the neutrality expressed by 28% underscores an important

consideration: eco-friendly design must appeal not only to ethical sensibilities but also to visual and sensory expectations. This reflects a broader understanding that sustainability, to be fully embraced by consumers, must be aesthetically engaging as well as environmentally responsible. As supported by Motoki et al. (2021), material choices, along with lighting and color, play a crucial role in shaping user mood, spatial perception, and even taste experiences in hospitality settings. Consequently, sustainable materials should be integrated not only for their ecological value but also for their ability to contribute to an immersive, emotionally resonant atmosphere. This dual demand highlights the need for sustainable interior design to move beyond technical compliance, positioning material selection as a multidimensional design decision that harmonizes ethics with aesthetics.

Natural elements like bamboo and wood were the most favored, with 88% of respondents expressing a preference for such materials. This finding aligns with biophilic design principles, which suggest that natural textures foster psychological well-being and environmental affinity (Veronica et al., 2024; Sutrisno et al., 2020). Other eco-features such as recycling bins and green walls or plants received positive responses from 76% of respondents, and 64% favored the use of energy-efficient appliances. These features were not only appreciated for their function but also seen as signals of ethical branding and environmental commitment. These preferences align with state-of-the-art practices such as biophilic and circular design, which emphasize natural textures and material reuse to foster psychological well-being and ecological responsibility.

Regarding perceptions of environmental impact, a significant portion of respondents acknowledged the ecological value of sustainable materials. Specifically, 40% perceived their use as having a strong positive impact on the environment, while an additional 24% rated the impact as significant. This suggests that a majority of café-goers are capable of connecting interior design choices—particularly material selection—with broader environmental outcomes. These perceptions are consistent with the perspectives offered by Liu et al. (2022) and Yahia et al. (2024), who argue that sustainable materials function not only as low-impact construction choices but also as communicative agents that convey ecological responsibility and institutional commitment to sustainability.

However, while environmental awareness appears to be growing, its translation into purchasing behavior is tempered by economic considerations. Although 44% of respondents expressed a high or very high willingness to pay a premium for sustainable design features, a considerable 40% remained neutral, suggesting hesitation when environmental ideals intersect with personal or perceived financial cost. This ambivalence reflects a well-documented tension in sustainable consumer behavior, where ethical alignment does not always equate to economic action. The findings highlight a critical challenge for designers and business owners: to not only adopt sustainable practices but also to articulate their value in ways that justify potential cost differentials. For sustainable materials to influence decision-making more effectively, they must be perceived as integral to the quality, durability, and overall experience of the space—not merely as ethical enhancements.

Ultimately, the findings reinforce the central argument that the strategic integration of sustainable materials within café interiors plays a critical role in shaping consumer perception, fostering emotional engagement, and strengthening brand loyalty. When selected and implemented with deliberate intent and clear visual communication, eco-friendly materials contribute not only to the environmental performance of the space but also to the perceived authenticity and integrity of the brand. For these materials to effectively convey the values of sustainability, they must be prominently visible, emotionally resonant, and coherently embedded within the spatial and experiential narrative. As articulated by Mulyadi et al. (2023), sustainable materials should be understood not merely as technical or functional components, but as narrative instruments that articulate brand ethos, cultivate transparency, and enhance relevance—particularly among increasingly environmentally conscious consumers.

Taken together, the findings highlight that sustainable material choices should not be reduced to technical compliance or cost-efficiency. Positioned at the intersection of ethics, aesthetics, and branding, they represent a frontier in interior design research—extending the discourse beyond

environmental performance to consumer psychology and brand identity, especially in the socially influential café sector.

CONCLUSION

This study affirms that integrating sustainable materials into café interiors is both an urgent environmental responsibility and a strategic design choice. With buildings and interiors contributing significantly to global carbon emissions, and café culture rapidly expanding in Indonesia, material selection becomes a high-impact decision. The findings reveal that young urban consumers—especially Gen Z—value natural, recycled, and certified materials not only for their ecological benefits but also for their visual appeal, emotional resonance, and alignment with brand authenticity.

By situating cafés within cutting-edge movements such as biophilic design, circular reuse, and green certification, this research extends the state-of-the-art from technical and ecological discussions toward branding and consumer psychology. Sustainable materials are shown to operate simultaneously as ethical commitments and experiential branding tools. For café owners and designers, adopting them meaningfully into interiors is no longer optional—it is a timely pathway to environmental relevance, consumer trust, and competitive advantage.

The integration of sustainable materials contributes to a holistic café experience by enhancing comfort, authenticity, and spatial atmosphere. Customers perceive cafés with visible green features—such as natural materials, indoor plants, recycling facilities, and energy-efficient lighting—as more trustworthy, modern, and aligned with environmental values. This reflects broader trends identified in both global and local literature, which position sustainable interior design as a catalyst for emotional engagement and brand loyalty.

However, the study also identifies a gap between environmental intention and behavioral commitment. While many respondents support sustainable practices in principle, willingness to pay a premium remains moderate. This indicates a need for strategic communication and design storytelling to make sustainability more visible, experiential, and personally meaningful to users. Café owners and designers are thus encouraged to not only adopt eco-materials but also to integrate them intentionally into the branding and atmosphere of their spaces.

In conclusion, sustainable material choices are no longer simply technical or ethical decisions—they are experiential tools that shape how users feel, behave, and connect with space. For cafés operating in an increasingly competitive and value-driven market, embedding sustainability into interior design offers a pathway to creating environments that are not only environmentally impactful, but also emotionally compelling and brand-defining.

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