Understanding Pro-Environmental Behavior in the Hospitality Industry: A Systematic Review of Employee and Consumer Perspectives

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Abstract

Purpose – This study systematically reviews and synthesizes the literature on pro-environmental behavior (PEB) in the hospitality industry, integrating both employee and consumer perspectives. It aims to identify dominant theoretical frameworks, methodological trends, and contextual gaps shaping sustainability-oriented behavior research in hospitality.

Design/methodology/approach – A systematic literature review (SLR) was conducted in accordance with PRISMA 2020 guidelines. A total of 29 peer-reviewed articles published between 2019 and 2025 were retrieved from Scopus-indexed journals and analyzed using qualitative thematic coding complemented by bibliometric mapping to identify publication trends, theoretical dominance, and regional distribution.

Findings – The results indicate that PEB research in hospitality is heavily grounded in cognitive–normative models, particularly the Theory of Planned Behavior and Value–Belief–Norm theory, which together account for the majority of empirical studies. Most research adopts cross-sectional, survey-based designs, with growing but still limited use of experimental and mixed-method approaches. Empirically, PEB is driven by cognitive, normative, and affective antecedents, while organizational enablers—such as green human resource management, ethical climate, and marketing authenticity—play a critical mediating role. The literature remains geographically concentrated in Asia and Europe and continues to rely predominantly on self-reported behavioral measures.

Originality/value – By adopting a dual-actor perspective, this review advances the hospitality sustainability literature by integrating fragmented employee- and consumer-focused research into a coherent analytical framework. The study contributes theoretically by highlighting the limitations of dominant rationalist models and identifying pathways for integrating behavioral, organizational, and emotional perspectives, while methodologically outlining directions for more robust, field-based, and cross-contextual research.

Keywords: pro-environmental behavior; hospitality industry; green human resource management; sustainable consumption; organizational climate; consumer behavior

INTRODUCTION

The hospitality industry is both a major contributor to environmental degradation and a sector highly vulnerable to climate change impacts. Hotels and restaurants consume substantial amounts of energy and water, generate significant waste, and contribute to greenhouse gas emissions, making sustainability a critical strategic concern (Santos 2025; M. J. H. Yang et al. 2026). In response, sustainability initiatives in hospitality have increasingly shifted from a primary focus on technological and infrastructural solutions toward an emphasis on human behavior. In this context, pro-environmental behavior (PEB) among both employees and consumers has emerged as a central mechanism for hospitality organizations to reduce their environmental footprint and advance sustainability goals.

Employees play a pivotal role as internal change agents by engaging in environmentally responsible practices such as energy conservation, waste reduction, and environmental advocacy, often beyond formal job requirements (Bangwal et al. 2025; Elshaer, Kooli, and Azzaz 2025). Simultaneously, consumers' in-situ behaviors—such as towel reuse, air conditioning use, and food waste

generation—significantly shape the environmental performance of hospitality operations (Greene, Birenboim, et al. 2025; Greene, Zinn, Demeter, et al. 2025). Despite this interdependence, the literature has largely examined employee and consumer pro-environmental behaviors in isolation, overlooking the interconnected nature of sustainability practices within hospitality systems.

A wide range of theoretical perspectives has been applied to explain PEB in hospitality contexts, including the Theory of Planned Behavior (TPB), Value–Belief–Norm (VBN) theory, Norm Activation Theory, and Social Practice Theory. Empirical studies consistently identify cognitive, normative, and habitual factors—such as attitudes, perceived behavioral control, personal norms, and habits—as key predictors of environmentally responsible behavior (Dhir et al. 2025; Senooane and Mkhize 2025; Trivedi et al. 2025). At the organizational level, green human resource management (GHRM), ethical climate, leadership, and internal marketing practices have been shown to foster pro-environmental behavior among employees by shaping motivational states and perceived support (Elshaer et al. 2025; H.-D. Nguyen et al. 2025). However, the growing body of research remains theoretically fragmented, with limited integration across individual, organizational, and contextual levels of analysis.

Three critical gaps can be identified in the existing hospitality PEB literature. First, most studies adopt a single-actor focus, either examining employees or consumers, thereby neglecting potential cross-actor dynamics and reinforcing siloed explanations of sustainability behavior. Second, the literature remains dominated by cross-sectional, intention-based survey designs, raising concerns about common method bias and the persistent intention–behavior gap. Empirical evidence based on field experiments and observational data remains scarce (Greene, Zinn, Demeter, et al. 2025; Juvan et al. 2025). Third, although well-established behavioral theories are frequently employed, there is a lack of integrative theoretical frameworks that explain how cognitive, emotional, organizational, and contextual mechanisms jointly shape pro-environmental behavior in hospitality settings.

Against this backdrop, this systematic literature review (SLR) seeks to consolidate and critically evaluate empirical research on pro-environmental behavior in the hospitality industry from both employee and consumer perspectives. Drawing on peer-reviewed studies published between 2015 and 2025, the review aims to (1) map dominant theories and methodological approaches, (2) synthesize individual-level and organizational determinants of PEB, and (3) identify conceptual and methodological gaps that constrain theory development in the field. By adopting a dual-actor and multi-level perspective, this review contributes to the hospitality sustainability literature by moving beyond descriptive aggregation toward a more integrative understanding of pro-environmental behavior.

The following research questions guide the review:

RQ1: What theoretical frameworks and research methods dominate the study of pro-environmental behavior in the hospitality industry?

RQ2: What individual-level factors (e.g., values, beliefs, norms, habits) influence pro-environmental behavior among hospitality employees and consumers?

RQ3: What organizational and contextual factors (e.g., green HRM, ethical climate, and customer engagement strategies) enable or constrain pro-environmental behavior in hospitality settings?

RQ4: How do green marketing strategies shape consumer attitudes, trust, and behavioral intentions in the hospitality context?

RQ5: What conceptual and methodological gaps remain in the current literature, and how can future research address them?

METHODS

This study employs a systematic literature review (SLR) following the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines (Page et al. 2021). The objective of the review was to synthesize peer-reviewed empirical research on pro-environmental behavior (PEB) in the hospitality industry, integrating both employee and consumer perspectives. The review process was designed to ensure transparency, replicability, and methodological rigor.

Literature Search Strategy

The literature search was conducted using the Scopus database, selected for its extensive disciplinary coverage, high-quality metadata, and compatibility with bibliometric analysis tools. The search strategy employed Boolean combinations of keywords related to pro-environmental behavior (e.g., "pro-environmental behavior", "green behavior", "sustainable behavior") and hospitality contexts (e.g., "hotel", "restaurant", "hospitality", "tourism"), alongside actor-specific terms ("employee", "staff", "consumer", "guest"). The

search was limited to peer-reviewed journal articles published in English between 2016 and 2026 and available in full text.

Study Selection Process

The initial search yielded 305 records. After applying filters for publication year, document type (journal articles), publication status (final publications), and language, 231 records remained. A two-stage screening process was then conducted. In the first stage, titles and abstracts were screened for relevance to pro-environmental behavior in hospitality contexts, yielding 150 articles for full-text assessment. In the second stage, full-text articles were evaluated against predefined inclusion criteria, including empirical grounding, relevance to hospitality settings, and explicit examination of employee or consumer pro-environmental behavior. This process resulted in a final sample of 29 articles included in the review. The study selection procedure is illustrated in the PRISMA flow diagram (Figure 1).
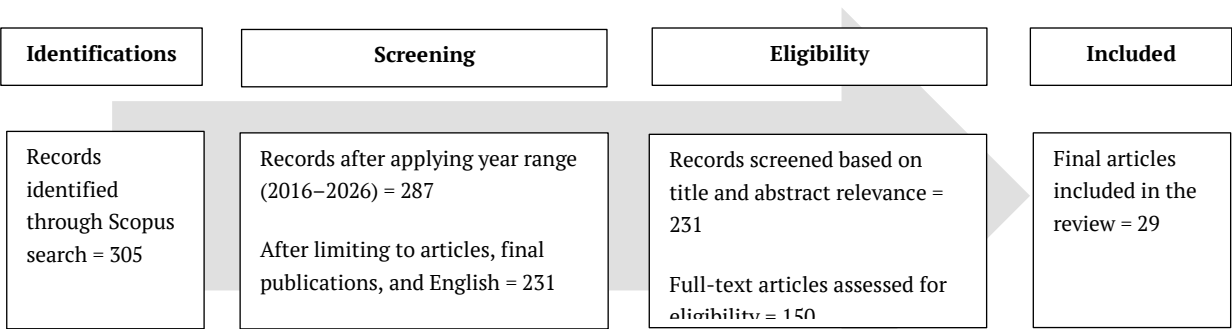
Identifications	Screening	Eligibility	Included
Records identified through Scopus search = 305	Records after applying year range (2016–2026) = 287 After limiting to articles, final publications, and English = 231	Records screened based on title and abstract relevance = 231 Full-text articles assessed for eligibility = 150	Final articles included in the review = 29

Figure 1. PRISMA Framework
Source: Research data, 2025

Data Extraction and Coding Procedure

For each included study, key metadata were systematically extracted, including publication year, country of origin, journal outlet, research objectives, actor level (employee or consumer), theoretical framework, methodological approach, sample characteristics, and principal findings. Data extraction and coding were conducted using a structured coding protocol developed iteratively based on prior SLRs in sustainability and hospitality research. To enhance reliability, the coding process was conducted independently by two researchers. Initial coding categories were refined through pilot coding of a subset of studies. Inter-coder reliability was assessed using Cohen's kappa coefficient, yielding a value of $\kappa = 0.82$, which indicates substantial agreement. Discrepancies were resolved through discussion until consensus was reached.

RESULTS AND DISCUSSION

Theoretical and Methodological Landscape of PEB Research in Hospitality (RQ1)

This subsection provides an overview of the theoretical frameworks and methodological approaches used in empirical studies of pro-environmental behavior (PEB) in the hospitality industry.

Theoretical Frameworks

The reviewed literature demonstrates the use of a wide range of theoretical perspectives to explain pro-environmental behavior among hospitality employees and consumers. However, the distribution of theories is uneven. The Theory of Planned Behavior (TPB) (Ajzen 1991) is the most frequently applied framework across both employee- and consumer-focused studies. TPB constructs—attitude, subjective norms, and perceived behavioral control—are commonly used to examine behavioral intentions and, in some cases, self-reported pro-environmental actions (Fang and Zaman 2025; Senooane and Mkhize 2025; Trivedi et al. 2025). The Value–Belief–Norm (VBN) theory (Stern 2000) is the second-most-frequently employed framework, particularly in consumer-oriented research. Studies applying VBN focus on the role of environmental values, awareness of consequences, ascription of responsibility, and personal norms in shaping environmentally responsible behaviors such as food waste reduction and green purchasing (Dhir et al. 2025; Juvan et al. 2025).

In addition to TPB and VBN, several other theoretical approaches are represented in the literature, albeit less frequently. These include Social Practice Theory, which emphasizes routines, materials, and shared meanings in sustainability-related practices (Munir 2025); Norm Activation Theory, applied to examine moral obligation and norm-driven behavior (Senooane and Mkhize 2025); Equity Theory, used primarily in green

marketing studies to explore perceptions of fairness and willingness to pay or sacrifice (Martín-Gago, Camarero, and Laguna-García 2025); and Social Exchange Theory and the AMO (Abilities–Motivation–Opportunities) framework, which are predominantly applied in employee-focused studies examining green HRM and workplace behavior (Bangwal et al. 2025; Sarwar et al. 2025). More recent studies also incorporate emotion- and identity-based perspectives, particularly in experimental research examining humor, empathy, and anthropomorphism as behavioral interventions (Greene, Birenboim, et al. 2025; Greene, Zinn, Demeter, et al. 2025; Juvan et al. 2025).

Methodological Approaches

Regarding research design, the reviewed studies are predominantly quantitative. Most empirical investigations employ cross-sectional survey designs and analyze them using structural equation modeling (SEM) or partial least squares SEM (PLS-SEM), particularly when examining relationships among psychological variables and behavioral intentions (Dhir et al. 2025; Fang and Zaman 2025; Nguyen, Nguyen, and Nguyen 2023). A smaller number of studies employ experimental and quasi-experimental designs, primarily in consumer-focused research. These studies typically assess the behavioral effects of message framing, emotional appeals, or normative cues in naturalistic or field-based settings (Greene, Zinn, Demeter, et al. 2025; Juvan et al. 2025). Qualitative and mixed-method approaches are less common but include case studies and ethnographic research exploring sustainability practices such as food waste management and water reuse in hospitality operations (Munir 2025; Santos 2025). In terms of geographic coverage, the empirical evidence is concentrated in Asia (notably China, India, and Vietnam) and Europe, with relatively limited representation from Latin America and Sub-Saharan Africa.

Determinants of Pro-Environmental Behavior in Hospitality (RQ2)

This subsection synthesizes individual-level determinants of pro-environmental behavior among hospitality employees and consumers identified across the reviewed studies. Across the literature, pro-environmental behavior is most frequently associated with cognitive, normative, affective, habitual, and capability-related factors. Table 1 summarizes the key categories of individual-level determinants identified in the review. Cognitive determinants—such as environmental attitudes, perceived behavioral control, subjective norms, and personal norms—are consistently examined across both employee and consumer studies, largely reflecting the widespread application of the Theory of Planned Behavior and Value–Belief–Norm theory (Dhir et al. 2025; Trivedi et al. 2025; Senooane and Mkhize 2025).

Table 2. Summary of Key Determinants

Category	Key Factors Identified
Cognitive	Attitude, PBC, subjective norms, personal norms, environmental beliefs
Affective	Emotions (empathy, guilt, pride), moral obligation, compassion
Habitual	Past behavior, routine patterns, automaticity
Capability-based	Self-efficacy, environmental knowledge, and green motivation
Demographic (contextual)	Age, education, gender (mixed evidence)

Source: Research data, 2025

Affective determinants, including emotions such as empathy, guilt, pride, and moral obligation, are increasingly incorporated into consumer-focused research, particularly in studies examining in-situ behavioral responses (Greene, Birenboim, et al. 2025; Greene, Zinn, Demeter, et al. 2025; Juvan et al. 2025). Habitual factors—such as past behavior, routines, and behavioral automaticity—are also reported, especially in relation to repeated consumption practices, such as towel reuse and thermostat adjustment. Capability-based determinants, including green self-efficacy, environmental knowledge, and green motivation, are predominantly examined in employee-focused studies and are frequently linked to workplace pro-environmental behavior (H.-D. (Nguyen et al. 2025; Sarwar et al. 2025). Demographic variables such as age, education, and gender are included in several studies, although their effects are reported inconsistently across contexts. Table 2 presents a structured comparison of individual-level determinants of pro-environmental behavior across employee and consumer groups, highlighting similarities and differences in dominant drivers.

Table 2. Individual-Level Determinants of Pro-Environmental Behavior in Hospitality

Actor Level	Category	Determinants / Drivers	Representative Studies
Employee	Psychological	Attitudes, personal norms, perceived behavioral control	(Dhir et al. 2025; Trivedi et al. 2025)
	Values & Beliefs	Biospheric, altruistic, moral norms, and environmental beliefs	(Dhir et al. 2025; Senooane and Mkhize 2025)

Actor Level	Category	Determinants / Drivers	Representative Studies
	Capabilities	Green self-efficacy, environmental knowledge	(H.-D. Nguyen et al. 2025; Sarwar et al. 2025)
	Motivational States	Work engagement, task-related pro-environmental behavior	(Bangwal and Tiwari 2019)
	Demographic	Education, age, gender (context-dependent)	(Saydam et al. 2025)
Consumer	Cognitive	Attitudes, subjective norms, perceived control, responsibility	(Fang and Zaman 2025; Senooane and Mkhize 2025)
	Emotional	Empathy, guilt, pride, compassion	(Greene, Birenboim, et al. 2025; Greene, Zinn, Demeter, et al. 2025; Juvan et al. 2025)
	Habitual	Routine choices (e.g., towel reuse, thermostat settings)	(Juvan et al. 2025)
	Cultural Values	Spirituality, moral obligation	(Senooane and Mkhize 2025)

Source: Research data, 2025

Organizational and Contextual Influences on Pro-Environmental Behavior (RQ3)

This subsection reports organizational- and context-level factors associated with pro-environmental behavior (PEB) in hospitality settings, as identified across the reviewed studies. The findings are organized by actor level (employee and consumer) and type of influence.

Organizational Influences on Employee Pro-Environmental Behavior

Across the reviewed literature, green human resource management (GHRM) emerges as the most frequently examined organizational mechanism influencing employee pro-environmental behavior. GHRM practices commonly include green recruitment and selection, green training and development, green performance appraisal, and green reward systems (Bangwal et al. 2025; Elshaer et al. 2023; H.-D. Nguyen et al. 2025). Studies report both direct and indirect associations between GHRM practices and employee PEB, with several investigations identifying mediating variables such as green self-efficacy, psychological green climate, and internal green values. In addition to GHRM, ethical climate and perceived organizational support are recurrent organizational factors linked to employee pro-environmental behavior. Empirical studies indicate that ethical climate is a contextual factor that shapes employees' motivation and engagement in environmentally responsible practices (Sarwar et al. 2025). Multi-level analyses further report associations between green organizational support and outcomes at both the individual and team levels, including team resilience (Saydam et al. 2025). Leadership-related variables—such as green or transformational leadership—are included in a smaller subset of studies and are primarily examined in relation to norm-setting and role modeling within hospitality organizations.

Contextual Influences on Consumer Pro-Environmental Behavior

On the consumer side, empirical investigation focuses on contextual cues embedded in the service environment. Studies frequently examine message framing strategies, including social norms messaging, emotional appeals (e.g., humor and empathy), and anthropomorphism, as mechanisms influencing consumer pro-environmental actions (Greene, Birenboim, et al. 2025; Greene, Zinn, Demeter, et al. 2025; Juvan et al. 2025). These contextual interventions are predominantly tested in relation to behaviors such as energy use, towel reuse, and food waste reduction. Additional contextual factors examined in consumer-focused studies include economic and trust-related variables. Compensation mechanisms—such as shared responsibility framing and willingness to pay or sacrifice—are explored in green marketing research (Martín-Gago et al. 2025). Digital safety communication and perceived cleanliness are also examined, particularly in post-pandemic contexts, as factors associated with consumer trust and booking-related behavior (Park et al. 2025).

Cross-Cutting Organizational and Contextual Factors

Several studies identify cross-cutting factors that operate across employee and consumer domains. These include psychological climate, environmental knowledge, self-efficacy, and cultural norms, which are examined as contextual conditions influencing the enactment of pro-environmental behavior in hospitality settings (Senooane and Mkhize 2025; Trivedi et al. 2025). Research across diverse national contexts highlights variations in how organizational practices and contextual cues are operationalized, with empirical evidence drawn primarily from studies in Asia and Europe. Table 3 summarizes the main organizational and contextual

factors identified across the reviewed studies, while Table 4 provides a structured comparison of employee- and consumer-focused influences on pro-environmental behavior.

Table 3. Summary of Organizational & Contextual Factors

Domain	Influencing Factors	Key Evidence
Organizational (Employee)	Green HRM (training, rewards), ethical climate, internal marketing, green leadership, green team resilience	(Bangwal et al. 2025; Elshaer et al. 2023; H.-D. Nguyen et al. 2025; Sarwar et al. 2025; Saydam et al. 2025)
Contextual (Consumer)	Message framing, anthropomorphism, humor/emotion, compensation, safety communication	(Greene, Zinn, Chen, et al. 2025; Juvan et al. 2025; Martín-Gago et al. 2025; Park, Jun, and Kim 2025)
Cross-cutting	Psychological climate, self-efficacy, environmental knowledge, cultural norms	(Senooane and Mkhize 2025; Trivedi et al. 2025)

Source: Research data, 2025

Table 4. Organizational and Contextual Influences on Pro-Environmental Behavior in Hospitality

Domain	Category	Influencing Factors	Representative Studies
Employee	Organizational	Green HRM (training, rewards, appraisal), internal marketing, ethical climate, green leadership	(Elshaer et al. 2022; H.-D. Nguyen et al. 2025; Sarwar et al. 2025; Saydam et al. 2025)
	Psychological Climate	Perceived organizational support, team resilience	(Sarwar et al. 2025; Saydam et al. 2025)
Consumer	Contextual Cues	Message framing (humor, norms), anthropomorphism	(Greene, Zinn, Demeter, et al. 2025; Juvan et al. 2025)
	Trust & Safety	Digital safety signaling, perceived cleanliness	(Park et al. 2025)
	Economic Factors	Willingness to pay, shared responsibility, compensation	(Martín-Gago et al. 2025)

Source: Research data, 2025

Green Marketing Strategies and Their Influence on Consumer Behavior (RQ4)

This subsection reports empirical findings related to green marketing strategies examined in hospitality research and their associations with consumer attitudes, trust, and behavioral intentions. Across the reviewed studies, green marketing is examined as a set of communication- and strategy-based mechanisms through which hospitality organizations signal environmental commitment to consumers. Empirical investigations focus primarily on the role of sustainable brand image, brand authenticity, message framing, and compensation mechanisms in shaping consumer responses.

Green Marketing Constructs and Consumer Responses

A recurrent theme in the literature is the examination of sustainable brand image and perceived authenticity as determinants of consumer attitudes and booking-related intentions. Several studies analyze how consumers' perceptions of environmental responsibility and brand credibility are associated with trust and intention-based outcomes in green hospitality contexts (Atshan et al. 2025; Fang and Zaman 2025). These studies typically operationalize green marketing through constructs such as communal brand relationships, customer-ascribed environmental responsibility, and green brand identity. Another stream of research focuses on compensation framing and its relationship with willingness to pay (WTP) and willingness to sacrifice (WTS). Empirical evidence indicates that studies distinguish between economic compensation (e.g., price incentives or additional services) and social compensation (e.g., shared responsibility or normative recognition) when examining consumer responses to environmentally oriented offerings (Martín-Gago et al. 2025). These constructs are frequently analyzed using behavioral intention measures and structural modeling techniques.

Theoretical Perspectives in Green Marketing Research

Studies examining green marketing strategies commonly draw on established behavioral and normative frameworks. The Theory of Planned Behavior, Norm Activation Theory, and Equity Theory are the most frequently cited theoretical lenses, particularly in analyses of booking intentions, perceived fairness, and responsibility attribution (Senooane and Mkhize 2025; Martín-Gago et al. 2025). In addition, some studies adopt integrative marketing frameworks combining elements of the green marketing mix (product, price, place, promotion) with brand image dimensions to examine consumer decision-making processes (Atshan et al. 2025).

Digital Communication and Contextual Marketing Factors

A subset of studies examines the role of digital communication and transparency in shaping consumer trust, particularly in post-pandemic hospitality contexts. These studies analyze online platforms and digitally communicated signals—such as safety protocols, cleanliness information, and sustainability disclosures—in relation to consumer perceptions and booking-related behavior (Park et al. 2025). Digital safety communication is frequently examined alongside environmental messaging, reflecting an intersection between sustainability, perceived risk, and trust.

Summary of Green Marketing Influences

Table 5 provides a structured summary of green marketing constructs examined across the reviewed studies and their associated consumer-related outcomes. The table highlights the diversity of green marketing strategies explored in the literature, including sustainable brand image, compensation framing, green marketing mix elements, social norms, digital communication, and emotional appeals.

Table 5. Summary of Green Marketing Influences

Construct	Effect on Consumer Behavior	Representative Studies
Sustainable brand image	Enhances trust and booking intention	(Atshan et al. 2025; Fang and Zaman 2025)
Compensation framing	Moderates willingness to pay/sacrifice	(Martín-Gago et al. 2025)
Green marketing mix (4Ps)	Influences green purchasing decisions	(Atshan et al. 2025)
Social norms & responsibility	Strengthen the subjective norm pathway (TPB)	(Juvan et al. 2025; Senooane and Mkhize 2025)
Digital safety communication	Builds post-pandemic trust	(Park and Nam 2025)
Authenticity vs. greenwashing	Critical for credibility and long-term loyalty	(B. Yang et al. 2026)
Emotional appeal (humor, empathy)	Increases message effectiveness	(Greene, Zinn, Chen, et al. 2025; Greene, Zinn, Demeter, et al. 2025; Juvan et al. 2025)

Source: Research data, 2025

Discussion

This systematic literature review aimed to synthesize and critically evaluate research on pro-environmental behavior (PEB) in the hospitality industry, integrating perspectives from employees and consumers. By addressing five research questions, the review reveals a field that has grown rapidly in scope and methodological sophistication, yet remains constrained by theoretical fragmentation, methodological conservatism, and limited cross-actor integration. This discussion interprets the key findings by integrating insights across RQ1–RQ4, critically evaluating dominant theoretical approaches, and articulating directions for future theory development in hospitality sustainability research.

Dominance and Limitations of Rationalist Behavioral Models

Across the reviewed literature, the Theory of Planned Behavior (TPB) and the Value–Belief–Norm (VBN) theory emerge as the dominant explanatory frameworks for pro-environmental behavior in hospitality. These models provide a robust foundation for understanding cognitive and normative drivers such as attitudes, perceived behavioral control, personal norms, and environmental values. Their widespread application across both employee- and consumer-focused studies reflects their perceived generalizability and empirical tractability. However, the review also reveals structural limitations associated with the continued reliance on these rationalist models. First, TPB- and VBN-based studies predominantly emphasize intention formation rather than actual behavior, reinforcing the well-documented intention–behavior gap. Second, these frameworks tend to underrepresent habitual, emotional, and contextual influences that are particularly salient in hospitality environments, where behaviors are often routine, time-constrained, and embedded in service encounters. As a result, rationalist models alone appear insufficient to fully capture the complexity of pro-environmental behavior in hospitality settings.

Recent studies incorporating emotional appeals, anthropomorphism, and social norms interventions—particularly those using experimental and field-based designs—demonstrate that behavior change frequently occurs outside deliberate, intention-driven processes. These findings suggest that hospitality PEB is not solely the outcome of rational evaluation but is also shaped by affective responses, situational cues, and behavioral automaticity. This points to the need for theoretical models that move beyond cognitive–normative explanations toward more context-sensitive and behaviorally realistic frameworks.

Fragmentation Across Actor Levels and the Need for Integrative Frameworks

A key contribution of this review lies in highlighting the persistent separation between employee- and consumer-focused PEB research. While both streams draw on similar theoretical foundations, they have evolved largely in parallel, with limited attention to cross-actor dynamics. Employee-focused studies emphasize organizational systems such as green human resource management (GHRM), ethical climate, and leadership, whereas consumer-focused studies prioritize marketing communication, brand authenticity, and contextual nudges. This fragmentation obscures the interconnected nature of hospitality systems, where employee practices, organizational culture, and consumer behavior are mutually reinforcing. For example, employees trained and motivated to engage in pro-environmental behavior may enhance the credibility of sustainability messaging perceived by guests, while consumer participation in green practices may, in turn, reinforce organizational norms and employee motivation. The absence of integrative models capturing these reciprocal relationships represents a significant gap in the current literature. The findings of this review therefore support the development of dual-actor and multi-level frameworks that explicitly link individual cognition, organizational systems, and service-context interactions. Integrative perspectives, such as the Attitude–Context–Behavior (ACB) framework or socio-technical systems approaches, offer promising pathways for reconceptualizing PEB as an emergent outcome of interactions among actors, structures, and contexts, rather than as isolated individual choices.

Methodological Implications and the Intention–Behavior Gap

Methodologically, the literature remains dominated by cross-sectional survey designs relying on self-reported measures of pro-environmental behavior. While these approaches enable theory testing and large-sample analysis, they are limited in their ability to capture behavioral dynamics, contextual variability, and causal mechanisms. The review confirms that relatively few studies employ longitudinal, experimental, or observational designs, despite growing recognition of their importance for advancing behavioral research. Notably, studies that utilize field experiments and real-world interventions—particularly in consumer settings—consistently reveal discrepancies between stated intentions and observed behavior. These findings underscore the importance of methodological pluralism and support calls for greater use of mixed-methods designs, naturalistic observation, and behavioral data in hospitality sustainability research. Without such approaches, the field risks reproducing models that explain intention rather than behavior.

Implications for Conceptual Framework Development

The conceptual framework proposed in this review responds directly to the limitations identified in the literature. By integrating individual-level determinants, organizational enablers, and contextual and marketing influences, the framework positions pro-environmental behavior as a multi-level and multi-actor phenomenon. Importantly, it highlights mediating mechanisms such as self-efficacy, psychological climate, and perceived authenticity, which link institutional practices to behavioral outcomes. Rather than presenting PEB as a linear outcome of attitudes or values, the framework emphasizes interaction effects and enabling conditions. This integrative approach advances existing hospitality sustainability research by offering a structured basis for future empirical testing, including the formulation of testable propositions and cross-level hypotheses. In doing so, it moves the field toward more comprehensive and explanatory models of sustainability-oriented behavior.

Contributions to Theory, Method, and Practice

This review makes several contributions to the hospitality and sustainability literature. Theoretically, it advances understanding of pro-environmental behavior by synthesizing fragmented research streams and critically evaluating the limitations of dominant behavioral models. Methodologically, it highlights the need to move beyond intention-based survey research toward designs that capture actual behavior and contextual complexity. From a practical perspective, the findings suggest that effective sustainability interventions in hospitality require alignment between organizational systems, employee engagement, and consumer-facing strategies.

CONCLUSION

This systematic literature review provides a comprehensive synthesis of empirical research on pro-environmental behavior (PEB) in the hospitality industry by integrating both employee and consumer perspectives. Drawing on 29 peer-reviewed studies published between 2019 and 2025, the review demonstrates that hospitality PEB research has expanded rapidly in scope and topical diversity, yet continues to rely heavily

on a limited set of theoretical frameworks and methodological approaches. At the individual level, pro-environmental behavior among both employees and consumers is consistently associated with cognitive, normative, affective, habitual, and capability-based determinants. While attitudes, perceived behavioral control, and personal norms remain central predictors, emerging evidence highlights the growing relevance of emotions, habits, and self-efficacy—particularly in real-world hospitality settings where behavior is often routine and context-dependent. At the organizational and contextual levels, structured systems such as green human resource management, ethical climate, and internal marketing shape employee behavior, while contextual cues, green marketing strategies, and digital communication influence consumer responses. These findings underscore that pro-environmental behavior in hospitality is not solely an individual choice, but an outcome embedded within organizational architectures and service environments.

Theoretically, this review reveals a strong dominance of rationalist models—most notably the Theory of Planned Behavior and Value–Belief–Norm theory—across both employee- and consumer-focused research. While these frameworks have contributed significantly to understanding intention formation, their explanatory power is constrained by limited attention to emotional, habitual, and contextual dynamics. By synthesizing insights across fragmented research streams, this review advances the literature by highlighting the need for integrative, multi-level frameworks that capture interactions between individual cognition, organizational systems, and service-context influences. The dual-actor perspective adopted in this study represents a step toward such integration, offering a more holistic understanding of sustainability-oriented behavior in hospitality. Methodologically, the review identifies a continued overreliance on cross-sectional, self-reported survey designs, which limit the ability to capture behavioral change and contextual variability. Although experimental, longitudinal, and qualitative approaches are emerging—particularly in consumer-focused research—they remain underutilized. Addressing this imbalance is essential for closing the intention–behavior gap and for developing more robust, behaviorally grounded insights.

Overall, this review contributes to hospitality sustainability research in three key ways. First, it consolidates and systematizes a fragmented body of literature into coherent thematic, theoretical, and methodological patterns. Second, it advances theory by critically evaluating the limitations of dominant behavioral models and articulating pathways for integrative, cross-actor frameworks. Third, it provides a structured foundation for future research by identifying methodological and contextual gaps that must be addressed to advance both theory and practice. By moving beyond descriptive aggregation toward integrative synthesis, this study positions pro-environmental behavior as a multi-actor, multi-level phenomenon that is central to the sustainability transition of the hospitality industry.

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