

# Sustainability in Hospitality: The influence of Hotel's Green Attributes on Guests' Pro-Environment Behavior

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## Abstract

*This study investigates the impact of hotel green attributes on guests' Pro-Environment Behavior (PEB) within the dynamic context of the hospitality industry. The global hospitality industry faces pressing sustainability challenges, including excessive energy and resource consumption. Understanding the impact of hotel green attributes on guest Pro-Environment Behavior (PEB) is critical in addressing these challenges, as it offers insights into how the industry can reduce its environmental footprint. The study was conducted in Itanagar Smart City, located in the picturesque region of Arunachal Pradesh, India. A convenience sampling method was employed in this research. The sample size for the study was 276 and the sample unit was hotel guests. Structured equation modelling using AMOS was performed to analyze the impacts. The results shows that Hotel green attributes impacts all the constructs of PEB significantly and positively. The study's findings have an implication for the broader hospitality industry. As eco-conscious travelers increasingly prioritize environmentally responsible accommodations, hotels that champion green attributes can cater to these evolving consumer preferences more effectively.*

**Keywords:** Hotel green attributes, pro-environment behavior, sustainability, hospitality, smart city.

## INTRODUCTION

The concept of sustainability has woven itself into the fabric of our modern world, compelling industries and individuals alike to reevaluate their practices and behaviors in light of environmental responsibility. Within this paradigm, the hospitality

industry has emerged as a key player, striving to redefine its role in promoting sustainable practices. This study delves into the intricate relationship between the green attributes of hotels and their profound influence on guests' Pro-Environment Behavior (PEB).

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The hotel industry, characterized by its rapid growth and global presence, has become increasingly aware of its environmental footprint. In response to the pressing concerns surrounding issues such as energy consumption, water conservation, waste reduction, and the use of eco-friendly products, hotels have embarked on a journey towards adopting and promoting sustainable practices (Bohdanowicz, 2006). Green attributes have emerged as the hallmark of this transformation, reflecting a commitment to mitigating the industry's environmental impact (Chen & Tung, 2014).

In parallel, the mindset of today's guests has evolved to encompass a heightened awareness of environmental issues. Modern travelers are no longer solely focused on comfort and luxury; they are also conscious of the environmental implications of their choices (Kim, Barber, & Kim, 2019). As a result, hotels have recognized the significance of aligning their offerings with guests' pro-environment values. Green attributes, which encompass a wide range of environmentally friendly initiatives, have now become pivotal in shaping guests' choices and behaviors during their stay.

This research aims to explore the intricate dynamics between hotel green attributes and guests' Pro-Environment Behavior. It investigates how the presence of these green attributes influences guests' decisions and actions with regard to environmental sustainability. In doing so, this study seeks to provide a comprehensive understanding of the interconnectedness of these two critical facets within the hospitality industry.

Despite the existence of numerous potential factors influencing Pro-Environment Behavior (PEB), a conspicuous research gap persists in comprehensively integrating elements such as hotel green attributes into the understanding of this behavior. Given the intricate nature of the consumer PEB process and its enactment, the current study offers invaluable insights into advancing the cause of tourism sustainability. Additionally, it explores the

potential for a collaborative approach between guests and hotel management, where the management actively promotes and facilitates guests' PEB through the strategic implementation of sustainable initiatives within the hotel. This research seeks to bridge an essential knowledge gap in the field, shedding light on the influence of hotel green attributes on guest behavior and contributing to a more environmentally responsible and sustainable future in the hospitality industry.

## LITERATURE REVIEW

### 1. Hotel green attributes

Hotel green attributes are the specific environmentally sustainable features and practices that hotels adopt to reduce their environmental impact, promote sustainability, and meet the preferences of eco-conscious travelers, encompassing areas such as energy efficiency, water conservation, waste reduction, sustainable sourcing, and eco-friendly building design (Kwok, Huang, & Hu, 2016).

### 2. Pro-environment behavior

Pro-Environment behavior, often abbreviated as PEB, refers to conscious and intentional actions, choices, and activities undertaken by individuals or organizations that are aimed at reducing negative impacts on the environment and promoting sustainability, such as conserving resources, reducing waste, and supporting eco-friendly practices. (Kurusu, 2015). It encompasses a range of conscious and intentional actions, including behaviors such as recycling, energy savings, and water savings, undertaken by individuals or organizations to reduce negative impacts on the environment and promote sustainability (Krajhanzl, 2010).

### 2.3. Relationship between hotel's green attributes and pro-environment behavior

Pro-environmental features within a tourist destination play a pivotal role in fostering Pro-Environment Behavior (PEB) among travelers, as emphasized by Miller et al. (2015). Likewise, hotels equipped with environmentally responsible attributes can significantly facilitate and encourage PEB among their guests. Take, for instance, the presence of well-labeled and separate recyclable and general waste bins in hotels, which not only streamlines waste disposal but also actively supports recycling practices. Furthermore, consumers consistently prioritize water and energy conservation initiatives as the paramount green attributes within hotels, as identified by Millar, Mayer, and Baloglu (2012). Consequently, these green attributes within hotels serve as essential enablers, helping guests translate their

environmentally conscious intentions into concrete actions, ultimately contributing to a more sustainable and responsible hospitality experience. Based on the preceding discussion, the following hypothesis has formulated:

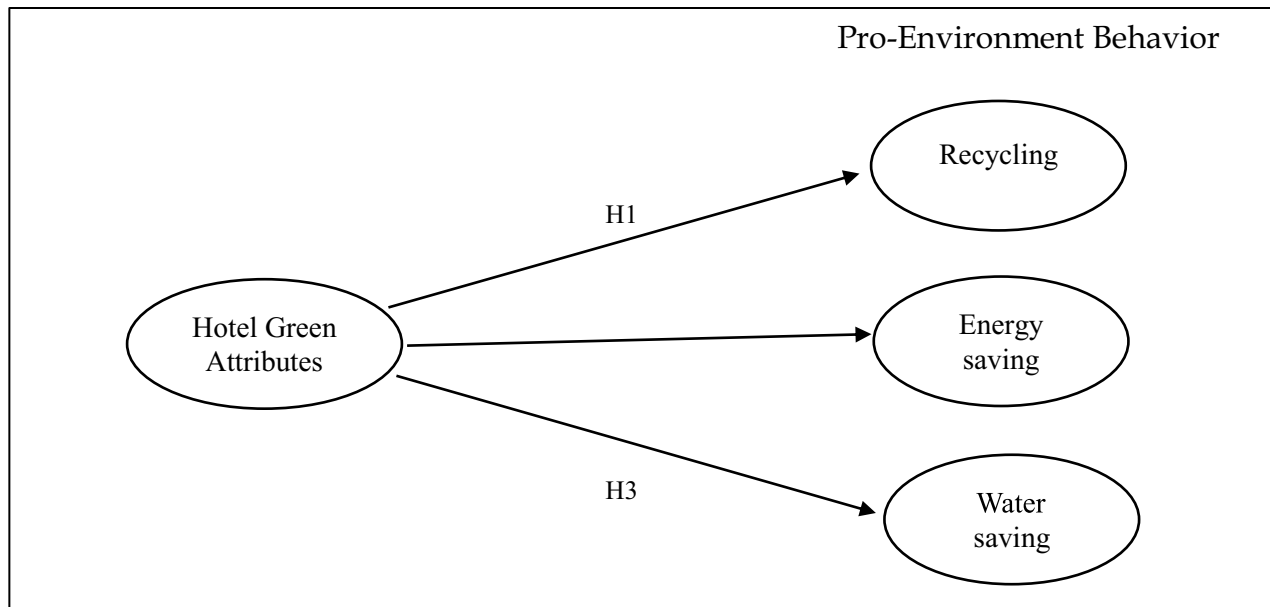
*H1: Hotel’s green attributes have a significant impact on guest’s actualization of pro-environment behavior.*

The above hypothesis was further classified into sub hypotheses.

*H(a): Hotel green attributes significantly influence recycling behavior among guests.*

*H(b): Hotel green attributes significantly impact energy-saving practices among guests.*

*H(c): Hotel green attributes significantly affect water-saving practices among guests.*



**Figure 1 : Conceptual Model**

**RESEARCH METHODOLOGY**

In this study, an exploratory research design was adopted to investigate the intricate relationship between hotel green attributes and guest Pro-Environment Behavior (PEB) in the hotels. The study was conducted between July – October 2023, in

Itanagar smart city in Arunachal Pradesh, India. Data were collected through structured survey questionnaires. The sample size for the study was 276 guests staying in the hospitality units such as hotels and resorts. Since, proper information regarding number of tourist inflows, numbers of hotels and resorts was not available in the study area

was not available hence, convenient sampling was employed for the study. Pilot study was conducted with 30 respondents to check the reliability of the instruments.

### 1. Measurements scale

Hotel green attributes were measured using a 6-item sscale adapted from Manaktola and Jauhari (2007), while pro-environment behavior was assessed using 3-item each for recycling, energy savings, and water-saving behaviors, adopted from Miller et al. (2015). The scale was in 5-point Likert scale. From the pilot study, it was found that the adapted scale was reliable ( $\alpha > 0.7$ )

## ANALYSIS

### 1. Demographic profile

Table no. 1 highlights the demographic information's of the respondents. From the table it was found that 76.45% of the respondents were male where as 23.55% were female. Among the age, majority were between 20 – 30 years of age with 32%. Among educational qualification majority were graduate (44.93%). Respondents were asked about their purpose of visit, majority of the respondent were travel to the smart city for business purpose with 50%.

**Table 1 : Demographic profile of the respondent**

Variable		n	%
Gender	Male	211	76.45
	Female	65	23.55
Age	Upto 20	30	10.87
	20 – 30	90	32.61
	30 – 40	80	28.99
	40 – 50	50	18.12
	Above 50	36	13.04
Education	Elementary	12	4.35
	Higher secondary	45	16.30
	Graduation	124	44.93
	Post Graduation	83	30.07
	Others	12	4.35
Travel purpose	Leisure	55	19.93
	Business	138	50
	Education	83	30.07

Source:Field survey

The table no. 2 presents the measurement model for assessing hotel guests' perceptions of hotel green attributes and their pro-environment behavior (PEB). It includes factor loadings, the Average Variance Extracted (AVE), and

Composite Reliability (CR) for each item. The AVE and CR for all the constructs were above 0.5 and 0.7 which is above threshold value i.e. AVE > 0.5 & CR > 0.7 (Hair et al., 2014). This implies that, the scale has a good validity.

2. Measurement Model

Table 2 : Measurement Model

Variable		Items	Factor loading	AVE	CR
Hotel’s Green attributes		GA-1	0.65	0.72	0.84
		GA-2	0.75		
		GA-3	0.82		
		GA-4	0.73		
		GA-5	0.69		
		GA-6	0.81		
Pro-Environment Behavior	Recycling	RE-1	0.63	0.68	0.75
		RE-2	0.80		
		RE-3	0.78		
	Energy saving	ES-1	0.76	0.74	0.78
		ES-2	0.69		
		ES-3	0.63		
	Water saving	WS-1	0.65	0.58	0.72
		WS-2	0.71		
		WS-3	0.75		

RESULTS/FINDINGS

Table 3 presents the structural model's findings, specifically the path coefficients, t-values, and

inferences regarding the relationship between hotel's green attributes and various pro-environment behaviors (PEB). The results of the structural model analysis are as follows:

Table 3 : Structural Model

Path	Coefficient	t-value	Inference
H(a): Hotel’s green attribute – Recycling	0.29	4.01	Supported
H(b): Hotel’s green attribute – Energy conservation	0.31	5.27	Supported
H(c): Hotel’s green attribute – Water conservation	0.27	3.26	Supported

Hotel’s Green Attribute - Recycling (Supported): The path coefficient between hotel's green attributes and recycling behavior is 0.29, with a t-value of 4.01. This positive coefficient indicates a significant and positive relationship between the hotel's green attributes and recycling behavior among guests. The t-value of 4.01 suggests that this relationship is statistically supported. In other words, guests who

perceive the hotel's green attributes positively are more likely to engage in recycling behaviors.

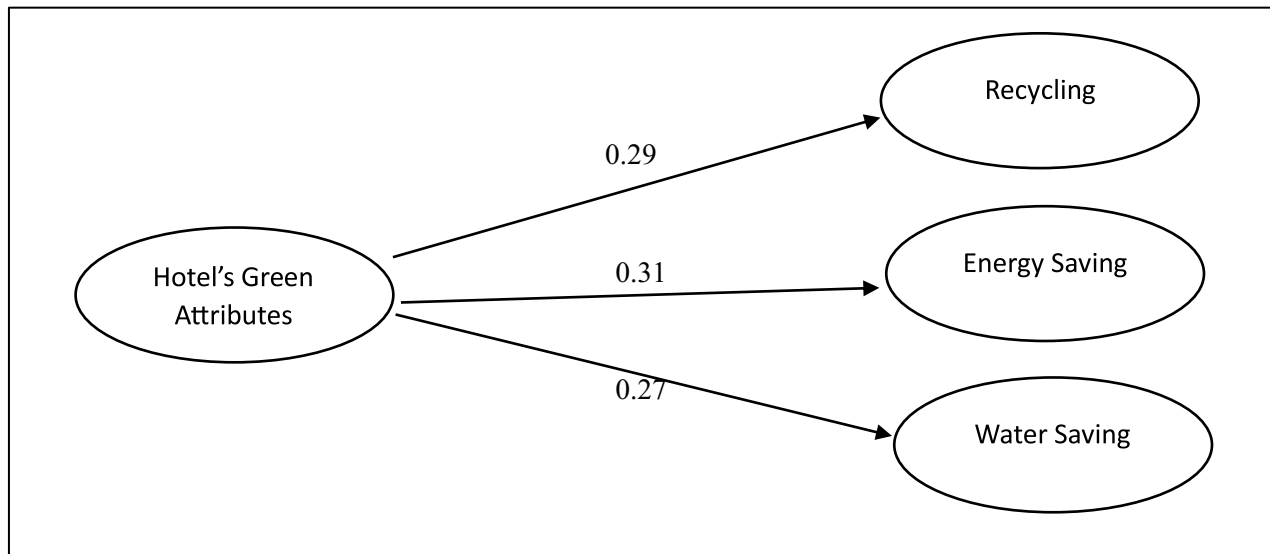
Hotel’s Green Attribute - Energy Conservation (Supported): The path coefficient between hotel's green attributes and energy conservation behavior is 0.31, with a high t-value of 5.27. This finding demonstrates a significant and positive association

between the hotel's green attributes and guests' energy conservation behavior. The high t-value of 5.27 strongly supports this relationship, implying that guests who have a favorable perception of the hotel's green attributes are more inclined to engage in energy-saving practices.

**Hotel's Green Attribute - Water Conservation (Supported):** The path coefficient between hotel's green attributes and water conservation behavior is 0.27, with a t-value of 3.26. This coefficient indicates a meaningful and positive link between the hotel's green attributes and water-saving behaviors among guests. While the t-value of 3.26 is slightly lower than the previous paths, it still signifies statistical support for the relationship. This means that guests who view the hotel's green attributes positively are

more likely to practice water conservation during their stay.

In summary, the structural model analysis provides substantial evidence that guests' perceptions of hotel's green attributes have a positive influence on their pro-environment behaviors. The relationships between hotel's green attributes and recycling, energy conservation, and water conservation behaviors are all statistically supported. This suggests that the hotel's sustainability initiatives and environmentally friendly practices are effective in encouraging guests to adopt more eco-conscious behaviors during their stay. These findings highlight the importance of hotels' efforts to promote sustainability and the potential impact on guest behavior.



**Figure 2 :**

**IMPLICATIONS OF THE STUDY**

The findings offer invaluable insights for Smart City Itanagar's sustainability initiatives. By encouraging hotels within the region to prioritize green attributes, the city can contribute to the creation of a more eco-conscious and environmentally responsible atmosphere for both residents and visitors. This aligns with the city's broader smart city goals of sustainability and innovation.

As Itanagar seeks economic growth and development, the study suggests that emphasizing sustainability within the hospitality sector can have economic benefits. Hotels that focus on green attributes can attract environmentally conscious tourists, potentially resulting in increased revenue. This can contribute to the city's economic progress, supporting its ambitions as a smart city. Additionally, the findings point towards

collaborative efforts between hotel management and guests. This shared responsibility for environmental conservation within hotels can lead to a more sustainable ecosystem.

## CONCLUSION

This study conducted in Smart City Itanagar reveals the profound impact of hotel green attributes on guests' pro-environment behavior. Hotels have the potential to drive environmental responsibility and economic benefits by prioritizing sustainability. Positive perceptions of sustainability efforts enhance market positioning, attracting eco-conscious guests. This study calls for a reevaluation of hotel policies, with an emphasis on recycling, energy conservation, and water-saving practices. Collaboration between hotel management and guests fosters shared responsibility for environmental conservation. In Smart City Itanagar, these findings provide a strategic path for promoting sustainability and aligning with the city's smart and sustainable goals.

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