

Perspectives of Urban Hotel Managers and Guests on Environmental, Social, and Economic Sustainability Practices

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ABSTRACT

The hospitality industry exerts significant environmental impact through water consumption, energy use, and waste generation. Urban hotels, particularly those branding as “lifestyle” establishments, increasingly adopt sustainable practices to mitigate their footprint. However, there’s often a mismatch between how hotel managers perceive their sustainability efforts and guests’ perceptions. This study assessed sustainability practices’ adequacy from guests’ and managers’ perspectives in urban hotels. Employing an Explanatory Sequential Mixed Method Design, quantitative data from 205 guests and qualitative insights from 19 hotel managers were collected and analysed using descriptive statistics and reflexive thematic analysis respectively. The results showed that guests generally rated environmental and economic sustainability practices highly but perceived social sustainability practices less favorably. Managers acknowledged the impact of environmental and social sustainability practices but downplayed economic initiatives, despite their underlying motivations for adopting the other sustainability practices. Both guests and managers concurred on the effectiveness of waste, water, and energy management practices. However, discordance was noted regarding the adequacy of social sustainability practices, with managers emphasizing human resources and community initiatives less visible to guests. The study recommends enhancing communication on sustainability efforts to bridge perception gaps and involve guests more in initiatives, fostering competitiveness. Future research should conduct comparative studies across regions to explore variations in sustainability practices and their effectiveness.

Keywords: Hotel Sustainability Practices, Urban Hotels.

INTRODUCTION

Urban hotels cater to travellers seeking stylish, centrally located accommodations in vibrant city environments (The Urban Hotel Group, 2023). Unlike resort hotels that focus on leisure or suburban hotels offering family-friendly spaces, urban hotels emphasize convenience, modern design, and proximity to cultural attractions (Urbanpoint Hotel, 2023). They often feature contemporary decor, rooftop bars, and cater to both business travellers and tourists desiring an energetic urban experience. Urban hoteliers have introduced the “lifestyle hotel” concept to distinguish their offerings from traditional international chains (Hans & Lee, 2021). These hotels provide experiences tailored to guests’ individual preferences, making personalized experiences their unique selling proposition (Jones, Day & Quadri-Felitti, 2013; Kosar, 2014).

Scholars suggest that the urban lodging industry is the most environmentally harmful within the hospitality

sector and highly vulnerable to climate change impacts (Peeters & Ponce, 2020). The hospitality industry significantly affects the environment through water consumption, energy use, solid and hazardous waste creation, and the use of consumable and durable goods (Upadhyay, Vadam, & Mohan, 2013). Hotels, as a subsector, consume large quantities of energy and natural resources while producing significant waste (Alipour, Safaeimanesh, & Soosan, 2019; Verma & Chadra, 2016; Ristova, 2020). For instance, a five-star hotel's average energy consumption per guest per night is about 130 Mega Joules, with daily water usage per guest ranging from 170 to 440 litres. Additionally, guests in star-rated hotels generate an average of 0.9 kg of waste per day, which is significantly higher than household waste generation (Ning, Yim, & Khuntia, 2021; Ristova, 2020).

Consequently, urban hotels, especially those branding as “lifestyle” hotels, are increasingly adopting sustainable practices also due to pressure from regulatory authorities, communities, media, and industry best practices (Becken & Hay, 2017). Evidence shows that urban hotels are embracing sustainability to mitigate their adverse environmental, economic, and social impacts (Moise et al., 2020), which also enhances profitability by reducing operational costs through resource conservation (Barakagira & Paapa, 2024; Moise et al., 2020). Implementing climate resilience measures ensures business continuity amidst extreme weather events (Becken & Hay, 2017). This focus on sustainability strengthens a hotel's competitive edge by attracting environmentally conscious travellers (Perrini & Tencati, 2020).

Urban lifestyle hotels, prioritize wellness and holistic experiences, aligning with the growing trend in wellness tourism (Lengkeek, 2019). Additionally, sustainability has become increasingly important to guests, with lifestyle hotels often incorporating eco-friendly practices, resonating with environmentally conscious travellers (Kim & Jogaratnam, 2018). This personalized approach serves as their competitive advantage and brand differentiation (Hans & Lee, 2021; Perrini & Tencati, 2020). Research by Molina et al. (2019) indicates a growing preference for sustainable practices among urban hotel guests, highlighting the potential for hotels to gain a competitive edge by prioritizing environmental responsibility.

The literature and practice highlight various categories of hotel sustainability practices (HSPs). Environmental strategies focus on resource conservation, pollution abatement, environmentally sensitive architectural design, recycling, eco-sensitive purchasing, and waste management (Yu, Li & Jai, 2017). Social sustainability practices involve employee empowerment, community involvement, corporate governance, and fostering good supplier relations (Pereira et al., 2021). Conversely, economic sustainability pertains to hotel cost control, income growth, profitability, and practices aimed at expanding market share (Pereira et al., 2021).

For the hotel manager, the challenge remains the choice of appropriate sustainable practices in order to align with guest preferences (Molina et al., 2019), meet regulatory requirements (Becken & Hay, 2017), while maintaining operational profitability (Moise et al., 2020). Still, research suggests a gap between guest preference and actual hotel choice (Han et al., 2019). Additionally, some guests may view certain green practices as mere “greenwashing” (Kim & Shin, 2018) or fail to recognize them altogether (Yoon & Kim, 2015). Despite substantial investment in environmental initiatives, hotel managers remain uncertain about whether guests view these efforts positively or negatively (Gil-Soto et al., 2019).

A review of existing literature reveals a lack of evidence comparing guests' and hotel managers' perceptions of sustainability practices, particularly in urban hotels. Most studies focus on sustainable practices' effects on guest behavior, determinants of hotel managers' perceptions, or how these perceptions influence the adoption of sustainability practices, neglecting comparisons between guest and management views (Chen et al., 2022; Lee et al., 2017; Molina et al., 2019; Yadav et al., 2016). This study addresses this gap by quantitatively assessing hotel guests' perceptions and comparing them with qualitatively evaluated hotel managers' views on sustainability initiatives in Nairobi's vibrant hotel sector.

LITERATURE REVIEW

A. Sustainable Tourism Standards

Many jurisdictions have developed local sustainability standards or certification schemes to promote adoption of sustainable tourism practices by their stakeholders. In Europe, the Travelife for Hotels & Accommodations Standard provides a comprehensive framework for improving sustainability across social, economic, and environmental aspects in the Netherlands (Cembruch-Nowakowski, 2020). The Austrian Ecolabel for Tourism promotes responsible practices in accommodations and travel agencies (Hamele, 2001). In Asia, India's Green Mark Scheme (Yadav & Pathak, 2013) and China's Green Leaf Certification (Jia & Wahnschafft, 2015) recognize hotels that demonstrate responsible environmental management and social responsibility. In Africa, South Africa's Eco-Certification Label, administered by the Tourism Grading Council, encourages sustainable practices in tourism businesses (Keitumetse & Keitumetse, 2016). Similarly, Kenya's Eco-rating Program awards bronze, silver, or gold certifications to establishments demonstrating increasing levels of environmental responsibility (Atieno & Njoroge, 2018).

Font and Sallows (2002) argue that despite the widespread introduction of certification schemes for sustainable tourism, these efforts have not effectively changed demand behaviours or supply practices due to the global nature of the tourism industry. They suggest that tourism should follow the example of sectors like forestry, fisheries, and organic farming by developing universally accepted standards that can serve as sustainability benchmarks across various jurisdictions and industry subsectors, including hospitality, travel, and destinations. This perspective led to establishment of the Global Sustainable Tourism Council (GSTC) in 2010, which aims to create a unified approach to implementing sustainable tourism worldwide (Bricker & Schultz, 2011).

Bricker and Schultz (2011) note that the GSTC began developing criteria for minimum requirements for tourism businesses to protect and sustain global natural and cultural resources. These criteria also aimed to harness tourism's potential as a tool for conservation and poverty alleviation. The global standards were formulated through extensive consultations with sustainability experts and the tourism industry, reviewing over 60 existing certification and voluntary criteria sets worldwide. In total, more than 4,500 criteria were analysed, and the resulting draft received feedback from over 2,000 stakeholders.

The GSTC industry criteria outline the minimum efforts tourism enterprises must undertake to achieve sustainability (GSTC, 2016). The primary objectives of these standards are to promote sustainable destination management, maximize economic benefits for host communities, enhance social impacts, and reduce environmental impacts. The GSTC standards are applicable to destinations of all types and sizes, as well as across various tourism sub-sectors including hotels (Anis, Putra, Azhar, & Rahmadani, 2023). Anis et al. (2023) note that the GSTC standards and indicators align with established sustainability frameworks, including United Nations World Tourism Organization (UNWTO) target indicators and Sustainable Development Goals (SDGs). The GSTC industry criteria is based upon four major pillars for sustainable tourism practice i.e., sustainable planning and management, managing socio-economic impacts, cultural impacts and environmental impacts.

The GSTC industry criteria (GSTC, 2016), which establish a baseline for sustainable tourism operations and development, provided the foundation for identifying and assessing guests' and hotel managers' perceptions of the adequacy of sustainable practices implemented by urban hotels in this study.

B. Empirical Review

1) Hotel Sustainability Practices: Recent studies have explored sustainability initiatives across various

hotel categories and geographical regions. Wang et al. (2020) investigated environmental sustainability practices at 25hours Hotel Shanghai, documenting waste, water, and energy conservation efforts, and promotion of sustainable transportation. Al-Swidi and Huque (2020) focused on social and environmental sustainability initiatives among luxury hotels in Malaysia, emphasizing investments in local culture and heritage, waste reduction, and water conservation. Dangi et al. (2020) assessed economic sustainability practices in boutique hotels in India, revealing strategies to reduce operating costs and support local communities. In Africa, Mutseyekwa and Nhamo (2020) studied environmental sustainability practices in luxury hotels in Zimbabwe, noting widespread initiatives like waste reduction and resource conservation. They also found that guests were willing to pay more for stays in environmentally sustainable hotels, underscoring the importance of sustainability in the African hospitality sector.

These studies offer valuable insights into sustainability practices across various contexts, shedding light on the multitude of sustainable initiatives available for hotels. This observation aligns with Reem, Rasoolimanesh, and Nelum Rajika's (2022) view that the hotel industry employs numerous management strategies for sustainability practices using various models and theories. However, a gap exists in understanding how both managers and guests perceive these practices in urban hotels in developing countries. This gap underscores the need for further investigation to inform sustainable management strategies effectively.

2) Hotel Managers Perceptions of Sustainability Practices: Wei and Ruys (1999) surveyed Australian hotel managers, focusing on environmental accreditation, costs and benefits, and staff attitudes. They found that managers supported accreditation for enhancing performance but were skeptical of direct financial benefits and guests' perceptions. However, high implementation of practices like water and energy conservation and waste recycling was noted, attributed to the positive image it brought to the hotels.

Also, studies have examined factors influencing hotel managers' perceptions of sustainability practices. Saenyanupap (2011) surveyed 243 hotel managers in Phuket, Thailand, to assess if their attitudes impacted the adoption of environmental sustainability practices. The results showed that managers generally held positive attitudes toward these practices. Additionally, managers' attitudes towards sustainability practices were influenced by social demographics, hotel type, ownership status, and whether the hotel was affected by climate events.

Stylos and Vassiliadis (2015) conducted a survey involving 423 hotels to explore differences in managers' perceived significance of economic, environmental, and social sustainability practices and policies. They aimed to compare managers' attitudes based on their hotels star ratings and locations in highly developed, less developed or developing tourism destinations in Greece. Their findings indicate that star ratings greatly influence the managers' perceived importance of economic viability measures and socially responsible practices but not environmental practices. Interestingly, hotel location was not found to significantly affect perceptions of sustainability dimensions.

In a similar study, Novacka, Pícha, Navratil, Topaloglu, and Švec (2019) explored how hotel location in Central and Eastern Europe influences managers' perceptions of sustainability practices. Surveying 25 hotels from the region, they found significant differences between Central and Eastern European hotel managers' views regarding the complexity of implementing environmental practices. They concluded that geographical location, star rating, and hotel chain affiliation influence managers' views on adopting environmentally friendly practices, highlighting location as the most crucial factor in the region.

Studies have also explored how managers' environmental perceptions influence the adoption of sustainability practices. Lopez-Gamero, Claver-Cortés, and Molina-Azorin (2011) surveyed 239 Spanish hotel managers and found that both external factors (regulation, stakeholders) and internal factors (resources) shape managerial perceptions. Managers responded favorably to voluntary norms, while

stakeholder pressure negatively impacted perceptions. Available resources encouraged viewing sustainability as a competitive opportunity. The study highlights that managers' attitudes are crucial for investing in environmental technologies and underscores the importance of proactive sustainability in the hospitality industry.

The reviewed studies shed light on hotel managers' attitudes toward environmental practices, their influence on sustainability adoption, differences in perceived sustainability significance, and factors shaping environmental policy perceptions, emphasizing proactive approaches. However, there is a lack of recent studies following Wei and Ruys (1999) in assessing hotel managers' views on the adequacy of sustainability practices. Moreover, a gap persists in comparing managers' perceptions of sustainability practices to those of guests. Hence, this study assessed guests' views on sustainability practices and evaluate hotel managers' perspectives on their hotels' initiatives.

3) Guests' Perception of Sustainability Practices: Recent scholarly focus on guests' perceptions of hotels' green practices has intensified (Merli, Preziosi, Acampora, & Ali, 2019). Researchers, like Lee, Jai, and Li (2016), have approached this subject from diverse perspectives. Their investigation into guests' views of green practices, using TripAdvisor reviews of top green hotels in the USA, revealed positive responses to recognizable efforts like energy and water conservation. However, guests may feel inconvenienced if unaware of these practices, a trend also noted by Gil-Soto, Armas-Cruz, Morini-Marrero, and Ramos-Henríquez (2019). These scholars conducted content analysis of Canary Island hotel guests' perceptions on TripAdvisor, identifying six recognized areas of green efforts. However, guests lacked awareness of the extent of hotels' environmental commitment. Both studies advocate for hotels to improve communication of their sustainability strategies to leverage their green image effectively.

Several studies have linked hotel guests' perceptions of sustainability practices to behavioural outcomes. Merli et al. (2019) surveyed 325 guests to gauge their perceptions of "green hotel" practices and their impact on loyalty. They found a significant association between hotel environmental practices and guest satisfaction, influencing revisit intentions and word of mouth, fostering loyalty to green hotels. Similarly, Rawashdeh and Al-Ababneh (2021) explored tourists' perceptions of green practices in Jordan. Surveying 270 guests, they discovered a positive correlation between environmental practices and willingness to stay in eco-hotels. Moise et al. (2021) investigated the effect of green practices on hotel image, trust, and satisfaction, considering guest gender. Surveying 302 guests in Bogota, they found a positive relationship between sustainability initiatives and these variables, with gender moderating the effects. These findings highlight the significance for hotels, particularly in developing countries, to embrace green practices to enhance their reputation, trust, and guest satisfaction, fostering enduring relationships (Merli et al., 2019; Rawashdeh & Al-Ababneh, 2021; Moise et al., 2021).

The reviewed literature emphasizes a tradition of research on guest perceptions of hotel sustainability practices across different segments (Merli et al., 2019; Rawashdeh & Al-Ababneh, 2021; Moise et al., 2021). However, these studies mainly focus on the guest perspective, frequently neglecting hotel managers' viewpoints and not comparing guests' opinions with the efforts of managers in implementing sustainability practices (Becken & Robson, 2008). This gap justifies the current study's focus on investigating both guest perceptions and managerial practices to achieve a more comprehensive understanding of hotel sustainability.

METHODOLOGY

A. Research Design

The study utilized the Explanatory Sequential Mixed Method Design (ESMMD), a two-phase mixed method approach. Initially, quantitative data on guests' perceptions was collected and analysed, guiding the subsequent qualitative phase involving hotel managers' data. Following Creswell and Creswell's (2018)

methodology, qualitative findings were triangulated with quantitative results. This method facilitated comparing managers’ views on the effectiveness of sustainability practices with guests’ views on their adequacy. ESMMD is increasingly popular in tourism research, as shown by Mariani and Baggio’s (2020) network analysis and Sahaf and Fazili’s (2024) exploration of customer-based destination brand equity. Mason et al. (2010) also advocates for mixed methods in exploratory research, where quantitative data precedes qualitative insights.

B. Sampling and Data Collection

The study was conducted in Nairobi, a major administrative, economic, and cultural hub, and one of Africa’s largest and fastest-growing cities (Mundia, 2017). Nairobi was selected for its pivotal role in Kenya’s tourism sector, featuring a well-established hotel infrastructure. According to the Kenya National Bureau of Statistics (KNBS, 2022), Nairobi has 36 classified hotels. The study targeted hotel guests who had stayed for at least one night and hotel managers from those hotels. Cochran’s equation was used to determine a sample size of 384 hotel guests; however, 205 completed questionnaires were collected, reflecting a 53% response rate. Additionally, the study aimed to interview managers from all 36 classified hotels in Nairobi (3-5 star), as listed by the Tourism Regulatory Authority (TRA, 2023); 19 hotel managers agreed to participate, yielding a 53% response rate. Data from hotel guests was collected using a questionnaire administered by trained field assistants in the hotel lobby during check-out. The questionnaire recorded demographic attributes such as age, academic qualification, and occupation. It included 19 items measuring perceptions of environmental and social sustainability practices, rated on a five-point Likert scale (Cohen, 2018; Driml & Thomsen, 2013; Gössling et al., 2013). Qualitative data from hotel managers was collected using a semi-structured interview guide. The guide captured the manager’s education, hotel industry experience, and current responsibilities. It also gathered data on the hotel’s profile, including size, ownership (independent, chain, or franchise), and target market. Managers were asked about the impacts of managerial, environmental, social, and economic sustainability practices implemented by their hotels. Interviews were conducted on-site at participating hotels and recorded verbatim using handheld recorders.

ANALYSIS AND RESULTS

A. Hotel Guests Profile

Descriptive statistics, including percentage frequency, were computed to profile guests based on their demographic attributes and trip characteristics. Table 1 presents results of the analysis.

Table 1 Hotel Guests Profile

| Demographic Attribute | Level | Frequency | Percentage Frequency | Cumulative Percentage Frequency |
|---------------------------|-----------------------------------|-----------|----------------------|---------------------------------|
| Age | 18 – 24 years | 55 | 26.96 | 26.96 |
| | 25 – 40 years | 58 | 28.43 | 55.39 |
| | 41 – 56 years | 49 | 24.02 | 79.41 |
| | 57 – 75 years | 42 | 20.59 | 100.00 |
| Educational Qualification | High School Diploma or equivalent | 40 | 19.70 | 19.70 |
| | College Diploma | 41 | 20.20 | 39.90 |
| | Bachelor’s Degree | 33 | 16.26 | 56.16 |
| | Master’s Degree | 56 | 27.59 | 83.74 |

| Demographic Attribute | Level | Frequency | Percentage Frequency | Cumulative Percentage Frequency |
|-----------------------|------------------------|-----------|----------------------|---------------------------------|
| | PhD or Equivalent | 33 | 16.26 | 100.00 |
| Occupation | Health /Medical | 24 | 11.76 | 11.76 |
| | Information Technology | 26 | 12.75 | 24.51 |
| | Technology/Engineering | 32 | 15.69 | 40.20 |
| | Education | 19 | 9.31 | 49.51 |
| | Arts/Entertainment | 27 | 13.24 | 62.75 |
| | Business/Finance | 47 | 23.04 | 85.78 |
| | Sports | 13 | 6.37 | 92.16 |
| | Others | 16 | 7.84 | 100.00 |

Table 1 presents the demographic profile of the respondents. Most participants (28%, $n = 58$) were aged 24 to 40, representing Millennials, followed closely by Generation Z at 27%. Baby Boomers were the least represented group at 21% ($n = 42$), indicating a balanced generational distribution. A significant portion of respondents held master’s degrees (28%), while 60% ($n = 122$) had university qualifications from bachelor’s to PhD levels. Most respondents (23%, $n = 47$) worked in business and finance. Other notable professions included information technology (IT) (13%, $n = 26$), arts/entertainment (13%, $n = 27$), and engineering/technology (16%, $n = 32$). Only 6% ($n = 13$) were in the sports industry. The “other” category, including professions such as NGO and public sector employment, comprised 8% ($n = 16$).

Analysis of trip characteristics revealed that the majority of guests (44%, $n = 90$) visited Nairobi for business, work-related purposes, or meetings/conferences, emphasizing the importance of the business and meetings market segment for urban hotels. Nairobi hotels also served as significant destinations for leisure/holiday purposes (20%, $n = 41$), particularly for international tourists engaged in wildlife-based tourism. Personal reasons, such as medical treatment, personal events, and visiting friends and family, collectively accounted for 26% of responses. Nairobi’s role as a regional transport hub for East Africa was reflected in 6% of respondents who indicated transit as their purpose of visit. A majority of guests (56%, $n = 115$) were repeat visitors. The number of nights spent at the hotel ranged from 0 to 36 nights ($\bar{x} = 5.00$, $SD = 5.44$). On average, repeat visitors spent slightly more nights ($\bar{x} = 4.90$, $SD = 5.43$) compared to first-time guests ($\bar{x} = 4.74$, $SD = 4.67$). However, there was no significant difference in length of stay between repeat and first-time visitors ($t_{(199)} = 0.22$, $p = 0.83$, ns).

B. Managers Profile and Hotel Firmographics

The managers held positions of responsibility in critical hotel departments like Food and Beverage, Human Resources, and Sales and Marketing. They possessed relevant training with postgraduate, degree, and diploma qualifications in tourism and hospitality. Their extensive experience in the industry, averaging 15.53 years ($SD = 5.91$), added credibility to their feedback. With diverse departmental representation and substantial industry experience, these informants offered a holistic understanding of hotel functioning and were reliable sources for evaluating sustainability practices within their hotels.

The hotel firmographics revealed a diverse representation of urban hotels, with 63% affiliated with franchises or chains, and 32% operating independently, while one hotel was a members’ club. Most hotels were categorized as large, with over 132 beds, yet maintained a moderate number of restaurants, averaging 2.32 ($SD = 1.25$). This balance indicated alignment between hotel capacity and dining facilities. The findings also showed an equal reliance on corporate clientele and leisure tourist markets, highlighting the hotels’ versatility. Overall, the varied affiliations, sizes, and target markets enriched the understanding of the

hotel industry landscape, reflecting adaptability to different business models and customer preferences.

C. Guests' Perceptions of Hotel Sustainability Practices

Descriptive statistics were calculated to summarize guests' perceptions of the adequacy of hotel implementation of a set of 19 practices derived from the GSTC industry criteria (GSTC, 2016). The summary of ratings is presented in Table 2.

Table 2. Guests' Perceptions of the Adequacy of Sustainability Practices Implemented by Hotels in Nairobi

| Hotel Sustainability Practice | N | Adequacy rating % of total | | | | | Mean | SD |
|--|-----|----------------------------|------------|---------|----------|--------------------|------|------|
| | | Extremely Inadequate | Inadequate | Neutral | Adequate | Extremely Adequate | | |
| Use of refillable soap/toiletries dispensers | 205 | 5.85 | 11.22 | 14.15 | 17.07 | 51.71 | 3.98 | 1.28 |
| Inclusion of local foods in menu | 205 | 10.24 | 9.27 | 12.68 | 18.05 | 49.76 | 3.88 | 1.38 |
| Environmental architectural | 205 | 9.76 | 9.27 | 14.15 | 27.32 | 39.51 | 3.78 | 1.32 |
| Waste separation | 205 | 7.32 | 9.27 | 22.44 | 21.95 | 39.02 | 3.76 | 1.26 |
| Use of energy conservation Technology | 204 | 8.33 | 11.27 | 18.63 | 20.59 | 41.18 | 3.75 | 1.32 |
| Eco-friendly toiletries | 204 | 9.80 | 10.78 | 12.75 | 28.43 | 38.24 | 3.75 | 1.33 |
| Use of energy efficient room appliances | 205 | 8.29 | 11.22 | 20.00 | 20.49 | 40.00 | 3.73 | 1.31 |
| Use of local material in interior décor | 205 | 10.24 | 11.22 | 13.66 | 25.37 | 39.51 | 3.73 | 1.36 |
| Elimination of single use items | 205 | 13.17 | 8.78 | 13.66 | 21.95 | 42.44 | 3.72 | 1.42 |
| Easy disability access | 204 | 11.76 | 9.31 | 18.63 | 20.59 | 39.71 | 3.67 | 1.38 |
| Support to local business | 202 | 10.89 | 11.39 | 17.82 | 19.80 | 40.10 | 3.67 | 1.38 |
| Enhanced employee health & safety | 205 | 10.73 | 11.71 | 18.05 | 21.46 | 38.05 | 3.64 | 1.37 |
| Use of water conservation Technology | 204 | 10.29 | 12.25 | 21.08 | 19.61 | 36.76 | 3.60 | 1.36 |
| Use LED lighting in public areas | 205 | 10.24 | 13.66 | 20.00 | 24.88 | 31.22 | 3.53 | 1.33 |
| Use of recyclable paper products | 204 | 12.75 | 13.24 | 17.16 | 22.06 | 34.80 | 3.53 | 1.41 |
| Use of renewable energy | 205 | 12.68 | 13.17 | 19.02 | 20.98 | 34.15 | 3.51 | 1.40 |

| | | | | | | | | |
|--|-----|-------|-------|-------|-------|-------|------|------|
| Guest participation in community activities | 205 | 13.66 | 15.12 | 20.00 | 19.51 | 31.71 | 3.40 | 1.42 |
| Employee recognition | 204 | 14.71 | 16.67 | 21.08 | 22.55 | 25.00 | 3.26 | 1.39 |
| Opportunities for guest-community interactions | 205 | 13.17 | 20.00 | 23.41 | 17.07 | 26.34 | 3.23 | 1.38 |

Table 2 presents an overview of hotel guests' ratings of sustainability practices observed during their stay, indicating an overall perception of "very adequate" on a five-point Likert scale ($\bar{x} = 3.98$, $SD = 1.28$ – $\bar{x} = 3.51$, $SD = 1.40$). However, specific practices such as guest involvement in community activities, acknowledgment of employees, and opportunities for guest-community interactions received neutral ratings ($\bar{x} = 3.40$, $SD = 1.42$ – $\bar{x} = 3.23$, $SD = 1.38$), suggesting potential areas for improvement. Most guests expressed that sustainability practices were extremely well-implemented by hotels (56% – 26%), underscoring widespread adoption. Conversely, a considerable proportion noted inadequate opportunities for guest-community interaction (57%, $n = 116$) and employee recognition (53%, $n = 109$). The top three sustainability practices deemed adequately implemented were refillable soap/toiletries dispensers ($\bar{x} = 3.98$, $SD = 1.28$), inclusion of local foods in menus ($\bar{x} = 3.88$, $SD = 1.38$), and incorporation of environmental architectural designs ($\bar{x} = 3.78$, $SD = 1.32$), as perceived by the guests.

The analysis utilized the GSTC industry criteria to classify HSPs, revealing three dimensions of sustainability: environmental, economic, and social practices. Table 3 presents the classification results, indicating the reliability of each class ($\alpha > 0.70$) and the mean scores of the computed indices representing guests' perceptions of the adequacy of implementation for each category of sustainability practices.

Table 3 Classification of Hotel Sustainable Practices

| GSTC Criteria | Classification | Mean | SD | Cronbach's alpha | Scale Mean | SD |
|---------------|--|------|------|------------------|------------|------|
| Environmental | Waste Management Practices | | | 0.71 | 3.74 | 0.91 |
| | Use of refillable soap/toiletries dispensers | 3.98 | 1.28 | | | |
| | Waste Separation | 3.76 | 1.26 | | | |
| | Elimination of single use items | 3.72 | 1.42 | | | |
| | Use of Recyclable paper products | 3.53 | 1.41 | | | |
| | Eco-friendly Toiletries | 3.75 | 1.33 | | | |
| | Resource Management Practices | | | 0.72 | 3.62 | 0.91 |
| | Use of water conservation Technology | 3.60 | 1.36 | | | |
| | Use of energy efficient room appliances | 3.73 | 1.31 | | | |
| | Use of Energy Conservation Technology | 3.75 | 1.32 | | | |
| | Use LED lighting in public areas | 3.53 | 1.33 | | | |
| | Use of Renewable Energy | 3.51 | 1.40 | | | |

| | | | | | | |
|-----------------|--|------|------|------|------|------|
| Economic | Local Engagement Practices | | | 0.68 | 3.75 | 1.07 |
| | Support to local business | 3.67 | 1.38 | | | |
| | Inclusion of local foods in menu | 3.88 | 1.38 | | | |
| | Use of Local Material in Interior Décor | 3.73 | 1.36 | | | |
| Social | Community and Guest Interaction Practices | | | 0.59 | 3.44 | 0.85 |
| | Easy Disability Access | 3.67 | 1.38 | | | |
| | Enhanced Employee Health & Safety | 3.64 | 1.37 | | | |
| | Guest Participation in community activities | 3.40 | 1.42 | | | |
| | Employee Recognition | 3.26 | 1.39 | | | |
| | Opportunities for Guest-Community Interactions | 3.23 | 1.38 | | | |

The environmental aspect of sustainable practices was divided into waste management ($\bar{x} = 3.74$, $SD = 0.91$) and resource management ($\bar{x} = 3.62$, $SD = 0.91$) categories. Social practices included initiatives related to community and guest interaction efforts ($\bar{x} = 3.44$, $SD = 0.85$). Economic practices aimed at fostering beneficial local engagements received a mean score of ($\bar{x} = 3.75$, $SD = 1.07$). Cronbach's alpha coefficients for these categories ranged between $\alpha = 0.72$ and $\alpha = 0.59$, indicating satisfactory internal consistency and scale reliability (Table 3).

The findings in Table 3 suggest that guests perceived social sustainability practices in hotels to be less adequate compared to environmental and economic sustainability. Notably, economic sustainability received the highest ratings. The results indicate that, based on guests' perceptions, hotels prioritize and perform better in economic and environmental sustainability practices than in social sustainability practices.

D. Managers Perceptions of Hotel Sustainability Practices

The study utilized the reflexive thematic analysis procedure, following Braun and Clarke's (2006) framework, to code the transcribed managers responses regarding the specific sustainability practices adopted by their hotels. Figure 1 summarizes the themes derived from the interviews.

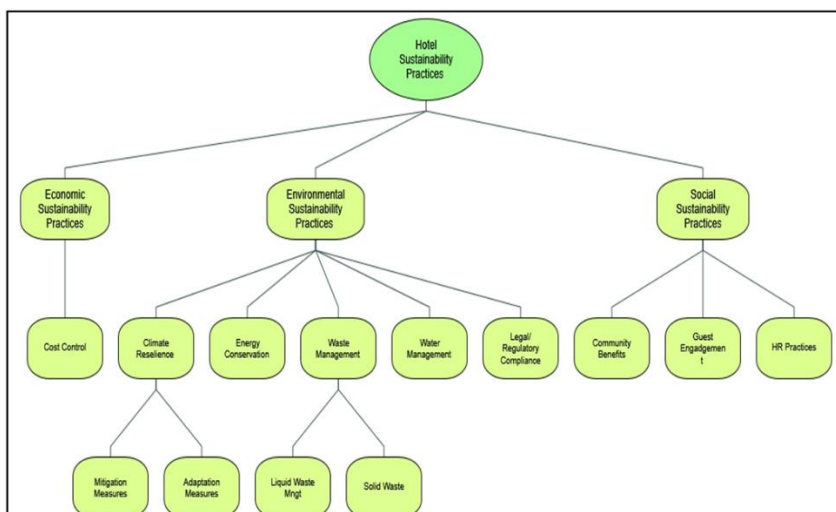


Figure 1 Hotel Managers' Perspectives of Hotel Sustainability Practices Adopted by Hotels in Nairobi

Most hotel managers (84%, n = 16) addressed a combined total of 52 references concerning environmental sustainability practices implemented in their hotels, while economic sustainability practices primarily focusing on cost reduction measures were mentioned by the fewest number of hoteliers (11%, n = 2). Additionally, a significant portion of managers (74%, n = 14) emphasized social sustainability practices, providing 45 references concerning community benefits, guest engagement initiatives, and human resource practices.

In terms of environmental sustainability, managers' interviews revealed various energy conservation measures implemented by the hotels. A majority of hotel managers (58%, n = 11) discussed practices such as using differently-sized laundry machines to optimize power usage, employing LED lighting, implementing solar energy, and utilizing key card-activated power in guest rooms. Waste management practices were also highlighted as essential for reducing ecological footprints, including the use of refillable soap dispensers, elimination of single-use plastics, and reduction in paper usage. One hotel notably featured refillable toiletries, reducing the need for individually portioned items:

“We have a reusable dispenser mounted on the wall. When guests need lotion, body wash, shampoo, or conditioner, they don't have to bring those small individual portions daily. Instead, specific dispensers for each are installed in the bathroom cubicle. ... We opt for refillable soap dispensers in guest rooms, avoiding the use of individual portions brought in daily or after each checkout. It's a sustainable approach to minimize waste and enhance guest convenience.”

According to the managers, some hotels were actively phasing out plastic bottled water, especially in guest areas, opting for more sustainable alternatives:

“We've embraced eco-friendly practices, particularly with our bottles. We're in the process of phasing them out. You may notice a water bottle on my desk, but in our rooms, we've initiated the transition, starting from guest areas. Most of our water is now served in glass bottles there. This is a gradual shift we're implementing, moving from the guest areas and extending slowly towards the employee sections. The aim is to steadily reduce our reliance on plastic bottled water throughout the entire establishment.”

Furthermore, the hotels engaged in partnerships to support plastic recycling initiatives, which in turn contributed to the production of towels. These collaborative efforts demonstrate a dedication to environmental responsibility and signify a reduction in plastic and paper usage across the hotels.

Figure 2 is a hierarchical diagram indicating that, according to the managers, social sustainability initiatives adopted by Nairobi hotels mainly comprised human resource practices (n = 12) and community involvement activities (n = 11).



Figure 2 Hotel managers' perceptions of social sustainability practices implemented by their hotels

to chosen causes. The following quote demonstrates hotels participation in CSR programs:

“Currently, there is a planned visit to a children’s home, where staff have contributed items—whether consumables, clothing, or any other items they deemed suitable to assist. Additionally, we actively participate in events such as the Standard Child Marathon, ensuring consistent representation from the hotel. In fact, I recently had the opportunity to be part of the team representing the hotel in the last marathon. This engagement in events aligns with our commitment to social responsibility, exemplifying our dedication to making positive contributions to the community”

DISCUSSION

The study focused on diverse generational cohorts of hotel guests staying at least one night, contrasting with prior research on “lifestyle” urban hotels. Unlike studies focusing on middle-aged or youthful demographics (Liu et al., 2018; Sining, 2021), this study captured a wide age spectrum, with many respondents aged 24 to 40. Educational and professional profiles aligned with previous findings, indicating a significant portion with higher education and professional roles, similar to observations in Sining (2021) and Liu et al. (2018). The study shows many guests were repeat visitors, often staying at least 5 days, indicating familiarity with the hotel’s sustainability efforts. This aligns with research suggesting a link between repeat visits, duration of stay, and guest familiarity, as proposed by Kim and Han (2022).

The study’s findings underscore the diverse affiliations, sizes, and target markets of the hotels, revealing the industry’s adaptability. Similarly, the managers’ profile indicates their suitability and reliability in evaluating sustainability practices due to their high-ranking positions, educational qualifications, diverse departmental representation, and substantial industry experience.

The study’s findings on hotel guests’ perceptions of HSP adequacy highlight a generally favourable view of sustainability practices, though community engagement and employee recognition need improvement. The top three practices identified—refillable soap/toiletries dispensers, local foods in menus, and environmental architectural designs—provide guidance for enhancing sustainability in line with guest preferences. Berezan, Millar, and Raab (2014) support these findings, showing high satisfaction with recycling, green product procurement, and local supplier engagement in San Miguel de Allende, Mexico, with slightly lower satisfaction for dispenser use and linen reuse encouragement. Both studies, despite cultural differences, confirm successful implementation of waste management, energy conservation, and sustainable procurement practices, indicating a global trend toward sustainability in hospitality. Similarly, Gitobu and Njoroge (2015) found that Mombasa hotels adopted similar ‘green practices’ to stand out from competitors, reduce operational costs, and appeal to environmentally conscious consumers.

The results of the study suggest that according to guests, hotels prioritize economic and environmental sustainability over social aspects, potentially affecting perceptions of holistic sustainability and community engagement. This aligns with Rezapouraghdam et al. (2021), who caution that focusing solely on environmental sustainability creates an inaccurate, one-dimensional view of sustainable tourism.

While guests felt hotels prioritized economic sustainability practices, few managers explicitly mentioned them. However, the economic motives behind energy conservation practices were implicit. Managers highlighted using energy-efficient equipment in kitchens and health clubs, emphasizing cost reduction.

However, both guests and managers agreed on the adequacy of environmental practices implemented by the hotels. Guests noted effective solid waste management practices, such as using refillable dispensers, waste separation, eliminating single-use items (especially plastics), and using recyclable paper products. Hotel managers also emphasized waste management as crucial for minimizing their facilities’ ecological footprint.

Hotels' adoption of green practices, particularly in waste management, aligns with the growing awareness among guests of sustainability and environmentally conscious consumption (Kim & Roseman, 2022). This trend has led to increased guest loyalty and preference for establishments embracing green initiatives. The study confirms Kim and Roseman's (2022) findings that hotels are integrating essential green initiatives, like substituting single-use plastic water containers with larger dispensers and phasing out plastic straws. As guests become more attuned to sustainability efforts, such practices are expected to become more widespread. Notably, surveyed guests rated the use of refillable soap/toiletries dispensers as the most adequately implemented practice by hotels ($\bar{x} = 3.98$, $SD = 1.28$).

The study revealed differing opinions on the adequacy of social sustainability practices between guests and hotel managers. The results suggest that guests found social sustainability practices less noticeable, likely because hotels emphasized human resource and community betterment initiatives that were less visible to them. Nonetheless, the high prevalence of HR practices observed by both managers and guests aligns with previous findings supporting corporate social responsibility (CSR) initiatives. For instance, Cherapanukorn and Focken (2014) linked CSR programs, including activities aimed at improving relationships with customers, employees, and the host community, to enhancements in hotel performance.

CONCLUSION

The study revealed a consensus between hotel guests and managers on the effectiveness of environmental sustainability practices in Nairobi hotels, specifically targeting water, energy, and waste management. Both groups acknowledged the successful implementation of several key practices, including the use of refillable soap/toiletries dispensers, incorporation of local foods in menus, effective waste separation, adoption of energy conservation technologies, utilization of eco-friendly toiletries, and the application of environmental architectural designs. This agreement underscores the hotels' commitment to environmental sustainability and highlights areas where their efforts are recognized and appreciated by both guests and managers.

The research findings highlight a divergence in perceptions regarding the adequacy of social sustainability practices between hotel guests and managers. While guests rated certain practices, such as participation in community activities, employee recognition, and opportunities for guest-community interactions, as inadequately implemented, hotel managers underscored the significance of their Corporate Social Responsibility (CSR) and Human Resources (HR) programs. Furthermore, the study findings indicate a prioritization of economic sustainability practices by hotels, primarily aimed at cost reduction. While hotel managers were less explicit about the economic motives behind practices such as energy and water conservation and linen-reuse programs, the results underscore the importance of these cost-saving measures in the hospitality industry.

RECOMMENDATIONS

Based on the research findings, the study recommends that despite the consensus on the effectiveness of environmental sustainability practices, hotels should improve communication to ensure guests are fully aware of these initiatives. Implementing clear signage, information cards in guest rooms, and interactive displays can educate guests about the hotel's efforts and encourage their participation in sustainability efforts.

Secondly, while environmental sustainability practices are well-received, hotels should also focus on enhancing social sustainability initiatives to bridge the gap between guest perceptions and hotel management priorities. This could involve increasing community engagement activities, improving employee recognition programs, and providing more opportunities for guest-community interactions to

enhance the overall guest experience and community impact.

Furthermore, the study recommends bridging the gap in social sustainability communication to address the disparity in perceptions regarding social sustainability practices. This can be accomplished by enhancing communication channels between guests and management. Implementing regular guest feedback mechanisms, like surveys or suggestion boxes, would allow hotels to gauge guest satisfaction with social initiatives. Additionally, hotels should offer transparent and detailed information on their Corporate Social Responsibility (CSR) and Human Resources (HR) programs through website updates, brochures, or informational sessions for guests. Fostering open communication will ensure alignment between guest expectations and management priorities, ultimately enhancing guest satisfaction and community impact.

The study focused on perceptions of guests and hotel managers in urban hotels within a specific jurisdiction. Future research could involve comparative studies across regions or countries to understand variations in environmental sustainability practices. This may include analysing regulatory frameworks, cultural factors, and economic conditions impacting sustainability initiatives. Such comparisons could offer valuable insights for improving sustainability efforts globally within the hospitality industry.

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