

EXPLORING THE POSSIBILITIES OF UTILIZING LANDSCAPE TO GENERATE SENSORIAL EXPERIENCE WITHIN SRI LANKAN RESORT INDUSTRY

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Abstract: Despite Sri Lanka's rich natural biodiversity and cultural heritage, current resort designs often underutilize multisensory landscape elements, focusing mainly on visual aesthetics. The research investigates how landscape and architectural design in Sri Lankan resorts can be strategically utilized to create immersive multisensory experiences that enhance guest engagement and promote sustainability. The research explores five sensory modalities visual, auditory, olfactory, tactile, and gustatory senses using a mixed-method approach, the study combines qualitative case analyses of two resorts of Heritage Kandalama and Jetwing Vil Uyana with interviews of naturalists, agri-managers, staff members, guest surveys, and sensory mapping to explore how natural materials, spatial organization, and ecological features stimulate guests' senses. Key findings reveal that both Heritage Kandalama and Jetwing Vil Uyana resorts effectively engage visual, auditory, olfactory, tactile, and gustatory senses, contributing to emotional connection and high guest satisfaction in Central Province, making the province as one of Sri Lanka's top three travel destinations specifically for culture, unspoiled nature in Dambulla-Sigiriya area. Visual and gustatory elements emerged as particularly influential, while auditory calmness and tactile variety also enhance the overall experience. Recommendations include layering sensory inputs, promoting habitat diversity and enhancing soundscapes and scentscapes to create culturally and ecologically integrated resort environments. This research contributes practical insights for architects, landscape architects and hospitality managers aiming to advance eco-tourism through multisensory integration in Sri Lanka's resort industry.

Keywords: *Sensory experience, Resorts, Landscapes, Sensory Design, Guest Satisfaction*

1. Introduction

The rich geographical and cultural context of Sri Lanka provides a unique foundation for exploring sensorial experiences within the resort industry. Sri Lanka is recognized as a global biodiversity hotspot, featuring diverse ecosystems with extensive forest cover, numerous water bodies, and a variety of endemic flora and fauna. This natural wealth, combined with a deep cultural heritage that includes multiple UNESCO World Heritage Sites, offers resorts an exceptional opportunity to integrate authentic environmental and cultural narratives into their design (Arachchi & Wijeratne, 2017) Such integration can enhance guests' sensory engagement by connecting them intimately with the island's natural and cultural landscapes with their motivations to gain the emotional involvement, education, enjoyment and relaxation (Poria, Butler & Airey, 2003).

In recent years, there has been a transformation in hospitality design, moving beyond purely visual aesthetics to embrace multisensory experiences (Spence, 2022). This shift responds to evolving traveller preferences, with a growing number of luxury tourists seeking authentic and immersive sensory encounters that reflect the local environment and culture. Resorts that successfully incorporate multiple sensory modalities have demonstrated higher guest satisfaction and repeat visitation rates, underscoring the commercial and experiential value of sensorial design. (Ataturk, 2024)

1.1. RESEARCH PROBLEM

Despite Sri Lanka's abundant natural beauty and growing resort industry, there is a significant underutilization of landscape design as a strategic tool to create immersive sensorial experiences for guests. Most resorts focus primarily on visual aesthetics and basic landscaping without fully integrating multisensory elements. This results in missed opportunities to enhance guest satisfaction, emotional connection, and competitive differentiation and it is underexplored.

1.2 RESEARCH GAP

Previous research, such as the study on Southern coastal zone resort hotels (Wickramasinghe, 2019), primarily addresses landscape architecture as a branding and marketing tool, focusing on visual appeal and outdoor space preferences. However, there is a lack of comprehensive investigation into how landscapes can be deliberately designed to engage other senses to create holistic sensorial experiences for resort guests.

1.3 OBJECTIVES OF THE STUDY

- To assess how the architectural philosophy of built structure with the natural environment enhance the overall sensory experience for guests.

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- To identify key landscape features and design strategies that enhance sensorial experience in resort settings, particularly within the context of Sri Lanka’s natural and cultural environment.
- To examine how natural materials, spatial organization, and ecological features are integrated to stimulate the senses and ecological features are integrated to stimulate.
- To assess guest perception and preferences regarding sensorial landscape experiences in selected resorts, with an emphasis on understanding which sensory elements most influence satisfaction.

2. Integrating Sensorial Experience in Landscapes

2.1 UNDERSTANDING OF SENSORIAL EXPERIENCE

A sensorial experience happens when we engage with the world through the five senses sight, sound, touch, taste and smell. It’s not just noticing what’s around us but also about how we interpret these sensory inputs, shaping memories, emotions and overall understanding of life (Smith, 2020). It involves both the immediate perception and the interpretation of sensory stimuli from the environment (Brown & Lee, 2018),

A sensory experience isn’t just about encountering stimuli like light or sound, but about truly feeling and noticing these sensations within the body (Suarez, 2016, 2019).

Wolfe stats that multisensory learning combining visual, auditory and other senses taps into the brain’s natural connectivity (Wolfe,2019). Since each sense has its own memory area, using several senses together creates richer neural engagement. This helps deepen understanding and retention.

Sensorial experiences actively engage us, helping build connections with the environment, affect emotions, and form lasting memories (Miller, 2019).

Multisensory experiences have been researched in tourism industry (Brochado et al., 2021). Multisensory experiences often focus on just a couple of senses like sight or smell, and there are few practical methods to fully capture how multiple senses interact (Parket et al., 2023b).

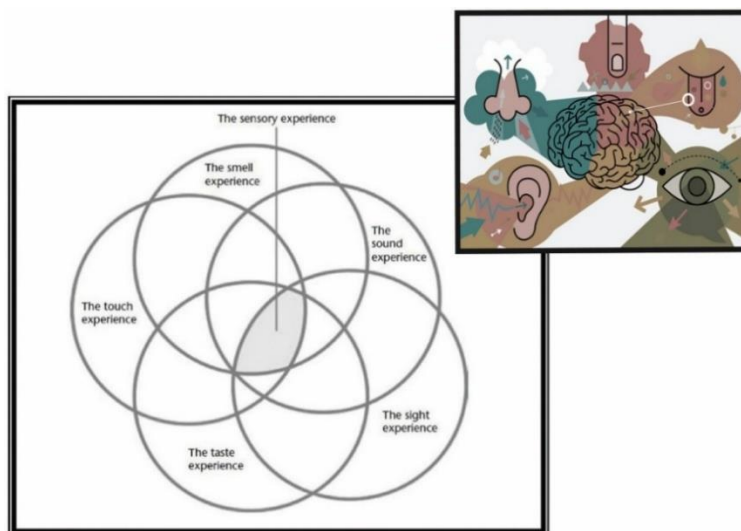


Figure 1; Diagrammic presentation of Sensorial Experience
 Source; Compiled by Author

2.2 SPECIFYING MULTI-SENSORY LANDSCAPE

2.2.1 Multi-sensory Landscape Design Theory

This theory refers to an approach in Landscape Architecture that intentionally engage all five senses sight, sound, smell, touch and taste in the spatial design process. This theory moves beyond conventional visual aesthetics, emphasizing the holistic human experience of space to create emotionally resonant and immersive outdoor environments (Pallasmaa, 2005).

This theory goes beyond traditional visual aesthetics by intentionally incorporating: visual elements, Auditory elements, Olfactory elements, Tactile elements, Gustatory elements.

Purpose; To enhance well-being, relaxation, emotional response, user experience by making outdoor environments feel more natural, stimulating, and meaningful.

Traditionally, studies on landscapes have primarily focused on visual stimuli, emphasizing the concept of the visible landscape (Weiber, 1981). However, in recent years, there has been a growing shift towards a multi-sensory approach that incorporates both visual and non-visual senses. This broader perspective, referred to as the “Multi-sensory Landscape” was introduced by T. Bartkowski (Bartkowski, 1985). (Bernet, 2008,2015) notes that among non-visual senses, sound has received special focus.

Another research shows that adults get about 87% of landscape information through sight, 7% through hearing, 3–5% through smell, 1–5% through touch, and 1% through taste (Visual Landscape, 1994).

2.3 STRATEGIES FOR CREATING SENSORIAL EXPERIENCE IN RESORTS

2.3.1. *Crafting Signature Sensory Elements*

Crafting signature sensory elements in resorts involves thoughtfully blending unique sensory features that reflect local culture and natural surroundings to create memorable and authentic guest experiences. By incorporating indigenous materials, traditional art, regional scents, flavors, and sounds, resorts establish a distinct identity that resonates emotionally with visitors.

Ataturk (2024) highlights sensory experiences enables hotels to personalize guest environments, like using signature scents in lobby or tailored culinary offerings to create memorable stays (Ataturk, 2024). Ogle (2009) found that deluxe hotel managers in the Asia Pacific region view sight as the most important sense for guests, with smell ranked second (Ogle, 2009).

David Robson, biographer of Geoffrey Bawa, explains that the Kandalama Hotel in Sri Lanka shifts from traditional picturesque views to a modern interpretation of Sigiriya.

When it comes to smell, citrus scents are proven to enhance perceptions of cleanliness in a space (Holland et al, 2005). The Hilton Doubletree has scented its lobbies with a chocolate chip cookie fragrance for years, delivered by a ScentAir device rather than from actual cookies, despite handing out 65,000 daily (Hoppough, 2006). The sweet scent likely helps relax guests on arrival, serving as a recognizable signature fragrance for the hotel (Wiedmann et al., 2016).

Antalya Belek Resort in Turkey uses varied music styles in its public areas to reflect and accommodate guests' diverse cultural backgrounds (Vardari & Arapi, 2017). This approach connects to the hotel's location and aids guest relaxation by harmonizing scent, sound, and color stimuli (Errajaa et al., 2018).

Choir music and bird songs can increase feelings of security in underground car parks and transit areas, according to laboratory studies (Sayin et al., 2015). Emphasising local heritage and nature through sensory design elevates the resort experience, making it immersive, culturally meaningful, and environmentally harmonious.

3. Research Methodology

A mixed method approach combining qualitative and quantitative techniques (Kelechi, Peace & Favour,2024) will provide a comprehensive understanding of landscape sensorial integration in resorts.

Selecting a purposeful sample of Sri Lankan resorts (1-2) known for integrating landscape, architecture and landscape architecture for the case study analysis can be done with conducting in depth site visits to document landscape features, material use and spatial organization through photographs, sketches and field notes. And there, analyzing resort design documents, master plans, and architectural briefs where available also can be done.

Conducting semi structured interviews with naturalists, resort managers to understand design intentions and ecological integration will clarify the areas focusing on how natural materials, spatial layout, and ecological features are used to stimulate senses and reflect Sri Lanka's cultural context.

Structured questionnaires development targeting resort guests to assess their sensory perceptions and preferences regarding landscape elements will be done through Google Forms online and the guest reviews of the tourist websites will be analyzed. This can be followed by using Likert scales and ranking questions to identify which sensory stimuli most influence satisfaction and overall experience.

Employing sensory mapping techniques during site visits to record sensory stimuli intensity and distribution, including,

- Visual mapping of viewsheds and spatial legibility
- Mapping scent zones created by landscape or artificial features
- Recording the distribution and intensity of natural sounds (e.g. water, birdsong) and man made noises.

Collected data will be analyzed (survey data) by descriptive statistics and factor analysis to determine key sensory elements influencing guest satisfaction. Correlation analysis between sensory preferences and demographic variables also can be done.

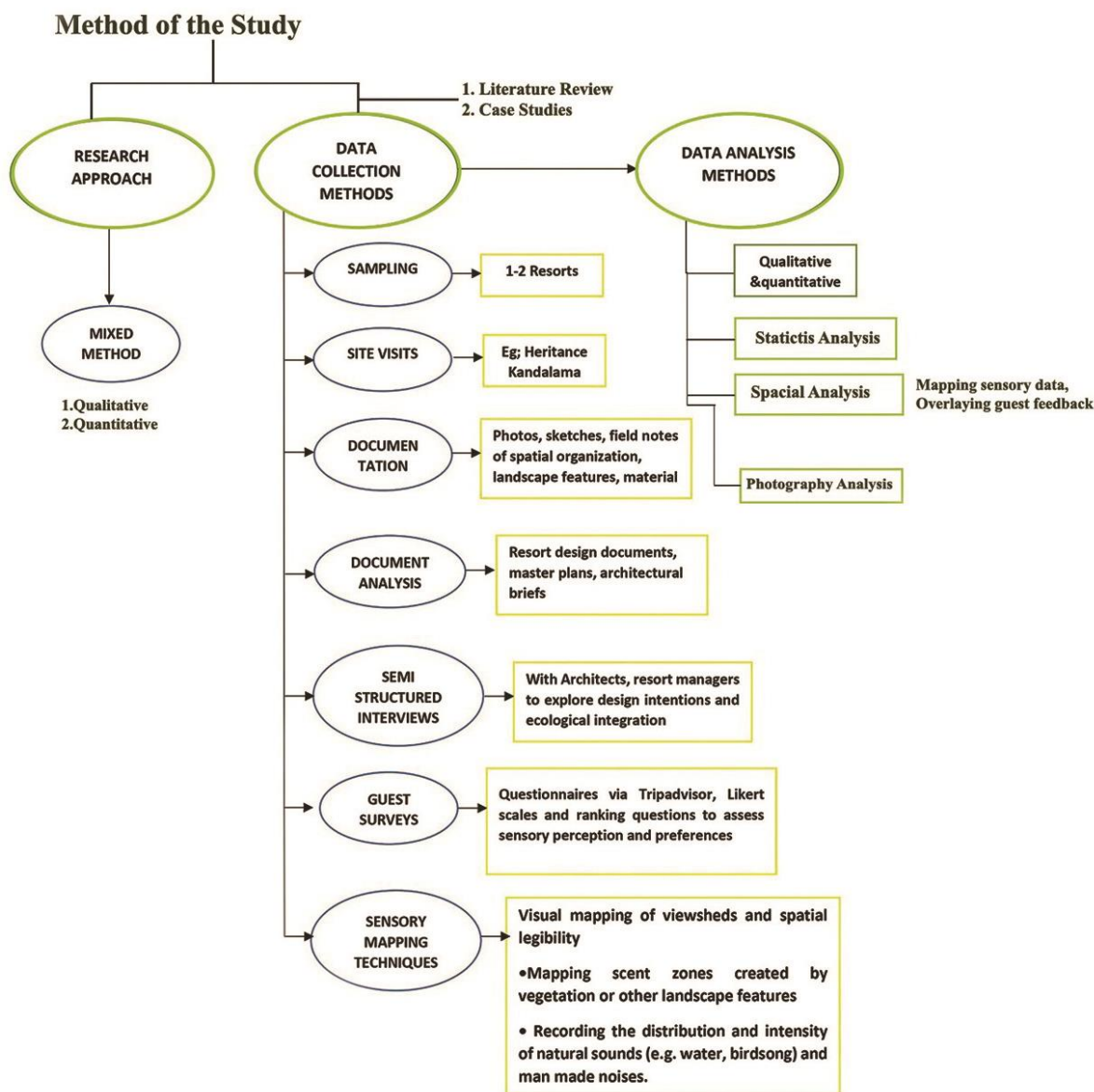


Figure 2; Method of the Study
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3.1 PRIMARY AND SECONDARY DATA COLLECTION METHODS

To analyze how the Resort Landscapes have been utilized to enhance Sensorial Experience will be examined by using mixed method. The study will examine how the resort landscape elements such as green spaces, gardens, dining spaces, lights and

illumination, pathways, corridors and seating, fauna flora, meditation areas can influence on guest sensorial experience, memories and satisfaction. Key areas will be **Heritance Kandalama** and **Jetwing Vil Uyana** Resorts.

3.2 CASE STUDIES: HERITANCE KANDALAMA AND JETWING VIL UYANA

The data analysis for this study employed multiple methods to comprehensively examine user experiences at Heritance Kandalama and Jetwing Vil Uyana. Google Excel will be used for the statistical analysis, beginning with data preparation through cleaning and coding survey responses. Descriptive statistics will be applied to summarize basic trends, while inferential statistics explored relationships between variables. Visualizations, such as bar charts and pie charts will be generated to illustrate the data. In addition to the survey data, insights from the questionnaire, observation checklist, and photograph analysis were incorporated to enrich the findings. Furthermore, sensory mapping technique can be used to identify the spatial organization in the area and the sensory distribution of the place. Qualitative responses from open-ended questions will also be coded to provide deeper context.

Considering the data analysis, a 5-point Likert scale was selected. Comparing other methods, this is easier to collect data within the site with the limited time. It contains 5 responses with two extreme sides and neutral.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	2	3	4	5

Figure 3; Scale of five-point Likert measurement

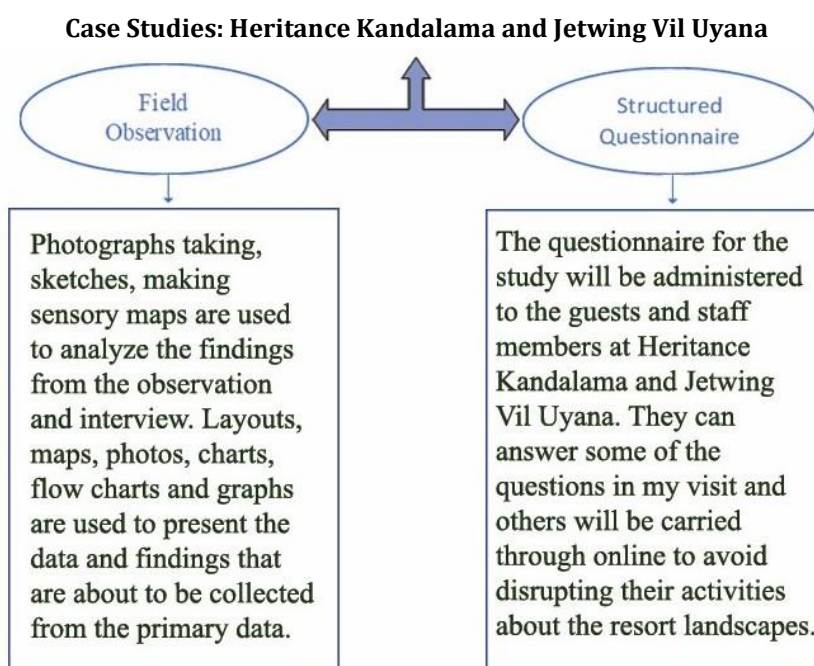


Figure 4; Data Collection Method
 Source; Compiled by Author

4. Case Studies, Findings, Discussion

Heritance Kandalama and Jetwing Vil Uyana are eco-luxury resorts in Sri Lanka known for immersive sensory experiences, blending nature and architecture. Heritance Kandalama features biophilic design by Geoffry Bawa, while Jetwing Vil Uyana offers habitat-themed villas amid wetlands.

4.1 HERITANCE KANDALAMA

Heritance Kandalama is a five-star eco-friendly resort in Kandalama, Sri Lanka, about 11km southeast of Sigiriya. Resort is owned by Aitken Spence Hotel Holdings under their Heritance Hotels and Resorts brand and designed by architect Geoffrey Bawa. It was built between 1992 and 1995. It features 152 rooms integrated into a hillside surrounded by forest and Kandalama lake views. The resort offers three restaurants, pools, a spa, and gym, and is World’s first LEED-certified Green hotel, making it ideal for cultural and nature tourism.

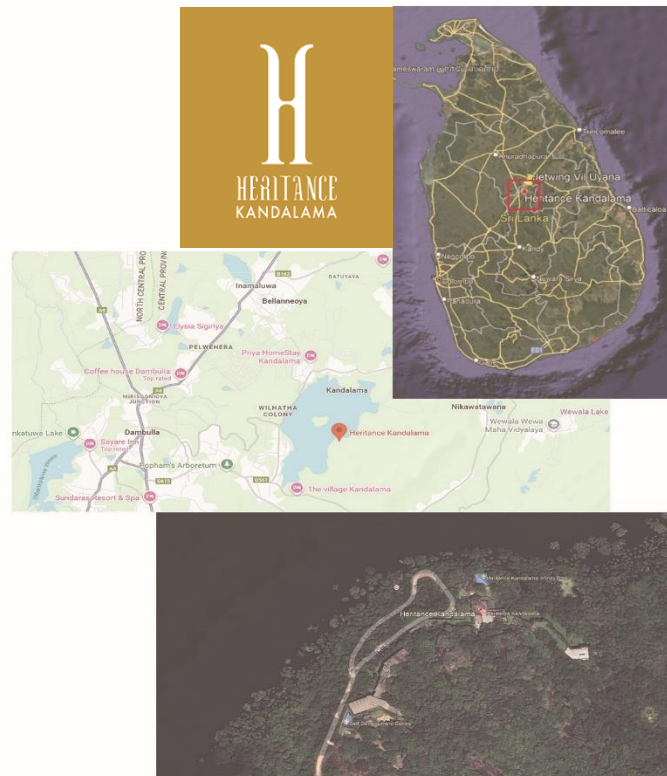


Figure 5; Heritance Kandalama Location
 Source; Google Maps

4.2 JETWING VIL UYANA

Jetwing Vil Uyana is a boutique eco-friendly luxury resort located in Sigiriya, Sri Lanka, near the historic Sigiriya Rock Fortress. Owned by Jetwing Hotels and designed by environmental architect Sunela Jayawardena, it opened in 2006. The resort features 36 unique dwellings set amidst wetlands, paddy fields, forests, and marshes, emphasizing sustainable luxury and nature integration. Its eco-conscious architecture and location in Sri Lanka's Cultural Triangle make it a top choice for eco-tourism and cultural exploration in the region.

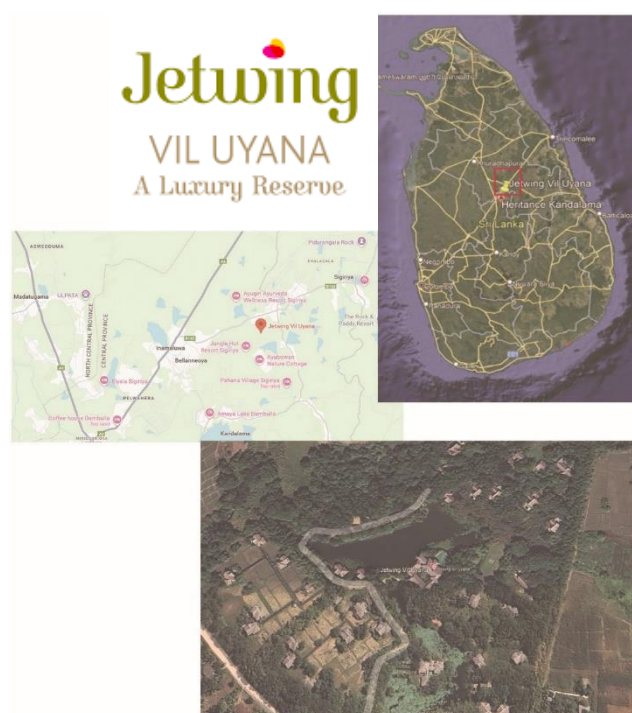


Figure 6; Jetwing Vil Uyana Location
 Source; Google Maps

Figure 7 and Figure 8 show Landscape Elements enhancing Sensorial Experience in two resorts Heritance Kandalama and Jetwing Vil Uyana.

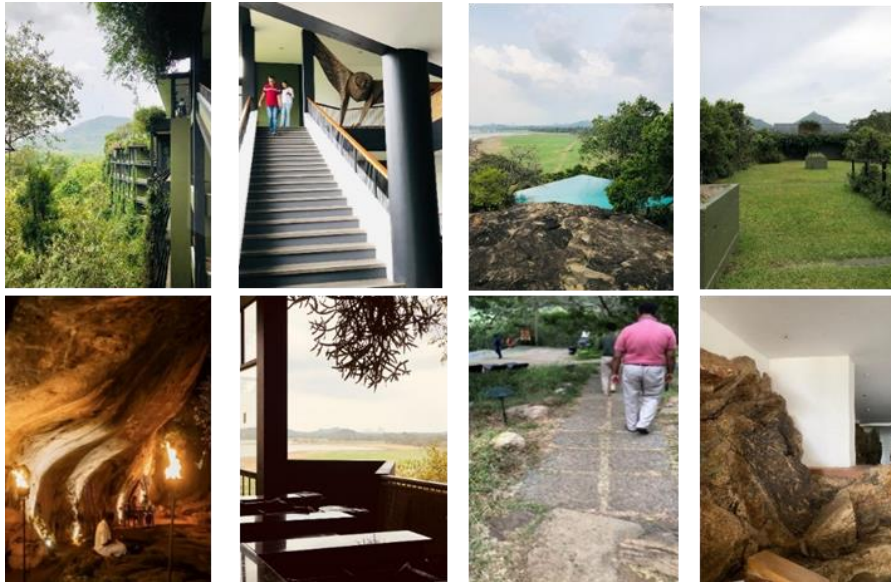


Figure 7; Landscape Elements enhancing Sensorial Experience in Heritance Kandalama
Source; Compiled by Author



Figure 8; Landscape Elements enhancing Sensorial Experience in Jetwing Vil Uyana
Source; Compiled by Author

4.3 VISUAL EXPERIENCE AND PERCEPTION OF RESORT LANDSCAPES

Jetwing Vil Uyana scores higher than Heritance Kandalama in visual aspects, especially natural views (91.2% vs. 87.2%) and food presentation (98.4% vs. 89.6%), enhancing guest sensory experience.

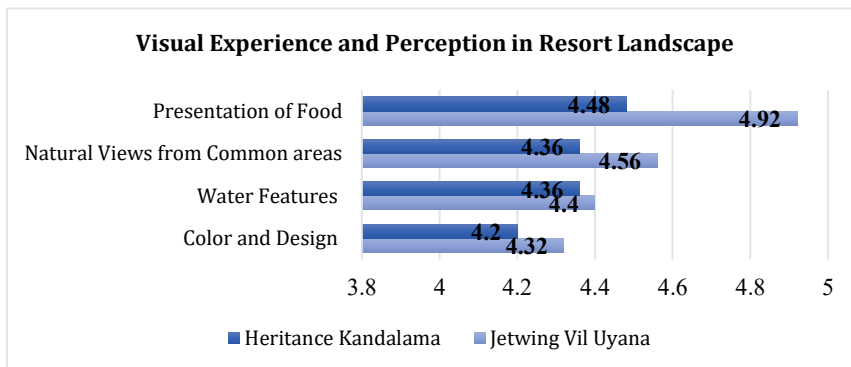


Figure 9; Visual Experience and Perception of Resort Landscapes
Source; Compiled by Author

4.4 AUDITORY EXPERIENCE AND PERCEPTION OF RESORT LANDSCAPES

Jetwing Vil Uyana scores lower than Heritance Kandalama in natural sounds (86.4% vs. 89.6%) and ambient music (78.4% vs. 84%), favored for Indonesian, flute, and traditional music. However, Vil Uyana excels in minimizing unwanted noise (92% vs. 72%), resulting in a slightly better overall auditory environment (85.6%).

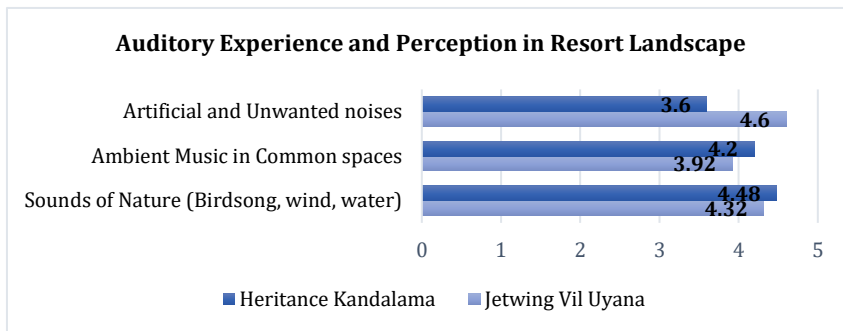


Figure 10; Auditory Experience and Perception of Resort Landscapes
Source; Compiled by Author

4.5 OLFACTORY EXPERIENCE AND PERCEPTION OF RESORT LANDSCAPES

Jetwing Vil Uyana slightly leads in scent variety (80.8%) while Heritance Kandalama scores a bit higher in shared space aromas (78.4%), making Vil Uyana's overall scent experience marginally better (79.2% vs. 78.8%).

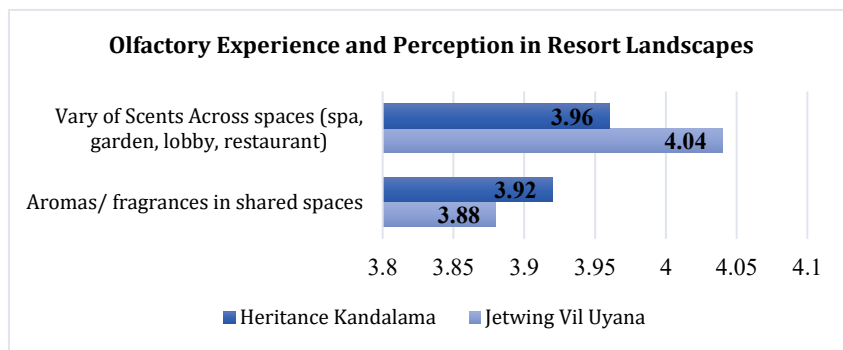


Figure 11; Olfactory Experience and Perception of Resort Landscapes
Source; Compiled by Author

4.6 TACTILE EXPERIENCE AND PERCEPTION OF RESORT LANDSCAPES

Heritance Kandalama excels in tactile aspects like walls and handrails (97.6% vs. 78.4%), while Jetwing Vil Uyana leads slightly on walking paths (82.4% vs. 80%). Overall, Kandalama offers a stronger tactile experience (88.8% vs. 80.4%).

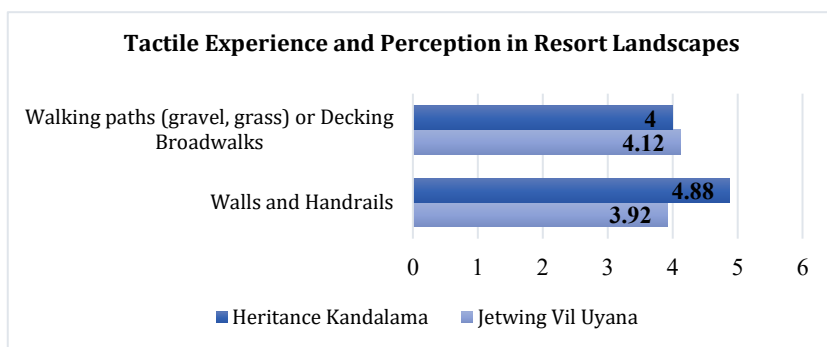


Figure 12; Olfactory Experience and Perception of Resort Landscapes
Source; Compiled by Author

4.7 GUSTATORY EXPERIENCE AND PERCEPTION OF RESORT LANDSCAPES

Jetwing Vil Uyana offers a higher overall taste experience (90%) despite Heritance Kandalama scoring higher in local Sri Lankan flavors (88% vs. 81.6%). Vil Uyana excels in food presentation (98.4% vs. 89.6%), with both resorts appreciated for traditional, environment-linked cuisines.

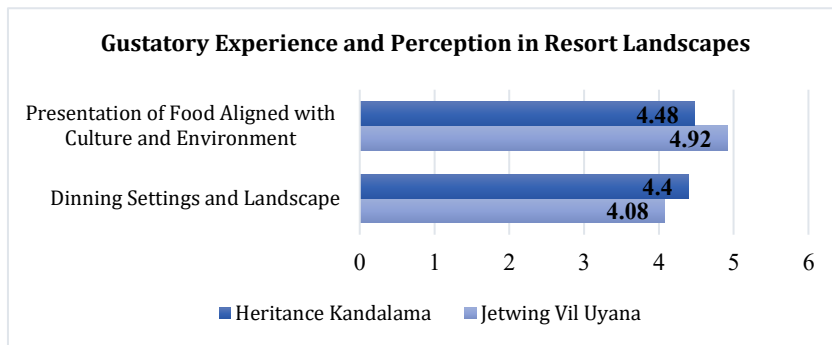


Figure 13; Gustatory Experience and Perception of Resort Landscapes
Source; Compiled by Author

4.8 OVERALL SENSORIAL EXPERIENCE PERCEPTION OF RESORT LANDSCAPES

Combining data, guests prioritize gustatory (89.4%) and visual (89%) experiences in resorts, with tactile and auditory sensations valued next, and olfactory least. Heritance Kandalama and Jetwing Vil Uyana offer nearly equal overall sensory satisfaction around 85% guiding future design focus in Sri Lankan resorts.

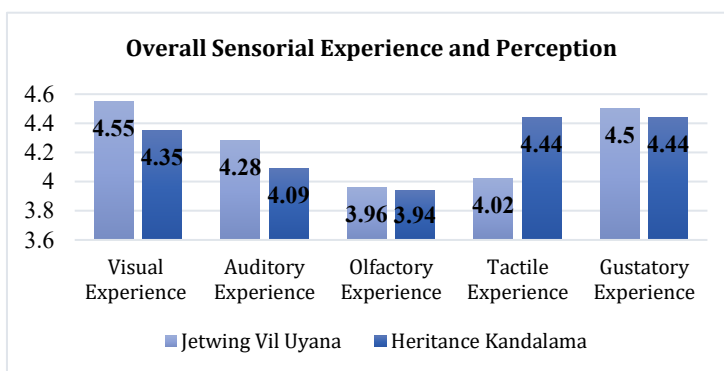
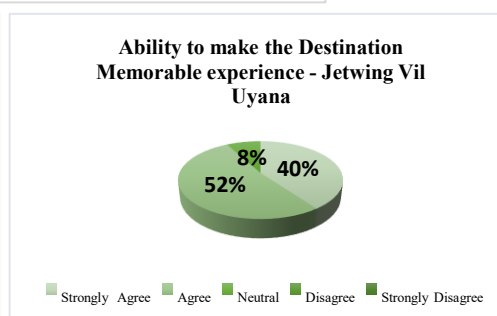
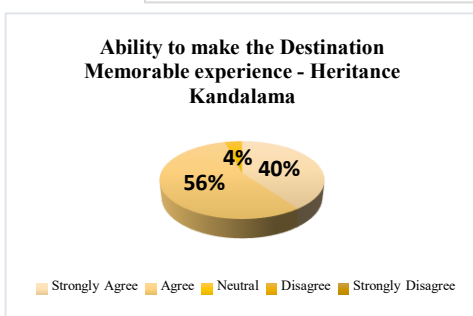
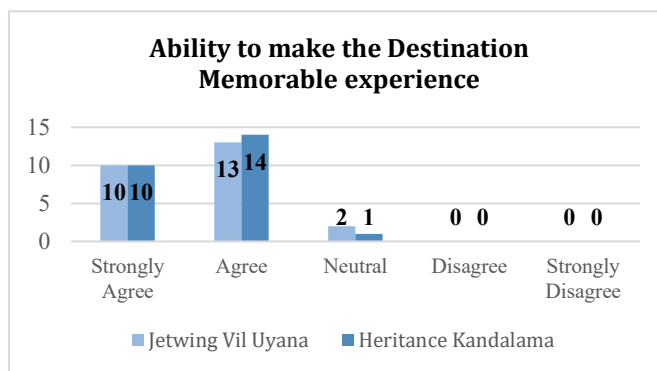


Figure 14; Overall Sensorial Experience and Perception of Resort Landscapes
Source; Compiled by Author

4.9 ABILITY TO MAKE THE DESTINATION A MEMORABLE EXPERIENCE

Guests found both Heritance Kandalama (56%) and Jetwing Vil Uyana (52%) equally memorable, with Vil Uyana having 40% strongly agree and 8% neutral responses, indicating both resorts offer similarly impactful sensory experiences that enhance destination memorability.



5. Conclusion

This study explored immersive multisensory experiences in Sri Lankan eco-luxury resorts, focusing on Heritage Kandalama and Jetwing Vil Uyana. Combining theory with field data, it investigated how visual, auditory, olfactory, tactile, and gustatory senses enhance guest satisfaction, emotional connection, and sustainability. **Vision** was confirmed as **dominant**, as literature emphasizes (up to 87% of perception, Kaidong & Weihong, 1999), with visual aesthetics and dining presentation driving satisfaction. However, tactile textures at Kandalama and intentional smellscape at Vil Uyana enriched the experience further and important haptic landscape theory (Liuliu, Taoze & Hongna, 2023). Auditory elements such as birdsong and cultural music fostered place identity and relaxation. Gustatory experience combined taste, setting, and cultural cues, highlighting eco-luxury and sustainability. This supports Rogowski's (Rogowski, 2016) idea of gustation as a multisensory event influenced by setting.

Sensory preferences varied by demographics, with younger guests valuing sound and smell more. Key design considerations include natural scenery (rock formations, wetlands, flora, fauna), use of authentic materials (stone, timber), local traditions (music, crafts), natural sounds, food as a multisensory experience, and linking resort features to Sri Lanka's heritage. Scents from vegetation and spa treatments contributed but were less influential.

Future research directions include broader comparative studies across Sri Lanka, longitudinal studies on sensory memory, cross-cultural guest perceptions, atmospheric and temporal sensory dynamics, and exploring augmented sensory environments. Interdisciplinary collaboration could deepen understanding of multisensory engagement.

In conclusion, **sight** remains central, but touch, smell, and taste are vital in creating immersive, meaningful sensorial landscapes. Soundscapes promote relaxation and cultural identity while demographic differences influence sensory priorities. These findings affirm that multisensory design is essential for guest satisfaction, ecological preservation, cultural continuity, and enhancing Sri Lanka's global eco-tourism standing.

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