

Sustainability evaluation of Meuraxa Green Tourism Park in the context of Lefebvre's Spatial theory

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ARTICLE INFO	ABSTRACT
<i>Article history:</i> Received November 03, 2025 Received in revised form Apr. 13, 2026 Accepted May 06, 2026 Available online June 01, 2026 <i>Keywords:</i> Aceh Henri Lefebvre Post-disaster park Social space Sustainability *Corresponding author: Ulfiatun Risma Department of Architecture, Faculty of Engineering, Universitas Diponegoro, Indonesia Email: ulfiarisma78@gmail.com	<i>The Meuraxa Green Tourism Park in Banda Aceh, which was established in the aftermath of the 2004 tsunami, embodies substantial ecological, societal, and spiritual significance as a public realm situated within a post-disaster reconstruction landscape. Nevertheless, its present state reveals a noticeable deterioration in terms of functionality and long-term sustainability, as evidenced by deteriorated infrastructure, insufficient levels of community engagement, and the gradual erosion of its cultural significance. This research critically assesses the sustainability of the park by employing Henri Lefebvre's Theory of the Production of Social Space, a conceptual framework that interprets space as a socially constructed product shaped through three interrelated dimensions: spatial practice (perceived space), representations of space (conceived space), and representational space (lived space). A qualitative-descriptive method was applied using field observation, document analysis, and semi-structured interviews. Findings show that the park's social and cultural sustainability remains weak. The spatial practice dimension reflects minimal social use; the representations of space dimension reveal top-down planning; and the representational space dimension shows diminished spiritual identity. The study concludes that the park's sustainability depends on reproducing its social space through three strategies: physical revitalization, participatory social activation, and the restoration of spiritual and cultural meanings. These integrated approaches are essential to transform Meuraxa Park into a living, sustainable public space that embodies the resilience and spiritual identity of Acehnese society.</i>

Introduction

The 2004 Aceh tsunami constituted a transformative and catastrophic event that profoundly reshaped the physical, social, and spiritual fabric of Acehnese society. The massive waves that struck and devastated approximately 149 kilometers of coastline not only resulted in extensive material destruction but also generated a renewed collective awareness regarding the

critical role of public space as a medium for reflection, social recovery, and disaster education (Sari 2023; Pratama and Galih 2018; UNDRR 2015). Within this context, the Tourism Park emerged as a symbolic public space developed through post-disaster reconstruction initiatives in the coastal zone of Ulee Lheue (Aprilia 2022). More broadly, global tourism systems demonstrate a high degree of vulnerability to external disruptions, including pandemics and environmental crises, which significantly affect

mobility patterns, economic systems, and social interactions (Gössling, Scott, and Hall 2021).

The park was developed on the site of former fishponds and mangrove ecosystems that were destroyed by the tsunami. In its initial conception, it functioned as an urban green open space and a coastal recreational landscape (Peraturan Walikota 2021). Between 2019 and 2023, the park accommodated a range of community-based cultural activities (Sekertariat Kabinet RI 2022). However, more recent observations and studies conducted between 2019 and 2024 reveal several critical issues, including inadequate landscape management and limited community participation (Asrar, Karsono, and Olivia 2024), the need for improved infrastructure and enhanced public awareness in maintaining the Ulee Lheue coastal tourism area (Muridha and Desfandi 2023), and expectations for recreational tourism education focused on environmental ecology (Sukma Saputri Sukma, Dwi Oktavallyan Saputri, and Atik Prihatiningrum 2023). At a broader scale, studies on urban parks in Banda Aceh indicate that while physical and recreational functions remain relatively sufficient, their social, cultural, and educational roles are still insufficiently developed (Desyan Ria et al. 2025; Sabila and Aryastiana 2024). In addition, facilities have deteriorated, vegetation is poorly maintained, and social activities have declined significantly (Observation 2025). This condition reflects a wider pattern in which tourism spaces are highly susceptible to management deficiencies and declining social engagement, ultimately leading to reduced functionality and long-term sustainability (Gössling, Scott, and Hall 2021).

From a regulatory standpoint, Banda Aceh Mayor Regulation No. 13 of 2021 concerning the Detailed Spatial Plan (RDTR) and Zoning Regulation for 2021–2041 designates the Meuraxa District as a coastal tourism zone with the thematic orientation of Dhikr and Tsunami Education within a waterfront city framework (Governor 2021). However, this strategic direction has not yet been fully translated into the current patterns of management and spatial utilization within the park. Although prior studies have examined aspects such as physical condition, landscape quality, and tourism potential, there remains a lack of comprehensive evaluation of the park's sustainability through a theoretical framework that simultaneously addresses spatial, social, and symbolic dimensions. This absence constitutes a clear

research gap that the present study seeks to address. Furthermore, existing literature tends to prioritize physical and environmental dimensions of park development, while comparatively limited attention has been directed toward the socio-spatial production of space and its cultural significance in achieving tourism sustainability (Gössling, Scott, and Hall 2021).

Early theoretical developments in architecture and urbanism emphasized the ways in which individuals perceive and utilize public space. Kevin Lynch demonstrated the importance of urban form through the concept of “imageability,” articulated via elements such as paths, edges, districts, nodes, and landmarks, which collectively function as the cognitive structure supporting collective memory and spatial navigation, thereby suggesting that design interventions can enhance urban legibility and emotional attachment (Lynch 1960). Subsequently, Jan Gehl examined how everyday activities, such as lingering, sitting, and conversing, translate spatial design into lived social experiences, arguing that well-designed public spaces facilitate optional and social activities rather than merely accommodating necessary functions (Gehl 2001). Humanistic geography further deepened this experiential perspective. Yi-Fu Tuan's *Space and Place* and Edward Relph's *Place and Placelessness* emphasized the relationships among sense of place, attachment, and identity as grounded in lived experience, while cautioning that placeless modern environments may erode a sense of belonging (Tuan 1977; Lomas, Ayodeji, and Brown 2024). In parallel, Marc Augé's notion of “non-places” captured the anonymity characteristic of supermodern environments such as airports and highways, contrasting them with relational, historically embedded “places” (Augé 1995; İnal-Çekiç, Kozaman-Aygün, and Bilen 2024).

Contemporary scholarship has both reinforced and extended these foundational perspectives. Urban parks are increasingly recognized as essential public spaces that enable urban populations to congregate, engage in social interaction, and foster social cohesion, while also addressing psychological, physical, and sociological needs (Carmona et al. 2003; Groat and Wang 2013). Systematic reviews of public space and social cohesion indicate that physical attributes including accessibility, mixed land use, and the provision of street furniture are closely

associated with meaningful social interaction, although sociodemographic characteristics and perceptual factors significantly influence perceptions of safety and attractiveness (Atmodiwirjo and Yatmo 2021). In Southeast Asian urban contexts, where spatial pressures are intense and socio-cultural diversity is high, the governance and design of green open spaces, and the ways in which communities actively “produce” space are particularly complex (Sahakian et al. 2020). Consequently, urban parks in Indonesia are increasingly oriented toward multidimensional functions, including strengthening ecological resilience, promoting social inclusion, and preserving cultural identity, with participatory processes recognized as essential for ensuring long-term sustainability (Malik et al. 2025).

Building upon and critically engaging with these theoretical traditions, the so-called “spatial turn” reconceptualized space as socially produced and politically contested. Henri Lefebvre’s well-known spatial triad, comprising spatial practice (perceived or used space), representations of space (conceived or planned space), and representational space (lived or meaningful space), proposes that sustainable public space emerges through the co-production of physical form, governance structures, and symbolic meaning (Lefebvre 1974). Stanek (2011) further elaborates Lefebvre’s framework within a qualitative, urbanization-oriented perspective, emphasizing its relevance for contemporary spatial analysis. Lefebvre’s spatiotemporal and dialectical-materialist approach offers a systematic contribution to understanding complex urban phenomena (Ghulyan 2019). This perspective is increasingly significant within contemporary sustainability discourse, in which space is understood not merely as a physical entity but as a socially constructed and continuously reproduced process (Gössling, Scott, and Hall 2021). The integration of Lefebvre’s spatial theory thus provides a critical framework for revitalizing and regenerating urban environments as living spaces, not only as functional settings but also as arenas of meaning, interaction, and cultural expression (Zieleniec 2018). Edward Soja extended this conceptualization through the notion of Thirdspace, a both/and perspective that integrates material and imagined geographies, while Doreen Massey’s *For Space* emphasizes multiplicity, openness, and relational place-making; both perspectives contribute to post-

disaster design approaches that simultaneously engage physical, social, and symbolic dimensions (Massey 2005). Furthermore, Lefebvre’s three spatial dimensions can be aligned with contemporary sustainable urbanism frameworks, introducing core urban qualities such as diversity, efficiency, and identity (Wiedmann and Salama 2019).

Within disaster contexts, the post-disaster dimension of this research necessitates particular attention. Studies on the reconstruction of public spaces following major disasters demonstrate that differing approaches, specifically, government-led versus community-driven initiatives, produce significantly different spatial outcomes in terms of social inclusivity, accessibility, and participatory engagement (Ghezelloo, Hokugo, and Tsukihashi 2023). In such contexts, the Sendai Framework highlights the importance of memory, education, and participation as integral components of disaster risk reduction, roles that are frequently embodied by memorial parks and interpretive sites in countries such as Japan, Thailand, and Sri Lanka (UNDRR 2015).

Overall, existing studies indicate that the Meuraxa Green Tourism Park is confronted with multidimensional challenges, including physical deterioration, limited community participation, the gradual erosion of cultural and spiritual identity, and a persistent disconnect between institutional planning objectives and on-the-ground realities. Despite prior research addressing aspects such as physical condition, landscape quality, and tourism potential, no study has comprehensively assessed the park’s sustainability through a theoretical framework that simultaneously integrates spatial, social, and symbolic dimensions within the specific post-disaster socio-cultural context of Acehese society. Although Lefebvre’s theoretical framework has been widely applied in global urban studies, including in Turkey (Ghulyan 2019), the Netherlands (van Lanen and Meij 2026), and post-industrial British cities (Leary 2013), its application to post-disaster green tourism parks in Indonesia remains limited. This gap constitutes both a research deficiency and a point of novelty for the present study.

This gap underscores the necessity for a more integrative analytical approach that connects spatial theory with sustainability evaluation in post-disaster environments. Accordingly, the objective of this research is to evaluate the sustainability of the Meuraxa Green Tourism Park

through Lefebvre's three spatial dimensions and to formulate strategies for the reproduction of social space that can reinforce the park's role as a living, reflective, and meaningful post-disaster public space. In doing so, this study contributes to bridging the divide between spatial theory and sustainability assessment by proposing an integrative socio-spatial framework applicable to post-disaster public environments.

Methods

This study adopts a qualitative–descriptive research design, employing Lefebvre (1974) Theory of the Production of Social Space as its principal analytical framework. Lefebvre's conceptualization is particularly pertinent, as it interprets space not simply as a material or physical entity, but as a socially constructed product that is continuously formed and re-formed through the dynamic interaction of human practices, institutional structures, and embedded symbolic values within society (Bedford 1998; Lefebvre 1974). This theoretical perspective facilitates a more comprehensive understanding of space as simultaneously a physical configuration, a social process, and a medium of cultural articulation (Massey 2005). Furthermore, the qualitative–descriptive approach is especially suitable for examining complex socio-spatial conditions, as it enables an in-depth interpretation of lived experiences within their specific contextual settings (Creswell and Poth 2018; Groat and Wang 2013).

The empirical investigation was conducted at Meuraxa Green Tourism Park, situated in Meuraxa District, Banda Aceh (see figures 1 and 2). This location constitutes one of the principal post-tsunami reconstruction zones and occupies a

strategic role within the broader network of tsunami heritage tourism in the city. The site was selected as a case study due to its symbolic relevance as both a reconstructed physical landscape and a socio-spatial environment reflecting the evolving dynamics of post-disaster urban life (Sari 2023; UNDRR 2015). The case study approach is considered appropriate because it allows for an in-depth exploration of contemporary phenomena within real-life contexts, particularly when the boundaries between the phenomenon and its context are indistinct (Yin 2018).

Data collection was carried out through three main techniques:

1. Field observations were conducted to evaluate the physical condition of the park, its spatial organization, patterns of user behavior, and levels of public engagement. This method corresponds to Lefebvre's dimension of spatial practice (perceived space), which captures how space is experienced and utilized in everyday life.
2. Document analysis was carried out through a review of the Detailed Spatial Plan (RDTR) of Banda Aceh for the period 2021–2041, along with other relevant spatial policies, in order to examine the conceptual and institutional representations underlying the park's planning and management. This aligns with the dimension of representations of space (conceived space).
3. In-depth interviews were conducted with local residents, community leaders, religious figures, park users, and site managers to investigate their perceptions and interpretations regarding the social and spiritual meanings associated with the park. This corresponds to the dimension of representational space (lived space).



Figure 1. Situation map of Meuraxa Green Park, Aceh, Indonesia
Source: Google Earth 2025



Figure 2. Signage situation of the park, entrance

All collected data were evaluated using thematic and interpretive techniques, with Lefebvre's three spatial dimensions serving as the principal evaluative framework for assessing sustainability. The analysis emphasized the interconnections among physical form, social practices, and symbolic meanings, demonstrating how these dimensions interact either to reinforce or to weaken the sustainability of social space. To

ensure the validity and reliability of the findings, a triangulation strategy was applied by cross-referencing insights derived from field observations, interview data, and document analysis. This methodological integration enhances the robustness and credibility of the research and is consistent with established standards in qualitative spatial inquiry (Groat and Wang 2013).

Results and discussion

Spatial Practice (The Experienced Space)

Field observations indicate that the level of social activity within Meuraxa Green Tourism Park has decreased markedly compared to the early period following reconstruction. Current patterns of use are largely passive and sporadic. Visitors predominantly arrive in the late afternoon to rest, relax, or enjoy coastal views and sunsets. These activities tend to be individual in nature, such as taking photographs, sitting alone, or fishing, rather than collective or socially interactive practices that foster community engagement. Several zones within the park exhibit clear signs of neglect. Physical elements such as seating facilities, lighting infrastructure, and pedestrian pathways are either damaged or overgrown with vegetation (Asrar, Karsono, and Olivia 2024). This deterioration reduces user comfort and diminishes perceived safety,

particularly during evening hours. Activities that were originally envisioned as core functions of the park, namely community-based, religious, and educational programs linked to post-disaster recovery, are no longer evident. The quality and safety of public spaces are critical determinants of social sustainability, and inadequate lighting combined with poor maintenance significantly discourages public use and interaction (Groat and Wang 2013; Atmodiwirjo and Yatmo 2021).

Beyond its social implications, the decline in spatial utilization has also affected localized economic activity. Informal vendors, parking attendants, and small-scale service providers that previously operated within and around the park have largely disappeared, indicating a loss of microeconomic interactions formerly sustained by public presence (Gehl 2001). As a consequence, the park now functions predominantly as a passive physical environment rather than an active locus of social production (Lefebvre 1974; Malik et al. 2025).

Table 1. Summary of spatial activity patterns in Meuraxa Green Tourism Park

Area / Zone	Main Observations
Seaside area	Moderate levels of activity occur during the late afternoon period. Visitors generally engage in passive behaviors such as sitting, observing, and photographing the alignment of fishing boats and coastal tourism features. Interactions are predominantly individual rather than collective (see figure 3).
Central area	No discernible public use is evident; deteriorated facilities and excessive vegetation growth have rendered the space largely inaccessible and functionally inactive (see figure 4).
Green zone	Intermittent use is observed in the form of small-scale family picnics, typically occurring on weekends; however, such activities are irregular and temporary in nature (see figure 5).
Cultural stage	The area is currently unused and in a state of decline; although the structural elements remain intact, there is an absence of programming, maintenance, and functional activation (see figure 6).

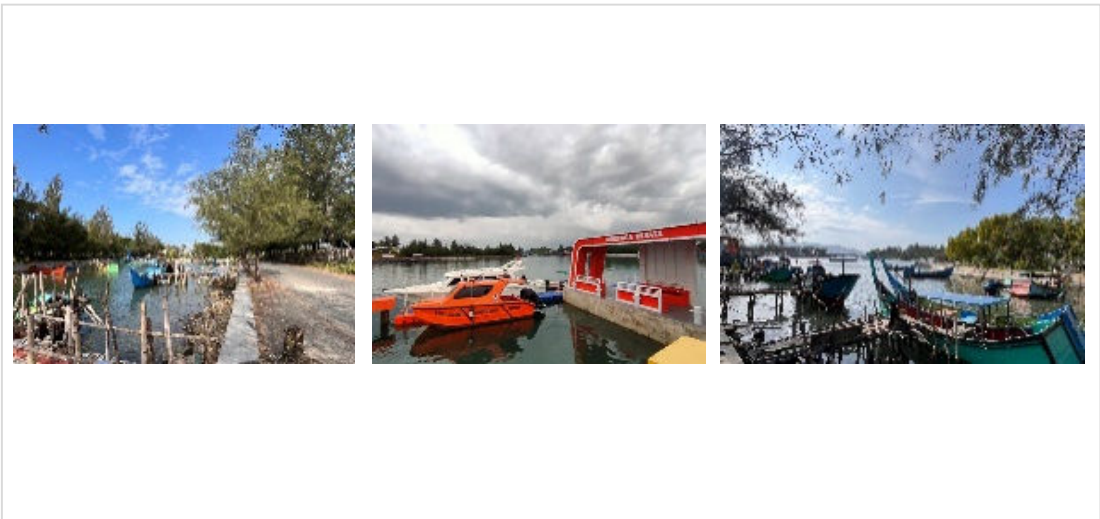


Figure 3. Situation of seaside area



Figure 4. Situation of Central area

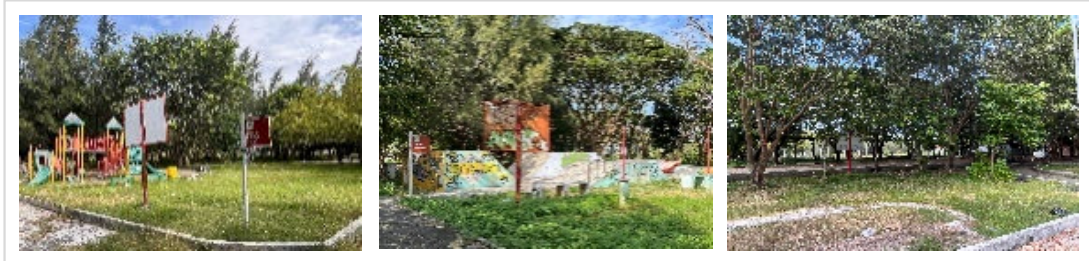


Figure 5. Situation of Green zone



Figure 6. Situation of Cultural stage

Representations of Space (The Planned Space)

An examination of the Banda Aceh Detailed Spatial Plan (RDTR) for 2021–2041 indicates that Meuraxa District is conceptually designated as a coastal tourism zone with a thematic emphasis on Dhikr and Tsunami Education. This vision aligns with broader municipal strategies aimed at integrating recreation, spirituality, and disaster awareness within a cohesive coastal tourism model, commonly framed as a waterfront city concept (Peraturan Walikota 2021). The planning framework envisions Meuraxa as a prototype for sustainable post-disaster urban development that balances ecological restoration with cultural and spiritual revitalization. Integrating local cultural identity into spatial design is essential not only for reinforcing residents' sense of belonging but also for ensuring that public spaces retain emotional and symbolic significance.

However, on-site conditions reveal a substantial discrepancy between planning intentions and actual implementation. Physical development within the park has largely prioritized visual and environmental aspects,

including green open spaces, pedestrian circulation routes, and landscape vegetation. In contrast, there is a lack of institutional and programmatic support for activities that would reinforce its identity as a reflective and educational environment. The absence of tsunami education facilities, interpretive signage, and regularly organized community or spiritual programs, such as dhikr gatherings, demonstrates a clear gap between conceptual planning and practical realization. Infrastructure maintenance and public awareness initiatives in the Ulee Lheue area also remain insufficient (Muridha and Desfandi 2023).

Within Lefebvre's theoretical framework (1974), this situation reflects the dominance of conceived space, which is produced through top-down bureaucratic and technocratic processes. Although planners and governing bodies have formally "designed" the space, it lacks the lived social dimension that emerges through active community participation. Consequently, planning practices remain predominantly top-down, privileging physical form over social function.

This condition indicates a failure to achieve the dimension of “identity” within sustainable urbanism frameworks (Wiedmann and Salama 2019). As a result, the park exists primarily as a designed artifact rather than as a socially embedded and sustained environment.

This phenomenon also highlights the fragility of institutional sustainability. Coordination among governmental agencies, park administrators, and local communities is limited, and no dedicated management body is responsible for overseeing the park’s operations. Maintenance

responsibilities are largely assigned to technical departments with constrained resources. In the absence of participatory governance mechanisms, planning lacks the flexibility required to respond effectively to evolving social needs and cultural practices.

Consequently, Meuraxa Green Tourism Park represents a formally planned yet socially disconnected space, in which the dominance of bureaucratic representations of space overshadows the dynamic interplay of spatial practice and lived experience.

Table 2. Comparison between planning intentions and actual conditions in Meuraxa Green Tourism Park

Planning Aspect	Main Findings (RDTR vs Reality)
Land-Use Function	Within the RDTR (2021–2041), Meuraxa is formally designated as a coastal tourism zone structured around the themes of Dhikr and Tsunami Education. In actual implementation, however, the site predominantly operates as a passive recreational landscape, with only minimal provision for educational or spiritually oriented activities (see figure 7).
Physical Design	The planning framework proposes key spatial components, including green corridors, pedestrian circulation systems, contemplative plazas, and interpretive signage. In contrast, on-site conditions indicate degraded pathways, insufficient maintenance, and the absence of symbolic or educational landscape features (see figure 8).
Activity Programming	The space was originally intended to accommodate religious assemblies, disaster education programs, and cultural performances. In reality, none of these programmed activities are currently implemented, and there is an absence of both scheduled events and community-initiated uses.
Management & Governance	The planning vision anticipates collaborative governance involving both local authorities and community stakeholders. At present, however, the park is managed solely by a technical governmental unit with limited operational capacity, and no participatory management mechanism is in place.
Integration with Tourism Network	The RDTR envisions spatial and thematic connectivity with nearby tsunami heritage sites, including Masjid Baiturrahim and PLTD Apung (see figure 9). Empirical observations reveal weak physical linkage and a lack of thematic continuity across these sites.



Figure 7. Reality of Land-Use function on 2022



Figure 8. Current physical condition



Figure 9. Masjid Raya Baiturrahim and Kapal

Representational Space (The Lived and Meaningful Space)

Findings from interviews with local residents, community leaders, and visitors indicate that Meuraxa Green Tourism Park continues to possess significant symbolic meaning as part of the collective memory of the 2004 tsunami. Many respondents describe the park as a spiritual environment a place for reflection on the greatness of Allah SWT and for expressing gratitude for survival in the aftermath of the disaster. Concepts such as *dhikr* (remembrance), *tafakkur* (contemplation), and *shukr* (gratitude) remain embedded within community perceptions of the site. For numerous residents, visiting the park constitutes not merely a recreational activity but also a reflective engagement with divine power and human vulnerability. In this sense, a well-conceived park can simultaneously fulfill recreational and educational functions while reinforcing community identity and environmental awareness (Sukma Saputri Sukma, Dwi Oktavallyan Saputri, and Atik Prihatiningrum 2023).

However, these spiritual and symbolic meanings have gradually diminished due to declining social activity and weakening institutional as well as community support.

Respondents noted that large-scale *dhikr* gatherings, cultural festivals, and commemorative events that were actively held between 2019 and 2020 are no longer organized. The absence of symbolic elements such as memorial monuments, contemplative spaces, and interpretive installations has further contributed to the erosion of the park's reflective and spiritual identity. As one community leader remarked, "This park should remind us of the tsunami and of God's mercy, but now it appears neglected." This decline in meaning reflects a broader tendency characteristic of modern environments, in which spaces lose their relational, historical, and identity-forming qualities, becoming what Augé describes as "non-places" (Augé 1995).

This condition illustrates the weakening of representational space within Lefebvre's spatial triad, the dimension in which space is lived, experienced, and imbued with symbolic meaning. According to Lefebvre (1974), representational space arises from collective imagination and emotional attachment. When this dimension is not sustained through ritual practices, memory, or intentional design, space loses its capacity to embody cultural and spiritual values. The Sendai Framework (UNDRR 2015) also emphasizes that preserving memory and meaning in post-disaster

environments is not merely an aesthetic concern but a functional component of community resilience and disaster risk reduction.

Consequently, Meuraxa Green Tourism Park has shifted from a lived and meaningful space, once representing collective faith and memory, into what may be described as a symbolic void: a physical setting that has lost much of its cultural resonance. The weakening of representational space indicates that cultural and spiritual sustainability has not been successfully maintained. Values of remembrance and reflection, once central to the park's identity, are no longer actively expressed through its spatial configuration or patterns of use.

This decline further demonstrates the interdependence of Lefebvre's three spatial dimensions. The reduction in spatial practice (declining use) and the dominance of representations of space (top-down planning) have directly contributed to the erosion of representational space, resulting in the loss of shared identity and collective memory. From a sustainability perspective, this condition reflects a breakdown in cultural continuity, wherein the physical structure of space persists, but its social and symbolic meanings are no longer reproduced through lived experience.

Evaluation of Sustainability and Social Space Reproduction

The integrated analysis of Lefebvre's three spatial dimensions indicates that the sustainability of Meuraxa Green Tourism Park has not yet been fully realized. Each dimension, spatial practice, representations of space, and representational space, exhibits distinct deficiencies that collectively limit the park's effectiveness as a dynamic and socially meaningful public environment (Lefebvre 1974).

From the standpoint of spatial practice, the park no longer serves as an active arena for social interaction or community engagement. Patterns of use are limited and predominantly passive, while collective cultural activities have largely disappeared. Such passive usage patterns indicate a failure to achieve social sustainability within urban public spaces (Groat and Wang 2013; Malik et al. 2025).

In terms of representations of space, planning and management processes remain top-down, with an emphasis on physical aesthetics rather than participatory engagement and cultural integration. The official designation of Meuraxa

as a "Dhikr and Tsunami Education Zone" has not been effectively translated into spatial identity or operational programming.

Finally, the dimension of representational space, associated with collective memory, spirituality, and symbolic meaning, has significantly weakened. The spiritual values that once endowed the park with cultural depth are no longer reinforced through design interventions or community practices.

The disconnection among these three dimensions signifies a breakdown in the production of social space, wherein physical form, planning representation, and lived meaning no longer interact in a cohesive and mutually reinforcing manner (Wiedmann and Salama 2019). To restore sustainability, the park requires a process of social-space reproduction that reintegrates physical, social, and symbolic dimensions into an ongoing and dynamic system. International research on post-disaster public spaces indicates that sustainable recovery necessitates not only physical reconstruction but also the revitalization of social practices and the reestablishment of symbolic meaning (UNDRR 2015). In the specific socio-cultural context of Aceh, this involves restoring the role of parks as spiritual landmarks and sites of collective memory, transforming them from passive green areas into active and meaningful post-disaster commemorative spaces (Asrar, Karsono, and Olivia 2024; Muridha and Desfandi 2023). These findings underscore that sustainability in post-disaster public spaces cannot be achieved solely through physical development, but must involve the continuous reproduction of social space through the integration of spatial practice, planning frameworks, and lived experience.

Conclusions

This study concludes that Meuraxa Green Tourism Park has not yet attained comprehensive sustainability in its current condition. Utilizing Henri Lefebvre's Theory of the Production of Social Space (Lefebvre 1974), the analysis identifies a critical disjunction among three key spatial dimensions: (1) The spatial practice dimension, characterized by declining social activity and reduced user engagement; (2) The representations of space dimension, dominated by top-down planning and limited institutional

coordination; and (3) The *representational space* dimension, in which cultural and spiritual meanings have progressively diminished.

This fragmentation has weakened the park's role as a socially productive and culturally meaningful environment. To reestablish sustainability, the park must undergo a process of social-space reproduction that integrates physical revitalization, participatory social engagement, and symbolic reconstruction.

Through these strategies, Meuraxa Green Tourism Park has the potential to evolve from a passive green open space into a living memorial that embodies ecological resilience, social vitality, and spiritual significance. Its revitalization may serve as a model for post-disaster public spaces both within Indonesia and internationally, demonstrating that authentic sustainability emerges through the balanced integration of physical design, community participation, and collective meaning. This study therefore offers practical insights for policymakers and urban designers in developing post-disaster public environments that are not only physically resilient but also socially and culturally sustainable.

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References

- Aprilia, Ajeng Hanifa Zahra Caesar. 2022. "PLTD Apung: Saksi Bisu Kedahsyatan Tsunami Aceh." KPNL Banda Aceh. 2022. <https://www.djkn.kemenkeu.go.id/kpknl-bandaaceh/baca-artikel/15342/PLTD-Apung-Saksi-Bisu-Kedahsyatan-Tsunami-Aceh.html>.
- Asrar, M, B Karsono, and S Olivia. 2024. "Evaluasi Elemen Lanskap Pada Taman Wisata Meuraxa Banda Aceh." *Jurnal MESIL (Mesin Elektro Sipil)* 5 (1): 11–21.
- Atmodiwirjo, Paramita, and Yandi Andri Yatmo. 2021. "Urban Interiority: Emerging Cultural and Spatial Practices." *Interiority* 4 (1): 1–4. <https://doi.org/10.7454/in.v4i1.131>.
- Augé, Marc. 1995. *Non-Places: Introduction to an Anthropology of Supermodernity*. New York: London: Verso.
- Bedford, Richard. 1998. "Thirdspace. Journeys to Los Angeles and Other Real-and-Imagined Places By Edward W. Soja." *New Zealand Geographer* 54 (2): 48–49. <https://doi.org/10.1111/j.1745-7939.1998.tb02079.x>.
- Carmona, Matthew, Tim Heath, Taner Oc, and Steven Tiesdell. 2003. *Public Places, Urban Spaces: The Dimensions of Urban Design*. Architectural Press.
- Creswell, John W., and Cheryl N. Poth. 2018. *Qualitative Inquiry & Research Design*. 4th ed. SAGE Publications.
- Desyan Ria, Edi Saputra, Eka Rahmi, and Reza Fahmi. 2025. "Quality of City Parks as A Public Green Open Space Banda Aceh City." *ROCE: Jurnal Pertanian Terapan* 2 (1). <https://doi.org/10.71275/roce.v2i1.74>.
- Gehl, Jan. 2001. *Life between Buildings: Using Public Space*. The Danish Architectural Press.
- Ghezelloo, Yegane, Akihiko Hokugo, and Osamu Tsukihashi. 2023. "Production of Gathering Spaces in Post-Disaster Recovery Scenarios: Case Studies from the Great East Japan Earthquake and Tsunami-2011." *City, Territory and Architecture* 10 (1): 11. <https://doi.org/10.1186/s40410-023-00195-4>.
- Ghulyan, Husik. 2019. "Lefebvre's Production of Space in the Context of Turkey: A Comprehensive Literature Survey." *Sage*

- Open 9 (3).
<https://doi.org/10.1177/2158244019870537>.
- Gössling, Stefan, Daniel Scott, and C. Michael Hall. 2021. "Pandemics, Tourism and Global Change: A Rapid Assessment of COVID-19." *Journal of Sustainable Tourism* 29 (1): 1–20. <https://doi.org/10.1080/09669582.2020.1758708>.
- Groat, Linda N., and David Wang. 2013. *Architectural Research Methods*. 2nd ed. Hoboken, New Jersey: John Wiley & Sons, Inc.
- İnal-Çekiç, Tuba, Senem Kozaman-Aygün, and Ömer Bilen. 2024. "Reflections on 'Place Attachment': Perceptions of Urban Redevelopment in an Informal Neighborhood in Istanbul." *Journal of Housing and the Built Environment* 39 (1): 1–20. <https://doi.org/10.1007/s10901-023-10037-x>.
- Lanen, Sander van, and Erik Meij. 2026. "Producing Space through Social Work: Lefebvre's Social Production of Space and the History of Social Work in the Netherlands." *European Journal of Social Work* 29 (1): 188–200. <https://doi.org/10.1080/13691457.2025.2494065>.
- Leary, Michael Edema. 2013. "A Lefebvrian Analysis of the Production of Glorious, Gruesome Public Space in Manchester." *Progress in Planning* 85 (October): 1–52. <https://doi.org/10.1016/j.progress.2012.12.002>.
- Lefebvre, Henri. 1974. *The Production of Space*. Oxford: Blackwell.
- Lomas, Michael J., Eunice Ayodeji, and Philip Brown. 2024. "Imagined Places of the Past: The Interplay of Time and Memory in the Maintenance of Place Attachment." *Current Psychology* 43 (3): 2618–29. <https://doi.org/10.1007/s12144-023-04421-7>.
- Lynch, Kevin. 1960. *The Image of the City*. Harvard: The MIT Press.
- Malik, Andy Anton Mangopa, Rieneke Lusya Evani Sela, Leidy Magrid Rompas, Johan Reineer Tumiwa, and Adrian Szilárd Nagy. 2025. "Community Participation in the Design of Neighborhood Parks: Green Open Spaces for Quality of Life and Cultural Identity in East Indonesia." <https://doi.org/10.2139/ssrn.5953834>.
- Massey, Doreen. 2005. *For Space*. London: SAGE Publications Ltd.
- Muridha, Nabila -, and Mirza Desfandi. 2023. "Kajian Pengembangan Objek Wisata Pantai Ulee Lheue Di Desa Ulee Lheue Meuraxa Kota Banda Aceh." *Jurnal Pendidikan Geosfer* 8 (1.1): 85–103. <https://doi.org/10.24815/jpg.v8i1.1.31810>.
- Peraturan Walikota. 2021. *Rencana Detail Tata Ruang Dan Peraturan Zonasi Kota Banda Aceh Tahun 2021-2041*. Indonesia.
- Pratama, Aswab Nanda, and Bayu Galih. 2018. "26 Desember 2004, Gempa Dan Tsunami Aceh Menimbulkan Duka Indonesia." Kompas.Com. 2018. <https://nasional.kompas.com/read/2018/12/26/11213301/26-desember-2004-gempa-dan-tsunami-aceh-menimbulkan-duka-indonesia?page=all>.
- Sabila, Farisa, and Putri Aryastiana. 2024. "Study of the Function of City Parks as Public Open Space in Meuraxa District, Banda Aceh Autho." *Jurnal Serambi Engineering* 9 (3): 10137–10147.
- Sahakian, Marlyne, Manisha Anantharaman, Antonietta Di Giulio, Czarina Saloma, Dunfu Zhang, Rupali Khanna, Srikanth Narasimalu, et al. 2020. "Green Public Spaces in the Cities of South and Southeast Asia. Protecting Needs towards Sustainable Well-Being." *The Journal of Public Space*, no. Vol. 5 n. 2 (April), 89–110. <https://doi.org/10.32891/jps.v5i2.1286>.
- Sari, Ressay Novita. 2023. "Mengenang & Refleksi Diri 19 Tahun Tsunami Aceh (2004 – 2023)." LLDIKTI Wilayah XIII Aceh. 2023. <https://lldikti13.kemdiktisaintek.go.id/2023/12/27/mengenang-19-tahun-tsunami-aceh/>.
- Sekertariat Kabinet RI. 2022. "Menparekraf: 50 Desa Wisata Terbaik Simbol Kebangkitan Ekonomi Indonesia." Setkab.Go.Id. 2022. <https://setkab.go.id/menparekraf-50-desawisata-terbaik-simbol-kebangkitan-ekonomi-indonesia/>.
- Sukma Saputri Sukma, Dwi Oktavallyan Saputri, and Atik Prihatiningrum. 2023. "Perancangan Taman Wisata Edukasi dengan Pendekatan Arsitektur Ekologi di Kota Bengkulu." *Teknosia* 17 (2): 70–79.

- <https://doi.org/10.33369/teknosia.v17i2.28855>
5.
- Tuan, Yi-Fu. 1977. *Space and Place: The Perspective of Experience*. Minneapolis: University of Minnesota Press.
- UNDRR. 2015. "Sendai Framework for Disaster Risk Reduction 2015-2030." *UNDRR United Nations Office for Disaster Risk Reduction*. Japan: Geneva.
<https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030>.
- Wiedmann, Florian, and Ashraf M. Salama. 2019. "Mapping Lefebvre's Theory on the Production of Space to an Integrated Approach for Sustainable Urbanism." In *The Routledge Handbook of Henri Lefebvre, The City and Urban Society*. Routledge.
- Yin, Robert K. 2018. *Case Study Research and Applications: Design and Methods*. 6th ed. London: Sage Publication.
- Zieleniec, Andrzej. 2018. "Lefebvre's Politics of Space: Planning the Urban as Oeuvre." *Urban Planning* 3 (3): 5–15.
<https://doi.org/10.17645/up.v3i3.1343>.

Author(s) contribution

Ulfiatun Risma contributed to the research concepts preparation, methodologies, data analysis, visualization, articles drafting and revisions.

Agung Budi Sardjono contributed to the supervision of the overall research process, critical review of the manuscript, and editing of the final article draft.

Agus Supriyanto contribute to methodology, supervision, and validation.

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