Sustainable Waste Management and Economic Impact at Loang Baloq Park, Mataram City: A Focus on Tourism Economics

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Abstract: This qualitative study investigates the nexus between sustainable waste management and tourism economics at Loang Baloq Park, Mataram City. Utilizing interviews, focus group discussions, observational studies, document analysis, and ethnographic engagement, the research explores stakeholder perspectives and behaviors. The research intervention transformed waste management practices, introducing designated trash bins and addressing sanitation issues. Collaboration with Sekolah Tinggi Pariwisata Mataram and ambitious plans for a waste bank showcase a strategic shift toward economic sustainability. The study implemented a purposeful socialization approach, strategically aligning activities with economic goals to address waste management challenges while promoting local businesses.

Keywords: Waste and Hygiene management; Economic Impact; Loang Baloq Park; Mataram City

JEL Classification: Q53; Q56

Introduction

In the ever-evolving landscape of emerging economies, tourism emerges as a formidable force, propelling economic growth through multifaceted channels such as export revenue, infrastructure development, and job creation (Figini et al., 2018; Glasson et al., 1995; UNWTO et al., 2017). This dynamic force, while undeniably a catalyst for transformative change, encounters its own set of challenges, particularly in the realm of sustainability. Within the intricate tapestry of tourism’s expansive footprint, waste management stands out as a critical facet deserving nuanced exploration. This paper embarks on a comprehensive journey into the economic dimensions of waste management and hygiene issues, weaving a narrative that unravels the complex interplay between sustainable practices and economic impact, with a specific focus on the enchanting locale of Loang Baloq Park in Mataram City, Indonesia.

The exponential growth of tourism, a phenomenon often marked by unchecked expansion, gives rise to a parallel surge in the production of solid waste (SW), posing formidable environmental threats and potentially imperiling the long-term viability of the tourism industry itself (Tang & Tan, 2015). This challenge is further compounded in developing countries, where the management of solid waste encounters additional hurdles...
stemming from limited institutional capacity, inadequate funding, and a dearth of local awareness (Gidarakos et al., 2006; Maddox et al., 2011; Manaf et al., 2009).

A pivotal contributor to the escalating solid waste issue is the international tourist, whose sojourns are marked by a staggering daily production of up to 1 kg of waste (Babayemi & Dauda, 2010; Zorpas et al., 2015). The disparities in waste generation patterns between international and domestic tourists exacerbate this problem, giving rise to improper disposal practices such as open burning and dumping, which are regrettably prevalent in many developing nations (Brown et al., 1997; Gidarakos et al., 2006).

Amidst the burgeoning challenges, the clarion call for sustainable tourism becomes imperative, demanding practices that are not only economically viable but also ecologically sensitive and culturally appropriate (Liu & Shu, 2020). The linchpin of effective waste management lies in heightened public awareness, necessitating a collective understanding of the importance of litter reduction, waste source segregation, and the manifold benefits of recycling and composting (Alavi Moghadam et al., 2009; Babayemi & Dauda, 2010). Unfortunately, the current landscape in many developing countries, Indonesia included, reveals a stark reality of low public awareness levels, thereby impinging on effective waste management and environmental health.

As Indonesia asserts itself as the fourth most populous developing nation, it grapples with the ramifications of evolving consumption patterns and the resultant surge in waste volumes, with a particular emphasis on the pervasive issue of plastic waste (Gidarakos et al., 2006). The gravity of the situation is further accentuated by Indonesia’s global ranking as the second-largest contributor to plastic waste in the ocean (Pamungkas et al., 2021).

Against this backdrop of global significance and local urgency, the idyllic Loang Baloq Park, despite its natural allure and recent recognition as one of the top 50 tourist villages in Indonesia in 2022, finds itself ensnared in the labyrinth of significant waste management and cleanliness issues (Ghosh, 2016; Permana et al., 2015). This paper embarks on an exploration of strategic interventions and innovative strategies designed to enhance waste management and hygiene awareness within the park’s confines. The overarching goal is to fortify its sustainability and ensure its enduring economic viability, seamlessly aligning with the fundamental principles of tourism economics and environmental stewardship. This in-depth examination promises not only to unravel the intricacies of Loang Baloq Park’s current challenges but also to illuminate a path forward that harmonizes the preservation of its natural splendor with the imperatives of sustainable economic development.

**Research Method**

This study employs a qualitative research design to thoroughly explore the perceptions, behaviors, and experiences of key stakeholders, aiming to understand the economic implications of sustainable waste management at Loang Baloq Park. Conducting semi-structured interviews is a crucial component of the research methodology (Miles &
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Huberman, 2014), involving key stakeholders such as park management, local authorities, environmental organizations, and representatives from local businesses. The goal is to delve into their perspectives on the economic impact of current waste management practices and explore their thoughts on integrating sustainability into economic strategies.

Additionally, the research involves facilitating focus group discussions with park visitors to gain insights into their perceptions of waste management practices and the economic aspects of their park experience (Khan & Abedin, 2022; O.Nyumba et al., 2018). The focus is on understanding their willingness to participate in sustainable tourism activities and the perceived economic benefits associated with such practices.

Observational studies will be undertaken to closely observe waste management practices within the park (Braun & Clarke, 2006; Byrne, 2022). This includes analyzing visitor behaviors, waste disposal patterns, and interactions with economic opportunities linked to sustainable waste management, providing nuanced insights into the practical aspects of economic impact.

Document analysis is integral to the research (Aspers & Corte, 2019), involving the examination of relevant documents such as park management reports, environmental impact assessments, and local government policies related to waste management. This analysis aims to provide contextual information on existing frameworks and their economic implications.

Stakeholder engagement will be conducted through an ethnographic approach, immersing researchers within the community and park environment. This involves participant observation to understand the socio-economic dynamics associated with waste management practices and how they intersect with broader economic considerations.

Thematic analysis will be utilized to identify recurring themes, patterns, and narratives within qualitative data (Braun & Clarke, 2006; Byrne, 2022). Themes may include stakeholder perceptions of economic impact, barriers and facilitators of sustainable waste management, and potential economic opportunities associated with responsible tourism practices.

The constant comparative method will be applied to compare emerging themes across different stakeholder groups and observational contexts (Fram, 2013; Kolb, 2012). This iterative process will contribute to the development of a comprehensive understanding of the economic dynamics surrounding sustainable waste management.

Maintaining reflexivity throughout the research process is crucial, acknowledging the researchers' perspectives and potential biases. Regular reflection on how personal experiences and preconceptions may influence data interpretation is integral to ensuring research integrity.
Finally, ethical considerations are prioritized, ensuring informed consent, protecting participant confidentiality, and respecting cultural nuances. Upholding transparency in reporting is emphasized to accurately represent stakeholders' voices and perspectives.

**Result and Discussion**

**Waste Management Mechanism**

Before the research team's intervention, the waste management practices at Loang Balok Park were deeply entrenched in traditional methods, primarily reliant on open burning. This antiquated approach not only posed environmental hazards but also underscored the pressing need for transformative measures. The research and service teams, recognizing the imperative for change during their fieldwork, spearheaded a series of substantial improvements that heralded a new era for waste management at the park.

A cornerstone of this transformation was the strategic introduction of designated trash bins, marking a departure from the conventional practices. These bins were not mere receptacles but rather an organized system featuring color-coded categories for meticulous waste segregation. Green bins were earmarked for reusable waste, red for hazardous materials, and blue for recyclables. This innovative approach not only streamlined waste disposal but also laid the foundation for a more sustainable and environmentally conscious waste management system.

Simultaneously, the sanitation conditions at Loang Balok Park underwent a radical metamorphosis catalyzed by the proactive initiatives of the research and service teams. Prior to their intervention, the restroom facilities within the park were characterized by an alarming lack of adequate water supply, perpetuating an environment marred by filth and unpleasant odors. The origins of these challenges were rooted in a dual predicament – insufficient access to clean water sources and a pervasive neglect of sanitation facility maintenance by the park management.

The deficiency in clean water sources posed a multifaceted challenge, impacting not only the basic hygiene standards within the park but also contributing to the degradation of visitor experiences. The filth and unpleasant odors, symptomatic of this water scarcity, presented a clear manifestation of the urgent need for remedial measures. The research and service teams, recognizing the interconnectedness of sanitation and visitor satisfaction, undertook targeted interventions to address the root causes of these challenges.

Moreover, the inadequate attention to sanitation facility maintenance by the park management emerged as a critical contributing factor. The research team's intervention transcended the immediate visible issues, delving into the systemic problems affecting the maintenance protocols. Through collaborative efforts with park management, the research team sought to implement sustainable solutions that would not only rectify the existing issues but also establish a framework for ongoing maintenance and upkeep.
In essence, the metamorphosis witnessed at Loang Balok Park, catalyzed by the research and service teams, extends beyond the mere provision of designated trash bins and improved sanitation conditions. It epitomizes a paradigm shift in waste management practices, reflecting a commitment to environmental sustainability and visitor well-being. The orchestrated changes serve as a testament to the transformative power of targeted interventions in creating a holistic and enduring impact within the realm of tourism and environmental stewardship.

The implementation of designated trash bins with color-coded categories for waste segregation at Loang Balok Park is supported by a study on solid waste management solutions for a rapidly urbanizing area in Thailand. The study emphasizes the importance of understanding local contexts and engaging with stakeholders to develop viable solutions to waste management challenges (Yukalang et al., 2018). By learning from successful waste management practices in other regions, Loang Balok Park can continue to improve its waste management system and provide a cleaner and more sustainable environment for visitors and locals alike.

Furthermore, the research and service teams’ efforts to improve sanitation conditions at Loang Balok Park align with the United Nations’ Sustainable Development Goals (SDGs). Goal 6 aims to ensure access to water and sanitation for all, and the research team’s interventions have contributed to achieving this goal by addressing the lack of adequate water supply and improving sanitation facilities within the park (Sea Circular, 2020). By focusing on sustainable solutions and long-term management plans, the research and service teams have demonstrated their commitment to creating a more environmentally conscious and visitor-friendly waste management system at Loang Balok Park.

Waste Management Collaboration

In tracing the historical trajectory of Loang Baloq Tourism Park, a notable facet emerges — its erstwhile limited collaboration, primarily confined to a partnership with Sekolah Tinggi Pariwisata Mataram. This historical alliance, rooted in a shared commitment to environmental consciousness, specifically honed in on waste management practices and hygiene training, showcasing an early recognition of the pivotal role that sustainable practices play in the tourism landscape.

The nucleus of this collaboration was the symbiotic relationship established between Loang Baloq Tourism Park and Sekolah Tinggi Pariwisata Mataram. The collaboration, strategically focused on waste management practices and hygiene training, attested to a forward-looking approach in addressing the burgeoning challenges of waste generation within the park’s precincts. The Mataram Tourism High School team, as torchbearers of this collaborative initiative, spearheaded targeted training sessions that delved into multifaceted dimensions of waste management.

The training sessions orchestrated by the Mataram Tourism High School team were a dynamic amalgamation of theoretical knowledge and practical applications. Topics such as composting techniques and innovative crafting from recycled materials, notably plastic
glasses, took center stage. This bespoke training regimen not only imparted essential skills but also instilled a sense of environmental responsibility, nurturing a cohort of individuals cognizant of the transformative potential inherent in waste materials.

Composting, as a core component of the training, became a linchpin for sustainable waste management practices. The participants, guided by the expertise of the Mataram Tourism High School team, gained insights into the alchemy of converting organic waste into nutrient-rich compost, thereby contributing to the park's ecological balance. The crafting sessions, focusing on repurposing plastic glasses and other recycled materials, exemplified an innovative approach to waste reduction, aligning with the ethos of the circular economy.

Beyond the immediate impact on waste management, this historical collaboration resonates as a testament to the pivotal role educational institutions can play in steering the course towards sustainable tourism practices. The Mataram Tourism High School team, through its proactive engagement, not only disseminated knowledge but also sowed the seeds for a cultural shift towards environmental stewardship within the local community.

In retrospect, this historical collaboration laid a foundational cornerstone for the subsequent interventions undertaken by the research and service teams. It reflects an ethos of continuity and progressive engagement in addressing waste management challenges, with each phase building upon the insights and initiatives of its predecessor. This collaborative legacy stands as a beacon, illuminating the transformative potential that emerges when educational institutions and tourist destinations unite in their pursuit of sustainable and responsible practices.

The historical collaboration between Loang Baloq Tourism Park and Sekolah Tinggi Pariwisata Mataram, focusing on waste management practices and hygiene training, is in line with the recommendations based on stakeholder input for solid waste management solutions in a rapidly urbanizing area in Thailand (Yukalang et al., 2018). The study emphasizes the need for viable solutions to waste management challenges, which can be achieved through extensive community consultation, engagement with local experts, and the initiation of collection services that support waste separation at the source. This supports the collaborative approach taken by the two institutions, highlighting the importance of engaging stakeholders and implementing practical waste management solutions.

Additionally, the collaboration between the park and the Mataram Tourism High School aligns with the concept of a better world through cooperative waste management, as discussed in the publication "A Better World." The dynamic amalgamation of theoretical knowledge and practical applications in waste management and the focus on sustainable solutions resonate with the principles of cooperative management of waste for a better tomorrow (UNESCO, 2018). This underscores the significance of the collaborative efforts in not only addressing waste management challenges but also in fostering a cultural shift towards environmental stewardship within the local community.
Waste Management Planning

As we cast our gaze toward the future trajectory of Loang Baloq Tourism Park, a tapestry of ambitious plans unfolds, envisioning comprehensive waste management and sanitation improvements. At the forefront of these forward-looking initiatives stands a noteworthy proposal — the establishment of a waste bank designed not only to address environmental concerns but also to unlock economic value embedded within existing waste resources.

The conceptualization of a waste bank represents a paradigm shift in waste management strategies, transcending conventional approaches. This innovative concept aims to create a repository where various forms of waste, viewed not as mere disposables but as potential resources, can be deposited and repurposed. By extracting economic value from these materials, the waste bank aspires to contribute to the park's economic sustainability while concurrently championing the principles of the circular economy.

One facet of this initiative revolves around the economic prospects embedded within waste materials. By segregating and repurposing recyclables, such as plastic, glass, or paper, the waste bank seeks to create a reservoir of reusable resources. This reservoir, in turn, can be tapped into for various economic activities, from local handicrafts to larger-scale industrial processes. This approach aligns seamlessly with the overarching theme of sustainability that underscores the economic dimensions of waste management at Loang Baloq Park.

Simultaneously, the visionary plans for sanitation improvement underscore a commitment to addressing the fundamental needs of park visitors. The proposal to drill wells serves as a strategic response to the persistent water shortage issue experienced by visitors. This multifaceted initiative not only aims to enhance visitor comfort but also navigates the challenges posed by the dependence on external water suppliers, such as the Regional Drinking Water Company (PDAM).

The rationale guiding the decision to drill wells is deeply rooted in concerns about the potential difficulty of securing a stable water supply from external sources. The perceived vulnerabilities in relying solely on the PDAM underscore a proactive approach by the park management to mitigate risks and enhance the park's self-sufficiency. This strategic decision embodies a dual commitment — ensuring the availability of a vital resource for visitors and fortifying the park's resilience against external uncertainties.

In essence, the envisioned waste bank and the proposed well-drilling initiative epitomize a holistic approach to waste management and sanitation. Beyond their immediate benefits, these initiatives reverberate with economic implications, positioning Loang Baloq Tourism Park as a trailblazer in sustainable practices. As these plans materialize, they hold the promise not only of transforming waste into a valuable economic asset but also of fortifying the park's infrastructure to ensure a resilient and visitor-centric future. The proposal to establish a waste bank at Loang Baloq Tourism Park aligns with the principles of the circular economy, as discussed in the publication "A Better World."
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waste bank aims to create a repository where various forms of waste can be deposited and repurposed, viewed not as mere disposables but as potential resources. By extracting economic value from these materials, the waste bank aspires to contribute to the park’s economic sustainability while concurrently championing the principles of the circular economy (UNESCO, 2018). This innovative approach to waste management transcends conventional methods and positions Loang Baloq Tourism Park as a trailblazer in sustainable practices.

Furthermore, the proposal to drill wells at the park to address the persistent water shortage issue experienced by visitors aligns with the recommendations for solid waste management solutions in a rapidly urbanizing area in Thailand (Yukalang et al., 2018). The study emphasizes the need for viable solutions to waste management challenges, which can be achieved through extensive community consultation, engagement with local experts, and the initiation of collection services that support waste separation at the source. The proposal to drill wells serves as a strategic response to the perceived vulnerabilities in relying solely on external water suppliers, such as the Regional Drinking Water Company (PDAM), and underscores a proactive approach by the park management to mitigate risks and enhance the park’s self-sufficiency. This strategic decision embodies a dual commitment — ensuring the availability of a vital resource for visitors and fortifying the park’s resilience against external uncertainties.

Economic Perspective

The economic success of Loang Baloq Park as a premier tourist destination is intricately linked to visitor comfort, with a direct correlation to poor hygiene and garbage control. Recognizing the economic significance of addressing these challenges, the research team implemented a purposeful socialization approach with distinct phases, each strategically designed to maximize economic benefits.

Long before the commencement of activities, the research team engaged in meticulous preparations aimed at optimizing economic outcomes. Planning extended beyond logistical considerations to encompass economic sustainability goals. This included identifying potential revenue streams, understanding visitor spending patterns, and aligning socialization efforts with economic objectives to enhance the park’s overall economic contribution.

The second phase involved deliberate engagement with linked parties, acknowledging the interconnected economic interests at stake. Internal communication within the research team focused on how socialization efforts could drive economic revitalization. Discussions centered on identifying opportunities for local businesses, forging partnerships with tourism-related enterprises, and strategically enhancing the economic value derived from the park’s offerings.

The third phase of implementing socialization activities was approached with a clear economic vision. Activities were designed not only to address hygiene and garbage control but also to elevate the overall economic experience for visitors. Emphasis was
placed on showcasing economic opportunities tied to waste management, promoting local businesses, and creating an environment conducive to economic transactions within the park.

The concluding phase was dedicated to assessing economic outcomes and continuously improving strategies for economic sustainability. Evaluation criteria included not just the success of hygiene and waste management initiatives but also the economic impact on local businesses, employment generation, and the overall economic vibrancy of the park. This phase aimed to solidify economic gains and lay the foundation for ongoing improvements aligned with economic objectives.

Internal communication within the research team extended beyond technical aspects to include robust economic considerations. Deliberations centered on leveraging the economic success of Loang Baloq Park through effective waste management and hygiene practices.

Collaborating with local authorities, such as Tanjung Karang Ward and Mr. Tamrin, was not only about enhancing the park’s aesthetics but also about strengthening its economic standing. Coordination with Tanjung Karang sub-district personnel signified a shared economic interest in enhancing the park’s attractiveness. Collaborating with Mr. Tamrin aimed at aligning economic objectives with waste management and hygiene improvements to position Loang Baloq Park as a sustainable economic asset for Mataram City.

By embedding economic considerations throughout the socialization approach, the research team aimed not only to address hygiene and waste management issues but also to bolster the economic viability and allure of Loang Baloq Park as a sustainable economic contributor to Mataram City.

The research team’s socialization approach to address hygiene and waste management challenges at Loang Baloq Park, as well as its economic implications, can be related to the study on solid waste management solutions for a rapidly urbanizing area in Thailand (Yukalang et al., 2018). The study emphasizes the need for viable solutions to waste management challenges, which can be achieved through extensive community consultation, engagement with local experts, and the initiation of collection services that support waste separation at the source. This supports the research team’s socialization approach, highlighting the importance of engaging stakeholders and implementing practical waste management solutions.

Furthermore, the research team’s collaboration with local authorities, such as Tanjung Karang Ward and Mr. Tamrin, can be seen as a strategic move to enhance the park’s aesthetics and strengthen its economic standing, as discussed in the study on coastal tourism development at Loang Baloq Beach (Nugroho et al., 2022). Coordination with local authorities aims to align economic objectives with waste management and hygiene improvements to position Loang Baloq Park as a sustainable economic asset for Mataram City. This approach aligns with the recommendations for solid waste management
solutions in a rapidly urbanizing area in Thailand (Yukalang et al., 2018), which emphasizes the importance of collaborative efforts in addressing waste management challenges and fostering a cultural shift towards environmental stewardship within the local community.

**Conclusion**

In conclusion, the findings of this research underscore the transformative potential of synergizing sustainable waste management practices with strategic economic considerations, thereby positioning Loang Baloq Park as a paradigm of environmental responsibility and economic vibrancy. The meticulously implemented phased socialization approach, seamlessly intertwined with advancements in waste management, not only effectively addressed immediate challenges but also laid the robust groundwork for enduring and substantial economic contributions.

The study's significance extends beyond the immediate context, offering valuable insights that can be extrapolated to inform and guide future initiatives in the realm of tourism and waste management. By successfully navigating the intricate dynamics of environmental stewardship and economic prosperity, this research contributes to the evolving discourse on sustainable practices in tourist destinations. The nuanced understanding gained through this study illuminates pathways for decision-makers and stakeholders to implement holistic strategies, ensuring the continued harmony between ecological preservation and economic development.

As we look to the future, several avenues for further research emerge. Firstly, an in-depth analysis of the long-term economic impacts of the implemented waste management practices at Loang Baloq Park would provide valuable insights into the sustained economic benefits over time. Additionally, investigating the scalability of the phased socialization approach to different tourist destinations and cultural contexts could offer a broader perspective on its effectiveness and adaptability.

Furthermore, exploring the role of technological innovations and smart waste management systems in enhancing both environmental sustainability and economic outcomes represents a promising avenue for future research. Integrating cutting-edge technologies may optimize waste management processes and potentially generate new economic opportunities within tourist destinations.

Despite the strides made in this research, it is essential to acknowledge certain limitations. The study's focus on Loang Baloq Park may limit the generalizability of findings to other tourist destinations with distinct characteristics. The dynamic nature of tourism and waste management also implies that conditions and challenges may evolve over time, potentially impacting the relevance of the study's recommendations in the future.

Moreover, the research primarily relies on qualitative methodologies, and while these provide rich insights into perceptions and behaviors, future research could benefit from complementary quantitative analyses to ascertain the broader statistical significance of
observed trends.

In conclusion, while this research lays a robust foundation for understanding the symbiotic relationship between sustainable waste management and economic vitality, future investigations can build upon these insights to create a comprehensive understanding applicable to a diverse array of tourist destinations.

References


