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TRANSFORMING SLUMS INTO SUSTAINABLE TOURISM DESTINATIONS ON THE COAST OF MAKASSAR CITY, INDONESIA

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Abstract: This study proposes a model for slum area development in Indonesia, focusing on the management of local potential and land suitability for tourism planning. Its main objectives are to identify local potentials in slum areas and to analyze land suitability for destination development. A quantitative descriptive approach was applied in this research, which was conducted in Tallo Village, Makassar City, selected for its comprehensive socio-economic, physical, and tourism-related data. Geographic mapping through Geographic Information Systems (GIS) aids the descriptive analysis. The findings suggest that the slum area in Tallo Village has strong potential to be developed into a community-based tourism destination with three key attractions: local cultural heritage, culinary experiences, and natural scenery. Integrating these elements could lead to the creation of a sustainable tourism destination that also enhances community welfare. The development model emphasizes strengthening local culture, culinary, and natural resources, aiming to positively impact the economy, boost local pride, and enhance the tourist experience. The analysis shows that the slum area is suitable for tourism development, with many parts falling into the *suitable* and *very suitable* categories. The study advocates for an integrative tourism development approach that incorporates environmental sustainability and local community involvement. It stresses that management practices that consider environmental carrying capacity and provide direct benefits to the local community are essential for ensuring the long-term sustainability of tourism in slum areas.

Keywords: settlements; slums; attractions; destinations; slum tourism

1. Introduction

Slums in urban areas represent a persistent and multifaceted challenge, particularly in rapidly expanding cities where urbanization often surpasses the capacity of governments to provide adequate and affordable housing. The swift pace of urban growth frequently leads to the proliferation of informal settlements characterized by substandard housing structures, aesthetic deterioration, and severely underdeveloped municipal infrastructure (Friesen et al., 2018; Mahabir et al., 2016). These settlements not only compromise the quality of life for their

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residents but also pose significant threats to the long-term sustainability, resilience, and inclusivity of urban environments (Meredith & MacDonald, 2017).

Slums result from deep spatial and economic inequalities, including uneven urban growth, limited economic opportunities, and income disparities. These are worsened by unregulated land use, poor sanitation, inadequate waste and drainage systems, and restricted access to basic services like clean water, electricity, education, and healthcare (Chimankar, 2016; Friesen et al., 2018; Goswami & Manna, 2013). Consequently, slums become degraded physically and socially, reinforcing poverty and marginalization. Often, slums are excluded from urban planning and development, leading to neglect and underinvestment (Farinmade et al., 2018).

Addressing slum issues requires integrated solutions beyond physical upgrades, tackling environmental harm, socio-economic exclusion, insecure land tenure, and limited-service access. Slum upgrading should promote inclusive development, ecological resilience, and sustainable resource use to build just and livable cities. This situation is apparent in Makassar City, where studies (Surya, Ahmad, et al., 2020; Surya et al., 2018; Surya, Syafri, et al., 2020) identify coastal fishing slums as vulnerable to physical and social degradation, including poor housing, pollution, social disintegration, and limited essential services (Aras, 2022), compounded by residents' socio-economic challenges.

The global persistence of slums is closely tied to economic inequality and poor urban planning (Aras, 2022; Owusu et al., 2021), forcing marginalized groups into overcrowded areas lacking clean water, sanitation, and services (Friesen et al., 2018; Goswami & Manna, 2013). Slums also reflect socio-economic exclusion and weak municipal governance (Chimankar, 2016; Uddin, 2018), as seen in cities like Lagos where urban development visions often fail to uplift the urban poor and instead deepen livelihood insecurities (Olajide et al., 2018). As noted in the United Nations Sustainable Development Goals (SDGs), slum issues intersect with goals like poverty reduction, health, and urban sustainability (Kusuma & Rahmawati, 2021).

Residents often depend on informal work—fishing, farming, or street vending—which remains vulnerable and unsupported (Soma et al., 2021; Suryandari & Widyawati, 2019). Inadequate housing, land tenure insecurity, and exclusion from basic infrastructure typify informal settlements (Soyinka & Siu, 2018), exacerbating social marginalization. Unregulated growth leads to environmental harm and health risks (Das et al., 2021; Purwanto et al., 2017; Surya, Saleh, et al., 2020), alongside social impacts like limited education, crime, and exclusion (Roy & Lees, 2020; Sukmaniar et al., 2021).

In Indonesia, participatory approaches through programs like the National Slum Upgrading Program (KOTAKU) reveal both potential and limitations in community-based development (Sari et al., 2018). In response to the limitations of top-down strategies, models like community-based or "slum tourism" have emerged, framing slums as spaces of cultural and economic renewal (Frenzel, 2018; Gani et al., 2024; Griffin & Muldoon, 2022). This form of tourism, while controversial, can reflect urban poverty from a new lens—as documented in historical and contemporary studies (Steinbrink, 2012)—and support entrepreneurship and heritage preservation if implemented ethically (Rogerson & Mthombeni, 2015). However, concerns remain over poverty commodification and the need for inclusive urban planning (Dürr & Jaffe, 2012; Frenzel & Koens, 2012).

Many inhabitants of these slum areas live below the poverty line, primarily due to a lack of education and limited skillsets. Educational deprivation is both a cause and consequence

of poverty in slums, as economic hardship often forces children out of school and into the labor market at a young age (Ary et al., 2014; Gay et al., 2009). This, in turn, limits future employment opportunities and traps families in a cycle of low-income, informal sector jobs such as day laborers and petty traders. This entrenchment of poverty severely restricts upward social mobility and access to better living conditions (Das et al., 2021).

In addition to economic hardship, slum communities are frequently associated with higher incidences of crime and social unrest. Thefts and other forms of criminal activity are often driven by desperation and a lack of opportunities, with poverty and low education acting as reinforcing factors (Chimankar, 2016). These social dynamics create a negative image of slums and further alienate them from the broader urban society.

However, it is important to recognize that slums are not devoid of value. Many of these communities possess rich cultural heritage, historical significance, and unique creative economies that, if properly harnessed, can serve as a foundation for sustainable tourism development (Gani et al., 2024). Recognizing and leveraging these intrinsic assets offers a pathway to reframe slums not merely as urban problems but as untapped opportunities for inclusive growth. This approach is especially promising in coastal slum areas where maritime culture and traditional livelihoods can be integrated into distinctive tourism experiences.

Transforming slums into tourist destinations, based on their local potential, offers a promising strategy to generate economic benefits, increase employment, and alleviate poverty. Evidence from other parts of the world indicates that slum tourism when ethically planned and managed can attract both domestic and international visitors, offering them authentic experiences rooted in local culture, history, cuisine, and everyday life (Dürr & Jaffe, 2012; Griffin & Muldoon, 2022). Unlike mass tourism, which often leads to the commodification of culture, this community-based model emphasizes inclusivity, sustainability, and the preservation of cultural identity in the face of modernization and urban homogenization (Frenzel & Koens, 2012; Kieti & Magio, 2013).

Nevertheless, the transformation of slums into viable tourist destinations is not without challenges. One of the critical issues is determining land suitability and assessing the area's carrying capacity. Unregulated tourism can exacerbate existing vulnerabilities if development surpasses the ecological and social thresholds of the area (Haribudiman et al., 2023). Therefore, land suitability analysis must account for factors such as accessibility, safety, environmental resilience, and the socio-cultural sensitivity of the site. A careful balance must be struck to avoid overburdening the local infrastructure while ensuring meaningful community participation (Kusuma & Rahmawati, 2021).

Spatial analysis and Geographic Information Systems (GIS) are essential for identifying suitable zones for tourism development. By mapping local assets, risks, and infrastructure, GIS provides planners with data-driven tools for sustainable, feasible interventions. These models aid multi-criteria decision-making aligned with the area's physical, economic, and social traits (Mahabir et al., 2016).

This study aims to: (1) identify local potentials in slum areas for tourism and (2) analyze land suitability using spatial and GIS approaches. The integrated model ensures tourism development supports community needs and environmental capacity, fostering resilient, inclusive urban spaces. This study offers a new perspective on slum redevelopment in Indonesia and highlights local potential and land suitability as key for tourism planning. The findings aim to inform academic debates and guide policymakers, reframing slums from

liabilities to assets and inspiring adaptive urban regeneration. Insights may also benefit other Indonesian cities facing similar challenges.

2. Materials and methods

2.1. Research approach and study area

This study used a mixed methods approach to comprehensively assess the tourism development potential in Tallo District, an urban slum area in Makassar City, South Sulawesi, Indonesia. The research design combined quantitative descriptive analysis, geospatial techniques, and qualitative field exploration to capture the multifaceted dimensions of the area. The mixed descriptive-quantitative approach facilitates a systematic assessment of tourism potential through the collection and interpretation of numerical data (Ary et al., 2014; Creswell, 2014; Gay et al., 2009; Woodard et al., 2016). The study specifically examined the socio-economic, physical, and cultural characteristics of the local community and evaluated the land suitability for tourism development, with a particular emphasis on spatial data and geospatial analysis techniques. The location was purposively selected based on socio-economic diversity, environmental infrastructure, cultural richness, and untapped tourism potential. Furthermore, the availability of spatial and demographic data strengthens the suitability of Tallo District for an integrated multidimensional analysis.

2.2. Methodological framework and research stages

The methodological framework was designed to capture both the quantifiable elements and the socio-cultural dimensions of tourism development. It was adapted from previous studies on spatial planning and sustainable tourism (Malczewski, 2004) and contextualized to the local characteristics of Tallo. The research began with a review of spatial planning documents, tourism master plans, and spatial datasets of Makassar City to identify Tallo as a strategic site. The selection criteria included high population density, informal settlement patterns, the presence of local cultural assets, and environmental infrastructure conditions.

2.3. Primary and secondary data collection

Primary data were collected through field observations, in-depth interviews, and focus group discussions (FGDs), which were conducted between March and June 2024. Observations focused on identifying local attractions, infrastructure conditions, and environmental features. Semi-structured interviews were conducted with five community leaders, one local government official, and two tourism development practitioners. Additionally, two rounds of FGDs were held, each involving 6–8 participants, including youth representatives, local micro-entrepreneurs, and community members. Secondary data included topographic maps, land use data, population density maps, and tourism statistics sourced from the Makassar Development Planning Agency and the South Sulawesi Provincial Tourism Office. Satellite imagery was used for spatial overlay analysis and land cover interpretation.

2.4. Thematic and spatial analysis

Data were analyzed using both thematic and spatial techniques. Interview and FGD transcripts were examined using qualitative thematic analysis to identify community perceptions, intangible cultural assets, and aspirations for inclusive tourism development.

Subsequently, a land suitability analysis was conducted using GIS techniques with ArcGIS 10.8 software. The analysis applied the Multi-Criteria Evaluation (MCE) method, a widely adopted spatial planning approach that integrates multiple parameters into a composite suitability index (Eastman, 2012; Malczewski, 2006).

Four main parameters were evaluated: accessibility, topography (slope gradients of 0–5°, 5–15°, and >15°), environmental conditions, and regional carrying capacity (Buckley, 2012; Food and Agriculture Organization of the United Nations [FAO], 1976; Pereira, 2018; Turner et al., 2001). Each parameter was assessed using a scoring system based on threshold values drawn from relevant literature and adapted to local context. The final results were aggregated into four land suitability classes for tourism development: very suitable, suitable, less suitable, and not suitable.

2.5. Mapping potential and developing a destination suitability model

From the results of the spatial analysis, a tourism potential map was developed by overlaying variables such as culture, environment, and infrastructure. This map helps identify strategic zones with high cultural and ecological values. A conceptual destination suitability model was then built to guide policymakers in designing community-based and sustainable tourism development strategies. This model integrates physical factors (e.g., accessibility, topography) with intangible cultural elements such as culinary heritage, local arts, and communal traditions.

2.6. Validation

Preliminary findings and the proposed destination development model were validated through a second round of FGDs, involving five community representatives, one official from the city's spatial planning division, and one tourism consultant. Feedback from these stakeholders was incorporated to refine the model and ensure its contextual relevance and practical applicability.

2.7. Research instruments and ethical considerations

The data collection process was supported by a structured observation checklist and interview protocol, both of which were pre-tested for validity. Informed consent was obtained from all participants prior to data collection. This study complies with ethical research standards approved by the Ethics Committee (Faculty of Engineering, Hasanuddin University).

3. Results

3.1. Identification of local potential in slum areas

Drawing from interviews with local cultural practitioners (including traditional dancers, musicians, and craftsmen), youth representatives, and tourism-related stakeholders—alongside systematic field observations at key points in Tallo Village—this study identified several tourism assets with high potential despite prevailing slum conditions. These qualitative insights provided a nuanced understanding of local perspectives, the vitality of everyday cultural expressions, and the spatial distribution of tourism-relevant features. Three primary categories emerged: (1) cultural attractions, including traditional performances and handicrafts, offering authentic cultural experiences; (2) distinctive local cuisine, which holds strong potential for gastronomic tourism; and (3) natural features such as coastal landscapes, mangrove-lined waterways, and riverbanks, which, with ecological planning, could be integrated into sustainable tourism development. These three potentials—culture,

cuisine, and environment—are envisioned to be developed through an integrated approach, promoting a holistic visitor experience where each aspect complements the others in reinforcing the area's unique identity.

Insights gathered from interviews with local cultural figures, including traditional dancers and artisans, youth representatives, and tourism stakeholders such as local officials and practitioners, as well as detailed field observations at various locations in Tallo Village, revealed several key tourism attractions. These qualitative insights provide an in-depth understanding of local perspectives on tourism potential, everyday cultural expressions, and the spatial layout of these attractions.

The study identified multiple high-potential sites in Tallo Village, categorized into three tourism types: cultural attractions, culinary uniqueness, and environmental scenery. The selection was based on criteria synthesized from field observations, stakeholder interviews, and spatial analysis, including accessibility, cultural practices, authenticity of local cuisine, scenic quality, and community willingness to participate. These indicators guided a systematic and strategically distributed mapping and assessment process (see Figure 1), minimizing subjectivity through an evidence-based, participatory approach.

Building on the earlier identification process, the study classified tourism potentials in Tallo Village into three core themes: cultural heritage, local culinary uniqueness, and environmental landscapes. These potentials are not only distinct assets but also envisioned to be developed within a synergistic and community-based tourism framework. Rather than treating these elements in isolation, the study proposes an integrated development model where cultural performances and craftsmanship enhance culinary experiences, and both are spatially contextualized within scenic natural settings such as mangrove-fringed waterways and coastal views. This integrated approach aims to deliver immersive and authentic visitor experiences while strengthening community identity, economic participation, and environmental stewardship. In this way, tourism development becomes a tool for socio-cultural revitalization and sustainable transformation within slum-affected urban areas like Tallo.

Tallo Village has a rich cultural heritage, including traditional dance, music, and handicrafts, which could appeal to tourists seeking authentic cultural experiences. While the development of cultural tourism in Tallo faces challenges—such as the need for heritage preservation and stronger community participation—these cultural assets can be unlocked through targeted investments in governance, infrastructure, and education. Such interventions are necessary to address existing issues like cleanliness and resource management, which this study now explicitly recognizes as key constraints.

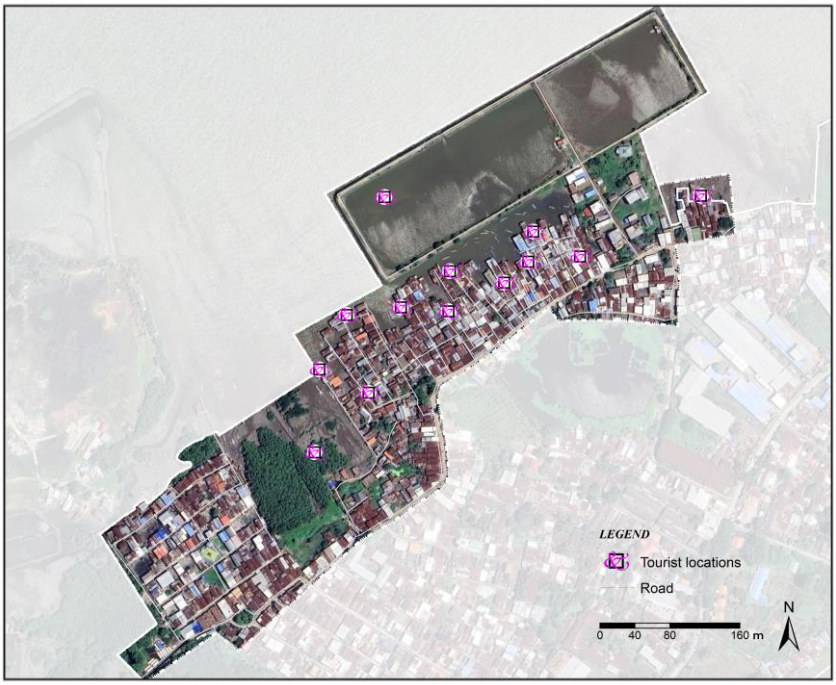

Figure 1. Tourist attractions distribution map.
Note. Map produced from the author's analysis (2024), based on satellite imagery from *Landsat 9 Collection 2 Level-1 and Level-2*, by USGS, 2022 (https://earthexplorer.usgs.gov). In the public domain, and the base map of Makassar City obtained from *Vector Data of Indonesia's Topographic Map: Regency/Municipality Administration*, by the Geoaccess Indonesia, 2023 (https://geoaccess.id/dataspasial/). In the public domain.

In parallel with its cultural potential, Tallo Village, despite its current slum designation, also holds considerable promise for community-based tourism through its distinctive culinary heritage and scenic environmental features. The presence of traditional foods, rarely found elsewhere, provides a compelling foundation for culinary tourism, albeit one that requires improvements in hygiene standards, capacity building, and marketing efforts. Likewise, the village's coastal landscapes and waterways, though currently underutilized, exhibit strong visual appeal that could be harnessed through phased development and investment in environmental rehabilitation. While these opportunities are not without their challenges, particularly in terms of infrastructure and environmental degradation, they form part of a broader, long-term vision that positions Tallo as a culturally grounded and community-driven tourism destination.

This transformation process is reinforced by a participatory and inclusive approach to tourism planning. The identified sites represent more than spatial assets they reflect the community's cultural vitality and its capacity for economic regeneration. The integrated tourism potential that emerges linking cultural traditions, culinary uniqueness, and natural scenery resonates with global trends in sustainable, community-based tourism. As elaborated in the Discussion section, the findings are consistent with prior studies (Lopes & Hiray, 2024;

Parwati et al., 2024; Rahman, 2023; Ruoss & Alfarè, 2013; Sainu et al., 2023; Sulistiyo et al., 2024; Zakaria & Hua, 2024), which underscore the strategic value of leveraging culture, cuisine, and environmental aesthetics to attract visitors, even in socioeconomically disadvantaged areas. Collectively, these assets offer a viable pathway toward a tourism development model that is sustainable, inclusive, and locally empowered.

3.2. Land suitability of destination development locations

The land suitability analysis in this study was conducted using a structured MCE approach based on four main parameters, as detailed in the methodology (Section 2.4.). Each parameter was assessed using a scoring system adapted from the FAO Land Evaluation Framework (FAO, 1976) and refined according to Indonesian spatial planning standards (Purnamasari et al., 2019). Scores ranged from 1 (*not suitable*) to 4 (*very suitable*) for each spatial unit.

The scores for each location were weighted by the importance of each parameter and combined using GIS-based weighted overlay analysis to produce a composite suitability score. These scores were then normalized and classified into four categories—very suitable, suitable, less suitable, and not suitable—reflecting how well each site meets physical, environmental, and socio-infrastructural criteria for tourism development. *Very suitable* zones fully satisfy all criteria with minimal constraints, while *suitable* areas meet most, but may need moderate adaptation or investment. The percentage distribution of these categories is shown in Table 1, providing a clear, spatially grounded, and replicable framework for assessing tourism potential in underdeveloped urban areas.

Table 1. Land suitability analysis of tourism development locations in slums

Criteria	Very suitable	Suitable	Less suitable	Not suitable
Accessibility	30%	50%	15%	5%
Topography	25%	45%	20%	10%
Environmental conditions	40%	35%	15%	10%
Regional carrying capacity	35%	40%	20%	5%
Total	32.5%	42.5%	17.5%	7.5%

Based on Table 1, the analysis of land suitability for tourism development in the slum area of Tallo Village shows that the overall potential for tourism development falls into the *suitable* category, with a significant portion in the *very suitable* category. For accessibility, most areas are categorized as *suitable* (50%), with a smaller portion falling into the *very suitable* category (30%). Accessibility plays a key role in making these locations accessible to tourists, contributing 80% to the *very suitable* and *suitable* categories. This indicates good transportation infrastructure and easy access to various tourist attractions.

About 45% of the area's topography is classified as *suitable*, with 25% deemed *very suitable*, supported by favorable altitude and landscape for tourism development. Environmentally, 40% of locations fall into the *very suitable* category, reflecting strong natural appeal based on climate, water features, and ecological health. Additionally, 40% of the area is considered *suitable* regarding regional carrying capacity, considering infrastructure, population, and resources, indicating the area can support tourism without overburdening the community. Overall, most areas in Tallo Village are *suitable* for tourism development (42.5%), followed by *very suitable* (32.5%), highlighting favorable conditions for developing the slum area as a tourist destination. Figure 2 presents the zoning

suitability mapping results, illustrating the most and least suitable areas based on the land suitability assessment.

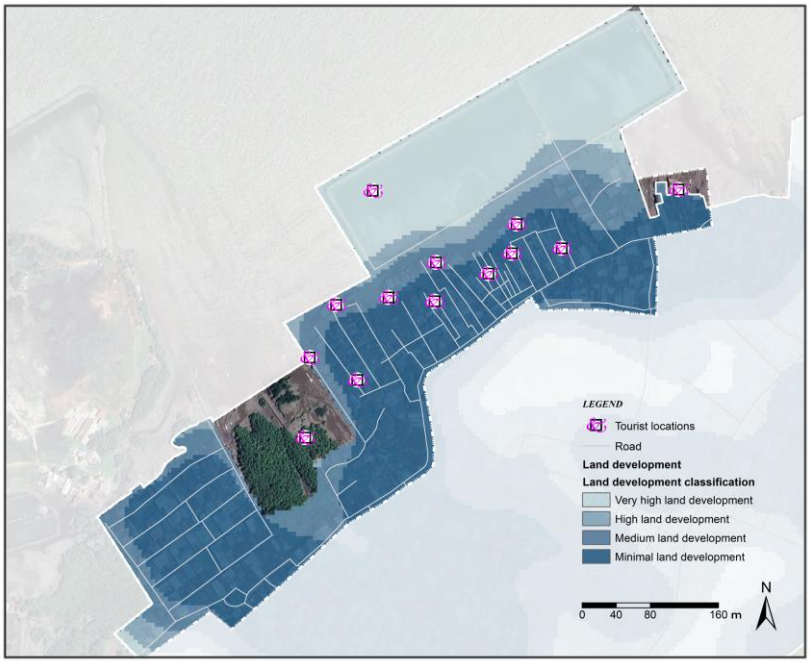

Figure 2. Land development potential map.
Note. Map produced from the author's analysis (2024), based on satellite imagery from *Landsat 9 Collection 2 Level-1 and Level-2*, by USGS, 2022 (https://earthexplorer.usgs.gov). In the public domain, and the base map of Makassar City obtained from *Vector Data of Indonesia's Topographic Map: Regency/Municipality Administration*, by the Geoaccess Indonesia, 2023 (https://geoaccess.id/dataspasial/). In the public domain.

To assess the potential for tourism infrastructure development, a spatial accessibility analysis was conducted. This accessibility map was created using a GIS-based overlay analysis, incorporating key variables such as road width, surface conditions, and spatial proximity to tourism nodes. Figure 3 presents the accessibility mapping of Tallo Village, highlighting the spatial distribution of road network segments categorized according to access potential: low (green), medium (yellow), high (orange), and priority potential (red). This classification is derived from a multicriteria analysis based on the parameters mentioned above. The designated tourism locations, as marked in purple in Figure 2, are situated in the center of the study area, which increases their connectivity with the surrounding environment.

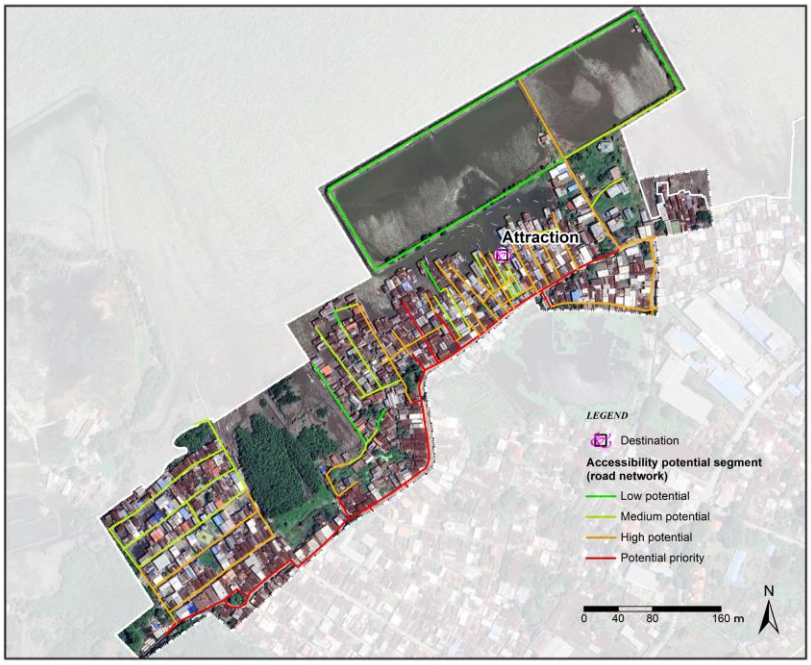

Figure 3. Area accessibility map.
Note. Map produced from the author's analysis (2024), based on satellite imagery from *Landsat 9 Collection 2 Level-1 and Level-2*, by USGS, 2022 (https://earthexplorer.usgs.gov). In the public domain, and the base map of Makassar City obtained from *Vector Data of Indonesia's Topographic Map: Regency/Municipality Administration*, by the Geoaccess Indonesia, 2023 (https://geoaccess.id/dataspasial/). In the public domain.

The map shows that most of the road segments with high potential and priority are concentrated in the central and southern parts of the village, forming a continuous network that facilitates access to tourist sites. This spatial configuration indicates strong internal connectivity, which is essential to support mobility and the provision of tourism services. Furthermore, the presence of several access points from various directions underlines the strategic advantage of the area in terms of visitor movement, especially for the development of community-based tourism.

Figure 3 presents a geographical visualization of the priority tourism destination identified in Tallo Village. This destination is shown in relation to the surrounding accessibility network, indicating its strategic connectivity and potential for sustainable tourism development. The spatial configuration suggests that the area is well-connected and easily accessible from multiple directions, thereby offering convenience for visitors. This pattern highlights the importance of road accessibility in enhancing both the attractiveness and functional utility of a tourism destination. The visualization supports the view that effective accessibility, when combined with supportive environmental conditions, plays a vital role in promoting sustainable tourism development.

This accessibility pattern is consistent with the physical and cultural context of the village. Tallo Village is known for its culinary traditions, historical narratives, and coastal scenery

elements that are scattered within the reach of accessible routes. These features, when integrated with the potential road infrastructure, underscore the village's readiness for integrated tourism planning. This finding reinforces the need for targeted infrastructure improvements, especially along the road sections marked as potential priorities, to improve safety, visual appeal, and visitor experience.

The final analysis focuses on the suitability of mapping local potential for tourism development in slum areas, and it is visually presented in Figure 4. This mapping serves as an alternative model for the most ideal way to develop tourism in these areas. The most ideal locations for tourism development are identified in zones with "high" land suitability (marked in red) and strong or moderate local potential (marked in yellow). These areas are considered the best candidates for development due to both their physical and cultural appeal. These zones are particularly attractive because they combine favorable land conditions (e.g., accessibility, topography, and environmental factors) with a rich local potential (e.g., cultural heritage, culinary offerings, and natural landscapes).

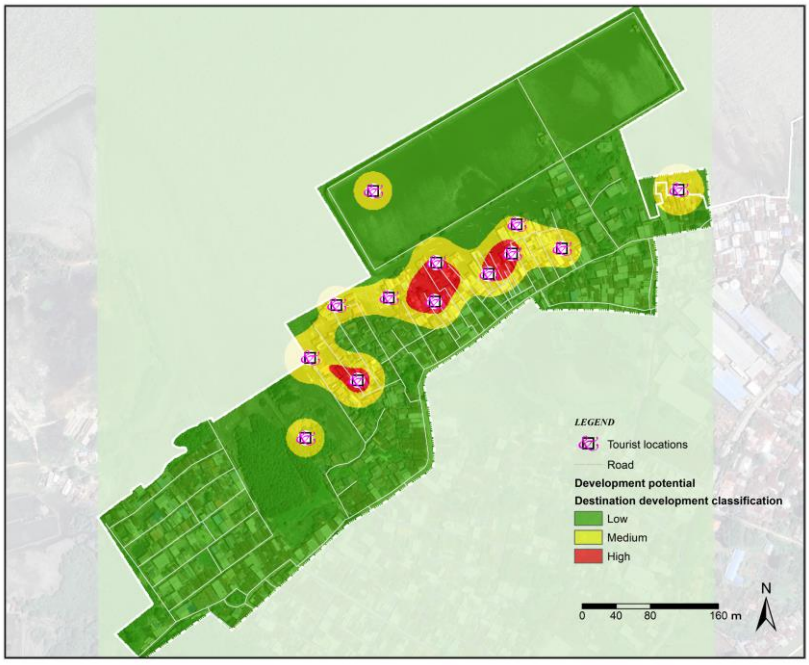

Figure 4. Tourism development potential map.
Note. Map produced from the author's analysis (2024), based on satellite imagery from *Landsat 9 Collection 2 Level-1 and Level-2*, by USGS, 2022 (https://earthexplorer.usgs.gov). In the public domain, and the base map of Makassar City obtained from *Vector Data of Indonesia's Topographic Map: Regency/Municipality Administration*, by the Geoaccess Indonesia, 2023 (https://geoaccess.id/dataspasial/). In the public domain.

The final results from the spatial analysis are visualized in Figure 4, which presents the tourism development potential map for Tallo Village. This map classifies the study area into three development zones based on their land suitability: high (red), medium (yellow), and

low (green). The "high suitability" areas are concentrated in the central corridor of the site and show significant overlap with existing and proposed tourism locations, indicating strong spatial alignment between natural-cultural assets and physical land readiness.

These zones exhibit favorable development indicators, including accessibility to roads, proximity to water bodies, and the presence of cultural and culinary nodes. The medium and high suitability zones also correspond with community-identified spaces known for local traditions, natural attractions, and tourism activities. This spatial configuration reflects an integrative pattern where land characteristics and local tourism assets coexist in close proximity.

Figure 4 also highlights the clustering of potential tourism nodes within areas that combine cultural heritage (such as traditional settlements), economic activity (e.g., fish markets and street food zones), and scenic landscapes. The composite potential of these zones suggests that future development initiatives can be spatially optimized by focusing on these clusters, thus supporting both tourism development and local economic revitalization in a spatially coherent manner.

4. Discussion

4.1. Identification of local potential in slum areas

The analysis of tourism potential in Tallo Village, Makassar, reveals three main assets suitable for community-based tourism: cultural heritage (including traditional arts, crafts, and performances), distinctive local cuisine, and scenic natural landscapes such as coastal areas and waterways. Despite slum conditions, these assets can be holistically developed into a sustainable destination through integrated planning that aligns cultural, culinary, and environmental values. This approach supports community empowerment and environmental conservation, consistent with sustainable tourism principles. These findings echo recent studies (Lopes & Hiray, 2024; Sulistiyo et al., 2024; Zakaria & Hua, 2024) underscoring the importance of cultural heritage, while others (Parwati et al., 2024; Rahman, 2023; Sainu et al., 2023) highlight the role of local cuisine and natural assets in enhancing tourist experiences. Notably, local cuisine emerges as a key driver—not only enriching visitors' engagement but also contributing to cultural preservation, job creation, and sustainable development.

This study also demonstrates that, despite the initial condition of the slum area, with proper planning, the coastal areas and waterways can be transformed into attractive natural tourist destinations. As successfully demonstrated in Europe (Ruoss & Alfarè, 2013), environmental quality can be improved through effective management. These findings contribute significantly to theoretical understanding, particularly in expanding knowledge on community-based tourism that integrates local culture and heritage as a model of sustainable tourism. Moreover, the research enriches theories on local economic development by showing how tourism can directly benefit local communities and introduces natural resource management theory by demonstrating that slum areas, when sustainably managed, can improve environmental quality while becoming appealing tourism destinations.

Furthermore, this research provides valuable insights for various stakeholders, including city governments, urban planners, tourism practitioners, and community leaders. The proposed development model can serve as a guide for transforming slum areas into valuable tourism destinations, benefiting both the local community and environmental conservation. By integrating cultural, local economic, and environmental sustainability

aspects, Tallo Village has the potential to become a successful example of inclusive and sustainable community-based tourism.

4.2. Land suitability of destination development locations

This study conducted a spatially-informed analysis of land suitability for tourism development in the slum area of Tallo Village, Makassar City, using a structured MCE framework. The analysis incorporated four key parameters: accessibility, topography, environmental conditions, and regional carrying capacity. Results indicate that the majority of the area falls into the *suitable* (42.5%) and *very suitable* (32.5%) categories for tourism development, revealing substantial potential despite the area's socio-economic challenges. Accessibility emerged as a particularly critical factor, with 80% of the area rated as either *suitable* or *very suitable*, underlining the presence of relatively well-developed infrastructure and connectivity to potential tourist sites. The topographic analysis also yielded favorable results, with 70% of the land assessed as appropriate for infrastructure development, while environmental conditions were especially strong—40% of the area rated *very suitable*—highlighting the ecological appeal through vegetation, water availability, and climatic conditions. The region's carrying capacity, with 75% of zones categorized as *suitable* or *very suitable*, further supports the area's ability to accommodate tourism without endangering ecological or social systems.

These spatial findings were visually reinforced through land suitability and accessibility maps (Figure 2 and Figure 3), which highlighted central and southern zones with superior land quality and connectivity as prime locations for tourism development. Building upon these results, the study proposes an integrative tourism development model aligned with the frameworks advanced by Maimaitiaili (2024) and Haribudiman et al. (2023). This model emphasizes a balance between economic growth, environmental preservation, and social inclusion. It asserts that physical land suitability alone is not sufficient; sustainable tourism in underdeveloped urban areas like Tallo must be rooted in holistic planning that respects ecological thresholds and elevates community participation.

Three pillars form the core of this proposed model. First, it underscores environmental sustainability. With 35–40% of zones evaluated positively for environmental conditions, the model stresses the importance of aligning development with ecological capacity, ensuring that tourism does not deplete local resources or harm biodiversity. Second, the model highlights the centrality of community-based tourism, advocating for the active engagement of residents in planning, governance, and entrepreneurship to foster economic empowerment and preserve cultural identity. Tallo's rich coastal narratives, culinary traditions, and localized heritage present unique opportunities for community-based tourism that enhances resilience and reduces inequality. Third, the study recommends that tourism infrastructure be designed in an environmentally responsive manner, integrating local topographic features with eco-friendly construction and mobility systems. The suitability of terrain for development 70% rated as *suitable* or *very suitable* supports context-sensitive infrastructure that harmonizes with the natural landscape.

Theoretically, this study contributes to the discourse on sustainable tourism, environmental management, and participatory development. The study shows that slums can be transformed into inclusive tourism destinations through strategic spatial planning and community engagement. The use of GIS-based evaluation methods based on FAO (1976) standards and national spatial planning policies offers a replicable model for similar urban contexts. By

emphasizing participatory planning, the study confirms that empowered communities are key to achieving resilient, culturally grounded, and inclusive tourism.

Practically, the study provides four key recommendations: (1) using GIS-based tools to identify tourism zones in slums without displacing residents; (2) developing green infrastructure tailored to local topography and culture; (3) promoting inclusive economic growth by leveraging local culinary and craft assets; and (4) building a governance system that integrates zoning, environmental management, and community oversight. Although Tallo Village faces development challenges, its spatial and cultural resources provide a strong foundation for sustainable tourism. Realizing this potential depends on strategic, inclusive, and environmentally sound interventions, as outlined in the proposed integrative tourism development model.

5. Conclusion

The slum area in Tallo Village, Makassar City has significant potential to be developed into a community-based tourist destination. The three primary attractions identified are local culture, culinary experiences, and natural scenery. By strengthening these aspects, the area can be transformed into a sustainable tourism destination that not only attracts visitors but also improves the welfare of the local community. Developing local cuisine as a tourism asset can help preserve cultural heritage, promote community pride, and create economic opportunities, while offering environmentally friendly and healthier alternatives to industrial food systems. The area's natural scenery, such as coastal landscapes and waterways, has great potential to become attractive tourist destinations, contributing to both environmental improvement and increased tourist interest if managed effectively.

The land suitability analysis indicates that the area falls under the *suitable* and *very suitable* categories, highlighting its potential for development. Zones with high land suitability and strong local potential are considered the most ideal for tourism development. An integrated tourism development model is essential for success, one that incorporates both environmental sustainability and active local community involvement. Sustainable management must prioritize the environmental carrying capacity and ensure that the benefits of tourism flow directly to the community. This approach will be crucial in fostering long-term tourism growth while maintaining the cultural and environmental integrity of the area.

However, this study has limitations. It focuses solely on Tallo Village, limiting its generalizability to other slum contexts with different socio-cultural or environmental settings. The research also lacks a long-term perspective on the sustainability of tourism impacts and does not incorporate the voices of tourists or external stakeholders such as private investors. Furthermore, it emphasizes economic potential but does not fully account for possible social and environmental costs, such as displacement or ecological degradation.

Future research should expand to other slum areas for comparative insight, undertake longitudinal studies to evaluate long-term impacts, and incorporate perspectives from tourists and external actors to identify synergies and tensions. A comprehensive cost-benefit analysis is also needed to balance economic gains with social and environmental costs. Additionally, research should explore the integration of tourism with environmental management strategies to ensure that growth does not come at the expense of ecological integrity.

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