

The Impact of Tourism on the Environmental and Socio-Economic Conditions of Settlements in Langsa City

Irwan Sutiono

e-mail: irwan.sutiono77@gmail.com

Cut Nuraini

e-mail: cutnuraini@dosen.pancabudi.ac.id

Universitas Pembangunan Panca Budi, Indonesia

ABSTRACT

Tourism is a sector that significantly contributes to the economic development of a region, including Langsa City. However, the growth of tourism not only brings economic benefits but also presents challenges in terms of environmental and socio-cultural aspects of the local community. This study aims to analyze the impact of tourism on the environmental and socio-economic conditions of settlements in Langsa City and to identify sustainable management strategies. Employing a qualitative approach with descriptive-analytical methods, data were collected through observation, interviews, questionnaires, and document studies involving 220 respondents, including local residents, tourism business actors, and other stakeholders. The findings reveal that economically, tourism increases community income and creates new business opportunities. However, it also leads to rising land prices and living costs, which may negatively affect indigenous residents. From an environmental perspective, increased waste generation and land-use conversion are key challenges that require better management. In terms of socio-cultural impacts, changes in values and norms have occurred due to interactions with tourists, potentially resulting in cultural commodification. A SWOT analysis was used to identify the strengths, weaknesses, opportunities, and threats in tourism management in Langsa City. To optimize the benefits and mitigate negative impacts, the study recommends strengthening environmental regulations, implementing stricter spatial planning, preserving local culture, and promoting the concepts of ecotourism and community empowerment in tourism sector management. Through the implementation of sustainable strategies, tourism in Langsa City is expected to continue to grow without compromising ecological balance and the social well-being of the local community.

Keywords: *Tourism, Socio-Economic Impact, Environmental Impact, Cultural Commodification*

Introduction

Tourism is a sector that significantly contributes to the economic development of a region, including Langsa City. As one of the cities in Aceh Province with rich natural and cultural tourism potential, Langsa has experienced a growing tourism industry in recent years. The increasing number of both domestic and international visitors has impacted various aspects of life, particularly the environment and the socio-economic conditions of communities surrounding tourist areas.

However, alongside this growth, several issues have emerged, particularly concerning environmental degradation and socio-economic impacts on local community structures. From an environmental perspective, the intensification of tourism activities can lead to environmental degradation such as air and soil pollution, increased waste generation, and the reduction of green open spaces due to the expansion of tourism infrastructure (Nuraini, 2019, 2024; Sugiarto et al., 2023; Sugiarto & Kustiah Ramadania, 2024). From a socio-economic perspective, tourism offers economic opportunities to local residents through job creation and tourism-based enterprises. Nevertheless, it can also trigger social changes, including cultural value shifts, conflicts of interest, and rising living costs in areas near tourist destinations (Linda et al., 2024; Sugiarto et al., 2023).

The urgency of this study lies in the need for a comprehensive evaluation of both the positive and negative impacts of tourism development in Langsa City, particularly on community organizations (Aini et al., 2023; Nuraini, 2017). Given the continuous growth of tourism in the city over recent years, there is a pressing need for research that provides recommendations for local governments and communities to manage tourism in a sustainable manner (Nuraini, 2021; Nuraini et al., 2023). This would ensure that the economic benefits of tourism are preserved without compromising environmental quality and the social welfare of the local population.

Based on the background outlined above, this study aims to analyze the impacts of tourism on the environment and the socio-economic organization of Langsa City. It focuses on how tourism activities affect environmental conditions, local economic dynamics, and the social changes that occur. This study is expected to provide a comprehensive overview of these impacts, serving as a valuable reference for local governments in formulating more adaptive policies for sustainable tourism management.

The significance of this study can be viewed from three main perspectives. From an academic standpoint, it contributes to the literature on the environmental and socio-economic impacts of tourism, particularly in urban contexts within Indonesia. From a practical perspective, the findings may serve as a guide for local governments, tourism business actors, and communities in developing mitigation strategies for negative tourism impacts while maximizing its positive effects. From a policy perspective, this research may form the basis for regulatory frameworks that prioritize sustainability, enabling tourism development in Langsa City to proceed in a more balanced and sustainable manner.

Literature Review

Tourism has become one of the key sectors driving economic development in various regions, including Indonesia. However, in addition to its economic benefits, the growth of tourism also has notable impacts on the environment and the socio-economic conditions of local communities. To understand these impacts, it is essential to review relevant theories and previous studies.

International Conference on Digital Sciences and Engineering Technology (ICDSET)
Theme: "Integration and Interdisciplinarity: Digital Sciences, Engineering and Technology
Concepts Frameworks"

Volume 2, No 1 (2025)

<https://proceeding.pancabudi.ac.id/index.php/ICDSET/>

A. Environmental Impacts of Tourism

The development of tourism often has significant effects on the environment. A study by Kurnianingtyas and Pratama (2023) in Lerep Tourism Village, Semarang Regency, found that tourism activities led to land-use changes, increased waste volume, and challenges in waste management. The conversion of agricultural or forest areas into tourism facilities can degrade environmental quality and threaten local ecosystems. Furthermore, the growing number of tourists has the potential to increase air, water, and soil pollution due to their activities. Therefore, effective environmental management is required to minimize these negative impacts.

B. Socio-Economic Impacts of Tourism on Communities

Tourism exerts complex influences on the social and economic aspects of local communities. On the one hand, tourism can enhance community income by creating jobs and new business opportunities. On the other hand, it may also cause social changes, such as shifts in cultural values and lifestyles. A study by Suherli (2020) in Singkep Subdistrict revealed that interactions between local communities and tourists may introduce new values and norms, which are not always aligned with traditional local culture. Additionally, economic dependency on the tourism sector can increase community vulnerability to fluctuations in tourist arrivals. Thus, it is crucial to ensure that the economic benefits derived from tourism are sustainable and do not come at the expense of the community's social and cultural values.

C. Studi Case: Construction Moratorium in Bali

In response to the negative consequences of overdevelopment, the Indonesian government imposed a moratorium on the construction of hotels, villas, and nightclubs in several areas of Bali. This policy was implemented to address issues such as traffic congestion, tourist behavior that disrespects local culture, and the conversion of agricultural land into commercial facilities. The moratorium aims to promote high-quality and sustainable tourism while preserving Bali's environment and cultural heritage. This policy highlights the importance of balanced tourism management that considers economic growth alongside environmental protection and cultural preservation.

Conceptual Framework

This study is grounded in the basic premise that tourism has dual impacts—both positive and negative—on the environment and the socio-economic conditions of the community. Therefore, the research employs a conceptual framework that links tourism activities with their impacts on society and the environment. The general outline of the conceptual framework is as follows:

1. Independent Variables (Tourism Activities)
 - a. Increase in tourist arrivals
 - b. Development of tourism infrastructure
 - c. Investment in the tourism sector
2. Dependent Variables (Impacts on Environment and Socio-Economy)
 - a. Environmental impacts (pollution, land-use conversion, ecosystem degradation)
 - b. Economic impacts on communities (income levels, employment, land prices)

International Conference on Digital Sciences and Engineering Technology (ICDSET)

Theme: "Integration and Interdisciplinarity: Digital Sciences, Engineering and Technology Concepts Frameworks"

Volume 2, No 1 (2025)

<https://proceeding.pancabudi.ac.id/index.php/ICDSET/>

- c. Socio-cultural impacts (changes in norms, conflicts of interest, cultural commodification)

The relationships between these variables are explored through a qualitative method using data collected from observation, interviews, questionnaires, and document studies.

RESULTS and DISCUSSION

Data collected through observation, interviews, questionnaires, and document review were analyzed using the SWOT method. The research findings are presented in tables and diagrams to provide a clearer understanding of community perceptions regarding the impacts of tourism in Langsa City.

Based on data gathered from 220 respondents, the impacts of tourism on the people of Langsa City can be classified into three main aspects: **economic impact**, **environmental impact**, and **socio-cultural impact**. The following are the key results from the conducted survey:

Table 1. Survey on Economic Impacts

Category of Economic Impact	Percentage of Respondents (%)
Increase in Income	65%
Creation of New Employment	55%
Rise in Land Prices	40%

Source: Researcher's Survey, 2025

From the table above, it is evident that 65% of respondents experienced positive economic impacts of tourism in the form of increased income, while 55% acknowledged the creation of new employment opportunities as a result of tourism sector growth. However, 40% reported a rise in land prices, which may present challenges for local residents in acquiring or renting property.

Table 2. Survey on Environmental Impacts

Category of Environmental Impact	Percentage of Respondents (%)
Increase in Waste Volume	50%
Land-Use Conversion	35%

Source: Researcher's Survey, 2025

According to the data, 50% of respondents believe that the increase in tourist numbers contributes to a rise in waste volume around tourism areas. Furthermore, 35% reported changes in land use due to tourism infrastructure development, which potentially reduces green spaces and disrupts ecological balance.

Table 3. Survey on Socio-Cultural Impacts

Category of Socio-Cultural Impact	Category of Socio-Cultural Impact
Lifestyle Changes	45%

Source: Researcher's Survey, 2025

As many as 45% of respondents stated that tourism has influenced the lifestyle of the local population, with noticeable shifts in consumption patterns and social interaction behaviors.

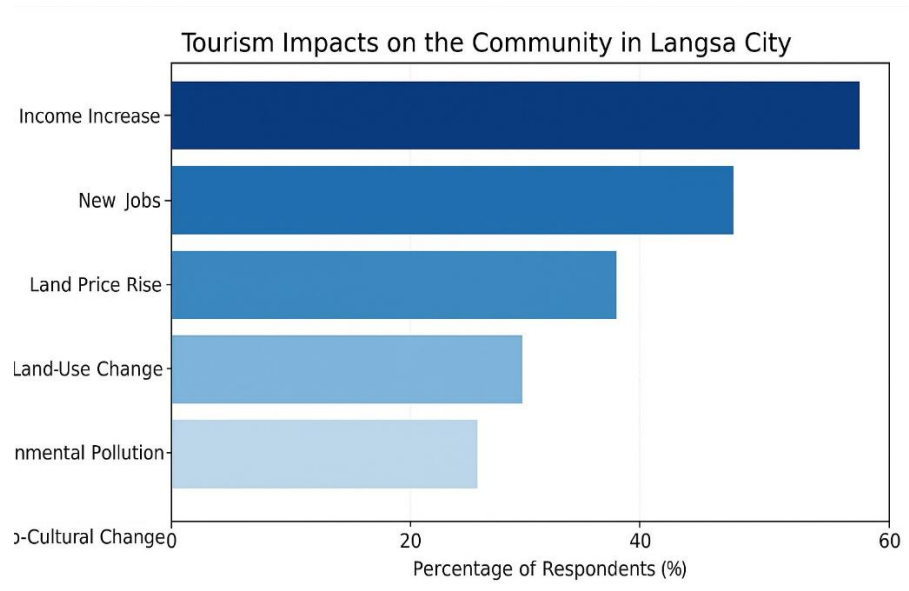


Figure 1. Graph of Tourism Impacts on the Community in Langsa City
Source: Researcher, 2025

A. SWOT ANALYSIS

Based on the research findings, the impacts of tourism were analyzed using the SWOT method, which identifies Strengths, Weaknesses, Opportunities, and Threats:

1. Strengths

- Increased Community Income: In line with the study by Dewi and Suparno (2022), which found that tourism growth enhances local household income.
- New Employment Opportunities: Many residents have transitioned into the tourism sector as hotel staff, tour guides, or small business operators such as vehicle rental services and food vendors.

2. Weaknesses

- a. Land-Use Conversion: The study by Kurnianingtyas and Pratama (2023) showed that land-use changes for tourism purposes can reduce green open space and productive community lands.
- b. Rising Land Prices: As observed in other tourism destinations, high demand for property and land drives up prices, making it difficult for local residents to afford owning or renting property in their own area.

3. Opportunities

- a. Economic Diversification: Tourism can create various new business opportunities, including in the creative industries and local product sectors.
- b. Sustainable Management Policies: The government can formulate sustainability-based policies to minimize environmental impacts while improving community welfare.

4. Threats

- a. Environmental Pollution: A study by Susanto and Rahmawati (2023) revealed that increased tourist arrivals often lead to higher volumes of waste and air pollution, requiring improved management systems.
- b. Socio-Cultural Changes: Interactions with tourists may alter local lifestyles, potentially eroding traditional values.

The results of this study align with tourism impact theory, which suggests that tourism has both positive and negative effects on communities and the environment. As outlined in Butler's Tourism Area Life Cycle theory (1980), tourism destinations often experience rapid economic growth; however, without proper management, negative environmental and social impacts may hinder long-term sustainability.

This research also supports previous studies, such as Dewi and Suparno (2022), which found that while tourism enhances local economies, it also contributes to social and ecological pressures. Similarly, Susanto and Rahmawati (2023) found that pollution levels increase in line with tourist numbers, which was also observed in this study. These findings corroborate the broader literature, which acknowledges that while tourism can boost economic welfare, it poses challenges to the environment and socio-cultural integrity.

Safuridar and Andiny (2020) investigated the development of mangrove ecotourism in Kuala Langsa Village and found that ecotourism contributed significantly to income generation and job creation, while also providing positive social benefits. This is consistent with the present findings in Langsa City, where 65% of respondents reported increased income, and 55% noted new job opportunities in the tourism sector.

Kurnianingtyas and Pratama (2023) found that tourism in Lerep Tourism Village increased local economic welfare but also led to land-use changes and rising waste levels—similar to findings in Langsa City, where 35% of respondents reported land-use conversion and 50% identified waste pollution as a major issue.

Furthermore, Suherli (2020) examined the social and economic impacts of tourism in Singkep Subdistrict and found that, alongside economic benefits, tourism also triggered shifts in cultural values and lifestyle—reflected in this study, where 45% of respondents reported lifestyle changes. Dewi and Suparno (2022) also observed challenges in cultural preservation due to increased tourist-resident interactions, which aligns with findings in Langsa showing signs of cultural commodification.

Susanto and Rahmawati (2023) further noted that tourism in urban destinations increases local income but places pressure on infrastructure and the environment—also evident in Langsa, where the growing number of tourists has led to increased waste generation and a need for better environmental regulations.

However, some studies were less relevant due to differing research focuses. Budiman et al. (2020) studied halal tourism development strategies in Langsa, focusing more on policy than on environmental and socio-economic impacts. Similarly, Aswan (2023) examined factors influencing tourism's contribution to Langsa's Gross Regional Domestic Product (GRDP), which, while related to tourism, focused on macroeconomic contributions rather than direct community impacts. Mukhti (2019) studied tourism sector planning and policy, making it less aligned with this study's focus on tourism's specific environmental and socio-economic impacts.

Conclusion and Recommendations

Based on the findings of this research on the impact of tourism on the environment and the socio-economic conditions of the community in Langsa City, it is evident that tourism offers significant economic benefits while also presenting challenges in environmental and socio-cultural aspects. Environmentally, tourism contributes to pollution, as indicated by increased waste volume and pollution resulting from tourist activities. Additionally, land conversion for tourism infrastructure has occurred in several areas, leading to the reduction of green spaces and threatening the sustainability of agricultural lands. Economically, tourism positively impacts the local community by increasing income, particularly through the emergence of new business opportunities such as tour guiding, accommodations, and culinary services. Furthermore, new jobs in the tourism sector and related industries have helped reduce poverty and improve economic welfare. However, the negative economic impacts should not be overlooked, such as the rising cost of land and living expenses due to increased property demand in tourism zones, making it difficult for original residents to own or retain housing.

In terms of socio-cultural impact, tourism has altered community lifestyles and norms, largely influenced by tourist interactions. While the presence of tourists has helped promote local culture globally, there is also the risk of cultural commodification, where traditions are modified or diluted for economic gain. Overall, this study demonstrates that tourism in Langsa City delivers considerable economic benefits but also brings challenges to environmental sustainability and cultural preservation. Therefore, sustainable tourism management strategies are needed to maximize the benefits without sacrificing ecological balance or community well-being.

Based on these findings, several recommendations can be implemented by local government, tourism businesses, and the community to optimize tourism management in Langsa City for long-term sustainability and positive impact. To ensure that tourism continues to provide benefits without causing environmental or socio-cultural damage, stronger environmental regulations are required, especially through stricter enforcement of waste management rules. This includes increasing the number of waste bins, implementing recycling systems, and imposing penalties on tourists and businesses that pollute. In addition, tighter spatial planning is necessary to prevent uncontrolled land conversion, thereby maintaining a balance between tourism infrastructure development and environmental conservation.

Governments should also develop educational programs for tourists to raise awareness and respect for local traditions, helping to protect cultural heritage from the pressures of tourism commercialization. Beyond macro-level policies, practical measures can be taken by local communities and tourism businesses to better manage the tourism sector. Empowering local communities through entrepreneurship and skills training in tourism-related areas can enhance their capacity to capitalize on emerging economic opportunities. Community-based tourism development can also serve as a solution to ensure greater local participation in tourism management, allowing residents not only to benefit economically but also to control social and cultural impacts. The implementation of ecotourism principles can further help minimize ecological damage while promoting more environmentally friendly and sustainable tourism practices.

To gain a deeper understanding of tourism impacts in Langsa City, future research may adopt a quantitative approach to measure economic and environmental impacts more precisely using numerical data and statistical analysis. Moreover, longitudinal studies could

International Conference on Digital Sciences and Engineering Technology (ICDSET)
Theme: "Integration and Interdisciplinarity: Digital Sciences, Engineering and Technology
Concepts Frameworks"

Volume 2, No 1 (2025)

<https://proceeding.pancabudi.ac.id/index.php/ICDSET/>

provide insights into long-term socio-economic changes, while comparative studies with other tourist destinations in Indonesia could offer broader perspectives on effective tourism management. With these recommendations, it is hoped that tourism in Langsa City can grow sustainably, providing optimal economic benefits to the local population without leading to environmental degradation or harmful socio-cultural shifts. The successful implementation of appropriate policies, supported by active community participation in tourism management, will be key to ensuring the long-term sustainability of tourism in Langsa City.

References

- [1] Aini, C. N., Azizah, Q., & Muharrani, S. (2023). ARAHAN PELESTARIAN TATA RUANG PERMUKIMAN MASYARAKAT ETNIS MANDAILING DI SUMATERA UTARA. *NALARs*, 23(1), 1. <https://doi.org/10.24853/nalars.23.1.1-16>
- [2] Anggarini, DR, Pagar, JZA, & Ratu, L. (2021). "Dampak Sektor Pariwisata pada Pertumbuhan Ekonomi Daerah Lampung". *Jurnal Bisnis Darmajaya* , 7(2), 59-72.
- [3] Azizah, M., & Saino. (2021). "Analisis Dampak Pengembangan Wisata Edukasi terhadap Perekonomian Masyarakat Lokal". *Jurnal Bisnis Darmajaya* , 7(2), 45-58.
- [4] Dewi, RK, & Suparno, H. (2022). "Analisis Dampak Sosial dan Ekonomi Pariwisata terhadap Masyarakat Lokal". *Jurnal Pariwisata Berkelanjutan* , 8(1), 45-60.
- [5] Kurnianingtyas, AP, & Pratama, KA (2023). "Dampak Pariwisata terhadap Kondisi Sosial, Ekonomi dan Lingkungan: Studi Kasus di Desa Wisata Lerep Kabupaten Semarang". *Jurnal Penelitian Pariwisata Eduwisata* , 5(2), 355-370.
- [6] Linda, N., Andiyan, A., Nuraini, C., Milanie, F., & Novalinda, N. (2024). Characteristics and Gender Interaction Patterns of the Mandailing Natal Community in the Housing Area of Sorik Marapi Sub-District: A Case Study of Sibanggor Julu Village 186 *JOURNAL OF INTERNATIONAL CRISIS AND RISK COMMUNICATION RESEARCH* Characteristics and Gender Interaction Patterns of the Mandailing Natal Community in the Housing Area of Sorik Marapi Sub-District: A Case Study of Sibanggor Julu Village. *Article in Journal of International Crisis and Risk Communication Research*. <https://www.researchgate.net/publication/386344996>
- [7] Mill, RC, & Morrison, AM (2009). *The Tourism System* (edisi ke-6). Dubuque, IA: Kendall Hunt Publishing Company.
- [8] Nasution Hasyim, N., & Sugiarto, A. (2024). The Role Of The Binjai Tavip Market As A Distribution Center For Local Agricultural Products In Binjai, North Sumatra. *International Conference in Artificial Intelligence, Navigation, Engineering and Aviation Technology (ICANEAT)*, 1, 576–580. <http://creativecommons.org/licenses/by-sa/4.0/>
- [9] Nirmala, IGAAN, Subadra, IN, & Putra, PGP (2024). "Dampak Pengembangan Desa Wisata terhadap Lingkungan, Sosial Budaya, dan Ekonomi di Desa Wisata Penglipuran". *Jurnal Daya Tarik Wisata* , 6(1), 8-21.
- [10] Nuraini, C. (2017). ROOM ARRANGEMENT CONCEPT: THE SACRED-PROFANE OF HEIRLOOM HOUSES IN HUTAGODANG VILLAGE, MANDAILING. *International Journal on Livable Space*, 2(2), 109–118. <https://doi.org/10.25105/livas.v2i2.4820>

International Conference on Digital Sciences and Engineering Technology (ICDSET)
Theme: "Integration and Interdisciplinarity: Digital Sciences, Engineering and Technology
Concepts Frameworks"

Volume 2, No 1 (2025)

<https://proceeding.pancabudi.ac.id/index.php/ICDSET/>

- [11] Nuraini, C. (2019). Morphology of residential environment of Singengu village in Mandailing Julu, North Sumatra. *Journal of Regional and City Planning*, 30(3), 241–260. <https://doi.org/10.5614/jpwk.2019.30.3.5>
- [12] Nuraini, C. (2021). *KARAKTER LINGKUNGAN PERUMAHAN BERBASIS SPACE ATTACHMENT YANG ADAPTIF DAN RESPONSIF DI MANDAILING*. <https://jurnal.umj.ac.id/index.php/nalars/article/view/8035/4962>
- [13] Nuraini, C. (2024). The Architectural Tectonics of Traditional Buildings in Mandailing, North Sumatera, Indonesia. *Civil Engineering and Architecture*, 12(2), 892–916. <https://doi.org/10.13189/cea.2024.120217>
- [14] Nuraini, C., Alamsyah, B., Novalinda, Sagala, P., & Sugiarto, A. (2023). Planning With ‘Three-World Structures’: A Comparative Study of Settlements in Mountain Villages. *Journal of Regional and City Planning*, 34(1), 55–82. <https://doi.org/10.5614/jpwk.2023.34.1.4>
- [15] Pitana, IG, & Gayatri, PG (2005). *Sosiologi Pariwisata*. Yogyakarta: Andi Mengimbangi.
- [16] Pratama, IGNW, Lilasari, LNT, & Widana, IBGA (2024). "Dampak Pariwisata terhadap Ekonomi di Destinasi Ubud Pasca Pencabutan Pembatasan Perjalanan". *Jurnal Kepariwisata*, 23(2), 120-130.
- [17] Sugiarto, A., & Kustiah Ramadania, R. (2024). Manajemen Lahan Bantaran Sungai Deli Untuk Pembangunan Kota Yang Berkelanjutan Berdasar Peraturan Daerah (RTRW/RDTR) (Studi Kasus : Bantaran Sungai Deli, Kecamatan Medan Maimun). *Jesya*, 7(1), 618–626. <https://doi.org/10.36778/jesya.v7i1.1378>
- [18] Sugiarto, A., Manalu, S. P. R., & Pakpahan, E. (2023). Pengaruh Jumlah Kunjungan Wisatawan Dan Pajak Restoran Terhadap Pertumbuhan Ekonomi Kabupaten Tapanuli Utara Dengan PAD Sebagai Variabel Intervening. *Jesya*, 6(1), 221–232. <https://doi.org/10.36778/jesya.v6i1.903>
- [19] Susanto, A., & Rahmawati, T. (2023). "Evaluasi Dampak Pariwisata terhadap Lingkungan dan Ekonomi Masyarakat: Studi Kasus di Destinasi Wisata Perkotaan". *Jurnal Ekonomi dan Lingkungan*, 6(2), 78-92.
- [20] Wibawa, IGN, & Mahagangga, IO (2023). "Dinamika Perkembangan Pariwisata di Desa Pakraman Ubud". *Jurnal Destinasi Pariwisata*, 1(1), 7-19.