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Coastal Tourism's Impact on Local Livestock Farming at Bilik Sijile Beach, Baluran National Park

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ABSTRACT

This research aims to analyze the development of coastal tourism at Sijile Beach and its impact on local beef cattle farming businesses. This research uses a quantitative approach with qualitative data as support, which includes interviews with key informants and surveys of around 40 breeders. The analysis was conducted to understand how tourism development affects livestock farmers' attitudes and identify policies and practices that can improve their welfare. PESTEL analysis identified political, economic, social, technological, environmental, and legal factors influencing Sijile Beach livestock farming. Political factors include conservation policies that limit land access for livestock breeders. In contrast, economic factors indicate challenges and opportunities arising from tourism, including rising land prices and opportunities for economic diversification. Social factors describe changes in cultural values and potential conflict between tourists and local communities. Technological factors indicate a lack of use of technology by livestock farmers, which limits their operational efficiency. Environmental impacts include habitat degradation and pollution due to tourism activities. Legal factors reveal problems in policy implementation and the need for local community participation in decision-making. SWOT analysis highlights strengths, such as solid local resources and a potential market of tourists, as well as weaknesses, such as technological limitations and pressure on natural resources. Opportunities include sustainable tourism development and diversification of the local economy, while threats include the environmental impact of tourism and competition with the tourism sector. These findings demonstrate the need for balanced and inclusive policies to integrate tourism with livestock and the importance of technology training and support for livestock adaptation. This research provides important insights for stakeholders in designing strategies that support ecosystem sustainability and the welfare of local communities.

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Introduction

Baluran has been a conservation area since the Dutch Colonial era until it was declared a National Park on March 6, 1980. Based on the Decree of the Minister of Forestry of the Republic of Indonesia Number 279/Menhut-VI/1997, the Baluran National Park area was determined to cover an area of 25,000 Ha. By its designation, the area is divided into several zones through the Director General of PKA Number 187/Kpts/DJ-V/1999, including a jungle water zone covering an area of 1,063 Ha. This area includes Bilik Sijile Beach, managed by the Karangtekok Region II National Park Management Section and located at the Labuhan Merak Resort. Even though there is not much human activity, there are various tourist attractions, and the Bilik Sijile beach landscape allows visitors to enjoy views of the mountains. This

often significantly impacts beef cattle farming businesses in the Sijile Beach area.

According to Ahlhorn (2017), the coastal zone is unique because it connects the ecology and use of dry land and marine space. Furthermore, the coastal zone is an essential ecological area because it is an area of dynamic biogeochemical activity with limited capacity to support various forms of human use. The President of the Republic of Indonesia, in Law of the Republic of Indonesia Number 1 of 2014 concerning Amendments to Law Number 27 of 2007 concerning Management of Coastal Areas and Small Islands, defines coastal areas as transitional areas between land and sea ecosystems which are influenced by changes on land and sea. With this unique potential and economic value, coastal areas are also faced with high threats, so coastal areas should be explicitly handled so that these areas can be managed sustainably.

With the growth of tourism and an increase in the number of tourist visits, there is a significant impact, especially on tourist destination areas, especially in coastal areas within the scope of conservation areas. The presence of tourism can accelerate economic growth, increase employment opportunities, increase income, improve living standards, and stimulate other productive sectors (Virjan, *et al.* 2023). Business opportunities and employment opportunities grow because tourism increases the demand for labor. The more tourists who come, the more types of businesses will develop in tourism areas, creating extensive job opportunities (Cranmer, *et al.* 2023). The jobs created are not only limited to sectors directly related to tourism but also extend to other sectors not directly related to tourism. This shows that tourism has great potential in providing employment opportunities for those who need new job opportunities.

It is hoped that the development of coastal tourism will not only improve the lives of local communities who currently depend on livestock and agricultural activities along the coast but will also increase the tourism sector's contribution to the national economy. On the other hand, coastal tourism has become a potential driver of social change, destruction of culture and traditions, and environmental degradation (Gössling, 2003; Lange, 2015). Increasing infrastructure investment along coastal areas with high restrictions on access to beaches by local communities affects their livelihoods and general well-being (Ashley & Mitchell, 2009; Mwaipopo, 2007). Furthermore, the socioeconomic and cultural impacts of coastal tourism have been discussed by several researchers (Dwyer, 2018; Gössling, 2003; Gössling & Peeters, 2015; Gössling & Schulz, 2005; Gustavson *et al.*, 2009), and the conclusions of these studies are mixed. Despite the extensive literature on global coastal tourism, the socioeconomic and cultural impacts of coastal tourism planning in the Baluran conservation area are poorly documented. Therefore, this research is intended to analyze the development of coastal tourism at Sijile Beach, so it is essential to shape and change the attitudes of beef cattle breeders participating in the tourism industry. This socioeconomic impact analysis will also create awareness for stakeholders involved in the tourism sector, especially on critical issues sensitive to livestock farmers.

Materials and Methods

This research uses a combined approach of PESTEL and SWOT analysis to evaluate the impact of coastal tourism at Sijile Beach on local community livestock businesses in Baluran National Park. PESTEL (Political *et al.*) analysis identifies and analyzes external factors influencing the local livestock sector. The political aspect includes government policies related to conservation and tourism and their impact on land

access by livestock breeders (Ruhanen, 2019). The economic component evaluates changes in the local economic structure, especially the economic opportunities and challenges livestock farmers face due to tourism (Liu & Wall, 2016). Social factors examine social and cultural changes in local communities due to interactions with tourists and changes in lifestyle (Hall, 2015). The technological aspect looks at the use of technology in tourism management and how this affects the efficiency of livestock businesses (Hjalager, 2015).

Meanwhile, environmental and legal aspects assess the impact of tourism on coastal ecosystems and regulations that protect the rights of local communities (Bramwell & Lane, 2013). Apart from PESTEL analysis, this research also uses SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) to evaluate internal factors influencing livestock businesses on Sijile Beach. The strengths and weaknesses of livestock businesses are evaluated in the context of adaptability and local resource capacity, while opportunities and threats arising from tourism development are also analyzed (Gheorghe *et al.*, 2014).

The informants and samples were selected purposively to ensure that the chosen respondents had knowledge and experience relevant to the topic under study. Key informants consist of local breeders, communities directly involved in tourism activities, stakeholders from the tourism sector, and government officials who have authority in managing conservation and tourism areas in the region. The sample used in this research consisted of around 40 active breeders around Sijile Beach. This sample was selected based on specific criteria, such as length of operation in the livestock business, involvement in tourism activities, and level of dependence on local resources, which may be affected by tourism development. This research was conducted in the coastal area of Bilik Sijile Beach, Sumberwaru Village, Banyuputih District, Situbondo Regency, from February to March 2024. Data was collected through in-depth interviews with key informants selected purposively, involving breeders, local communities, tourism stakeholders, and relevant government officials. Quantitative data was processed using Microsoft Excel 2019, while qualitative data was analyzed thematically to support and strengthen quantitative findings (Braun & Clarke, 2006). This combination of methods provides a holistic approach, allowing this research to describe the external conditions that influence livestock businesses and evaluate the internal capacity of livestock farmers to face challenges and exploit opportunities from tourism development on Bilik Sijile Beach.

Results and Discussion

General Description of Research Locations

This research was conducted in Merak Hamlet and Bilik Sijile Beach, in Sumberwaru

Village, Banyuputih District. Merak Hamlet is the center of livestock activities and is part of the local community adjacent to Bilik Sijile Beach. It is also one of the strategic points affected by tourism development in the area. Life in Merak Hamlet relies heavily on cattle and goat farming and marine products obtained from activities around the coast (Suryana *et al.*, 2021). Bilik Sijile Beach is a coastal tourist destination famous for its natural beauty, including white sandy beaches, mangrove forests, and coral reefs. This beach is part of the Baluran National Park, which has protection status to protect coastal ecosystems and endemic flora and fauna. However, the popularity of Bilik Sijile Beach as a tourist destination has triggered an increase in tourism activities, such as the construction of accommodation facilities, restaurants, and other tourist activities that attract domestic and international visitors (Riani & Rachmawati, 2022).

In the context of this research, Merak Hamlet functions as a social laboratory for understanding the impact of tourism on local livestock businesses. According to Aprylasari *et al.* (2022), empowering local communities is critical in managing the socioeconomic impacts of tourism.

Improvements in tourism infrastructure at Bilik Sijile Beach have had a significant positive and negative economic impact on the local Merak Hamlet community. This research aims to explore how livestock farmers in Merak Hamlet adapt to new challenges posed by the growth of the tourism sector, including increases in land prices and animal feed ingredients, as well as how they take advantage of new opportunities such as selling livestock products to tourists and opening stalls (Fitria & Susanto, 2020; Lane, *et al.* 2022). The environmental conditions of Bilik Sijile Beach are experiencing pressure from tourism activities such as infrastructure development and an increase in the number of visitors, affecting the balance of the ecosystem, which is essential for the continuity of livestock businesses in Merak Hamlet. By focusing on these two locations, this research aims to provide in-depth insight into the interactions between conservation, tourism, and livestock, as well as identify policies and strategies that can support the sustainability of livestock businesses and environmental protection in this region (Gössling & Hall, 2015; Sutanto *et al.*, 2021). The following is a picture of the research location.

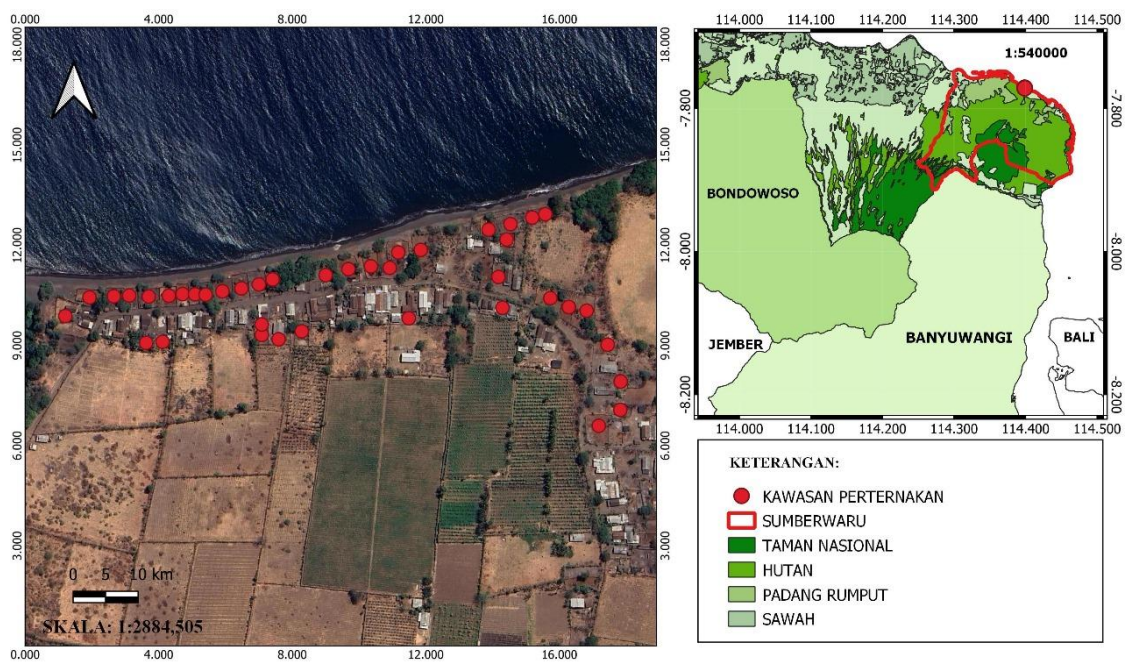


Figure 2. Research Location

PESTEL Analysis

A. Political (Politics)

Government policies related to conservation and tourism development play an essential role in determining land access for breeders on Sijile Beach. Natural resource conservation, often promoted by national and local policies, aims to protect biodiversity and ensure ecosystem sustainability. However, this research shows that these conservation policies usually limit the space for breeders to use land optimally for livestock activities. This restriction not only reduces

access to land but also reduces the availability of natural feed needed for livestock so that it can directly reduce livestock productivity (Wunder, 2015). These restrictive policies often create tensions between conservation goals and local economic needs, mainly as many ranchers depend for their livelihoods on increasingly limited access to land and natural resources. However, not all policies hurt breeders. Several government policies support sustainable tourism development that considers the balance between conservation and the economic needs of local communities. Policies

like this open up opportunities for breeders to diversify their business, for example, by getting involved in tourism activities as ecotourism actors or providers of local experience-based services (Fletcher *et al.*, 2021). This can include activities such as agrotourism, where tourists are invited to participate in livestock activities or sell livestock products directly to tourists. Thus, policies that support sustainable tourism maintain ecosystem sustainability and enrich the local economy by integrating the livestock sector with tourism.

Furthermore, the importance of the government's role in creating a framework that facilitates collaboration between the tourism and livestock sectors is also identified in this research. Governments can serve as mediators who reduce tensions between conservation and economic needs by promoting policies that combine the two, such as providing incentives to livestock breeders who implement environmentally friendly practices in their activities. This research emphasizes that balanced and inclusive government policies, which consider both conservation aspects and the economic needs of local communities, are essential to achieving sustainability in the Sijile Beach area (Azizah *et al.*, 2021). With appropriate policy support, tourism potential in this area can be maximized without sacrificing the welfare of local livestock breeders, which can improve the quality of life of local communities and maintain the balance of the existing ecosystem.

B. Economic

Changes in the local economic structure due to the development of tourism on Sijile Beach have a complex impact on livestock businesses, both positive and negative. This research identified that although tourism increases demand for livestock products from tourists, challenges such as rising land prices and animal feed costs are vital issues. Land price increases were caused by land conversion for tourism infrastructure development, while feed costs increased due to competition with the tourism sector in obtaining raw materials (Nunkoo, 2015). This creates financial pressure for livestock farmers, forcing them to adopt more efficient and innovative strategies to maintain the continuity of their businesses (Briedenhann & Wickens, 2021).

However, the positive impact of tourism is also significant. Opening stalls and small businesses by local communities is one of the positive adaptations of tourism development. This business provides food and drinks to tourists and markets handicraft products directly (Higgins-Desbiolles, 2018). The existence of these stalls helps increase household income, creates new jobs, and strengthens the local economy by absorbing local products into the tourism market. Research shows that the existence of small businesses of this kind contributes to improving the community's economy, providing alternative additional income that supports household economic stability amidst the challenges faced by

the livestock sector (Liu & Wall, 2016). Therefore, although tourism challenges livestock breeders, it also offers significant opportunities for economic diversification and improving the quality of life of local communities on Sijile Beach.

C. Social

The interaction between tourists and local communities at Sijile Beach has led to significant social and cultural changes. The influence of tourists has brought about profound lifestyle changes for some livestock breeders, with traditional values starting to be replaced by modern values introduced through these interactions (Moscardo, 2015). For example, traditional habits and practices in animal husbandry, such as land rotation systems and traditional livestock management methods, are starting to decline along with the adoption of more modern and efficient practices offered by tourists and tourism development. This not only affects livestock farmers' way of life but also changes local communities' social and cultural structure.

In addition, differences in perceptions and expectations between local communities and tourists often give rise to tensions and conflicts, especially regarding the use of local resources such as land and water (Tosun, 2016). For example, tourists may have expectations regarding access to beaches and tourist areas that conflict with the needs of local communities to use these resources for their livestock activities. This kind of conflict can disrupt social harmony and requires careful managerial strategies. Therefore, it is essential to develop policies that can align the interests of both parties and ensure that the social changes that occur do not damage local cultural identity (Aprilasari *et al.*, 2024). Integration between preserving traditional values and adapting to modern values is a challenge that must be faced to maintain a balance between tourism development and preserving local culture.

D. Technological

The use of technology in managing tourism at Sijile Beach has made it easier to access information and expanded market connectivity, providing significant benefits for the development of tourist destinations. Digital technology enables more effective promotion of tourist destinations, facilitates communication between business actors and tourists, and supports data collection and analysis for better business decisions. However, this research shows that most breeders on Sijile Beach still need to utilize technology optimally in their livestock business (Sigala, 2018). Local ranchers tend to be stuck in traditional practices, while the tourism sector has embraced technology to increase the visibility and attractiveness of destinations. This gap is caused by a need for more training and access to appropriate technology (Koo *et al.*, 2016). Most farmers need the knowledge or resources to integrate modern technology into their operations, which limits their ability to increase

efficiency and productivity. Technology, such as livestock management software and e-commerce platforms, can help farmers manage feedstocks, set rearing schedules, and sell their products online.

To bridge this gap, it is essential to organize targeted training programs for farmers, covering aspects such as management software, digital marketing, and other technological tools. These programs should be designed to improve the technical skills of farmers and introduce them to relevant technologies that can improve their operational efficiency. This training will help farmers adapt to technological developments, improve their work processes, and compete better in an increasingly digital market (Koo *et al.*, 2016). Continued government and private sector support is also essential to provide the infrastructure and access necessary for livestock farmers to utilize the technology effectively.

E. Environmental

The impact of tourism on the coastal ecosystem of Sijile Beach is significant and complex, with increased activities such as infrastructure development and a surge in visitor numbers placing enormous pressure on the natural environment. This research reveals that tourism expansion has caused habitat degradation, decreased water quality, and soil pollution, directly impacting local livestock resources (Gössling & Hall, 2015). For example, constructing tourism facilities often involves land conversion, which can reduce green areas that provide animal feed and maintain soil and water quality.

Furthermore, an increase in the number of tourists can cause the accumulation of waste and pollution, which disrupts coastal ecological systems and reduces the quality of resources used by livestock breeders to support their businesses (Azizah *et al.*, 2023). Changes in land use patterns and additional human activity in coastal areas can affect ecosystem stability, such as reducing habitats for local species that play a role in a healthy and sustainable ecosystem (Gössling, 2016). This disturbed ecological balance requires sustainable and well-planned mitigation efforts to minimize the negative impacts of tourism environmentally friendly management, such as limiting tourist areas, using environmentally friendly technology to reduce pollution, and enforcing strict environmental regulations. To maintain the sustainability of the ecosystem that supports livestock businesses, related parties need to work together to design an integrated tourism management strategy, environmental conservation interests and local economic needs. Thus, tourism development provides financial benefits and protects natural resources crucial for the sustainability of livestock businesses and the welfare of local communities on Sijile Beach (Siswanto, 2015).

F. Legal

Rules and regulations related to the management of conservation areas and tourism play an important role in protecting the rights of local communities, including livestock breeders on Sijile Beach. This policy usually aims to regulate the use of land and natural resources so that it is sustainable and fair for all parties. However, policy implementation often encounters obstacles such as a lack of adequate socialization and supervision, which results in injustice in access and use of resources by livestock breeders (Bramwell & Lane, 2013). This uncertainty and injustice can create tension between the parties involved and harm the sustainability of livestock businesses that depend on fair access to natural resources.

This research also shows that there is often a need for more local community participation in decision-making processes related to the management of conservation areas. The involvement of local communities in planning and implementing policies is essential to ensure that their interests are taken into account and to strengthen the legitimacy and effectiveness of those policies (Ruhanen *et al.*, 2019). Increasing outreach regarding existing policies and improving monitoring mechanisms can help overcome this problem. Implementing an inclusive approach, where local communities have a voice in decision-making, can increase the effectiveness of regulations and support both environmental and economic sustainability in the region (Ruhanen *et al.*, 2019).

SWOT Analysis Based on Internal Factors Strengths

1. Strong Local Resources

Merak Hamlet has significant strengths in terms of local resources, particularly in the experience and expertise of breeders and the quality of their livestock products. In-depth knowledge of traditional livestock techniques provides a solid foundation for business development and guarantees quality products (Fitria & Susanto, 2020). With a weight of 0.25 and a score of 4, the contribution of this strength to the overall analysis is 1.00, indicating that this strength is a significant factor in the success of livestock businesses in this region.

2. Potential market from tourists

The number of tourists at Bilik Sijile Beach provides new economic opportunities for local breeders, increases demand for livestock products, and opens up opportunities for business diversification. This provides a significant competitive advantage, allowing breeders to expand their markets and increase their income (Gössling & Hall, 2015). With a weight of 0.30 and a score of 4, this factor has the most significant contribution in the IFAS matrix, namely 1.20, indicating the importance of the tourist market as a leading force.

3. Community Involvement in Tourism

Involving local communities in tourism development, such as setting up food stalls, strengthens integration between the livestock and tourism sectors. Stalls established by local communities around Bilik Sijile Beach diversify income and increase livestock farmers' involvement in the local economy (Suryana *et al.*, 2021). With a weight of 0.20 and a score of 3, the contribution of this factor is 0.60, indicating that community involvement plays a vital role in exploiting opportunities from tourism.

Weaknesses

1. Technological Limitations

Most farmers in Merak Hamlet have yet to utilize modern technology to increase the efficiency of their livestock business. This inability limits their ability to compete in an increasingly technology-based market, reducing productivity and operational efficiency (Sigala, 2018). With a weight of 0.25 and a score of 2, this factor contributes to 0.50, indicating that technological limitations are a significant weakness.

2. Pressure on Natural Resources

The increase in tourism activities at Bilik Sijile Beach puts pressure on natural resources necessary for livestock businesses, such as land and animal feed. This pressure can disrupt the balance of the ecosystem that supports livestock businesses and reduce resource sustainability (Briedenhann & Wickens, 2021). With a weight of 0.20 and a score of 3, the contribution of this factor is 0.60, indicating that pressure on natural resources is a significant weakness.

3. Lack of Support and Training

Lack of support and training in tourism management and technology hinders livestock farmers' ability to take advantage of the opportunities offered by tourism. With adequate training, livestock farmers can adapt to market changes and optimize their potential (Koo *et al.*, 2016). With a weight of 0.20 and a score of 2, this factor contributes to 0.40, indicating that lack of support and training is a significant weakness that needs to be addressed. The following is the IFAS matrix shown in the following table

Table 1. IFAS Matrix

Type	Internal Factors	Value Weight	Ratings	Score
Strengths	Strong local resources	0,25	4	1,00
	Potential market from tourists	0,30	4	1,20
	Community involvement in tourism	0,20	3	0,60
	Sub-total	0,75		2,80
Weaknesses	Technological limitations	0,25	2	0,50
	Pressure on natural resources	0,20	3	0,60
	Lack of support and training	0,20	2	0,40
	Sub-total	0,65		1,50

Source: Primary data processed (2024)

SWOT Analysis Based on External Factors

Opportunities

1. Sustainable Tourism Development

Government policies supporting sustainable tourism provide significant opportunities for Merak Hamlet to participate in developing environmentally friendly tourism. This initiative can open up various new sources of income for local communities, such as the development of homestays, local tours, and community-based tourism activities. Involvement in sustainable tourism increases revenue and helps preserve the environment, which in turn can strengthen the attractiveness of tourist areas (Fletcher *et al.*, 2021).

2. Diversification of the Local Economy

The increasing number of tourists creates opportunities to diversify the local economy through side businesses such as food stalls and souvenir shops. This diversification helps reduce community dependence on the livestock sector and can strengthen local economic stability. With additional income from the tourism sector, people can more easily adapt to fluctuations in the livestock sector and improve their welfare (Nunkoo, 2015).

3. Partnership with Tourism Investors

Partnerships with investors in the tourism sector offer access to new capital and technology,

enabling local farmers and businesses to improve their practices, upgrade equipment, and expand their markets. With appropriate investment support, livestock and tourism development potential can be maximized, bringing additional economic benefits to local communities (Gössling & Hall, 2015).

Threats

1. Environmental Impact of Tourism

Increased tourism activities, such as infrastructure development and a surge in visitor numbers, could cause significant negative impacts on the coastal ecosystem at Bilik Sijile Beach. Pollution, habitat destruction, and poor waste management can worsen environmental conditions and threaten the balance of the ecosystem that supports local livestock businesses. This challenge requires special attention to ensure that tourism development does not harm the environment that supports life and livestock businesses (Briedenhann & Wickens, 2021).

2. Competition with the Tourism Sector

Competition for land and resources with the tourism sector can increase land prices and production costs for livestock farmers. This competition adds economic pressure to farmers and can reduce their profitability. Rapid adaptation and efficient managerial strategies are needed to face these challenges so farmers can compete effectively in

an increasingly competitive market (Nunkoo, 2015).

3. Regulatory Uncertainty

Uncertainty in policies and regulations related to conservation and tourism can create additional challenges for livestock breeders. Inconsistent or unclear policies regarding land and

resource use rights can hinder livestock business development and increase farmers' risks. Efforts are needed to clarify and enforce regulations consistently to provide fair protection for all parties involved (Bramwell & Lane, 2013; Igbinenikaro & Adewusi, 2024). The IFAS matrix is shown in the table below.

Table 2. EFAS Matrix

Type	External Factors	value weight	Ratings	Score
Opportunities	Sustainable tourism development	0,30	4	1,20
	Diversify the local economy	0,25	3	0,75
	Partnership with tourism investors	0,20	3	0,60
	Sub-total	0,75		2,55
Threats	Environmental impacts of tourism	0,30	3	0,90
	Competition with the tourism sector	0,25	2	0,50
	Regulatory uncertainty	0,20	3	0,60
	Sub-total	0,75		2,00

Source: Primary data processed (2024)

From these two types of analysis, an IFAS and EFAS matrix can be prepared in Table 3.

Table 3. IFAS and EFAS Matrix

IFAS/EFAS	Strengths (S)	Weakness (W)
Opportunities (O)	Strategy SO	Strategy WO
	2,80 + 2,55 = 5,35	1,50 + 2,55 = 4,05
Threats (T)	Strategy ST	Strategy WT
	2,80 + 2,00 = 4,80	1,50 + 2,00 = 3,50

Source: Primary data processed (2024)

1. SO Strategy (Strengths-Opportunities)

Total Score: 5.35

Description: SO strategy utilizes internal strengths and external opportunities to achieve optimal results. In the context of Merak Hamlet and Bilik Sijile Beach, this strategy focuses on:

- Leveraging Local Resources and Tourist Markets: With the strength of local solid resources and a potential market of tourists, there is an excellent opportunity to develop products and services that are attractive to tourists. For example, farmers can build livestock products for the tourist market, such as organic or local specialty products, and offer livestock-related tourism experiences.
- Sustainable Tourism Development: With government policies supporting sustainable tourism, livestock farmers and local communities can engage in environmentally friendly tourism activities that diversify income. This could include developing homestays, educational tours, and selling local product installs.

2. WO Strategy (Weaknesses-Opportunities)

Total Score: 4.05

Description: WO strategies focus on overcoming internal weaknesses while exploiting external opportunities. This strategy involves:

- Overcoming Technology and Support Limitations: To reduce technology limitations and lack of support, it is crucial to implement technology and management training for farmers. Partnerships with tourism investors can also provide access to new technology and necessary training.

- Diversification of the Local Economy: Despite weaknesses in support and training, opportunities to diversify the local economy can reduce dependence on livestock. This can be done by utilizing government support and investment partners to develop side businesses such as food stalls or souvenir shops.

3. ST Strategy (Strengths-Threats)

Total Score: 4.80

Description: ST strategy uses internal strengths to overcome external threats. In this case, the plan includes:

- Protecting Ecosystems and Natural Resources: By harnessing the power of local resources and community involvement, communities can adopt sustainable livestock practices that reduce the negative impacts of tourism on the environment. Implementing environmentally friendly practices can reduce the threat of the damaging effects on tourism.
- Overcoming Competition and Regulatory Uncertainty: Leveraging the tourist market and community involvement in tourism to strengthen the bargaining position of livestock farmers in the face of competition and regulatory uncertainty. This includes enhancing communication and negotiations with authorities and expanding market networks.

4. WT Strategy (Weaknesses-Threats)

Total Score: 3.50

Description: WT strategies focus on reducing internal weaknesses while avoiding or mitigating external threats. This strategy involves:

- **Strengthening Support and Training:** Addressing weaknesses in support and training to ensure livestock farmers can adapt to change and reduce the impact of threats from tourism. Better training programs and technical support can help breeders manage environmental pressures and increase competition.
- **Addressing Resource Pressures and Regulatory Uncertainty:** Increase capacity to adapt and mitigate against pressures on natural resources and regulatory uncertainty through training and adapting practices. Implementing more efficient resource management strategies and a solid policy-based approach can help reduce negative impacts.

The IFAS and EFAS analysis results show that a strategic approach to exploit strengths and opportunities while overcoming weaknesses and threats can help optimize results and increase the sustainability of livestock businesses in Bilik Sijile Beach and Merak Hamlet. The proposed strategy should focus on the integration between the livestock and tourism sectors, focusing on environmental sustainability, economic diversification, and strengthening local capacity.

Table 4. Strategy Table

	Strength (Strength ness)	Weakness
Internal Factors	1. Strong local resources	1. Technological limitations
	2. Potential market from tourists	2. Pressure on natural resources
External Factors	3. Community involvement in tourism	3. Lack of support and training
Opportunities	SO Strategy	WO Strategy
1. Sustainable tourism development	1. Leverage Local Resources and Tourist Markets: With the strength of local solid resources and a potential market of tourists, there is an excellent opportunity to develop products and services that are attractive to tourists. For example, farmers can build livestock products for the tourist market, such as organic or local specialty products, and offer livestock-related tourism experiences.	1. Overcoming Technology and Support Limitations: To reduce technology limitations and lack of support, it is crucial to implement technology and management training for farmers. Partnerships with tourism investors can also provide access to new technology and necessary training.
2. Diversification of the local economy	2. Sustainable Tourism Development: With government policies that support sustainable tourism, livestock breeders and local communities can engage in environmentally friendly tourism activities that diversify income. This could include developing homestays, educational tours, and selling local product installs.	2. Diversify the Local Economy: Despite weaknesses in support and training, opportunities to diversify the local economy can reduce dependence on livestock. This can be done by utilizing government support and investment partners to develop side businesses such as food stalls or souvenir shops.
3. Partnership with tourism investors		
Threats	ST Strategy	WT Strategy
1. Environmental impacts of tourism	1. Protect Ecosystems and Natural Resources: By harnessing the power of local resources and community involvement, communities can adopt sustainable livestock practices that reduce the negative impact of tourism on the environment. Implementing environmentally friendly practices can reduce the threat of the damaging effects on tourism.	1. Strengthening Support and Training: Addressing weaknesses in support and training to ensure livestock farmers can adapt to change and reduce the impact of threats from tourism. Better training programs and technical support can help breeders manage environmental pressures and increase competition.
2. Competition with the tourism sector	2. Overcoming Competition and Regulatory Uncertainty: Leveraging the tourist market and community involvement in tourism to strengthen the bargaining position of breeders in the face of competition and regulatory uncertainty. This includes enhancing communication and negotiations with authorities and expanding market networks.	2. Addressing Resource Pressures and Regulatory Uncertainty: Increase capacity to adapt and mitigate against pressures on natural resources and regulatory uncertainty through training and adapting practices. Implementing more efficient resource management strategies and a solid policy-based approach can help reduce negative impacts.
3. Regulatory uncertainty		

Conclusion

The conclusion of the PESTEL and SWOT analysis regarding the impact of coastal tourism on Sijile Beach on local community livestock businesses shows that tourism development has a complex effect. Politically, government policies that support conservation often limit livestock farmers' access to land and

feed. However, some policies have the potential to open up opportunities for business diversification through sustainable tourism. From an economic perspective, tourism increases demand for livestock products but also increases operational costs such as land and feed prices. Social impacts are seen in lifestyle changes and conflicts between tourists and livestock farmers regarding resource use. Technology offers great potential to improve livestock efficiency, but its application still needs to

be improved. The environment is under pressure from tourism activities, which can damage vital ecosystems for livestock. The legal aspect shows the need for increased outreach and policy monitoring to prevent injustice and tension between livestock farmers and the tourism sector.

From the SWOT analysis, the main strengths are vital local resources, potential markets from tourists, and community involvement in tourism, which provides opportunities for diversification and increased income. Weaknesses such as technological limitations, pressure on natural resources, and lack of support and training need to be addressed to maximize tourism benefits. Opportunities such as sustainable tourism development, economic diversification, and partnerships with investors provide ways to overcome challenges. However, threats from tourism's environmental impact, competition in the tourism sector, and regulatory uncertainty require special attention. Overall, an effective strategy must include balanced management between ecological conservation, sustainable tourism development, and increasing the capacity of breeders to optimize benefits and mitigate negative impacts.

Conflict of interest

The authors have no conflict of interest to declare. All authors have seen and agree with the contents of the manuscript.

Author's contribution

The authors confirm contribution to the paper as follows: study conception and design: D. A. and S. A.; data collection: D. A.; analysis and interpretation of results: D. A. and S. A.; draft manuscript preparation: D. A. and S. A.. All authors reviewed the results and approved the final version of the manuscript.

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