RATIONALITY OF DEVELOPING THE PROTECTED MANGROVE FORESTS AS ECOTOURISM

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ABSTRACT

Purpose: The purpose of the study is to analyze the rationalities and strategies of developing mangrove forests as ecotourism and its impact on socio-economic transformation.

Method: The research was conducted using exploratory qualitative methods with data collection techniques through observation, in-depth interviews, and document studies. Interviews were conducted with representatives of local governments, tourism agencies, the village head, the local communities, mangrove tourism management groups, local traders, employees, and tourists. The data were analyzed with an interactive model using an inductive approach.

Result and conclusion: Based on the analysis, two main rationalities were identified in developing protected mangrove ecotourism; economic potential and environmental conservation of mangroves. In addition, three strategies were carried out to transform protected mangroves into ecotourism; building community awareness, conducting good cooperation across sectors, and strengthening tourism development by making mayoral regulations.

Finding implication: The mangrove ecotourism has an impact on collective awareness and encourages the community to preserve mangroves for their economic interests based on the principle of sustainable environmental conservation. Finally, this study confirms that economic rationalities and mangrove conservation as ecotourism objects encourage stakeholders to find sustainable strategies for managing ecotourism-protected mangroves to ensure the realization of a blue economy.

Keywords: Ecotourism, Local Community, Mangrove, Socio-Economic Transformation, Sustainability.

RACIONALIDADE DE DESENVOLVER AS FLORESTA DE MANGUEZAIS PROTEGIDAS COMO ECOTURISMO

RESUMO

Objetivo: O objetivo do estudo é analisar as racionalidades e estratégias de desenvolvimento de manguezais como ecoturismo e seu impacto na transformação socioeconômica.

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Método: A pesquisa foi realizada utilizando métodos qualitativos exploratórios com técnicas de coleta de dados por meio de observação, entrevistas em profundidade e estudos documentais. Foram realizadas entrevistas com representantes de governos locais, agências de turismo, chefe da aldeia, comunidades locais, grupos de gestão do turismo de mangue, comerciantes locais, funcionários e turistas. Os dados foram analisados com um modelo interativo usando uma abordagem indutiva.

Resultado e conclusão: Com base na análise, duas racionalidades principais foram identificadas no desenvolvimento do ecoturismo de manguezais protegidos, potencial econômico e conservação ambiental dos manguezais. Além disso, foram realizadas três estratégias para transformar manguezais protegidos em ecoturismo; construindo a conscientização da comunidade, conduzindo uma boa cooperação entre os setores e fortalecendo o desenvolvimento do turismo por meio de regulamentos municipais.

Implicações da descoberta: O ecoturismo de manguezais tem um impacto na consciência coletiva e incentiva a comunidade a preservar os manguezais para seus interesses econômicos com base no princípio da conservação ambiental sustentável. Por fim, este estudo confirma que as racionalidades econômicas e a conservação de manguezais como objetos de ecoturismo encorajam as partes interessadas a encontrar estratégias sustentáveis na gestão de manguezais protegidos pelo ecoturismo para garantir a realização de uma economia azul.

Palavras-chave: Ecoturismo, Comunidade Local, Mangue, Transformação Socioeconômica, Sustentabilidade.

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1 INTRODUCTION

The development of ecotourism is widely discussed as one of the essential agendas in economic development. Areas with rich animal and plant resources and beautiful natural landscapes tend to be tourist choices for ecotourism (Nigatu & Tegegne, 2021). The tourism activity carried out individually and collectively involve the efforts for restoration, conservation, and sustainable tourism (Mohd Noh et al., 2020). Furthermore, The International Ecotourism Society defines ecotourism as a responsibly made trip to a natural area that relies on efforts to preserve the environment, improve the welfare of local communities, and involve educational efforts to protect nature. Ecotourism can also be a learning tool for sustainable development (Mondino & Beery, 2019) because it follows principles that promote social, environmental, and economic sustainability. The existence of sustainable tourism is also related to improving the quality of life, socio-psychological adaptation, and rehabilitation of persons with disabilities (Strehnikova et al., 2023).

Ecotourism with the potential for economic development is mangrove forest areas due to considered to have the potential for sustainable integrated development (Hartati et al., 2021; Mustari et al., 2022; Saefullah, 2022). It is identified as a blue economy development resource because it geographically grows and develops in marine coastal areas (Mitra et al., 2022; Shah & Ramesh, 2022). Many studies show that the development of ecotourism based on the utilization of marine and coastal resources has an impact on sustainable economic development, both in the context of improving the economy of local communities and increasing state income (Hertati, 2018; Lisova et al., 2017; Swangjang & Kornpiphat, 2021), as well as maintaining natural ecosystems (Phelan et al., 2020).

The aforementioned explanation indicates how mangrove ecotourism offers a multitude of development prospects that are beneficial from an economic, social, and ecological perspective. Economically, the existence of mangroves can be a vehicle for fish, crab, and shrimp farming through silvofishery patterns, processing of non-timber mangrove products, and natural tourism that strengthens the development of blue industrial areas. The economic benefits...
of nature tourism come from the growth of business ventures and employment opportunities. Non-economic benefits are obtained from strengthening the capacity and empowerment of the surrounding poor, including environmental disaster mitigation and strengthening the socio-cultural aspects of local communities (Lopez & Bhaktikul, 2018). In the context of ecology, mangrove also has an important role, including controlling marine abrasion and reducing environmental impacts (Wells & Raviliouos, 2006), including resisting storms and sea waves (Sutanto et al., 2022), including reducing hazards due to climate change (Dillon et al., 2013). Ecotourism successfully rearranges the damaged environment into a beautiful one, improves economic welfare, and maintains the socio-cultural values of the local community. Therefore, the Indonesian government designed a mangrove rehabilitation program to restore the national economy to improve the economy and community welfare (Yulianto et al., 2022). Coastal communities in Malaysia are willing to spend money on mangrove maintenance because they believe they can promote sustainable ecotourism while increasing their economic income (Musa et al., 2020).

Inspiring the fact, the Langsa City Government and developmental actors, Aceh Province, viewed the economic opportunities and ecological benefits of the existence of mangrove-protected forests to be developed into mangrove ecotourism. Therefore, this study aims to: 1) discuss the rationality of mangrove ecotourism development; 2) analyze mangrove ecotourism development and management strategies carried out by stakeholders so that they can provide economic and non-economic benefits to the surrounding community; and 3) analyze the form of socio-economic transformation as an implication of mangrove ecotourism development.

This study is exciting and urgent to discuss because, first, the existence of mangrove tourism development in Langsa City has not shown any negative impacts (Safuridar & Andiny, 2019). In contrast to the other mangroves developed as ecotourism destinations in several areas that caused environmental degradation and pollution (Jaya et al., 2020), the presence of social conflicts (Gunawan et al., 2018; Sanjaya & Wibowo, 2019), loss of local identity, social structure, culture and way of life (Fafurida et al., 2020; Swangjang & Kornpiphat, 2021). The second, finding the stakeholders' strategies in developing ecotourism because an inappropriate management system can harm the community's social, cultural, and environmental life. Degradation of local resources (energy, food, and other raw materials), resource exploitation, uncontrolled development, pollution, waste problems, and ecosystem damage are a series of tourism problems if the development is not based on a mature strategy (Raj Sharma et al., 2022). The third, knowing the form of socio-economic transformation in local communities as an implication of mangrove ecotourism development. It can be evidence that there are economic benefits that are evenly distributed and have an impact on the unification of diverse ethnicities, considering the characteristics of people in the study area come from various ethnicities, namely Acehnese, Javanese, Batak, and others. Finally, the results of this study are expected to be useful theoretically and praxis to ensure that ecotourism activities are environmentally responsible, socially just, and economically improved in the long term. In addition, valuable lessons from best practices can be adopted by other regions with the same potential to develop a blue economy based on mangrove ecotourism.

2 LITERATURE REVIEW

The International Ecotourism Society defines ecotourism as "a responsible travel to natural areas that conserves the environment sustains the well-being of the local people, and involves interpretation and education" (Nigatu & Tegegne, 2021). Ecotourism has characteristics that include natural landscapes, tourist attractions related to nature, and biodiversity in tourist areas (Keukenov et al., 2022). The Earth Summit international agreement
in 1999 in Rio de Janeiro shared the same view, where sustainable development in the tourism sector became a strategy for reducing environmental damage. Environmental and culturally sound and culturally sensitive tourism programs are strategies for developing a region and reducing inequalities between regions (Coronado Martínez et al., 2018).

Donohoe and Needham (2006) ensure that there are six basic principles of ecotourism, namely: depending on nature, aiming for conservation, environmental education, equitable distribution of benefits, having ethical responsibilities to local people and tourists, and sustainability. Therefore, sustainable tourism has always been understood as efforts to protect the environment and care for the interests of local communities (Coronado Martínez et al., 2018), as well as placing the community as significant actors in tourism development (Jimenez et al., 2010). This condition is also considered as an appreciation for local communities and their culture (Coronado Martínez et al., 2018). In short, sustainable ecotourism demands a shift in perspective from exploitative business practices to conservation-based industries (Phillips, 2015). In this context, economic and conservation facilities become the basic building blocks in developing ecotourism.

The development of mangrove ecotourism can be categorized as one of the environmentally friendly tourism objects that prioritize the natural beauty of mangrove forests and surrounding flora and fauna without damaging the ecosystem (Latif, 2018). This ecotourism has the same economic function as most ecotourism, where it becomes an alternative livelihood for coastal communities in increasing their income. According to Butarbutar (2021), ecotourism development based on the uniqueness and conditions of an area or region is developed by applying the concept of sustainable tourism, encouraging nature conservation, encouraging economic development, opening new jobs for the surrounding community, and providing environmental education to tourists (Maak et al., 2022).

In addition, another critical aspect of the success of ecotourism development is involving local communities or, in other words developing local community-based ecotourism (CBE) that aims to benefit these communities. Community-based ecotourism is a medium for poverty alleviation, environmental conservation, and responsible and sustainable tourism development. Therefore, CBE implies that communities have substantial control and involvement in ecotourism projects so that communities can feel some of the benefits. At the same time, communities have the right to utilize natural resources to improve their quality of life. Ecotourism provides an opportunity for these communities to benefit from natural resources. Community involvement in sustainable ecotourism is the same as optimizing welfare through equitable economic distribution. Community involvement is also essential in protecting the natural environment for future generations. Socio-cultural sustainability, in turn, implies respect for the socio-cultural identity of the community and its assets. In essence, CBE efforts can only be successful and sustainable if they benefit social sustainability, environmental conservation, and economic sustainability (Mearns, 2011). Mangrove ecotourism is associated with coastal ecotourism. It is booming when it ensures that ecotourism contributes to the blue economy and community welfare (Thorburn et al., 2021). To this end, four aspects must be developed in mangrove ecotourism: holding supporting facilities, producing mangrove ecotourism products, clarifying the role of stakeholders, and conserving and mitigating the mangrove ecotourism environment (Mulyadi et al., 2021). The government, as the leading actor, plays an essential role in building and developing mangrove ecotourism by facilitating research, regulating land use through regulations, helping to increase public awareness about the importance of mangroves, and facilitating the development of tourism infrastructure and services (Mohamed et al., 2023; Ruslan et al., 2022).
3 METHODOLOGY

3.1 Study Area

This exploratory qualitative study was conducted in a protected mangrove forest area in Langsa City, Aceh Province, Indonesia. This Mangrove area is located in the three villages: Sungai Pauh Village, Kuala Langsa Village, and Pusong Village, all administratively included in the Langsa City area.

The Langsa City mangrove forest area is around 6,014 ha and is one of Southeast Asia’s most extensive mangrove forests. This area was a protected forest with a river that served as a transportation corridor, a fishing area, and an alternative entrance and exit for fishing communities sailing to the sea before becoming an ecotourism destination (interview with the Head of Kuala Langsa Village, Elisuddin, 2022). The mangrove plant species found in it are Bangka minyak, Bangka u, Bangka banda/kurap, Pertut merah, Pertut putih, Pertut buah kecil, Tengar, Nireh, Tarumtum, Api-api, Paku laut kerakas, Lapeng (Buta-buta), Nipah, Prapat, Padada, Duduk rambat, and Gelan pasar Terutun (interview with Aulia, 2022). For the time being, mangrove management is delegated to private parties under the management of CV. Ayudhia and PT. PEKOLA (PT. Pelabuhan Kota Langsa).
3.2 Data Collection Techniques

The data were collected through observation, depth interviews and study of documents. Observation aims to collect data about research subjects, actions, and important events that occur in the field (Busetto et al., 2020), so that, sociological and anthropological imagination about the cultural dimensions of local communities can be carried out optimally (Benson & O’Reilly, 2022). Observation is needed to obtain an overview of the location, activities, and various activities (social practices) directly or indirectly related to mangrove ecotourism, such as the practice of economic activities in ecotourism areas. Practically, through observation, existing conditions and social practices occur in the mangrove ecotourism area, including how parties involved in building ecotourism were captured.

The interview techniques were used to explore information and data from informants. It encompasses the values, knowledge, and experience of the community. The data were unearthed with focuses on; 1) the rationality for mangrove ecotourism development, 2) strategies carried out to develop ecotourism so that it has a good impact on the sustainability of the community and environment, and 3) socio-economic transformation resulting from the mangrove ecotourism. All informants were selected purposively with the considerations they have rich information about mangrove and ecotourism development. They are; 1) Langsa City Government; 2) The Tourism Office; 3) Village government officials who stay surrounding the mangrove ecotourism area; 4) Individual communities; 5) Several communities who live in three villages shaded by mangrove tourism, namely Sungai Paoh Village, Kuala Langsa Village, and Pusong Village, especially in terms of knowing the benefits that have been felt so far by the community; 6) Community leaders or local traditional leaders; and 7) Tourists.

The study of documents is a reviewed document or document analysis process. It is used as a supplementary method of data collection to add rigor to a study via a multi-method form of triangulation. It is also used as an additional source of data (Cardno, 2019). The relevant documents to the research issues and problems were used to support the primary data. The documents reviewed in this study were official documents issued by the local government, such as "Langsa City in Numbers," Qanun (regulations), research reports, and other relevant records.

3.3 Data Analysis Techniques

This research follows an inductive and systematic approach to analyzing data obtained during and after data collection (Asan & Ozan Aksoz, 2022). However, intensive analysis was carried out after all data were collected. The collected data was analyzed interactively using a model proposed by Patton (Patton, 2014). The steps of analysis were conducted as follows: 1) Finding interesting patterns related to research problems; 2) Arranging appropriate themes and characteristics of specific categories of data; 3) Looking for relationships between concepts to find certain understandings that arise from the results of data interactions; and 4) Interpreting the data and giving meaning as a conclusion to the overall analysis process.

The process of research was done as in the following flowchart:
4 RESULT AND DISCUSSION

4.1 Rationalization and Motivation of Tourism Development

Mangrove forest tourism began to be built in 2013, precisely after the first period of the couple Usman Abdullah and Marzuki Usman served as Mayor and Deputy Mayor of Langsa. Many parties resisted this idea at the beginning of its construction. Nevertheless, in the Langsa City government, various rejections were interpreted as criticisms that must be addressed, but the initial principle to continue developing mangrove ecotourism is still carried out. It is not without cause that the Langsa City Government has its rationality and motivation as to why mangrove ecotourism must be developed and utilized.

Firstly, the local government of Langsa City tries to preserve flora and fauna of the mangrove forest ecosystem. This response reflects the reality of societal conduct that obliterates mangrove forests. At first, the residents of Kuala Langsa and the area around it needed to be made aware of the many uses and advantages of mangrove forests. So far, they have used mangroves as raw materials for making charcoal. Unfortunately, traditional logging practices do not include any replanting initiatives. Of course, uncontrolled logging has an impact on ecological threats. Even worse, many people outside the village cut mangroves with various interests. Every day, hundreds of boats go back and forth, transporting mangroves stolen (Interview with Marzuki Hamid, Deputy Mayor of Langsa, 2022).

This condition makes the local government worried about the extinction of mangroves and catastrophic impacts on the surrounding community. Therefore, the government of Langsa City makes it a tourist destination where mangroves can benefit the community’s economic resources. On the other hand, the sustainability of forest sustainability can be maintained. This idea was welcomed by some local elites, so that the majority of the surrounding community accepted and considered preserving mangrove areas important, especially preservation accompanied by economic improvement.
Since this location has become a tourist spot, people have become increasingly aware of the importance of mangroves for human survival, the various habitats that live in them, and the importance of mangroves that withstand sea breezes, full moon tides, and other natural threats. Here is a resident's story about his knowledge of the benefits of mangrove forests:

"Mangroves can withstand ocean currents that erode coastal land, function as oxygen producers, and living places for various types of marine life, such as fish, crabs, and shrimp, to shelter and survive. In addition, mangrove forests are also a habitat for land animal species such as monkeys and birds. In short, mangroves scattered on the east coast of Aceh are not only a place for fishermen to find fish, crabs, and shrimp but also guard against coastal abrasion and natural fortifications against sea waves that threaten damage, such as tsunami disasters" (Interview with Faisal, 2022).

Secondly, ecotourism development is a way to improve the community's economic welfare and increase village income. Ecotourism can generate many benefits as a domino effect of tourism development. The existence of the tourism sector can reduce poverty (Raj Sharma et al., 2022), and its positive impacts are illustrated through job creation (Gómez López & Barrón Arreola, 2019). Our question is how the Langsa city stakeholders see the rationality of economic development in developing the city's mangroves into ecotourism. Deputy Mayor of Langsa City stated:

“The location of the mangrove forest has strategic space for an ecotourism development zone because it is located in the port area of Langsa City, which is also part of the National Economic Development Zone. In addition, the mangrove forest in Langsa City is the only mangrove reserve with the widest area in Aceh Province, with great potential to become a carbon exchange area, support the realization of net zero emission (carbon neutrality), reduce global greenhouse gas emissions, and increase regional foreign exchange … the mangrove forest area a gathering place and center of community concentration daily” (Interview with Marzuki Hamid, 2022).

What the Langsa Government thought about the prospects of mangroves for community and regional economic improvement is very rational. One of the guarantees of economic realization in the human survival system is to utilize the surrounding natural resources. The presence of tourism has an impact on boosting the local economies and reducing poverty (Kabete et al., 2021). Even beyond economic benefits, the development of true mangrove ecotourism following the blue economy concept also positively impacts protecting mangroves from damage. Hakim et al. (2017) revealed that the existence of mangrove ecotourism is possible as a strategy for biodiversity conservation and the socio-economic development of the local community. Ecotourism development is effective in preserving nature if it positively impacts the surrounding community economically and non-economically (Mulyana, 2019).

Beyond that, local people's habits of using mangrove forests as a raw material for charcoal have changed, as has their source of income from selling in tourist areas or arranging parking in tourist arenas. The surrounding community no longer considers taking/cutting mangroves because they can benefit from this forest tourism object. Even more, when outsiders were still determined to steal the mangroves, residents caught the thieves directly. This demonstrates that the existence of mangrove ecotourism has made local people aware of the importance of mangroves for the sustainability of their lives, which has an impact on strengthening social values and community actions to protect mangrove forests.

Based on these findings, it can be argued that using mangroves as ecotourism sites based on sustainable development - the blue economy - can optimally revitalize mangrove function. Amongst are used to control marine abrasion and reduce the impact of natural disasters, such as tsunamis (Hilmi, 2018), storms, and ocean waves (Sutanto et al., 2022). In this case,
mangroves function to overcome or reduce various kinds of environmental damage and degradation (Firmansyah & Rahayu, 2022). In addition, mangroves also play an essential role in reducing hazards due to climate change (Vyhrestenko, 2019) because it can store and sequester three times more carbon than terrestrial tropical forests and five times larger than uplands (Kusmana et al., 2019).

![Figure 3. The viewing tower located in the middle of the mangrove tourism area.](image)

**Source:** Ministry of Tourism and Creative Economy Document (Widyanti, 2022)

### 4.2 Mangrove Ecotourism Development Strategies

The success of mangrove development is inseparable from the strategies applied. Stakeholders must carry out many strategies to achieve the vision of realizing the sustainability of mangrove ecotourism. According to the World Tourism Organization (WTO), sustainable tourism development must consider possible economic, social, and environmental impacts. The development of eco-based sustainable tourism that meets the needs and expectations of tourists while prioritizing environmental safety and economic benefits for local communities. Tourism management plans should be implemented together, actively involve local communities, and use part of the profits to promote local community development and preserve cultural and natural assets around the area (Havadi Nagy & Espinosa Segui, 2020). There are three strategies in developing mangrove ecotourism were carried out by the government.

Firstly, building public awareness of the importance of mangrove forests. It is essential to understand the potential and benefits of mangroves in improving environmental and community health and increasing public awareness in supporting the development of mangrove ecotourism. As explained earlier, many references show that mangroves can provide opportunities for sustainable ecotourism development, poverty alleviation, and help climate adjustment (Hoegh-Guldberg, 2009). Mangrove restoration and ecotourism effectively improve environmental conservation, which also has implications for providing income to conservation-based communities (Wallace & Chalkia, 2013).

Among the ways, the government voices the importance of mangroves is by making it a public discourse. It means that the government carries out mangrove campaigns on every occasion, both in traditional forms and non-formal settings. Comprehensive information about mangroves is disseminated through social media, print media, and electronic media. The power of information technology to promote mangrove ecotourism projects to the community is
considered to have a significant impact. The government also organizes education and training programs on the importance of mangroves for environmental conservation and local economic empowerment. In every training activity, the government invites experts as resource persons who talk about the benefits of derivative products that can be produced from mangroves, such as mangrove juice, mangrove batik, mangrove perfume, and mangrove crackers. It also includes the discourse on developing charcoal fuel that can be processed using only mangrove branches without cutting down trees. All of these are short-term programs that can be done, while in the long term, the existence of mangroves becomes a world need by producing world oxygen (carbon). These can support strengthening public knowledge related to ecotourism and economic improvement by not damaging the ecosystem. Environmental education is important for strengthening public awareness and understanding in improving the welfare of the population (García et al., 2023). Accordingly, the community’s behaviors is able to reduce the impact of damage and pollution to the environment (Hu et al., 2018; Ünal et al., 2018).

Secondly, building good cooperation between cross-sectors. The development of tourist areas cannot be done partially, and it must involve the village government, youth, the community, and private parties who are specially invited as managers. Providing opportunities for the surrounding community to be involved in the operational tourism system impacts tourism development (Alim et al., 2021). Regarding private party involvement, the Langsa City government appointed PT. Pelabuhan Kuala Langsa (PEKOLA) as the manager of mangrove ecotourism in Kuala Langsa based on the Approval of Forest Utilization Business Permit Commitment (Persetujuan Komitmen Perizinan Berusaha Pemanfaatan Hutan / PBPH) by the Ministry of Environment and Forestry on 8 November 2022, regarding work organization, PT. PEKOLA coordinates and is responsible for the Sustainable Forest Utilization Center (Balai Pemamfaatan Hutan Lestari / BPHL), the representative of the Ministry of Environment (Lingkarkita.com, 19 January 2023) PT. PEKOLA also commits to involving local communities as part of the official workforce in mangrove ecotourism areas.

Cooperation between the government and the private sector in managing ecotourism aims to improve the accessibility and quality of tourism services. The form of cooperation carried out is in the form of assisting in developing activities and attractions in the mangrove tourism arena, improving the quality of tourism services, increasing mangrove ecotourism marketing, and increasing conservation activities through mangrove forest restoration programs. Good cooperation between the government and the private sector in managing ecotourism is essential to ensure the availability and sustainability of ecotourism and improve mangrove management and preservation. Meanwhile, the government facilitates infrastructure development through roads, bridges, parking lots, and other facilities needed to support tourism activities.

The participation of the community in ecotourism development activities is a manifestation of awareness and concern as well as community responsibility towards the importance of development that aims to improve the quality of their lives. Through community involvement, they realize that development activities are not only an obligation that must be carried out by the government itself but also demands community involvement that will improve their quality of life. This reality is closely related to the sustainable policy framework of tourism development (Lopez & Bhaktikul, 2018) involving the public and private sectors and local community participation (Samia et al., 2017; Zacarias & Loyola, 2017). The importance of collaboration between professions and sectors, such as entrepreneurs, the business sector, local communities, the general public, the agricultural sector, and all other stakeholders to give birth to authentic practices in conserving biodiversity for the preservation of nature for the future (Crowley et al., 2020). All of this is in line with the study of Chiodi and Souza (2022) which states that good interaction and cooperation between informal institutions,
traditions and customs, and formal institutions can change perspectives in managing natural resources that resulting in a joint agreement to achieve common goals.

Thirdly, establishing a mayoral regulation (local terms known as Qanun). To strengthen the existence of pro-environmental tourism, the Langsa City Government issued Regulation / Qanun Number 8/2015 concerning the master plan for tourism development of Langsa City and Qanun Number 5/2018 concerning Tourism. The master plan for urban tourism development is a guideline for planning, managing, and controlling tourism development which contains the vision, mission, goals, policies, strategies, and programs that need to be carried out by stakeholders in tourism development. Meanwhile, Qanun Number 5 of 2018 concerning tourism aims to strengthen tourism development and equal opportunities in obtaining benefits and being able to face the challenges of changing lives by the Langsa community and strive to realize ecotourism-based economic improvement. Ecotourism, referred to in the two Qanun, refers to developing and implementing tourism activities based on environmental utilization for protection purposes and involving active community participation. The content of education and learning to minimize negative impacts is also important to be regulated regulations, which ultimately contribute positively to regional economic development.

The Langsa City Government mentioned that "the preparation of the Qanun regional planning aims to develop Langsa City as a tourist attraction area. This is based on very little regional income". As a result, the Langsa City government is engaged in a number of activities related to tourism development policies, including preparing a tourism development concept based on a planning approach, identifying top tourist destinations, developing policy for tourism, professionally managing all tourism potential by involving various parties, and maintaining preservation and paying attention to religious values and local wisdom.

Even so, Qanun Number 5/2018 concerning Tourism emphasizes that the tourism concept in Langsa City is implemented based on Islam, benefits, kinship, justice, equity, balance, participation, sustainability, democracy, equality, and unity. Meanwhile, the implementation of tourism aims to increase economic growth, improve welfare, reduce poverty, overcome unemployment, preserve nature, environment, and resources, promote regional culture, raise the image of the region, foster love for the motherland, and strengthen the nation's identity, as mentioned in Article 3.

Establishing regulations for tourism development is the right way to support sustainable tourism growth, conservation of natural resources, protect the rights and welfare of local communities, promote responsible tourism practices among visitors, and prevent adverse environmental impacts caused by tourism activities. This principle refers to the development of tourism that can meet needs without damaging existing natural and cultural resources. The regulations must also involve interested stakeholders to create good agreements in tourism development.

Without proper regulation and enforcement, ecotourism can lead to the exploitation of natural resources, ecosystem degradation, and marginalization of local communities. The balance of nature causes long-term negative impacts on the environment and local communities. Therefore, government regulation plays a vital role in balancing the economic benefits of ecotourism with social and environmental sustainability. Government regulations ensure that ecotourism activities benefit visitors and host communities while ensuring the conservation and protection of natural resources for future generations. Thus, all stakeholders involved in ecotourism promote sustainable tourism as a responsible travel model that benefits people and the planet.

By working together, ensured that ecotourism continues to be a positive force for economic development, environmental preservation, cultural exchange promotion, and mutual understanding between visitors and local communities. Therefore, governments must prioritize the sustainability of tourism practices and implement regulations that ensure the long-term
viability of ecotourism as a tool for economic development and environmental conservation. According to Kusmana et al. (2020), Langsa City Government to sustain mangroves, ecotourism development focuses on activities that support repairing environmental damage, such as planting mangroves, beaches, and beach cleaning festivals. All stakeholders are invited to participate and actively protect the area's natural resources and environment. Furthermore, regional managers issue policies to improve business conditions, conserve natural resources, and integrate them into national and international sustainable development plans. Addition to that, Kusmana et al. (2020) states mangrove working groups, formal and informal regulations, management consultations, management institutions, application of institutional regulations, role models, community assistance, and commitment to mangrove management are some factors that affect the sustainability of mangrove ecotourism.

4.3 Socio-Economic Transformation; Practical Implications of Mangrove Ecotourism

Previously, the income pattern of people who inhabited mangrove forest areas was in the fisheries and fishermen sectors. Some of its locations bordering the sea are ideal for aquaculture or ponds. These ponds' primary commodities are shrimp, crabs, milkfish, and grouper. However, the presence of mangrove ecotourism leads to the diversification of livelihoods, which becomes an alternative source of income for the surrounding community. Mangrove ecotourism provides opportunities for the socio-economic transformation of local communities and increases public awareness about the importance of protecting the natural environment. These two things are interrelated in the context of ecotourism's practical implications and become sustainable tourism development's goal.

Socio-economic transformation refers to fundamental changes in how humans view and manage natural resources and benefit from economic activity. This transformation involves changing paradigms and values in society as well as the adoption of new, sustainable practices. Before ecotourism, the income of forest area communities came from the fisheries, capture, and cultivation sectors because residential areas were directly adjacent to the sea. Aquaculture occurs in ponds, whereas fishing occurs in sea and mangrove forest waters. The community's sources of income became more diverse after mangrove forests were used as tourist attractions. In addition to the fishing industry, there are merchants, restaurant servers, and parking services. A large number of visitors has a significant impact on their income level. Their income increases as the number of visitors increases. This mangrove tourism is popular among Langsa residents and visitors from other parts of the island, including those from North Sumatra (Interview with Aulia, 2022).

In addition, the income level of the community, especially those in mangrove forest tourism areas, are traders, directly or indirectly greatly influenced by the number or a large number of visitors. It is known that the amount of monthly income of fishermen and farmers is difficult to average because the number of working days per month is also greatly influenced by many factors, especially seasonal issues that are highly considered to carry out fishing at sea. If it is the dead tide season and strong winds, the fishermen cannot go to the middle of the sea to find fish. So it is very influential for the income of every fisherman. This situation is also similar to traders. Nazira, one of the traders, said:

"Over time, the existence of mangrove forest tourism in the Langsa City area began to have a positive impact and benefits for the community's economic development, especially for those who trade food and beverages. People already feel dependent on the existence of this tourism. "
Furthermore, a few people have started processing food and beverages made from mangroves as a source of economic income. In early 2020, Aceh Wetland Foundation (AWF) formed a "Creative Economy Group." It opened a Mangrove Outlet that provides food, beverages, and batik made from organic mangroves—which was launched in Langsa City Mangrove Forest Park. This booth was inaugurated by the Chairman of the City of Kadin Langsa (Abdul Hadi Abidin) and accompanied by members of the Indonesian House of Representatives from Aceh (Ilham Pangestu) and several community leaders. According to the Executive Director of AWF (Yusmadi Yusuf), food and beverage products made from mangroves function as economic commodities. They can also be used as campaign media to protect mangrove forest areas.

This transformation of economic activities has an impact on improving the economy and improving social relations of the community built from routine social activities. A community and village leader said:

"The social relations of Kuala Langsa are currently in excellent condition. The routine activities they hold for harmony in community life can be seen in the routine activities every Friday. The community, both men and women, regularly hold recitations on Fridays. They are required to close all their stores or not open their merchandise. This routine activity can be done well to build social relations between residents because they are no longer busy with their respective affairs" (Interview with Febriansyah, 2022).

Furthermore, Elisuddin added that mangrove forest tourism makes the younger generation more solid in various social activities.

"They have wanted to activate social community activities, such as forming youth mosques and participating in social activities. The youth actively actualize the local wisdom of meuripe/meuseuraya in various social activities. It is unprecedented. These social values emerged since the youth worked at mangrove tourist sites; they also sparked the idea of alms to build mosques by increasing the price of food by IDR 1000 per portion sold by traders in tourist areas. Each trader is estimated to pay the mosque construction committee around IDR 300,000 to IDR 500,000 rupiahs monthly. It starts from each other's awareness since mangrove tourism was developed so that the community develops for the better and takes care of each other”.

Mangrove ecotourism is the hope of the community's alternative economy. It can be seen from the diversification and transformation of available livelihood systems as an implication of the presence of ecotourism. The value of economic benefits related to the tourism sector becomes a new industry for the local community. Economic resources are obtained from tourist services, restaurants, parking management, and security services. In addition, socio-economic transformation can be achieved by building partnerships between local communities and the tourism industry. Through these partnerships, local communities can benefit economically from tourism, while the tourism industry is responsible for preserving the natural environment and local culture. The development of mangrove ecotourism supported by the surrounding community can improve their economy while preserving the ecological function of mangrove forests. It is in line with (Husamah & Hudha, 2018) state that developing community-based ecotourism can improve the economy while maintaining natural ecosystems.

Furthermore, this study revealed that, in addition to providing an economic impact on local communities, the development of community-based mangrove ecotourism encourages them to maintain the mangroves actively and enables the community to build good social relations and revitalize local wisdom as social capital in carrying out social-religious activities. In such this case, according to Zhang (2012), the development of community-based rural
tourism provides numerous benefits, including 1) increasing the rural collective economy; 2) beautifying the rustic look; 3) strengthening the development of rural civilization; 4) increasing people's income; 5) changing traditional livelihood activities and people's lifestyles; and 6) reducing urban-rural disparities and building a harmonious society.

5 CONCLUSION

The development of mangrove ecotourism in Langsa City originated from the idea of the Langsa City Government, which was then supported by the community around the mangrove forest. The study showed that preserving mangrove ecosystems and economic potential were the two key justifications for mangrove ecotourism development. In addition, three strategies were implemented to convert protected mangroves into ecotourism: increasing community awareness, fostering cross-sectorial cooperation, and bolstering it by creating municipal regulations regarding tourism development. Mangrove ecotourism development, therefore, has favorable effects on social and economic transformation. The community's economic activities are increasingly diverse, including sea fishermen, mangrove fishermen, service providers, and traders. Improved economic conditions resulting from mangrove ecotourism development contribute to promoting the community more solid in social and religious activities. In addition, local wisdom such as meuripe/meuseuraya (shared culture) was revitalized and has become social capital in religious and other social activities. This fact also makes people aware that mangroves have many functions in meeting economic and social human needs. Finally, this study confirms that the economic and conservation rationalities for transforming a protected mangrove into an ecotourism object drive mangrove ecotourism stakeholders to develop long-term strategies for managing ecotourism-protected mangroves that ensure the realization of a blue economy.

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