

## **The Role Of Stakeholder In Developing Sustainable Island Nature Base Tourism In Tatoareng Sangihe North Sulawesi**

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### **Abstract**

Development of sustainable nature-based tourism in the islands requires the role of stakeholders who not only support environmental, local economic and cultural sustainability but also enhance the tourist experience and their satisfaction. This research focuses on identifying the existing conditions of tourism development in the Tatoareng Islands, and the role of stakeholder in developing nature-based island tourism in Tatoareng Sangihe, North Sulawesi. This research uses a descriptive qualitative approach. Data collection techniques include observation, interviews, focus group discussions, and document study. Data reduction techniques and SWOT analysis were used to analyze the data. The findings show that the Tatoareng Islands have potential tourist attractions, including protected habitats, wildlife and cultural heritage. However, there are several challenges in their development, such as limited accessibility, infrastructure, and low tourism human resource quality. The role of stakeholders is vital in improving the quality of the 4A components (attractions, amenities, access, and ancillary services) and enhancing the tourism human resources of the local community to achieve sustainable nature-based tourism development goals in Tatoareng.

**Keywords: Stakeholder's Role; Island Tourism; Nature Based Tourism; Sustainable tourism**

### **Introduction**

Stakeholder involvement is fundamental to the development of sustainable nature-based tourism, necessitating the active engagement of local communities, government agencies, private sectors, academia, non-governmental organizations (NGOs), and media. This collaborative approach fosters synergy in tourism management by aligning economic growth with the preservation of environmental and cultural resources. Through the integration of diverse stakeholder perspectives, sustainable nature-based tourism promotes economic benefits, ecological integrity, and social well-being, thereby enhancing the long-term viability and resilience of tourism destinations.

This comprehensive framework merges environmental conservation with community development, establishing a mutually beneficial relationship between tourism and local ecosystems. In the context of island destinations such as the Tatoareng Islands, sustainable nature-based tourism holds immense potential due to their unique ecological and cultural attributes. These islands are characterized by rich biodiversity, cultural heritage, and pristine natural landscapes, making them ideal for nature-based tourism development. Globally, nature-based tourism has proven effective in combining environmental conservation with economic development, serving as a key component of sustainable development strategies (Karhu et al., 2022; Tuan and Rajagopal, 2019; Barkin et al., 2016). For example, in Ethiopia, nature-based tourism has successfully supported natural habitat conservation while providing economic incentives for local communities to protect their resources (Gidebo, 2023; Poudyal et al., 2021).

This approach not only promotes sustainability but also empowers local communities to take control of their development while educating the public about the importance of conservation. Nature-based tourism, a vital segment of the global tourism industry, encompasses various recreational activities that rely on natural resources as both the setting and the core of tourism experiences (Zeitlin and Burr, 2011). Examples include adventure tourism, wildlife photography, safari tours, agritourism, and marine tourism such as diving, snorkeling, and fishing. However, despite its potential, island-based nature tourism often faces structural and operational challenges, particularly in local planning and coordination (Khairy and Magdy, 2021).

These challenges highlight the need for effective stakeholder cooperation to ensure that tourism activities are conducted in harmony with the ecosystem, preserving natural and cultural resources for future generations (Handayani and Lazuardi, 2022). The active involvement of stakeholders is a fundamental pillar in achieving sustainable tourism development, encompassing the participation of local communities, government agencies, private sectors, academics, non-governmental organizations (NGOs), and media. Such collaborative efforts foster a synergistic approach to tourism management, ensuring that economic growth aligns with the preservation of environmental and cultural resources. By integrating diverse stakeholder perspectives, sustainable tourism promotes development that delivers economic benefits, safeguards ecological integrity, and enhances social well-being, thereby ensuring its viability and resilience for future generations. The development of sustainable nature-based tourism in island destinations like the Tatoareng Islands is of paramount importance, given their unique ecological and cultural attributes. These islands offer a rich tapestry of biodiversity, cultural heritage, pristine natural landscapes, making them ideal for developing sustainable island nature based tourism.

Nature-based tourism globally offers an approach that combines environmental conservation with economic development, making it a key component in sustainable development strategies (Karhu et al., 2022; Tuan and Rajagopal, 2019; Barkin et al., 2016). In various countries, such as Ethiopia, Africa, nature-based tourism has become an effective means of protecting natural habitats and supporting conservation efforts (Gidebo, 2023). This approach provides economic incentives for local communities to preserve their natural resources (Poudyal et al., 2021). Consequently, this model not only promotes sustainability but also empowers local communities to have control over their future. Moreover, efforts to conserve natural resources play a crucial role in educating the broader public about the importance of conservation. Nature-based tourism is a vital component of the global tourism industry, with characteristics that vary across different destinations. Nature-based tourism involves recreational travel that relies on natural resources, both as a setting for activities and where natural resources serve as the primary component of tourism activities (Zeitlin and Burr, 2011). However, island-based nature tourism has not been properly developed due to structural and operational challenges related to local planning (Khairy and Magdy, 2021).

This situation calls for effective cooperation among all stakeholders to ensure that tourism activities do not disrupt the ecosystem (Handayani and Lazuardi, 2022). Stakeholders are an integral part of the development of sustainable nature-based island tourism, contributing significantly to the planning, implementation, and management of tourism initiatives that prioritize environmental conservation, community involvement, and long-term sustainability. Stakeholder involvement in the tourism development process is crucial for fostering collaboration and synergy among stakeholders to ensure that the development initiatives for nature-based island tourism align with sustainable environmental, social, and cultural practices and principles.

Several researchers have studied and identified the level and impact of involvement from local communities, tourism business actors, government and private bodies, and non-governmental organizations on the sustainability of tourism development. This includes government policies in applying the principles of sustainable tourism development, for job creation and increased regional spending, encouraging environmental conservation by addressing and mitigating environmental issues, enhancing the appeal of island tourism, and improving relationships with local communities to generate increased business opportunities and better sustainability performance.

Bozdaglar (2023); Kawatak et al., (2020); Hamel et al., (2017) promoting ecotourism and addressing barriers to effective stakeholder engagement Ramadesta et al., (2022); Zuvara et al., (2022); Byrd (2007) raising stakeholder awareness of critical tourism issues, knowledge of sustainable tourism principles, and a vision regarding the planning process and effective governance models Hatipoglu et al., (2016) stakeholder contributions to sustainable development by implementing the Penta-helix model and triple-bottom theory Handayani and Lazuardi (2022) identifying the potential and challenges faced by government authorities in promoting nature-based tourism.

Government support and policy interventions are critical in creating a regulatory environment that fosters sustainable practices among tourism stakeholders. By establishing clear policies and regulatory frameworks, governments can guide the actions of local communities, private sectors, academia, and non-governmental organizations (NGOs) toward sustainable development goals. Such interventions ensure that tourism development aligns with environmental conservation, cultural preservation, and equitable economic growth. Policies that promote sustainable infrastructure, nature tourism promotion, enhancing tourism services, and increasing community participation (Khairy and Magdy, 2021).

Furthermore, strategic government-led initiatives, such as capacity-building programs, financial support for sustainable projects, and the promotion of nature based tourism, can significantly enhance stakeholder engagement and community participation. A collaborative governance structure, where central, provincial, and local authorities work together with other stakeholders, strengthens the resilience of tourism destinations and ensures the integration of sustainability principles into all aspects of tourism management (Gori et al., 2021). Without robust government support, achieving a balance between economic development and the protection of natural and cultural resources becomes increasingly challenging.

The engagement of various stakeholders is essential for the sustainable development of natural-based island tourism in Tatoareng. Significant contribution from stakeholders, including the government, communities, NGOs, academics, business actors, and the media, is crucial for sustainable natural-based island tourism to deliver substantial economic benefits to communities around conservation areas by providing tourism-based livelihoods (Gupta et al., 2023; Praptiwi et al., 2021; Aryal et al., 2019). Identifying the roles of stakeholders in the sustainable development of natural-based island tourism in Tatoareng is imperative, considering the Tatoareng Islands have been designated as a conservation area by the North Sulawesi Provincial Government.

Effective sustainable tourism development requires a comprehensive approach that addresses environmental protection, economic growth, and cultural preservation while also enhancing the overall tourist experience and satisfaction. This delicate balance can only be achieved through the active involvement of all relevant stakeholders to collaborate and synergy in planning, managing, and developing sustainable nature-based island tourism. The role of each stakeholder group will help support the formulation and

implementation of effective policies and practices (Al-Tokhais and Thapa, 2019). However, the very qualities that make these islands attractive to tourists also make them vulnerable to the negative impacts of mass tourism, such as environmental degradation, loss of cultural identity, and economic disparities.

Therefore, the challenge lies in balancing the needs and expectations of tourists with the imperative of conserving the environment and supporting local communities. The development of sustainable nature-based island tourism requires the role of stakeholders not only to support environmental and cultural sustainability but also to enhance tourist experiences and satisfaction, which in turn can increase the appeal of sustainable tourism destinations (Grilli et al., 2021). This is supported by investments in infrastructure, such as transportation and renewable energy, to facilitate better access and sustainability in tourism, thereby supporting the local economy and conservation efforts (Halkos and Ekonomou, 2023).

Furthermore, the development of sustainable nature-based tourism not only benefits traditional tourism sectors such as accommodation and food services but also has spillover effects on other local economic areas, thereby supporting a broader economic development base (Gupta et al., 2023). This includes the protection and preservation of local cultural and natural resources Grilli et al., (2021) serving as a platform for environmental education, and being utilized to support conservation initiatives (Schuhbauer and Favoretto, 2023; Rizkhi et al., 2023). The sustainable tourism development suggested by Vu et al., (2020); Putra (2014) encompasses several key aspects.

First, environmental management and habitat conservation are crucial to protecting unique ecosystems such as coral reefs, mangroves, and seagrass beds, which are vulnerable to damage from uncontrolled tourism activities. Second, active involvement of local communities is essential, not only to enhance their economic well-being but also to increase their responsibility towards environmental and cultural conservation. Third, the development of sustainable infrastructure is necessary to support sustainable tourism, including eco-friendly transportation and waste management facilities. Fourth, the preservation of local culture and heritage is vital in maintaining unique local identities and traditions.

This can be achieved by limiting tourist access to sensitive cultural sites and promoting local traditions. Fifth, sustainable funding and investment are crucial aspects, including seeking new financing schemes and investments that support sustainable tourism projects. Sixth, environmental education and awareness are necessary to increase public and tourist awareness of the importance of sustainability and environmental protection through educational programs. Developing educational programs and awareness campaigns is crucial for fostering sustainable practices among stakeholders. These initiatives enhance understanding of ecosystem preservation, promoting responsible tourism and resource management.

By integrating scientific knowledge and local wisdom, such programs empower communities to actively participate in conservation efforts, ensuring long-term environmental and socio-economic benefits. The Tatoareng Islands in Sangihe are one of the conservation archipelagoes in Indonesia, represent a unique and fragile ecosystem that holds significant potential for developing sustainable nature-based tourism. However, the development of tourism in these islands has been met with challenges, including inadequate infrastructure, environmental degradation, and a lack of comprehensive stakeholder engagement. These issues have hindered the effective promotion and sustainability of tourism activities in the region.

The hexahelix model, which involves the collaboration of six key stakeholder groups; government, private sector, academia, community, Non Government Organization (NGO), and media offers a framework that could address these challenges. This study explores the current conditions of tourism development and the role of stakeholders in the development of sustainable nature-based tourism in the Tatoareng. The hexahelix stakeholders currently contribute to, or fall short in, the sustainable development of tourism in the Tatoareng Islands, with a particular focus on identifying the latest developments in Tatoareng Archipelago tourism and the role of stakeholders in the development of sustainable nature-based island tourism in Tatoareng, Sangihe, North Sulawesi.

## **Method**

This study is designed using a qualitative descriptive research method to analyze the existing conditions of tourism development and the roles of stakeholders in fostering sustainable nature-based island tourism in the Tatoareng Archipelago, Sangihe, North Sulawesi. Primary data were collected through field observations, Focus Group Discussions (FGDs), in-depth interviews, and document analysis, while secondary data were obtained from policy documents and reports. Informants were purposively selected from hexahelix stakeholders, including government, community, business actors, media, academics, and NGOs. Research instruments included observation checklists, interview guides, and document review templates. Data analysis involved reduction, presentation, and conclusion drawing to identify key themes and patterns. This approach enables a focused exploration of stakeholder contributions to sustainable tourism development in the region.

## **Results and Discussion**

The Tatoareng Islands, situated in the southern region of the Sangihe Islands Regency, North Sulawesi, represent a critical area for sustainable tourism development due to their extraordinary biodiversity and ecological significance. As part of the Coral Triangle, a globally acknowledged biodiversity hotspot, the islands are characterized by extensive coral reef systems, mangrove forests, and seagrass beds, which serve as vital habitats for diverse marine species, including Dugongs (*Dugong dugon*), Napoleon wrasse (*Cheilinus undulatus*), and sea turtles (*Cheloniidae*). Furthermore, the islands are home to several protected species, such as the Mangrove Crab (*Scylla* spp.), Coconut Crab (*Birgus latro*), the endemic Maleo Bird (*Macrocephalon maleo*) and Cave Swiftlet (*Aerodramus* spp). These ecological features not only underscore the region's global environmental importance but also constitute significant assets for the development of nature-based tourism. A comprehensive sustainable tourism strategy is imperative to harmonize the conservation of these delicate ecosystems with economic development objectives. Such a strategy ensures the preservation of natural resources for future generations while enhancing the socio-economic welfare of local communities, thereby promoting long-term sustainability. A strategic approach to tourism development in the Tatoareng Islands must prioritize biodiversity conservation, community engagement, and sustainable economic growth.

Establishing Marine Protected Areas (MPAs) and creating ecotourism zones can safeguard sensitive ecosystems while enabling low-impact activities such as snorkeling, diving, and cultural tourism. Community-based tourism (CBT), supported by the hexahelix collaboration model involving governments, private sectors, academia, communities, NGOs, and media, is essential to empowering local stakeholders and fostering environmental stewardship. This approach ensures that economic benefits are equitably distributed while preserving the islands' natural and cultural heritage.

Additionally, implementing carrying capacity assessments and continuous ecological monitoring is critical to mitigate the impacts of tourism on fragile habitats. Aligning these efforts with national conservation policies and promoting sustainable practices, such as eco-friendly waste management and environmental education, can position the Tatoareng Islands as a leading example of sustainable island tourism. Such an integrated strategy ensures the coexistence of biodiversity conservation and economic development, making the region a model for sustainable tourism practices.



Figure 1. Diving Spots In Para Island  
(Source: Herjunes Aatjin, 2020)

Tatoareng faces complexities in natural resource management and socio-cultural integration for sustainable nature-based island tourism development. Sustainable nature-based island tourism development in Tatoareng offers economic opportunities through the creation of alternative employment opportunities for the people of Tatoareng. However, as a conservation area, this development must follow strict zoning and regulations. The core zone includes the ecosystems of coral reefs, seagrass, mangroves, and habitats of protected species such as Turtle, Dugong, Napoleon Fish, coconut crab, mangrove crab, and Maleo Birds. The restricted utilization zone includes sub-zones; sustainable capture fisheries, traditional fisheries, aquaculture, mina wisata, marine tourism, beach tourism, cultural sites, and ecosystem rehabilitation.

The management of the potential and development of nature-based island tourism attractions in Tatoareng faces a variety of significant constraining factors, such as the Tatoareng community's lack of quality tourism human resources, limited basic infrastructure, including inadequate accessibility, limited health facilities, education, clean water supply and electricity for only six to seven hours a day, and poor telecommunications networks. This has a direct impact on the number of tourist visits and the quality of their experience, ultimately hindering the overall development of nature-based island tourism. These inhibiting factors point to the need for a holistic and integrative approach involving multiple stakeholder roles to address the challenges and maximize the management of potential tourist attractions for the development of sustainable nature-based island tourism in Tatoareng.

### **1. The Existing Conditions Of Tourism Development In The Tatoareng Archipelago**

Tourism development in Mahagetang Island began in 2008 when the Sangihe Government participated in promoting Sangihe's potential at the World Ocean Conference (WOC), which was held in Manado from May 11 to May 15, 2009. This initiative was in response to the directive of the President of the Republic of Indonesia, Mr. Susilo Bambang Yudhoyono, urging governors and regional leaders not to rely solely on local revenue and central government funding but to seek breakthroughs by utilizing regional potentials.

To follow up on the president's directive, the Sangihe Government promoted the tourism potential of Mahagetang Island, particularly the underwater volcano, Mount Banua Wuhu, as a tourism icon to be showcased and marketed during the WOC. The community was mobilized to prepare Mahagetang Village to welcome tourists by cleaning the coastal area and the village. These preparations took place over five months. The Sangihe Regency Government constructed cottages and furnished them, and provided diving and snorkeling equipment.



Figure 2. The Underwater Volcano, Mahagetang Mount Banua Wuhu  
(Source: The Department of Tourism and Creative Economy of Sangihe, 2020)

The community experienced euphoria, anticipating a large influx of tourists; however, the community's expectations were not met, as only two tourists visited Mahagetang Island. This situation impacted the community's motivation to manage the facilities built and prepared by the government and to establish a tourism awareness group (Pokdarwis) to manage, promote, and market the tourism potential of Mahagetang Island, as the result, the maintenance and management of the cottages and furniture, as well as the diving and snorkeling equipment, were ineffective, resulting in these facilities being damaged without ever being used.

Based on observations and interviews with the residents of Mahagetang Village, the majority of the men have become modern fishermen, requiring them to leave Mahagetang Island for two to three weeks to fish. The remaining residents on Mahagetang Island are the elderly, women, children, and traditional fishermen, so whenever there is a diving activity in the Banua Wuhu Mountain tourist area, they do not benefit economically, such as by serving as tour guides or selling food and souvenirs unique to Mahagetang Island. Tourists do not come ashore on Mahagetang Island; after diving, they return directly to their accommodations in Tahuna, Siau, or Manado.

They should visit Mahagetang Island, if the community develop their island potentials to become tourist attractions. Mahagetang has tourism potential not only in Mount Banua Wuhu but also in the cultural Tulude Ceremony. This ceremony is held at the end of January and the beginning of February each year with ritual ceremonies in areas of historical significance, such as the first settlement of Mahagetang Island inhabitants in Sarameng, the sacred site Puide Banua, and Mount Banua Wuhu. The community's traditional fishing practices and the activity of processing the catch into salted Cendro fish are also tourism attractions of Mahagetang Island.

Para Island developed its tourism sector in 2020. This initiative led Para Island to compete in the Anugerah Desa Wisata Indonesia (ADWI) awards. Para Island received recognition from ADWI as a tourism village ranked in the top three hundred for two consecutive years, from 2021 to 2022. As an appreciation for the efforts of the Para community, the government, through the Ministry of Villages of the Republic of Indonesia, provided assistance to build cottages, gazebos, and toilets on Nitu Para Island.

This achievement reflects the growing tourism awareness among the Para community. This progress is closely linked to the involvement of the international conservation organization, Wildlife Conservation Society (WCS), in collaboration with the local NGO 'Chaetodon' and the Department of Tourism and Creative Economy of Sangihe.



Figure 3. Cottage on Nitu Para Island.

(Source: Anton Belosomba, 2023)

The Para community received guidance from WCS, local NGOs, and the Sangihe Department of Tourism and Creative Economy in forming the tourism awareness group 'Pokdarwis,' which comprises eight divisions, homestay division, tour guide division, promotion and tourism package division, culinary division, tourist attractions and handicrafts division, transportation division, watersport division, and equipment division. Additionally, tourism training, such as homestay management, tour guiding, and diving rescue, was provided to the Para community. The Para village government allocated funds for boat construction from village funds and established village regulations (Perdes) to balance tourism development with sustainable conservation activities.

This includes Village Regulation No. 14 of 2022 concerning the protection, control, and utilization of protected wildlife in Para Village. The collaboration and synergy between the Para Village government, the Sangihe Department of Tourism and Creative Economy, WCS, and the Chaetodon NGO created a sense of euphoria among the Para community. As a result, the community regularly conducts communal work to clean the village and Nitu beach. Residents have prepared their homes to be used as homestays, and the Pokdarwis chairman has trained elementary and junior high school students in the Empat Wayer Dance and organized the Seke Festival. Seke is a traditional fishing culture using bamboo and coconut leaf tools.

As the result Para Island has started to gain recognition among both domestic and international tourists. According to interviews with the Pokdarwis chairman, thirty foreign tourists have visited Para from 2022 to June 2024. The duration of their stay was two days, as the only activities available were diving and snorkeling. Similarly, guests from the Insan Pariwisata Nusa Utara Sangihe Organization stayed in Para for two nights, as they traveled to and from the island using community transportation boats from Tatoareng. However, guests from Beach Hotel and Resort Tahuna did not stay overnight and returned to Tahuna immediately after completing their diving activities.

The number of tourist visits to Para Island reflects that tourism development on the island is progressing very slowly. The promoted and sold tourist attractions have not yet reached the target number of visitors, which should ideally accommodate 18 guests per day. This figure is based on the capacity of the facilities and tourism human resources in Para. Observations indicate that the existing tourist attractions in Para have not been developed into varied tourism packages. Tourism development has not yet occurred on



Kalama Island and Kahakitang Island. During interviews with the village heads of Kahakitang and Kalama, it was revealed that the village governments have work plans to develop tourism on their islands by 2025, considering that Kahakitang and Kalama Islands have a variety of potential tourist attractions that could be turned into tourism attractions to draw visitors. The tourism development in the Tatoareng Islands is reflected in the accompanying images below.

The development of tourism on Para Island is currently in the involvement stage. The number of tourist arrivals to Para has begun to increase. The community is welcoming and willing to share public facilities with tourists; for example, tourists can visit Para using the transportation boats operated by the Tatoareng community. The residents of Para warmly welcome the arrival of tourists. The local population is increasingly involved in tourism activities, such as providing accommodations, teaching the traditional Sangihe dance Empat Wayer to children, developing culinary activities, and cleaning the beaches on Para Island and Para Nitu Island. These services are only provided when tourists visit.

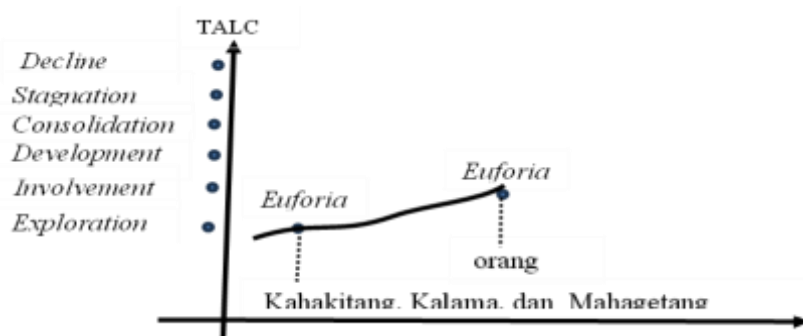


Figure 4. Tourism Development in the Tatoareng Islands  
(Source: Researcher's Data Interviews, 2024)

The above illustration is adopted based on the research by Yanti in 2014, adjusted to the phenomena and data findings. The Tatoareng Islands were designated as a conservation area in 2017, so tourism development must comply with the rules and regulations enforced by the conservation authority, namely the Fisheries and Marine Department of North Sulawesi Province, to protect the environment and local culture. The sustainability of the natural environment and socio-cultural aspects is marked by restrictions on the number of visitors.

The maximum number of visitors to the Tatoareng Islands must not exceed the carrying capacity of the ecosystem to prevent damage to natural habitats, including mangroves, coral reefs, and protected species such as Dugongs, Turtles, Dolphins, Maleo Birds, and Coconut Crabs. The availability of accommodations, clean water supply, transportation for carrying tourists to and from the Tatoareng islands, public facilities like toilets, trash bins, and rest areas, as well as sufficient human resources as workforce for managing the tourism area, such as tour guides, are all taken into consideration.

## 2. The Role of Stakeholders In The Sustainable Nature-Based Tourism Development Of The Tatoareng Islands

The sustainable development of nature-based island tourism in Tatoareng, Sangihe, North Sulawesi, necessitates the active participation of hexahelix stakeholders, including government, academia, private sectors, communities, media, and non-governmental organizations (NGOs). The government plays a key role in policy-making, infrastructure development, and environmental regulations to support sustainable tourism. Academia contributes through research, training, and knowledge dissemination,

enhancing local capacity and best practices. Private sectors invest in eco-friendly tourism businesses, fostering economic growth while maintaining environmental integrity.

Local communities, as primary stakeholders, ensure the authenticity of cultural and natural experiences, benefiting directly from tourism revenues. Media raises awareness and promotes responsible tourism, while NGOs facilitate conservation programs and community empowerment. Effective collaboration among these stakeholders ensures sustainability, cultural preservation, and equitable economic distribution in Tatoareng's nature-based island tourism. Here are the roles of stakeholders in the development of nature-based island tourism in this area.

#### **a. Collaboration and Synergy of Stakeholder Roles.**

Effective collaboration and synergy among stakeholders are crucial for balancing nature-based island tourism development and sustainable conservation. Collaboration and synergy in this context involve clear roles and responsibilities, transparent communication, and mutual support among hexahelix stakeholders. The analysis of data collected from informants shows that collaboration and synergy of stakeholder roles are the main components that must be created in the development of nature-based archipelago tourism in Tatoareng Sangihe North Sulawesi, so that supporting components include: (a) policies and regulations that support the development of sustainable nature-based archipelago tourism.

(b) a consistent and routine daily transportation network ensuring smooth access to the Tatoareng Islands from both Manado and Tahuna, available connecting transportation between islands in Tatoareng, determination of fixed prices for transportation costs, food, lodging, and tour packages, (c) availability of clean water, telecommunication networks, (d) development of facilities and infrastructure such as docks, health facilities, restaurants, homestays, tourist information, evacuation directions, public toilets and trash bins, (e) having tourism human resources who can provide good and professional services such as designing natural attractions, tour guides, hospitality, solid and liquid waste management.

Establishing a collaborative forum is crucial for fostering synergy in planning, addressing challenges, and innovating in nature-based island tourism development in Tatoareng, Sangihe, North Sulawesi. However, current collaboration among stakeholders remains weak and requires strengthening. Tourism development has been limited to Para Island, where the community received support from the Wildlife Conservation Society (WCS) and the local NGO Chaetodon. This support enabled the formation of a Tourism Awareness Group and provided training in homestay management and hospitality.

Conversely, Kahakitang, Mahagetang, and Kalama Islands, despite their significant tourism potential, have not benefited from similar initiatives, resulting in underdeveloped tourism activities. Interviews with village heads from Kahakitang, Kalama, and Mahagetang revealed their willingness to develop nature-based tourism but emphasized the need for stakeholder collaboration. Support from main, key, assisting, and supporting stakeholders is vital for planning strategies, managing resources, and promoting tourism. Enhanced stakeholder synergy is imperative to achieve sustainable tourism development across the Tatoareng Archipelago.

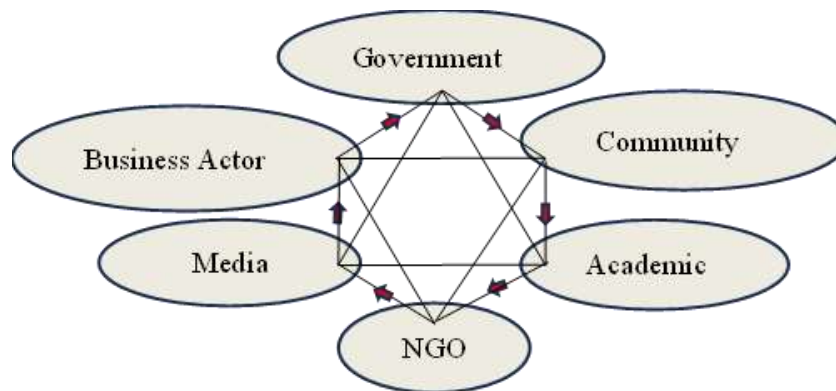


Figure 5. Model Of Collaboration and Synergy Of Stakeholders' Roles  
(Source: Researcher's Analysis Data)

The development of nature-based island tourism will have an impact on improving the economy and preserving nature and culture, if there is collaboration and synergy of stakeholder roles in seizing opportunities to create alternative jobs from tourism activities. The development of nature-based island tourism will have an impact on improving the economy and preserving nature and culture, if there is collaboration and synergy of stakeholder roles in seizing opportunities to create alternative jobs from tourism activities. Collaboration and synergy of stakeholder roles are crucial for villages in small conservation and border islands like in Tatoareng Islands.

This areas are characterized by unique ecological features, encompassing rich marine life and diverse ecosystems, including coral reefs, seagrass beds, mangroves, and habitats for various protected species such as turtles, dugongs, Napoleon fish, coconut crab, and Maleo birds endemic to North Sulawesi. Additionally, the region is notable for its cultural and natural landmarks, such as the Swallow Nest Cave and maritime traditions, including the Tulude ceremony and the traditional fishing practice using Seke Maneke tools. This remarkable biodiversity and cultural heritage offer significant opportunities for nature-based tourism, particularly in diving and eco-tourism. This is in line with studies that have been conducted by discussing the role of stakeholders in tourism development in conservation areas (Aas et al., 2005; Waligo et al., 2013; McCabe, 2016; Figueroa and Rotarou, 2021; Aas et al., 2005; Waligo et al., 2013; McCabe, 2016; Figueroa & Rotarou, 2016; McComb et al., 2017; Kihima and Musila, 2019; Zuvara et al., 2022; Wanjiku et al., 2022; Bozdoglar, 2023).

### 3. The Role of Stakeholders Is Critical to Achieving A Balance Between Nature-Based Tourism Development And Conservation

The role of stakeholders is pivotal in achieving a balance between nature-based tourism development and conservation. Effective collaboration and synergy among stakeholders, including local communities, government agencies, businesses, academics, non-governmental organizations, and media, are essential to align tourism development with conservation efforts. Such partnerships enable a balanced approach that supports environmental protection while fostering tourism activities to drive local economic development. Local communities play a critical role, and their readiness for sustainable tourism depends on their awareness of sustainability principles, leadership capabilities, social cohesion, financial stability, and resource management skills.

Institutional support, such as capacity-building programs and governance frameworks, further strengthens their ability to participate effectively. Addressing gaps in education, resources, and collaboration is essential to empowering communities and ensuring their active engagement. The integration of these efforts underscores the importance of a multi-stakeholder approach to achieving sustainable and inclusive

tourism development. Collaborative and synergistic roles of stakeholders are essential for this process, as emphasized by Al-Tokhais and Thapa (2019); Rakitovac and Urošević (2023) who evaluated the roles of various stakeholders in managing sustainable tourism destinations.

Collaboration and synergy of stakeholder roles, and coordinated efforts ensure that nature tourism activities are considered with conservation activities to help maximize conservation benefits for nature tourism attractions and minimize adverse impacts due to tourism activities, such as in the small islands and conservation areas of Tatoareng, pose ecological and socio-economic challenges. Unregulated tourism in this can degrade habitats like coral reefs, mangroves, seagrass beds, nesting habitats of Maleo birds and sea turtles, Napoleon, coconut crab. Socially, it may disrupt cultural traditions and erode local identity, while economically, over-tourism strains freshwater resources, infrastructure, and waste management. Sustainable tourism planning, including visitor regulation, community involvement, and strict environmental enforcement, is essential to protect biodiversity and support socio-economic resilience.

Each stakeholder group has specific roles that help ensure that nature tourism activities contribute positively to conservation. The government has a responsibility to develop and implement policies and regulations that support the conservation and sustainable development of nature-based tourism, as well as provide financial resources to build supporting facilities to facilitate sustainable tourism while protecting natural resources. Research results of previous researchers are in line with this view, such as Rakitovac and Urošević (2023) linking increased partnerships between stakeholders, partnerships are essential to integrate sustainable tourism development with global sustainability goals, ensuring that tourism makes a positive contribution to environmental conservation, economic prosperity, and social well-being. Collaboration and synergy of roles between stakeholders is also reflected in the establishment of rules and policies that support environmentally friendly tourism practices. The government ensures that tourism development does not come at the expense of environmental preservation, as stated in the Director General of Marine Resources Monitoring Regulation 'article 4 of Perdirjen No. 2/ Per-JPSDSKP/2015' on Technical Guidelines for Monitoring in Conservation Areas. This regulation regulates activities that can be carried out in conservation areas. The implementation of the regulations is supervised by the community called the Community Surveillance Group 'Pokmaswas'.

Table 1. Objects of Supervision in Marine Protected Areas Perdirjen No.2/PER.DJPSDKP/2015 Article 4 on Technical Guidelines for Monitoring in Conservation Areas

Core Zone	Core Zone	Utilization Zone	Other Zones
1. Education -Research	1. Education - Research	1. Education - Research	1. Education - Research
	2. Fishing	2. Aquatic Tourism	2. Protection
	3. Fish Farming	3. Aquatic Tourism	3. Rehabilitation
	4. Aquatic Tourism	4. Business -	
	5. Aquatic Tourism	Research	
	6. Business – Research		

Source: Source: Indonesian Ministry of Marine Affairs and Fisheries

Community Surveillance Groups (POKMASWAS) are integral to marine conservation efforts in Indonesia, particularly in regions like the Tatoareng Islands. These groups monitor, record, and report violations within marine protected areas, actively engaging in educational outreach during community gatherings to foster public awareness

and participation in sustainable marine resource management. This dual approach not only strengthens compliance with conservation regulations but also cultivates a community-centric ethos towards marine stewardship. Such community-based monitoring systems have been recognized for their effectiveness in enhancing conservation outcomes and promoting sustainable resource use.

In the Tatoareng Islands, community understanding of protected ecosystems, biota, and cultural heritage is vital for developing authentic and sustainable nature tourism experiences. Public awareness of environmental conservation among local populations is crucial and should be addressed through comprehensive socialization efforts across all Tatoareng Islands communities. To this end, the Cahaetodon NGO provides socialization on sustainable practices and the importance of conservation in maintaining the livelihoods and environment of the Tatoareng community. These initiatives empower local residents to independently manage and benefit from conservation activities, transforming them into nature tourism attractions.

Socialization activities aim to foster a sense of community ownership and responsibility for maintaining natural and cultural resources sustainably. Proposed tourism experiences include fishing trips, snorkeling and diving to observe marine life such as Napoleon fish, coral reefs, and underwater volcanoes, exploring mangroves; visiting the nesting habitats of Maleo birds and sea turtles, participating in bird's nest culinary experiences, engaging in the Tulude cultural festival, observing traditional fishing practices like Seke Maneke, joining cooking classes using freshly caught fish and exploring islands and clove plantations. These activities not only provide economic opportunities but also promote environmental education and cultural preservation.

The Wildlife Conservation Society (WCS) organization and local NGO Chaitodon play an important role in assisting and socializing to the Tatoareng community the benefits of conservation for the survival of protected biota, and also the presence of these animals can be a natural tourist attraction. Effective development of nature-based tourism in areas with conservation zones requires a strong collaborative framework and synergy of stakeholders. These activities, to communicate, coordinate, and share roles, to ensure that all policies are based on joint decisions. This is in line with studies conducted by Rakitovac and Urošević (2023); Stan et al., (2021) showing the importance of involving all relevant stakeholders in planning and implementing sustainable nature-based tourism development.

Developing a sustainable tourism framework necessitates a comprehensive approach that integrates stakeholder collaboration, environmental assessments, and community involvement to balance economic development with ecological sustainability. Central to this framework is the establishment of partnerships among government agencies, local communities, businesses, academic institutions, non-governmental organizations (NGOs), and media outlets. These collaborations facilitate the collective management and promotion of sustainable tourism initiatives, ensuring that diverse perspectives and expertise inform decision-making processes.

Environmental assessments are integral to this framework, involving the systematic evaluation of the ecological impacts of tourism activities. Such assessments are essential to ensure that tourism development does not compromise environmental integrity, thereby preserving the natural resources upon which tourism depends. Equally important is the active involvement of local communities in the tourism development process. Engaging local populations in decision-making, capacity-building, and the equitable distribution of tourism benefits fosters a sense of ownership and responsibility. This participatory approach enhances the social sustainability of tourism initiatives, ensuring that they contribute positively to the well-being of host communities.

Implementing this integrated framework enables the harmonious integration of economic development with ecological sustainability, ensuring that tourism contributes positively to both the community and the environment. By aligning economic objectives with environmental and social considerations, this approach promotes a balanced and sustainable tourism model.

## Conclusion

Tourism development activities in the Tatoareng Islands have not been effective because stakeholders have not collaborated and synergized effectively, so Mahagetang Island is still at the exploitation development stage, although in 2008, the government has provided tourism facilities. Kalama and Kahakitang Islands have never had tourism development activities, while the government is exploring tourism potential to become a tourist attraction. Stakeholder collaboration and synergy determine the success of tourism development. Effective collaboration and synergy of stakeholder roles are structured, scheduled, and carried out on an ongoing basis to discuss tourism development issues and innovate development. Future research needs to examine "The Role of Stakeholders in Anticipating the Impact of Nature-Based Islands Tourism Development on Changes in the Potential and Function of Conservation Areas. The focus locations of this research are Kahakitang Island, Kalama Island, Mahagetang Island, and Para Island which are conservation areas of the Tatoareng Small Island Park, so further research needs to examine; the role of stakeholders in anticipating the impact of nature-based island tourism development on changes in the potential and function of conservation areas.

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