

## Utilizing social network analysis for the advancement of rural tourism

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**Abstract:** Implementing Community-Based Tourism (CBT) can create employment opportunities and enhance regional competitiveness. Economic, social, and environmental conflicts sometimes follow the success of CBT. Social networks can drive the success of CBT, reduce conflict, and promote tourism sustainability. This study aims to analyze social networks to strengthen rural tourism. The research was carried out in the Carocok Tourism destination, a leading Pesisir Selatan Regency tourism destination—data collection through observation and FGD with five experts. Primary data were collected from 39 business units that were selected purposively. The variables observed were tourism asset ownership, asset control, capacity, and benefits. The data was analyzed using the Social network analysis (SNA) approach with Nvivo 12 plus and Gephi 0.9.5 software. The study's findings show that the social network pattern in the Carocok mirrors a triple helix model. This model involves three key stakeholders: the government, the community, and the private sector. Tourism management resembles community-based tourism as it emphasizes the community as the primary stakeholder, with the community owning 89.27% of tourism assets, a more significant share than the government and private ownership. While the community broadly owns these assets, there is still room for more robust control and improvement in the capacity of tourism labor. Conflicts were found in rural tourism activities, such as developing tourism infrastructure that impacted the ecological damage of coastal areas, privatization of public spaces, inconsistencies in tourism product tariffs, illegal levies, and misunderstandings of governance between the government and local communities. Some of the problems are related to the lack of control and capacity owned by the community in the tourism sector. The government and the private sector play significant roles in enhancing capacity building and fostering entrepreneurship. Developing tourism will require media and academic collaboration to improve tourism in the future.

**Keywords:** community based tourism, rural tourism, social network analysis, triple helix model

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### Introduction

One of the efforts aimed at mitigating the development disparity between rural and urban areas is the promotion of tourism. The tourism industry has the potential to stimulate economic development in rural regions, creating jobs and alleviating poverty. (Dang et al., 2024). Community-based tourism (CBT) is a tourism development approach that empowers local communities as the main actors and beneficiaries of tourism activities. (Mtapuri et al., 2022). Implementing CBT is expected to improve the local economy and reduce regional leakage in tourist villages.

Community-Based Tourism (CBT) is the implementation of sustainable and inclusive tourism that encourages community participation in tourism activities (Sithole et al., 2021). The implementation of CBT has proven to reduce the rural-urban gap, (Wang & Bai, 2023), create jobs, and increase community income. (Aminuddin et al., 2022), empowering the community (Hermawan et al., 2023), increasing regional competitiveness (Mtapuri et al., 2022) and environmentally friendly (Streimikiene et al., 2021). Cross-business linkages managed by local communities can increase linkages in the economy (Rocca & Zielinski, 2022) and have a multiplier impact on the regional economy (Nuryadin & Purwiyanta, 2023).

Optimizing the implementation of CBT can positively impact the community. However, the probability of CBT success in various countries still needs to improve due to inadequate community participation and local infrastructure (Sithole et al., 2021), weak coordination between stakeholders (Sinaga et al., 2021), lack of local community acceptance of tourists (Romeon & Sukmawati, 2021), insufficient supervision and control from local champions (Romeon & Sukmawati, 2021) and inadequate human resources and tourism institutions at the regional level. (Doni & Prasetyo, 2021). In managing Carocok tourism, a conflict has emerged between the government and the local community regarding the governance of the Carocok tourism area. This situation highlights the lack of effective coordination among stakeholders. Additionally, the existence of illegal levies and inconsistencies in entrance ticket prices for tourist areas indicates inadequate supervision of tourism activities.

Implementing rural tourism in multiple countries has led to various social, economic, political, and cultural conflicts. (Zielinski et al., 2021). In China, rural tourism management that does not involve the community ends up triggering land conflicts. (Wang & Yotsumoto, 2019), and social exclusion (Guo & Jordan, 2022). In Vietnam, CBT management is associated with conflicts of interest among stakeholders (Hien & Thanh, 2022). In Portugal, tourism management also triggers conflicts between land use and nature conservation (Almeida et al., 2018). In the Philippines, rural tourism is causing conflicts with non-indigenous stakeholders. (Okazaki, 2008), while some cases in Indonesia indicate that tourism is prone to conflicts of social and cultural interaction (Roestamy et al., 2020) and has only a minimal impact on reducing poverty (Martini et al., 2022).

Many researchers have also utilized CBT in the context of social capital studies. However, in this context, previous research has primarily examined the impact of social capital on sustainable tourism (Jumiati et al., 2024). In Colombia, tourism activities can positively impact the community's economy only when there is sufficient social capital and decentralized governance, given the limited presence of the government. (Rocca & Zielinski, 2022). The CBT approach involves social interaction among various community groups. These groups work together to boost the tourism economy by coordinating their roles. The social network formed through community interaction is crucial to the success of CBT. Social networks refer to the connections or bonds in social relationships between individuals or groups (Can & Alatas, 2019). Strengthening social networks can enhance the success of CBT. In contrast, weak social networks can lead to conflicts and hinder the implementation of CBT (Wibowo et al., 2020). The condition of diverse communities has implications for establishing collaborative networks between different communities (Kieffer & Burgos, 2015). Based on research, social networks are likely to facilitate the movement of tourism actors and the mobilization of resources. The strength of the social network formed in the community will affect the success of CBT implementation. Thus, this study focuses on revealing how social networks are formed in society and their role in strengthening CBT outcomes in rural areas.

## Methodology

This research was conducted in the Carocok Tourism Area, Pesisir Selatan Regency, West Sumatra Province. This area is designated as one of the main tourism destinations in the Tourism Development Master Plan (RIPPARDA) of the Pesisir Selatan Regency for 2015-2025. According to the Pesisir Selatan Tourism, Youth and Sports Office, there are 10 (10) tourist attractions in Pesisir Selatan Regency, and the Carocok Area is the tourist attraction with the highest number of tourists in 2016-2023 and the highest number of tourism business actors in Pesisir Selatan Regency.

The research employs a survey method, including observations and FGDs with various key informants as shown in Table 1. Additionally, relevant agencies are involved in collecting secondary data. The study also gathers primary data from business actors selected purposively, specifically local communities managing business units, with business representation accounted for proportionally. There are a total of 324 tourism business actors in the Carocok area, divided into 184 business owners and 140 workforces. The sample size of respondents is calculated based on the Slovin formula :

$$n = \frac{N}{1 + Ne^2} = \frac{184}{1 + 184 (0.02)} = \frac{184}{4,68} = 39,31 = 39 \text{ Business owners}$$

$$n = \frac{N}{1 + Ne^2} = \frac{140}{1 + 140 (0.02)} = \frac{140}{3,8} = 36,8 = 37 \text{ Workforces}$$

**Table 1.** Respondents of tourism business actors

Respondent Category	Sample Category		Total Unit Business	
	Based on tourism Activities	Type of business	Population (N)	Sample (n)
Unit Business	Attractions	Marine tourism rides	13	3
		Children's play rides	10	2
		Paragliding Attractions	5	1
	Accessibility	Boat	79	16
	Accommodations	Homestay	24	6
	Amenity	Restaurants, cafes	22	5
		Souvenir Shop	16	3
		Documentation Services	5	1
		Hawker	10	2
	Total			184
Workforces	Attractions	Marine tourism rides	62	16
	Accommodations	Homestay	52	13
	Amenity	Restaurants, cafes	26	8
Total			140	37

The variables observed in the social network analysis in CBT are: 1) ownership of tourism resources, 2) control over resources, 3) utilization of resources, and 4) capacity in resource management. Ownership includes a form of control of tourism resources by local communities. The ownership of tourism resources can be in the form of property rights, use rights, leases, and Ülayat rights. Control of tourism resources is managed based on the authority of the community. The benefits are determined by the economic, social, and environmental impacts felt by the community from tourism activities. Capacity refers to the abilities of local communities to support their involvement in tourism development

Data was collected through a Focus Group Discussion (FGD) with 5 key informants from the Regional Government, Nagari Government, and Pokdarwis. More details about the key informants are provided in Table 2. The data was analyzed using social network analysis (SNA) to map and measure social relationships between individuals or community groups for managing tourism activities. Qualitative data was processed using NVivo 12 Plus software and Gephi 0.9.5 software.

**Table 2.** Key informants

No	Key informants	Total
1	Head of the Tourism, Youth and Sports Office of Pesisir Selatan Regency	3
2	Head of the Public Works and Spatial Planning Office	
3	Supervisor of Young Expert Cooperatives at the Cooperatives, MSMEs, and Manpower Office of Pesisir Selatan Regency	
4	Walinagari	1
5	Chairman of Pokdarwis	1
Total Key Informants		5

The limitation of research methods such as surveys, observations, and focus group discussions (FGDs) is the potential for biased selection of respondents or research informants. Therefore, this study employs triangulation by gathering data from various sources through interviews with different individuals involved in the development of Carocok tourism. This data will then be compared with tourism documents from the Regional Government.

## Results and Discussions

### Results

The Carocok tourist area is located 2 km west of Painan, near the Painan market, and approximately 75 km from Padang City. It has the potential for natural, cultural, culinary, and historical tourism. Carocok Beach offers activities for marine tourism with its calm waves. The beach is a prominent tourist destination outlined in the South Coast Regency Tourism Development Master Plan for 2015-2025. Within the Carocok area, there are several tourist attractions located close to each other, including Cingkuak Island, Langkisau Peak, Batu Kereta Island, Portuguese Heritage Fort, and Madame Van Kempen Tomb.



Figure 1. Carocok tourist area, South Nagari Painan

The Carocok area covers 58.11 hectares, including blocks for tourism, facilities, trade, housing, urban space, and public services (Figure 2).

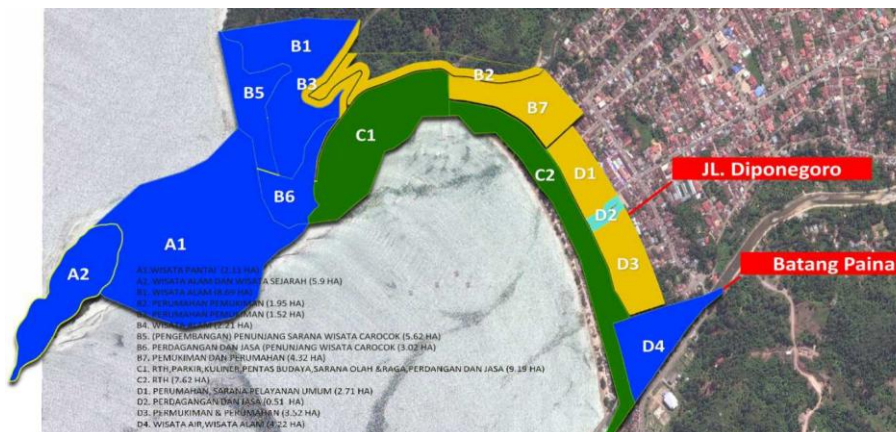


Figure 2. The spatial arrangement of the Carocok tourism area

In this area, there are several business units engaged in tourism activities. The study identified 183 business units involved in attraction activities (such as marine tourism rides, children's game rides, and paragliding attraction services), accessibility (including tourist boats), accommodation (such as homestays), and amenities (restaurants and cafes, craft shops and creative industries, documentation services, and hawkers).

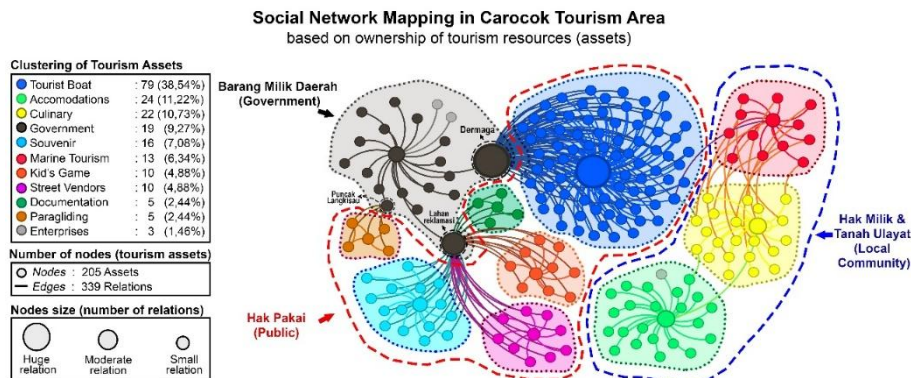
The study's findings highlight the sustainability challenges facing Carocok tourism development. These challenges include the privatization of public spaces, instances of thuggery by local community figures, and environmental pollution caused by tourism-related waste. This situation indicates that tourism stakeholders—including the government, the community, and business actors—have not fully grasped the principles of sustainable tourism development.

Community involvement in CBT is a social network pattern formed based on ownership of tourism resources, control over resources, resource management capacity, and resource utilization.

#### a. Ownership of tourism resources

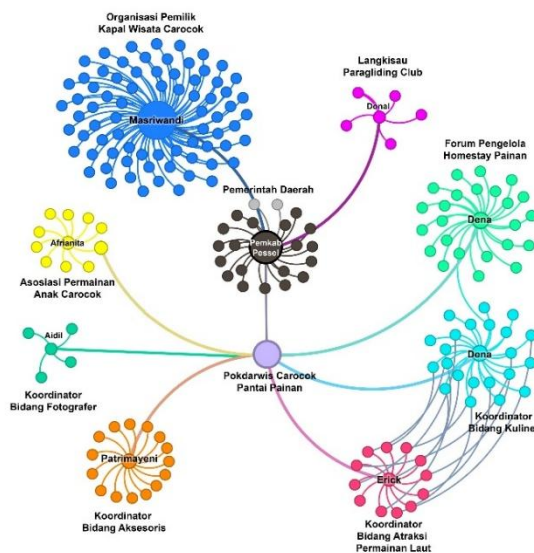
It was found that there are 205 tourism assets divided into four ownership patterns: 1) Regionally owned resources under the ownership of the Regional Government, such as reclamation areas, Carocok Coastal, and Langkisau Peaks. 2) Property rights under the

ownership of local communities, such as restaurants and cafes, 3) Rights to Ulayat land under the ownership of indigenous peoples, which is used as business land for marine tourism attractions. and 4) The right to use, under the ownership of local and non-local communities..



**Figure 3.** Ownership of tourism assets in the Carocok tourism area

The community dominates the ownership of tourism assets in the Carocok tourist area with a percentage of 89.27%, while the ownership of the Regional Government is 9.26% and the private sector is 1.46%. Strong social network are built among the government, the private sector, and the community in the management of tourism resources. These relationships are established through the collaboration of business entities that operate more than one type of tourism business. For example, an individual may own an attraction, offer boat services, and run restaurants. Social networks are also formed from the relationship of business actors who are members of local tourism organizations, such as tour boat owners forming Carocok tour boat owners organizations that play a role in operational management, ticket levies, and profit-sharing schemes between tour boat owners. In addition, social networks are formed from relationships between business actors utilizing facilities and infrastructure owned by the Regional Government. For example, souvenir traders, creative industry product vendors, children's game ride operators, and documentation service providers utilize the Carocok beach reclamation area as their business land. (Figure 4).



**Figure 4.** Social network mapping and community-based tourism management

Research findings based on social network analysis show that community involvement is more dominant than the government and the private sector in tourism activities. Social relations can detect the existence of local heroes in each tourism business cluster and determine key

tourism assets that are highly correlated to community needs (Figure 4). The results of social network analysis can be a consideration for stakeholders in formulating community-based tourism development policies. Local heroes can connect the interests of the local government with the community. Key tourism assets with a high relationship with people's lives can be more concerned regarding the supervision and maintenance of assets to sustain tourism activities.

b. Control over tourism resources

Community control over tourism assets is divided into three groups: strong, medium, and weak control. The level of control is determined based on the ownership of tourism resources. Different community groups have varying levels of authority and control based on the form of resource ownership they have. Community groups with property rights tend to have strong authority and control, while those with local ownership and "tanah ulayat" have moderate control. In contrast, community groups with use rights have the weakest control over the resources because it is vulnerable to potential conflicts and government interests related to spatial planning policies and tourism governance. The study results indicate that 68.31% of people have weak control over their resources, while only 17.49% exhibit strong control and 14.21% have medium control (Figure 5).

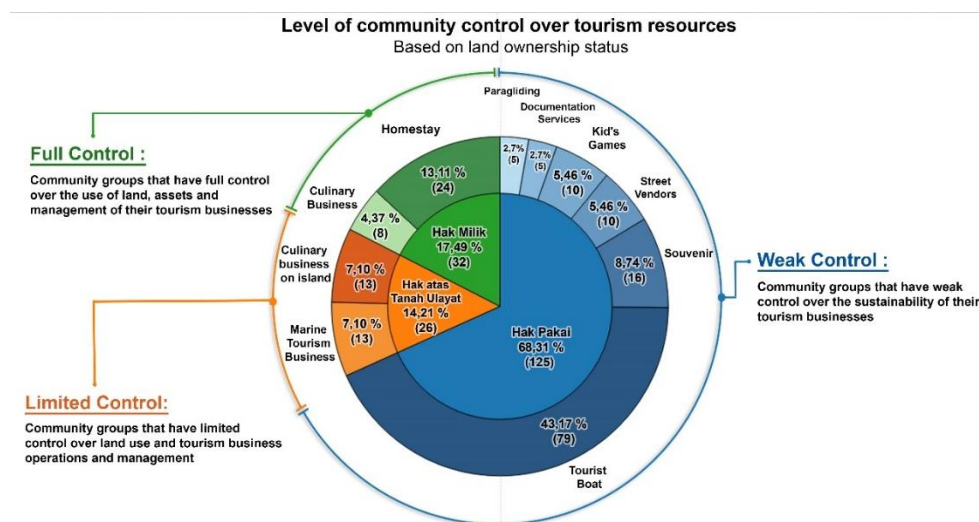


Figure 5. Community control of tourism resources in the Carocok area

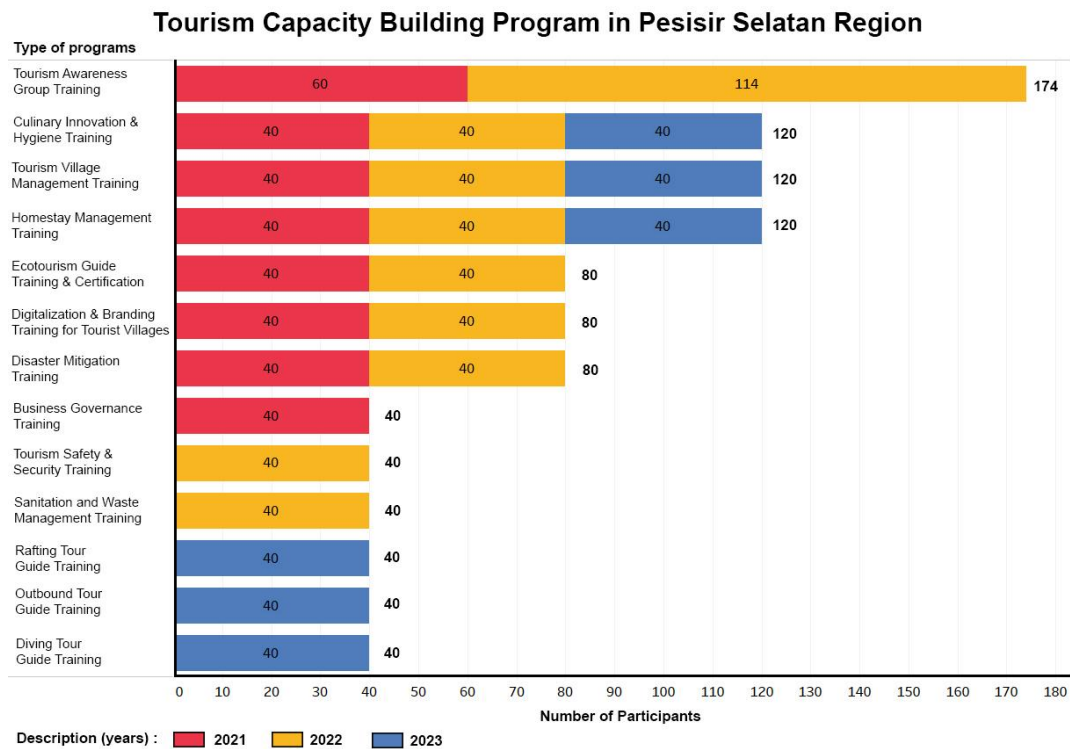
Figure 5 shows that the community's dominance over controlling tourism resources is not accompanied by community control—the phenomenon of capital gap between people who already have business land and those who do not. Most of the community has weak control because out of 183 business units managed by the community, as many as 125 businesses (68.31%) only have land use rights. The Regional Government provides business opportunities for local communities who do not have business land by giving them the right to use regionally owned land.

Land use rights often lack strong oversight and are susceptible to conflicts of interest between local communities and governments regarding spatial planning and tourism governance policies. Furthermore, individuals with land use rights typically do not have full control over how tourism land may be utilized in the future.

Policy implications that the Regional Government can carry out to overcome the weak community control in the tourism business, namely: 1) Providing legal certainty through a Memorandum of Understanding regarding rights and obligations, land use periods, and policies to protect local communities in the tourism business; 2) Management of the supply chain of raw materials or services needed by the tourism business, 3) Optimization of tourism supporting facilities and infrastructure. The policy is expected to facilitate business and increase community control in tourism activities in the future.

c. Tourism workforce capacity

The capacity of the community also determines social networks when implementing CBT. Capacity is related to the skills and knowledge of the community that enable them to participate in tourism activities as business actors and workers. The Tourism Office of Pesisir Selatan Regency, a leading force in regional tourism development, has implemented 13 programs over the last 3 years (2021-2023) to enhance the skills of human resources in the tourism sector. The Tourism Awareness Group Training (Pokdarwis) is the most popular program in the community. Additionally, the capacity building program conducted every year includes training on managing culinary businesses, homestays, and tourist villages. At the organizational level, community capacity building is observed through the Pokdarwis Carocok Painan, as well as several tourism associations such as the Langkisau Paragliding Club, the Tourist Boat Owners Organization, the Painan Homestay Management Forum, and the Carocok Children's Game Association. (Figure 6)



**Figure 6.** Capacity building program in Pesisir Selatan tourism development

Figure 6 shows that the community involved in the training organized by the Pesisir Selatan Regency Tourism Office for the last 3 (three) years has amounted to 974 participants. In connection with the large number of people involved in the training program, the level of community accessibility in the capacity-building program is further measured, as shown in the survey results in Table 3.

**Table 3.** Respondents of tourism business actors

Respondents	Involvement in Capacity Building Programs		Total
	Participated	Never Participated	
Business Owners (person)	26	13	39
Workforce (person)	9	28	37
Total (person)	35	41	76
Percentage (%)	46 %	54 %	100 %

Based on a survey of 76 respondents consisting of business owners (39) and workers (37) who do business in the Carocok tourist area, it is known that only 35 people (46%) have participated in the tourism human resource capacity building program. This result shows that the

level of community accessibility in the tourism human resource capacity building program organized by the Government is still low.

The low accessibility of the community to community capacity-building programs is because the program tends to prioritize business actors over the workforce. The workforce also has an essential role in serving tourists. The amount of community involvement in the program has implications for the number of business actors and workers with the capabilities, knowledge, and skills needed to develop tourism in the Carocok tourist area. Regarding the problem of limited community capacity, it is proposed to the organizers of capacity-building programs in the tourism sector to prioritize people who have never participated in the program at all, including tourism workers who have an essential role in serving tourists directly

d. Usefulness of tourism activities

The sustainability of tourism is determined by the benefits each stakeholder in social networks receives. These benefits are measured in economic, social, and environmental aspects : 1) The economic aspect is related to the impact of tourism activities on stimulating business opportunities, employment, and community income. 2) The social aspect is related to forming community awareness and skills in tourism, consolidating local communities, and preserving local traditions or culture. 3) The environmental aspect is related to the impact of tourism on the region and the environment (Figure 7).



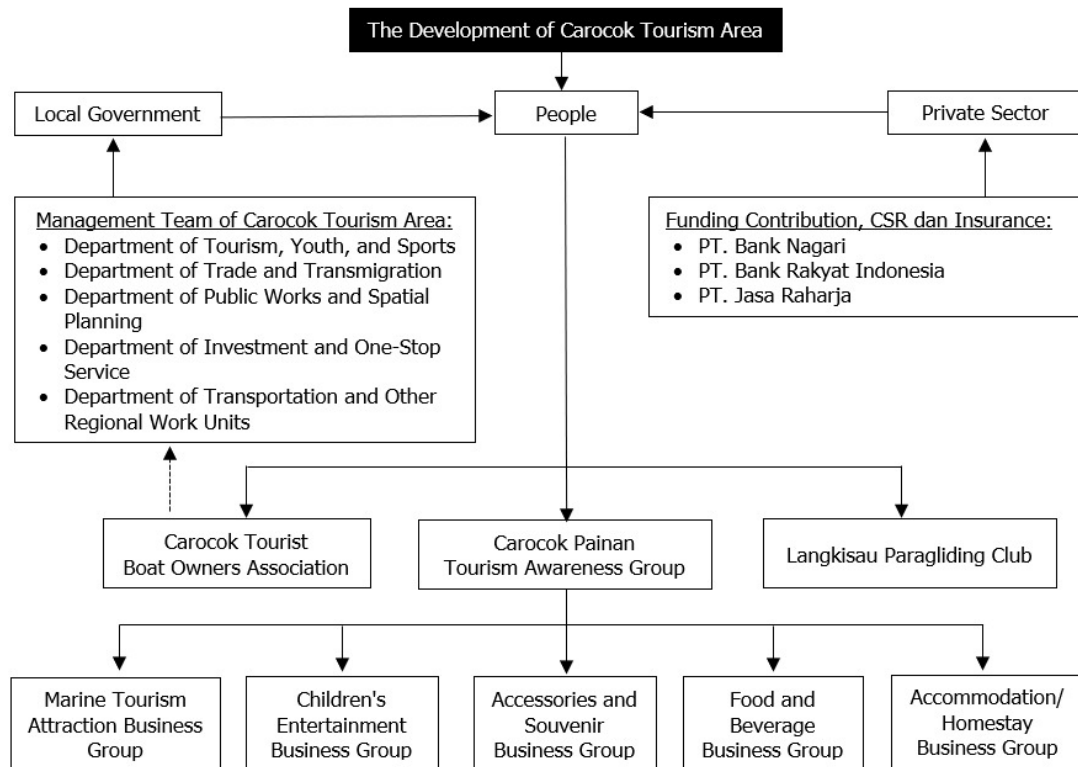
**Figure 7.** Economic, social, and cultural benefits of tourism activities for local communities

The interviews with key informants indicate that economically, Carocok tourism has the potential to stimulate economic diversification, create new employment opportunities, and the availability of supporting facilities and local infrastructure. Socially, the Carocok tourist area has the potential to enhance social networks within the community, foster unity among community members, preserve local traditions and culture, and boost community capacity. Ecologically, it can also raise awareness and concern for the environment.

Tourism activities in rural areas can negatively impact the social, economic, and environmental aspects of local communities. Issues such as an economic disparities among group members based on capital ownership, the misuse of homestays for prostitution, and increased tourist visits leading to environmental pollution from waste are significant concerns. To address these issues, several strategies can be implemented, including halal tourism policies aligned with local cultural values, economic empowerment programs, and effective systems for sustainable tourism waste management.

The development of the Carocok tourist area involves collaboration among the government, the community, and the private sector. This collaboration forms a triple helix with the community as the leading actor in developing community-based tourism (Figure 8).





**Figure 8.** A social network model for the development of the Carocok tourism area

The social network among stakeholders is determined based on their roles, authorities, and responsibilities. According to Decree Number 556/16/Kpts/BPT-PS/2015 from the Regent of Pesisir Selatan, the management of the Carocok Painan tourist area involves coordination and collaboration among several Regional Apparatus Work Units (SKPD) within the Pesisir Selatan Regency Government. The Regional Government has designated specific roles and responsibilities to each SKPD: 1) The Tourism Office serves as the team coordinator and is responsible for managing tourist attractions, tourism marketing, and tourism human resource development. 2) The Trade and Transmigration Office is responsible for regulating and structuring business operators within tourist attractions. 3) The Public Works and Spatial Planning Office is responsible for developing tourism infrastructure. 4) The Transportation Department oversees vehicle traffic, parking, and tourist boats in the Carocok tourist area. 5) The Wali Nagari is in charge of community empowerment and population mobility.

## Discussions

In the Carocok tourist area, social network analysis (SNA) involves examining the social interaction between three main stakeholders: the government, the community, and the private sector. This pattern is often referred to as the triple helix model. This model is commonly used to create synergy when developing agro-tourism in Indonesia (Fitriana, 2017), such as in West Nusa Tenggara (Rahmawati et al., 2023), and in South Sulawesi (Attas et al., 2020). This model is also applicable to the development of culture-based tourism, as seen in Saung Angklung Udjo in Bandung (Hani et al., 2013). Developing Carocok tourism requires strong support and dedication from stakeholders to ensure the future sustainability of tourism.

Stakeholders as any person, group or institution that has an interest in a development activity, project or program (Baggio & Cooper, 2010). In the tourism context, stakeholders are individuals and groups who influence or are influenced by local tourism development (Nguyen et al., 2019). According to Stakeholders Theory, the successful development of a tourism destination is dependent on stakeholder engagement where the local destination management organisation should identify and consider all interests of the stakeholders (Mowforth & Munt, 2015).

Stakeholders Theory helps to differentiate stakeholders by their level of salience (Mitchell et al., 1997), which is determined by their power, legitimacy, urgency, and proximity attributes (Nguyen et al., 2019).

The participation of triple helix actors in implementing CBT demonstrates that each stakeholder has roles and functions that complement one another. The main essence of CBT is that local communities can own and manage tourism resources, so the most significant proportion of benefits is in local communities (Sithole et al., 2021). Therefore, CBT defines as "tourism from the community, by the community, and for the community" (Okazaki, 2008). In the context of CBT, the role and contribution of the community are emphasized, as evidenced by the community's ownership of 89.27% of tourism resources. In contrast, the government owns only 9.26%, and private ownership accounts for 1.46%. The community has a strong ownership of tourism resources, with offerings such as tourist boats, restaurants, and cafes. Additionally, tourism activities can contribute to the development of handicraft businesses and creative industries (Fitriana, 2020) including local handicrafts made from shellfish. This creates job opportunities for the local community and has a positive impact on the local economy. The leadership of local leaders and community involvement in tourism activities are the main driving forces behind the development of Community-Based Tourism (CBT) in the Carocok Tourism Area. Sapphaya Community in Chai Nat Province, Thailand, demonstrates how local community leadership and ownership models can promote sustainable tourism and foster social entrepreneurship (Thananusak & Suriyankietkaew, 2023).

Based on their roles and interests, stakeholders can be divided into: 1) Key Players as stakeholders who have significant interests and influence; 2) Context setters are stakeholders whose influence is strong but whose importance is low; 3) Subject, namely stakeholders whose interests are high but do not have significant influence. These stakeholders usually have limited capacity to influence a policy; 4) Crowds are stakeholders whose importance and influence are low in decision-making.

The power relationship between the government and the community runs in the context of balanced power. Through the Tourism Office, the government has a claim of power in the form of regulations that allow it to become a key player in the development of CBT. The government bases its power claim on legal rationality, where policies, programs, and the implementation of agency duties and functions refer to regulations. On the other hand, people with a large portion of involvement with a high interest in tourism activities become their position as subjects in the development of CBT.

People who have been given space to access tourism resources have a high interest in obtaining economic benefits from tourism but have little influence in determining tourism policies such as spatial planning and tourism governance. Meanwhile, the government has a high interest in and impact on the implementation of policies and the success of regional tourism development because the legitimacy of the rules in the form of regulations on the implementation of main tasks and organizational functions supports them.

Pokdarwis helps coordinate the community in planning, managing, and evaluating tourism activities. According to the chairperson of Pokdarwis Carocok Pantai Painan (Pokdarwis CPP), having Pokdarwis can unite tourism business actors, such as by establishing price standards for tourism services and other marine tourism attractions. Pokdarwis also strengthens cooperation within the community through activities such as "Jumat bersih", "minggu sehat", and family gatherings. Community Based Tourism (CBT) has been proven to enhance the community's social capital (Zhang et al., 2021) and reduce the emergence of social conflicts (Rocca & Zielinski, 2022).

A tourism network is a complex system where nodes (e.g., organisations, groups, and individuals) and ties (e.g., communication, agreements, and relationships) form a system in which different entrepreneurs, through their position, decisions, behaviour, or attitudes, affect each other and the whole network (Hua & Wondirad, 2021).

SNA allows to map stakeholders and explore how they are linked through relational ties in the network (Can & Alatas, 2019). SNA explains the flow of information through direct linkages from one actor to another, and through indirect links via bridging actors. The focus of this study is focusing on the rural tourism networking between the local communities, government and enterprise.

The Pesisir Selatan Government is offering land in the reclamation area to provide economic opportunities for the local community. The land will serve as a place of business, and crossing piers will be made available to facilitate the ownership of tourist boats. This initiative aims to make it easier for the community to transport tourists from Carocok Beach to Cingkuak Island. This study demonstrates that the government serves as both a regulator and facilitator for the development of tourism infrastructure (Jailani et al., 2023). The government also actively participates in capacity-building programs. Enhancing community capacity will promote the success and sustainability of CBT. Through capacity building, communities can achieve unity and resilience against manipulation for personal gain (Giampiccoli et al., 2014).

Community capacity building is a process that aims to strengthen the capacity of individuals and organizations in developing and maintaining the sustainability of activities in people's lives. Capacity building has 3 (three) levels, namely:

- a) Individual level (behavior, motivation, skills, and knowledge),
- b) Organizational level (strategy, resource management, cooperation)
- c) The level of the broader social community system (framework and institutional).

The effectiveness of government policies aimed at supporting rural tourism through the development of reclaimed areas, capacity-building programs, and the establishment of tourism service tariffs faces several challenges. These challenges create gaps between planning and implementation, including issues such as the improper use of tourism facilities, capacity-building programs that fail to target the right groups, and inconsistencies in the tourism tariffs imposed by operators. These various governance problems in tourism have the potential to lead to prolonged conflicts of interest. Therefore, it is essential for the government to evaluate these issues to bridge the gaps in rural tourism governance.

The private sector offers tourism services that require significant capital investment, such as restaurants and accommodation. Additionally, it sponsors various tourism events in the Pesisir Selatan, including the Rabab Kreasi Festival, the "Baju Kuruang Basiba" Festival, the West Sumatra Culinary Bazaar, and the "Tangkok Itiak" Competition. Furthermore, the private sector promotes the growth of entrepreneurs and contributes to conservation efforts (Fitriana, 2017).

While the triple helix model has been instrumental in the development of tourism in this area, it's important to note that other stakeholders can play a strategic role in further encouraging tourism development. Studies conducted in 88 countries have shown that media development can significantly boost profits and contribute to the growth of the tourism industry (Kwabi et al., 2023). Other research also indicates that Ōkunoshima Island in Hiroshima, Japan, saw an increase in tourists after the video post went viral on social media (Usui et al., 2018). The media can play a role in the quadruple helix tourism model, in line with the new media theory that emphasizes media's ability to facilitate social interaction. In the future, the tourism development model will also involve other stakeholders such as academics and scientists, incorporating the latest research developments.

CBT is closely related to sustainable tourism because both concepts emphasize the benefits of tourism development for local communities, especially economic, socio-cultural, and environmental benefits (Khan et al., 2021). In other words, if people can directly enjoy the benefits of tourism, then they will automatically support tourism development and maintain its sustainability. The correlation between community-based tourism and sustainable development shows that ideal conditions will be achieved if people have awareness and empowerment and participate in destination management. UNWTO states this perfect condition is because sustainable development starts at the level of individuals, communities, or societies (from the bottom). Again, this happens because community-based tourism involves local communities in the decision-making process according to the priorities of the destinations that are being developed.

This opportunity allows all parties of society in an area to have the same involvement and responsibility in a tourism system that will bring economic benefits, socio-cultural sustainability, and sustainability to the destination environment.

## Conclusions

The tourism development in the Carocok Tourism Area can be likened to a triple helix model with three key stakeholders: the government, the community, and the private sector. This type of tourism management leads to community-based tourism (CBT), where the community plays a dominant role in tourism activities. It is evident from the community owns 89.27% of tourism resources. However, improvement is still needed in terms of control and community capacity. The government and the private sector both play important roles in capacity-building programs, specifically for those involved in tourism. This involves coordinating with Pokdarwis, as well as in regulating and providing infrastructure. Some challenges the government faces in regulating and facilitating the development of tourism infrastructure include the privatization of public spaces, acts of violence by community members, and environmental pollution due to tourism waste. Tourism activities have been shown to contribute economically by providing jobs and diversifying economic activities. Socially, it can help to strengthen community bonds, social networks, and local traditions and culture. From an environmental perspective, community-based tourism (CBT) can help raise public awareness about maintaining public facilities and the natural environment. Moving forward, tourism development should involve academics and the media to further strengthen its impact.

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## References

- Almeida, J., Costa, C., & Nunes da Silva, F. (2018). Collaborative approach for tourism conflict management: A Portuguese case study. *Land Use Policy*, *75*.  
<https://doi.org/10.1016/j.landusepol.2018.03.034>
- Aminuddin, H., Dhora Nailufar, F., & Alexander Mujiburrohman, M. (2022). Dampak Pengembangan Desa Wisata Terhadap Sosial Ekonomi Masyarakat. *Journal of Public Power*, *6*(2). <https://doi.org/10.32492/jpp.v6i1.6102>
- Attas, A., Risal, M., & Aqsa, M. (2020). *The Role of Government, Academia, and Private Sector Using Triple Helix Approach in Tourism Development in East Luwu Regency*.  
<https://doi.org/10.2991/assehr.k.201017.018>
- Baggio, R., & Cooper, C. (2010). Knowledge transfer in a tourism destination: The effects of a network structure. *Service Industries Journal*, *30*(10).  
<https://doi.org/10.1080/02642060903580649>
- Can, U., & Alatas, B. (2019). A new direction in social network analysis: Online social network analysis problems and applications. In *Physica A: Statistical Mechanics and its Applications* (Vol. 535). <https://doi.org/10.1016/j.physa.2019.122372>
- Dang, P., Ren, L., & Li, J. (2024). Does rural tourism reduce relative poverty? Evidence from household surveys in western China. *Tourism Economics*, *30*(2).  
<https://doi.org/10.1177/13548166231167648>
- Doni, S., & Prasetyo, A. (2021). Pengembangan Kawasan Ekowisata Dalam Roadmap Sistem Inovasi Daerah (SIDA) Kabupaten Labuhanbatu Melalui Pariwisata Berbasis Masyarakat. *Jurnal Ilmu Pemerintahan Widya Praja*, *47*(2). <https://doi.org/10.33701/jipwp.v47i2.1711>
- Fitriana, W. (2017). The Role of Triple Helix Actors for Agro-Tourism Development in West Sumatera. *MIMBAR, Jurnal Sosial Dan Pembangunan*, *33*(2).  
<https://doi.org/10.29313/mimbar.v33i2.2098>
- Giampiccoli, A., Jugmohan, S., & Mtapuri, O. (2014). International cooperation, Community-based tourism and capacity building: Results from a mpondoland village in South Africa. *Mediterranean Journal of Social Sciences*, *5*(23).  
<https://doi.org/10.5901/mjss.2014.v5n23p657>

- Guo, H., & Jordan, E. J. (2022). Social exclusion and conflict in a rural tourism community: A case study from Likeng Village, China. *Tourist Studies*, 22(1).  
<https://doi.org/10.1177/14687976211039067>
- Hani, U., Setyagung, E. H., Azzadina, I., Sianipar, C. P. M., & Ishii, T. (2013). Preserving cultural heritage: The harmony between art idealism, commercialization, and Triple-Helix collaboration. *American Journal of Tourism Management*, 2(1).  
<https://doi.org/10.5923/j.tourism.20130201.03>
- Hermawan, Y., Sujarwo, S., & Suryono, Y. (2023). Learning From Goa Pindul: Community Empowerment through Sustainable Tourism Villages in Indonesia. *Qualitative Report*, 28(5). <https://doi.org/10.46743/2160-3715/2023.5865>
- Hien, D. T., & Thanh, T. D. (2022). Conflicts between Residents and Other Stakeholders at Community-based Tourism Destinations: A Case Study of Pu Luong Natural Reserve, Vietnam. *Journal of Mekong Societies*, 18(3).
- Hua, H., & Wondirad, A. (2021). Tourism network in urban agglomerated destinations: Implications for sustainable tourism destination development through a critical literature review. In *Sustainability (Switzerland)* (Vol. 13, Issue 1).  
<https://doi.org/10.3390/su13010285>
- Jailani, M., Grindulu, L., Islam, M. H., & Ashady, S. (2023). Optimalisasi Kebijakan Publik Dalam Bidang Pariwisata Sebagai Upaya Meningkatkan Perekonomian Masyarakat Di Desa Wisata Seruni Mumbul Kecamatan Pringgabaya Kabupaten Lombok Timur. *Jurnal Sosial Ekonomi Dan Humaniora*, 9(4). <https://doi.org/10.29303/jseh.v9i4.432>
- Jumiati, J., Saputra, B., Frinaldi, A., & Putri, N. E. (2024). Examining the Mediating Effects of Social Capital and Community-Based Tourism on the Role of Tourism Villages in Sustainable Tourism. *Journal of Environmental Management and Tourism*, 15(1).  
[https://doi.org/10.14505/jemt.v15.1\(73\).15](https://doi.org/10.14505/jemt.v15.1(73).15)
- Khan, M. R., Khan, H. U. R., Lim, C. K., Tan, K. L., & Ahmed, M. F. (2021). Sustainable tourism policy, destination management and sustainable tourism development: A moderated-mediation model. *Sustainability (Switzerland)*, 13(21).  
<https://doi.org/10.3390/su132112156>
- Kieffer, M., & Burgos, A. (2015). Productive identities and community conditions for rural tourism in Mexican tropical drylands. *Tourism Geographies*, 17(4).  
<https://doi.org/10.1080/14616688.2015.1043576>
- Kwabi, F., Ezeani, E., Owusu, A., Wonu, C., & Hu, W. (2023). The impact of the media on tourism development and income inequality. *Journal of Sustainable Tourism*, 31(9).  
<https://doi.org/10.1080/09669582.2023.2166516>
- Li, S., & Seale, C. (2007). Learning to do qualitative data analysis: An observational study of doctoral work. *Qualitative Health Research*, 17(10), 1442–1452.
- Martini, R., Agustin, E. S. A. S., & Setiyono, B. (2022). The paradox of rural tourism and poverty alleviation. *Turyzm/Tourism*, 32(2). <https://doi.org/10.18778/0867-5856.32.2.05>
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, 22(4). <https://doi.org/10.5465/AMR.1997.9711022105>
- Mowforth, M., & Munt, I. (2015). Tourism and sustainability: Development, globalisation and new tourism in the Third World: Fourth edition. In *Tourism and Sustainability: Development, globalisation and new tourism in the Third World: Fourth Edition*.  
<https://doi.org/10.4324/9781315795348>
- Mtapuri, O., Camilleri, M. A., & Dłużewska, A. (2022). Advancing community-based tourism approaches for the sustainable development of destinations. *Sustainable Development*, 30(3). <https://doi.org/10.1002/sd.2257>
- Nguyen, T. Q. T., Young, T., Johnson, P., & Wearing, S. (2019). Conceptualising networks in sustainable tourism development. In *Tourism Management Perspectives* (Vol. 32).  
<https://doi.org/10.1016/j.tmp.2019.100575>
- Nuryadin, D., & Purwiyanta, P. (2023). Multiplier Effects of Tourism Sector in Yogyakarta: Input-Output Analysis. *JEJAK*, 16(1). <https://doi.org/10.15294/jejak.v16i1.40054>

- Okazaki, E. (2008). A community-based tourism model: Its conception and use. In *Journal of Sustainable Tourism* (Vol. 16, Issue 5). <https://doi.org/10.2167/jost782.0>
- Rahmawati, R., Handayani, S. R., Suprpti, A. R., Airawaty, D., & Latifah, L. (2023). Green Entrepreneurship Based On Local Characteristics and Culture To Support Sustainable Eco-Tourism: A Case Study. *Journal of Intercultural Communication*, 23(1). <https://doi.org/10.36923/jicc.v23i1.71>
- Rocca, L. H. D., & Zielinski, S. (2022). Community-based tourism, social capital, and governance of post-conflict rural tourism destinations: the case of Minca, Sierra Nevada de Santa Marta, Colombia. *Tourism Management Perspectives*, 43. <https://doi.org/10.1016/j.tmp.2022.100985>
- Roestamy, M., Fauziah, S. P., & Rusli, R. K. (2020). Society's legal conflicts due to accelerated socio-cultural interactions between foreign tourists and the BOPUNCUR community. *International Journal of Innovation, Creativity and Change*, 4.
- Romeon, R., & Sukmawati, A. (2021). Pengelolaan Desa Wisata Berbasis Partisipasi Masyarakat Lokal Di Negeri Saleman Kabupaten Maluku Tengah. *Tata Kota Dan Daerah*, 13(1), 1–8. <https://doi.org/10.21776/ub.takoda.2021.013.01.1>
- Sinaga, K., Nasution, M. A., & Dewi, A. T. (2021). Implementasi Kebijakan Pengembangan Pariwisata Berbasis Pemberdayaan Masyarakat. *Publik: Jurnal Manajemen Sumber Daya Manusia, Administrasi Dan Pelayanan Publik*, 8(1). <https://doi.org/10.37606/publik.v8i1.163>
- Sithole, N., Giampiccoli, A., & Jugmohan, S. (2021). Towards a Spontaneous Community Participation Model in Community-Based Tourism. *African Journal of Hospitality, Tourism and Leisure*, 10(1), 222–237. <https://doi.org/10.46222/AJHTL.19770720-97>
- Streimikiene, D., Svagzdiene, B., Jasinskas, E., & Simanavicius, A. (2021). Sustainable tourism development and competitiveness: The systematic literature review. In *Sustainable Development* (Vol. 29, Issue 1). <https://doi.org/10.1002/sd.2133>
- Thananusak, T., & Suriyankietkaew, S. (2023). Unpacking Key Sustainability Drivers for Sustainable Social Enterprises: A Community-Based Tourism Perspective. *Sustainability (Switzerland)*, 15(4). <https://doi.org/10.3390/su15043401>
- Usui, R., Wei, X., & Funck, C. (2018). The power of social media in regional tourism development: a case study from Ōkunoshima Island in Hiroshima, Japan. In *Current Issues in Tourism* (Vol. 21, Issue 18). <https://doi.org/10.1080/13683500.2017.1372393>
- Wang, L., & Yotsumoto, Y. (2019). Conflict in tourism development in rural China. *Tourism Management*, 70. <https://doi.org/10.1016/j.tourman.2018.08.012>
- Wang, Y., & Bai, H. (2023). The impact and regional heterogeneity analysis of tourism development on urban-rural income gap. *Economic Analysis and Policy*, 80. <https://doi.org/10.1016/j.eap.2023.10.031>
- Wibowo, A., Lestari, E., & Sugihardjo, S. (2020). Model Penyelesaian Konflik Denganmodal Sosialdalam Pembangunan Desawisata Genilangit Kecamatan Poncol Kabupatenmagetan Provinsi Jawa Timur. *Jurnal Penyuluhan*, 16(1).
- Zhang, Y., Xiong, Y., Lee, T. J., Ye, M., & Nunkoo, R. (2021). Sociocultural Sustainability and the Formation of Social Capital from Community-based Tourism. *Journal of Travel Research*, 60(3). <https://doi.org/10.1177/0047287520933673>
- Zielinski, S., Jeong, Y., & Milanés, C. B. (2021). Factors that influence community-based tourism (CBT) in developing and developed countries. *Tourism Geographies*, 23(5–6), 1040–1072. <https://doi.org/10.1080/14616688.2020.1786156>