

Prospects and analysis of coastal ecotourism in Malay community

¹Fatkhurahman Fatkhurahman, ²Irwan Effendi, ³Izzatulmila Effendi, ¹Hadiyati Hadiyati, ⁴Muhammad R. Akbar, ⁴Dawami Dawami, ⁵Ahmad Jamaan

¹ Faculty of Economy and Business, University of Lancang Kuning, Pekanbaru 28265, Indonesia; ² Faculty of Fisheries and Marine Sciences, University of Riau, Pekanbaru 28293, Indonesia; ³ Faculty of Psychology, University of Diponegoro, Semarang 50275, Indonesia; ⁴ Department of Islamic Economy, Institute of Islamic Religion Tafaquh Fiddin, Dumai 28816, Indonesia; ⁵ Faculty of Social Sciences and Politics, University of Riau, Pekanbaru 28293, Indonesia. Corresponding author: F. Fatkhurahman, fatkhurrahman@unilak.ac.id

Abstract. Coastal areas do not only function as residential areas, industries, and places of business, but also function as a recreation zone, entertainment, and other attractions. This study aimed to investigate the potential of ecotourism, management, and develop strategies for the development of coastal ecotourism areas in Malay society with location samples in North Rupat District. This research was a survey method conducted from January 2022 to August 2023 in the marine ecotourism area in North Rupat District, Bengkalis, Indonesia. The observation stations were Medang Cape Beach (station 1), Tanjung Medang Beach (station 2), Pesona Teluk Rhu Beach (station 3), Cemara Tanjung Punak Beach (station 4), and Lapin Beach (station 5). The data were collected through observation, structured interviews, semi-structured interviews, and a literature study. The results of the study show that there is a prospect for developing ecotourism in the area. The potential for coastal ecotourism in this area lies in the beauty of natural resources in the form of white beaches and clean seawater. The Malay culture of the people around the location is considered to be a particular strength in developing coastal ecotourism. The condition of the mangrove forest which is still relatively well maintained has its charm as well. Limited road infrastructure, crossings in the Rupat Strait, availability of tourist amenities and the skills of the community managing ecotourism are constraining factors. Synergism between the local Malay community, the tourism industry community, and the government in building infrastructure, providing tourist amenities, and ecotourism attractions, and developing human resources is a recommended strategy. More effective promotion through contemporary social media is also considered an effective strategy for improving the local ecotourism industry. Therefore, developing human resources for coastal ecotourism actors and improving instructors is a challenge in the future.

Key Words: community empowerment, mangrove forest function, Rupat Islands, tourism human resources, tourism management.

Introduction. Ecotourism is a trip to an environment, both natural and artificial, as well as existing culture, which is informative and participatory, and aims to ensure the preservation of nature and socio-culture. Ecotourism focuses on three main things, namely; natural or ecological sustainability provides economic benefits, and is psychologically acceptable in the social life of the community, thus ecotourism activities indirectly provide access for everyone to see, know, and enjoy the natural, intellectual, and cultural experiences of local communities. Ecotourism activities can increase income for nature conservation which is used as a tourist attraction and generates economic benefits for people living in the area and its surroundings (TIES 2015; Praprom & Laipaporn 2023).

Coastal areas do not only function as residential areas, industries, and places of business. But this area can also function as a recreation zone, entertainment, meeting, and other attractions. Mangrove forests have an important role in coastal areas. Mangrove vegetation can balance the environment and neutralize pollutants (Hadley &

Betts 2009; Barbier 2016). Through ecotourism, three benefits can be obtained at once, namely the preservation of coastal resources, increasing welfare, and minimizing conservation costs (Effendi et al 2022; Paul & Roy 2023).

The opening of the Pekanbaru-Dumai toll road has shortened the travel distance between the two cities, as well as expediting the flow of goods, services, and people. This gave rise to a new phenomenon, namely the growth of new beach-based tourist sites along the Dumai City area and Rupert Island. This business is managed by a group of local Malay people, starting from entrance officers, parking attendants, janitors, mat tenants, cottage tenants, water tourism owners, food stall owners, souvenir shop owners, and others. Coastal ecotourism has become a new livelihood for people in this area. Their cultural habits of catching fish in the sea and farming on land are gradually shifting towards the world of tourism. Malay traditions, culture, and management patterns that are thick with family principles are applied to this business (Effendi et al 2018, 2021).

North Rupert District, with the capital Tanjung Medang, is one of the districts in Bengkalis Regency, Riau, Indonesia. Located in the north of Rupert Island, North Rupert District consists of 8 villages namely Titi Akar, Tanjung Medang, Teluk Rhu, Tanjung Punak, Kadur, Hutan Ayu, Sukadamai, and Putri Sembilan. The area of North Rupert District is 628.50 km² with the largest village, Titi Akar Village, covering an area of 300.00 km² or 47.73 percent of the area of North Rupert District. North Rupert is also a national tourism strategic area (NTSA) which is listed in Presidential Regulation Number 50 of 2011 (Widiarsih et al 2018). This district has 17 kilometers of white sand with very clean beaches. Pesona Beach can be said to be similar to Sanur Beach in east Bali with white sand that stretches wide, so it can be used for beach volleyball and is suitable for sunbathing, swimming, diving, and even surfing. Exploring the interior of the island, we will find an ecological area with a myriad of uniquenesses. Apart from the charming Rupert Beach, there is another beach on Rupert Island that is no less charming, namely Beting Aceh Island. This island is a small unique island with whispering sand beaches that sound when touched (SBR 2023).

To improve the tourism sector, the Bengkalis Regency Government is currently intensively pursuing a marine tourism development program with various supporting facilities such as electricity, clean water the existence of public bathrooms or toilets, and the addition of gazebos (SBR 2023), especially on Pantai Tanjung Lapin, Tanjung Punak Village, and Teluk Rhu. Riau Provincial Government has agreed with the Bengkalis Regency Government to make Tanjung Medang the entry point for foreign tourists. The reason is, that during the holiday season, many Malaysians come to the area for traveling and fishing. With easy access, the increasing number of tourists will also improve the economy of the surrounding community (Firdaus et al 2023). This study aimed to investigate the potential of ecotourism, management, and develop strategies for the development of coastal ecotourism areas in Malay society with location samples in North Rupert District.

Material and Method

Locations and research methodology. This research used a survey method and was conducted from January 2022 to August 2023. North Rupert District, Bengkalis Regency, Indonesia (Figure 1) was used as a sample location. This area is inhabited by Malay communities, has a natural coastal environment, and has started to develop ecotourism businesses. A total of 5 coastal ecotourism locations were selected, namely Medang Cape Beach (station 1), Tanjung Medang Beach (station 2), Pesona Teluk Rhu Beach (station 3), Cemara Tanjung Punak Beach (station 4), and Lapin Beach (station 5). The data were collected through observation, structured interviews (questionnaires), semi-structured interviews, and a literature study. The survey method was used to determine aspects of potential conditions (organization, human resources, management, physical potential, and potential ecotourism attractions and elements of supporting facilities), aspects of community participation (social-economic analysis of society and community participation), and aspects of stakeholders' perceptions.

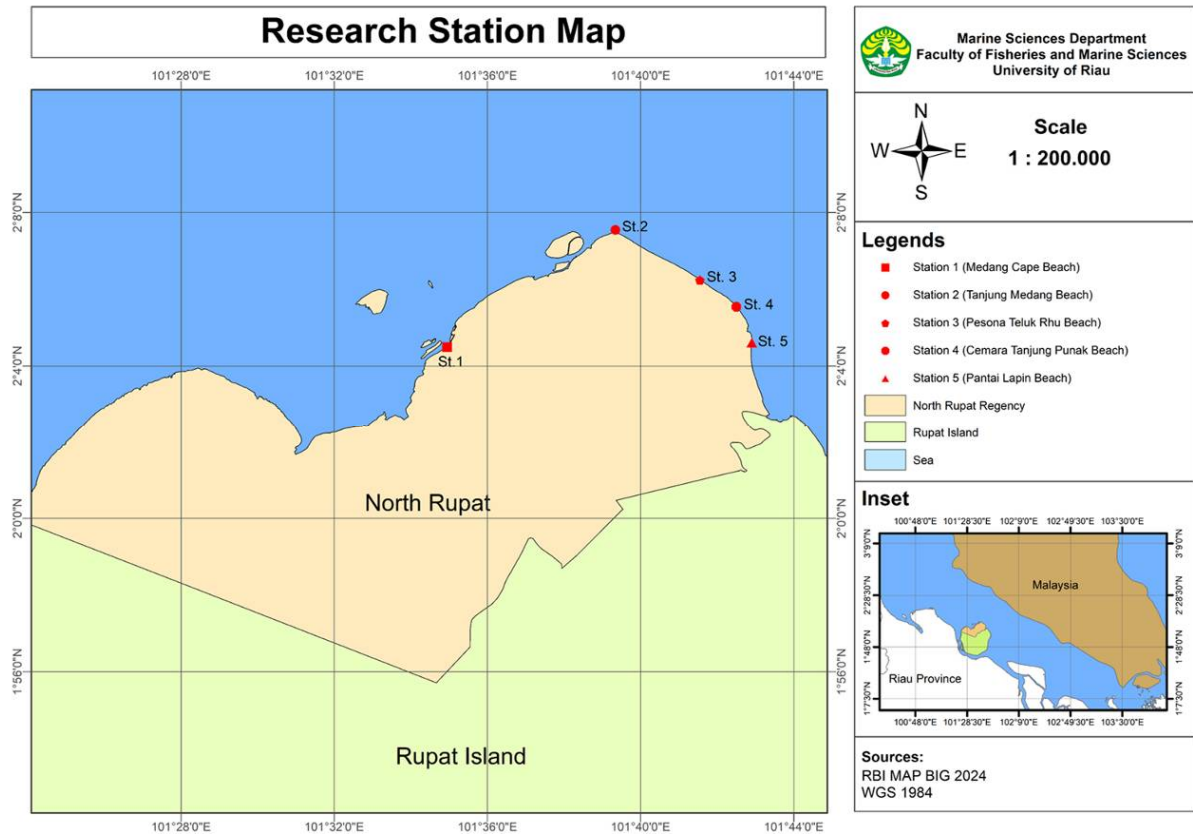


Figure 1. Observation stations in North Rupert District.

Analysis of mangrove flora and fauna. Mangrove community data were collected from mangrove forest in every station by using the line transect and roaming methods to assess the ecological environment. Identification of mangrove species was carried out by observing and photographing some parts of the mangrove morphology such as roots, stems, leaves, flowers, and fruit (Kitamura et al 1998; Noor et al 2006). Fauna were identified through observation, interviews with local communities, and literature studies from several sources, including mammals, reptiles, birds, and coastal invertebrates. Identification works were carried out by referring to some references (Giesen et al 2006).

Ecotourism potential development analysis. The analysis of the development of ecotourism potential uses a SWOT (strength, weaknesses, opportunity, and opportunity) analysis. It includes elements of business organization, human resources, management, tourist attraction, infrastructure, facilities, and services, market potential, security, socioeconomic conditions of the community, institutional elements, environmental quality, and accommodation. The data were collected directly at the research site through interviews with respondents and filling out questionnaires. The researchers selected the respondents by accidental sampling method where the number of respondents cannot be determined, depending on how many visitors come to the location, elements of the government, local communities, and other stakeholders living around the site.

Results

North Rupert District economic potential. North Rupert District is one of the sub-districts included in the administrative area of Bengkalis Regency. The district consists of eight villages with the sub-district capital in Tanjung Medang. Geographically, the North Rupert District is bordered by North-South and East Malacca Straits. The population in 2023 is 16,572 people consisting of 8,558 men and 8,014 women (Table 1). The total population density is 78.75 people per km² with the most densely populated village being Teluk Rhu village, namely 140 people per km² (Table 1). The quality of the road in this

district is in the moderate category with a medium-quality road length of only 88 km. Some economic facilities and infrastructure include food stalls, grocery shops, and restaurants (Table 2 and Table 3).

Table 1

Population data for North Rupert District in 2022

No.	Village	Population density (people per km ²)	Male	Female	Total	Total family
1.	Titi Akar	14	2,478	2,119	4,597	1,269
2.	Tanjung Medang	87	1,516	1,558	3,074	853
3.	Teluk Rhu	140	1,289	1,237	2,526	727
4.	Tanjung Punak	96	527	518	1,045	344
5.	Kadur	102	1,222	1,108	2,330	724
6.	Hutan Ayu	30	457	438	895	206
7.	Sukadamai	36	387	386	773	185
8.	Putri Sembilan	125	682	650	1,332	348
	Total		8,558	8,014	16,572	4,656

Source: NRDO (2023).

Table 2

Economic facilities and infrastructure in North Rupert District 2022

No.	Villages	Food stalls (unit)	Grocery shops (unit)	Restaurants (unit)
1.	Titi Akar	5	24	0
2.	Tanjung Medang	13	28	0
3.	Teluk Rhu	2	17	2
4.	Tanjung Punak	1	16	0
5.	Kadur	12	18	0
6.	Hutan Ayu	2	15	0
7.	Sukadamai	0	10	0
8.	Putri Sembilan	5	12	0
	Total	40	140	2

Source: NRDO (2023).

Table 3

Market facilities and infrastructure in North Rupert District 2022

No.	Village	Traditional permanent market buildings	Traditional semipermanent market buildings
1.	Titi Akar	0	1
2.	Tanjung Medang	0	1
3.	Teluk Rhu	1	0
4.	Tanjung Punak	0	0
5.	Kadur	0	2
6.	Hutan Ayu	0	0
7.	Sukadamai	0	0
8.	Putri Sembilan	0	0
	Total	1	4

Source: NRDO (2023).

Ecotourism potential of North Rupert District. Rupert Island has a land area of 1,500 km² which is much wider than Bengkalis Island which is the city center and district government center. Rupert Island is very exotic, with attractive white sand and views of ships passing through the Malacca Strait. This island has natural beauty, marine tourism objects, and other recreational areas as favorite tourist spots determined by the local government in Riau Province.

North Rupert District offers beautiful natural charm which can be a potential source of economics because it is located in the Malacca Strait – an international ship route. The atmosphere in the coastal area is refreshing with the many types of shady mangrove trees along the coastline. Lots of crabs are occasionally seen gathering and forming an arrangement that causes the color on the beach to look red which makes this beach unique.

Marine ecotourism on Rupert Island has more positive than negative impacts to surrounding community. One of the positive impacts is an increase in the community's economy where business activities in tourist areas can be a source of income. On the other hand, many people who work as fishermen depend on natural resources. Revenue from tourism activities can improve the standard of living of the community. Some facilities directly related to ecotourism include hostels, cafes, restaurants, cell phone operators, and banks (Tables 4-6).

Table 4
Facilities and infrastructure of hostel, hotel and bank in North Rupert District 2022

No.	Village	Homestay	Hostel	Hotel	Bank
1.	Titi Akar	0	1	0	0
2.	Tanjung Medang	0	2	0	1
3.	Teluk Rhu	0	8	2	0
4.	Tanjung Punak	0	1	0	0
5.	Kadur	0	0	0	0
6.	Hutan Ayu	0	0	0	0
7.	Sukadamai	0	0	0	0
8.	Putri Sembilan	0	0	0	0
	Total	0	12	2	1

Source: NRDO (2023).

Table 5
Communication facilities and infrastructure in North Rupert District 2022

No.	Village	Number of cell phone towers (BTS)	Number of cellular service operators	Signal strength
1.	Titi Akar	2	2	Strong
2.	Tanjung Medang	2	2	Strong
3.	Teluk Rhu	1	2	Weak
4.	Tanjung Punak	0	2	Weak
5.	Kadur	2	2	Strong
6.	Hutan Ayu	0	1	Weak
7.	Sukadamai	0	2	Weak
8.	Putri Sembilan	1	2	Weak
	Total	8	15	

Source: NRDO (2023).

Table 6
Number of visitors (people) for marine tourism objects in North Rupert in 2018-2022

No.	Tourist sites	2018	2019	2020	2021	2022
1.	Medang Cape Beach	6,500	6,000	5,000	4,500	6,400
2.	Tanjung Medang Beach	9,000	9,500	6,409	6,354	7,760
3.	Pesona Teluk Rhu Beach	7,530	5,010	7,000	5,500	7,640
4.	Cemara Tanjung Punak Beach	9,000	9,500	6,409	6,354	7,680
5.	Lapin Beach	9,057	9,500	6,409	6,354	7,688

Source: NRDO (2023).

Medang Cape Beach. Medang Cape Beach coast is located in Teluk Rhu. This place can be reached from Pekanbaru, Dumai, or Bengkalis. The main route of transportation to and from this island is by sea. There is already a fixed schedule of transportation to this island, namely the schedule for the Roro Dumai Rumat crossing. The journey from Dumai to Rumat Island can be reached within 20-30 minutes by using Roll-on/Roll-off (RoRo) ships which are designed so that they can enter and exit easily without using a crane. Meanwhile, departing from Bengkalis takes approximately 2 hours of travel by boat. This beach is famous for its beauty. The natural atmosphere is still felt here, where the air feels fresh, it is cool and far from the hustle and bustle of the city. This beach has beautiful white sand, with a length of 17 km and a width of 300-500 meters at low tide. North Rumat Beach is the longest white sand beach in Indonesia.

Tanjung Medang Beach. Tourism activities on this beach are windsurfing, boating, parasailing, swimming, and others. The clear-colored sea water is used by visitors for swimming. Sunset on this beach is no less beautiful than other beaches. The sun sets in the waters of the Malacca Strait in front of Rumat Island. This beautiful stretch of sand is often used by local children to play ball, jump rope, and other traditional games. This beach is crowded at certain times by domestic tourists and even foreign tourists. On the north coast, we can see national and international ships passing by. The white sand stretches sloping, so parents who bring children don't have to worry if they swim a bit in the middle because the coastline is quite far. The wide stretch of beach has encouraged beach managers to build soccer and beach volleyball fields. On this one beach, tourists can also play jet sky and banana boat.

Pesona Teluk Rhu Beach. At Pesona Teluk Rhu Beach the weather is friendly, the waves on the beach are calm and the sea water is clean, so it is very suitable for visitors to swim, sunbathe, relax with family, playing banana boat, fishing, or some physical exercises. The long coastline of about thirteen kilometers stretching from west to east can also be an option for walking, cycling, or leisurely horse riding accompanied by the waves breaking the morning silence. Those who want to try a different sensation can also take a short windsurfing course.

Cemara Tanjung Punak Beach. Pantai Cemara Tanjung Punak has a beautiful beach with white and clean sand, mangrove forests, and clean and fresh air. A golden yellowish sand beach located in Tanjung Punak village is an outermost area of Rumat Island, located on the lips of the Malacca Strait, where the Malacca Strait is the busiest strait in the world. Tanjung Punak village is located between Putri Sembilan village and Teluk Rhu village which is connected to the beach. To go to Tanjung Punak can be reached by 2 routes, namely the sea route and land route; by land route can be reached within 3 hours from Dumai, while the sea route can be reached in 1 hour and 30 minutes from Dumai. The village has a unique tradition, namely the zapin api dance and the syafar bathing cultural party, which later this tradition is used by the community to advance tourism where the syafar bathing event has been regularly held since 1989.

Lapin Beach. One of the beaches to be proud of is Pesona Tanjung Lapin Beach in Tanjung Punak village. Since the inauguration of the Pekanbaru-Dumai toll road, slowly the beach has begun to be widely heard as a beach tourism destination for Pekanbaru residents. Unfortunately, the access road to the beach is still in bad condition. However, from the main gate, the distance to the beach is relatively close and only takes less than 5 minutes. The Pesona Tanjung Lapin area has a sloping beach, smooth and white. With a beach stretch of 300 meters from the shoreline, this beach has stable waves, which are no more than 1 meter height.

Lapin Beach is one of the beaches, which is threatened by the issue of abrasion that hit Rumat Island. Indeed, a similar problem was also encountered in Teluk Rhu, Tanjung Medang, North Rumat District. However, the beauty of Lapin Beach remains enchanting as far as the eye can see. Its charm will appear more clearly when the water recedes, where you can walk quite far.

North Rupa mangrove flora and fauna. Mangrove forests grow along the coast. Visually, it can be seen that this ecosystem is still relatively intact. The results of identification in the field using the line transect and roaming methods showed that there were 5 species of members of the Rhizophoraceae family identified in Rupa Utara District with 3 genera. The genus of *Bruguiera* and *Rhizophora* have 2 species each, while the genus of *Ceriops* only has 1 species, namely, *Bruguiera gymnorrhiza*, *Bruguiera sexangula*, *Ceriops tagal*, *Rhizophora apiculata* and *Rhizophora mucronata*. Some species of mammals and primates that were encountered either through direct encounters or based on information from the public include wild boars (*Sus barbatus*), deer (*Cervus unicolor*), mouse deer (*Tragulus javanicus*), long-tailed macaques (*Macaca fascicularis*), macaques (*Macaca nemestrina*), langur (*Presbytis cristata*). Some species of birds that can easily be found in this area include hill myna (*Gracula religiosa*), lathe (*Centropus bengalensis*), chestnut-capped thrush (*Zoothera interpres*), swallow (*Collocalia fuciphaga*), eagle (*Haliastur indus*), sooty-headed bulbul (*Pygnonotus aurigaster*), blue-eared kingfisher (*Alcedo meninting*), sparrows (*Amandava amandava*), white-rumped Shama (*Copsychus* spp.), and others.

The North Rupa area has been assigned as a coastal park, with a total area of 15,547 ha, consisting of 1,413.58 ha of mangrove ecosystems and 14,133.50 ha of water area. Rupa Island is one of the outermost small islands (OST) located in Riau Province. The island is also included in a certain national strategic area (CNSA) of Indonesia and has also been designated as a national tourism strategic area (NTSA) by the Ministry of Tourism. The Ministry of Forestry has also designated Rupa Island as an essential ecosystem area to protect mangrove forest resources and migratory birds habitat. The development of marine tourism with an environmental perspective (ecotourism) is expected to provide benefits for the welfare of the community. The stages of reserving the North Rupa Regional Marine Protected Area have been completed with the issuance of the Decree of the Governor of Riau No. 565/II/2019.

SWOT analysis of ecotourism. SWOT analysis helps a person, organization, or other entity to identify the strengths, weaknesses, opportunities, and threats of a particular economic activity or project. This analysis can help strategically plan new steps or development of something at the next stage. Ecotourism in North Rupa District can be analyzed from the aspects of internal factors (IFAS) and external factors (EFAS). Based on the results of this study, it was found that the current strengths of North Rupa District as an ecotourism area are; 1) the availability of coastal areas that are still in very natural condition as part of coastal ecotourism; 2) the local community warmly welcomes coastal ecotourism activities. While weaknesses are: 1) limitations in tourism amenities and facilities; 2) availability of skilled human resources in tourism; 3) long-distance and limited access to transportation to the location. If external factors are analyzed, the opportunities for coastal ecotourism business development are: 1) the demand for community tourism is increasing; 2) the political will and the government's support for the development of the tourism sector are increasing. However, there are also threats, namely: 1) degradation of coastal environmental quality; 2) there are ecotourism activities elsewhere on Rupa Island and Dumai City (Table 7). Furthermore, if all these factors, both external and internal, are combined, 4 groups of strategies are obtained, namely: the S-O (strength-opportunity), S-T (strength-threat), W-O (weaknesses-opportunity) strategy and W-T (weaknesses-threat) strategy. For more details, see Table 7.

Table 7

SWOT analysis matrix of ecotourism in North Rupat District

	OPPORTUNITY (O)	THREAT (T)
EFAS	1. The demand for community tourism is increasing. 2. Political will and the government's support for the development of the tourism sector.	1. Degradation of coastal environmental quality. 2. There are ecotourism activities elsewhere on Rupat Island and Dumai City.
IFAS		
STRENGTH (S)	SO STRATEGY	ST STRATEGY
1. The availability of coastal areas that are still in very natural condition as part of coastal ecotourism. 2. The local community warmly welcomes coastal ecotourism activities.	1. Stepping up digital promotion activities for coastal tourism objects and activities in this area. 2. Synergizing coastal tourism programs with government programs.	1. Improving community support in local social and cultural conditions for coastal tourism. 2. Educating the local community and tourists in reducing environmental degradation.
WEAKNESSES (W)	WO STRATEGY	WT STRATEGY
1. Limitation in tourism amenities and facilities. 2. Availability of skilled human resources in tourism. 3. Long distance and limited access to transportation to the location.	1. Improving the coastal tourism facilities and amenities in attracting tourists. 2. Improving the quality of human resources in providing coastal tourism services.	1. Improving transportation facilities in supporting access to the area. 2. Aligning ecotourism programs with government programs in overcoming environmental quality degradation. 3. Improving the quality of human resources to maintain local social and cultural conditions

Discussion

Ecotourism potential of North Rupat District. Coastal ecotourism in North Rupat District has the potential to be developed, namely by utilizing existing strengths, accompanied by community support and the potential of pristine natural resources. Apart from that, there are also community cultural events based on local wisdom which also enrich the ecotourism treasures there. Development is carried out by utilizing the potential of natural resources to capture opportunities that attract tourist interest through improving access to infrastructure and supporting facilities. For example, developing lake ecotourism areas in Iran by introducing the natural beauty of lakes nationally and internationally. This tourism promotion involves international organizations making promotions and registration in which a lake is made an ecotourism zone (Asadpourian et al 2020). Similar things have also been reported by other researchers where the appropriate strategy for developing mangrove ecotourism areas is aggressive (Murtini et al 2018).

The research results state that access to resources, infrastructure development, and ease of access are the most important effective criteria in developing an ecotourism location (Ganjaeian 2020). It was also reported that the strategy for developing community-based educational ecotourism in coastal areas of National Parks is through preserving natural and cultural attractions that have potential for local communities, increasing prevention of environmental pollution by involving all stakeholders. The ability to develop more creative and innovative tourist attractions is the keyword. Apart from that, increasing community understanding of the concept of educational ecotourism to prevent land use conflicts and increasing community capacity through the provision of supporting activities is no less important (Wiwoho et al 2019).

North Rupal District mangrove flora and fauna. The Riau Provincial Government has established the North Rupal as a Regional Marine Protected Area (RMPA) through the Decree of the Governor of Riau. Mangrove forests grow in brackish waters, namely where salt water and fresh water meet. Extreme changes in salinity, for example due to reduced freshwater supply to the ecosystem, can disrupt the growth of some mangrove species and can even lead to death. Mangrove forests have a very important function in terms of ecological and economic benefits. Ecological functions are as a habitat for wildlife such as various birds, fish, and shrimp; prevent seawater intrusion; windbreakers for areas bordering residential areas. Mangrove damage causes a shortage of various aquatic animals (fish, shrimp, and crabs) that have economic value, which will also have an impact on people's income. Some researchers (Syahril et al 2020) reported that mangrove community in Rupal Island included *R. mucronata*, *R. apiculata*, *Rhizophora stylosa*, *Bruguiera gymnorrhiza*, *B. sexangula*, *Ceriops tagal*, *Nypa fruticans*, *Avicennia alba*, *Avicennia marina*, *Thespesia populnea*, *Pandanus tectorius*, *Xylocarpus granatum*, *Sonneratia alba*, *Terminalia catappa*, *Lumnitzera racemosa*, *Scyphiphora hydrophyllacea*, and *Excoecaria agallocha*.

Rupal Island has the potential for diverse aquatic biological resources, ranging from mangrove forests, seagrass beds, to protected marine biota such as dugongs, dolphins, porpoises, and turtles. Some researchers (Nasution et al 2017; Syahril et al 2023) mentioned that mangrove forests in North Rupal could be categorized as having high naturalness (98.17%). The development of coastal ecotourism areas by involving the community will have an impact on increasing their welfare. Participation in ecotourism, level of education, increasing productive human resources, and increasing income have improved people's livelihoods (Anup et al 2015). Regional development by generating innovation and creation from the surrounding community will certainly increase the attraction of tourist visits. Innovative community leaders have a vision, to embrace and exploit the ecotourism opportunities that arise from their proximity to transboundary parks. Communities can be actively involved in social networks to promote cultural tourism and develop ecotourism products (Chirozva 2015).

The values held by the community around ecotourism locations also contribute to increasing tourist attraction. Traditional Malay culture has permeated and shaped social values and spiritual beliefs concerning nature that can be strengthened through its integration into modern policies and institutions (Karst 2017). This is also one of the supporting capacities for the development of ecotourism areas (Salemi et al 2019). Other factors such as public awareness of protecting the environment education of human resources and sharing the benefits obtained are also driving participation in developing ecotourism areas (Aseres & Sira 2021; Prajawati et al 2021).

The government can be the main key in developing ecotourism areas. Regulations are made by the government and control of the area is in the hands of the government and the desire to develop the area also comes from the government. The government will invite the community, especially local communities, to participate in development. Participation of some communities like tourism communities, nature conservation groups, beach care companies, or other parties in protecting and caring for coastal areas may be taken in consideration as well. The many cultures and rituals carried out provide unique value to an ecotourism location (Basyuni et al 2018). Apart from that, the third party is the private sector, that also plays a role in investing in how to optimize regional potential operationally in attracting tourists to visit. If each party has not carried out its role optimally, for example, the infrastructure provided by the government is not optimal, this will hamper the tourism sector's interest in investing and reduce the number of visitors which ultimately reduces the income of the local Malay community. Therefore, the synergy of each party is necessary in achieving sustainable development goals (Snyman 2017; Effendi et al 2019).

SWOT analysis and development strategy. SWOT analysis has identified the aspects of internal factors (IFAS) and external factors (EFAS). From these results, certain development strategies called SO strategy, ST strategy, WO strategy, and WT strategy were prepared. SO (strength-opportunity) is used to utilize all strength factors to achieve

existing development opportunities. ST (strength-threat) strategy utilizes all strength factors to minimize development threat factors. WO strategy improves weaknesses to gain opportunities for business development. Meanwhile, the WT (weakness-threat) strategy improves weaknesses to minimize threats to an organization's development (Wheelen et al 2017).

The mainstay tourist object on Rupert Island is the beach which is also not less beautiful than beaches in Indonesia in general. People also say that the beaches on this island are a hidden paradise in Riau. The coastal ecotourism activities include windsurfing, boating, parasailing, swimming, and others. The clear-colored sea water is used by visitors for swimming. The sun sets in the waters of the Malacca Strait in front of Rupert Island. This beautiful stretch of sand is often used by local children to play ball, jump rope, and other traditional games. This beach is crowded at certain times by domestic tourists and even foreign tourists (SBR 2023).

Rupert Island has an attractive coastal tourism potential to be developed as a tourist destination. It has beautiful and natural beaches. The beaches are covered with soft white sand and clear seawater. Then it offers a variety of interesting beach tourism activities, rich in Malay culture and traditions. Tourists can interact with local Malay residents, learn about their customs, and enjoy local specialties. This experience will add value to travelers seeking an authentic cultural experience. Rupert Island can be accessed by land transportation, namely through the city of Dumai, and can also be accessed by sea transportation. Good accessibility makes it easier for investors to build infrastructure supporting tourism, such as hotels, restaurants, and transportation facilities (SBR 2023).

It is crucial for tourism investment on Rupert Island to pay attention to aspects of natural sustainability in the area. It is also important to implement environmentally friendly infrastructure development practices and tourism activities to protect the ecosystem. Investment is needed in the development of infrastructure supporting tourism, such as hotels, villas, restaurants, roads, and transportation facilities. Good infrastructure will provide comfort for tourists and increase the attractiveness of destinations. Tourism investment needs to be supported by effective promotional efforts. Good marketing will help attract tourists and increase visits to Rupert Island such as local events which are held regularly every year. Collaboration with tourism authorities, the private sector, and social media can be an effective strategy (Sarjana & Widokarti 2020; Shariffuddin 2020).

Engaging local communities in tourism development will provide direct economic benefits and strengthen local support for these investments. This can be achieved through training, capacity building, and providing employment opportunities to residents to support and prepare local resources for tourism programs. Maintaining the safety and cleanliness of the beach and the surrounding area is an important factor in maintaining the attractiveness of Rupert Island as a tourist destination. Investing in safety and maintaining cleanliness will improve the quality of the tourist experience (Novianto et al 2021).

Promotion can help tourism service providers design promotional campaigns that suit their objectives and are effective in reaching the target market. Understanding these concepts is an important step in developing a successful promotional strategy. Tourism promotion is an effort to promote a tourist destination or region to increase the number of tourist visits. Tourism promotion has an important role in supporting the local economy, building a destination's image, and increasing public awareness about the tourism potential of an area (Suhel & Bashir 2018). Tourism marketing could be done through digital promotions by utilizing digital platforms such as destination websites, social media, online advertising, and email campaigns to reach a global audience. Posting interesting photos, videos, and stories about destinations can influence tourist interest. Digital promotion is an important aspect of modern marketing, and effective strategies often involve a mix of various marketing channels and techniques to achieve business goals such as tourism businesses. It must also be tailored to consumers and industry to achieve optimal results (Devasia & Kumar 2022).

Digital promotion is the main promotional media today, for example, through a responsive and attractive website. Digital promotions can provide information about

products or services, collect customer data, and sell products online. Creating website content for tourism business is one of the keys to attracting and retaining visitors and promoting a destination or service. Informative, interesting, and relevant content can help increase a site's visibility in search engines, educate potential travelers, and inspire them to plan their trips (Khanom 2023). Social media has become a very effective tool in tourism promotion. By using social media platforms such as Facebook, Instagram, Twitter, YouTube, and others, one can connect with a wide audience, share interesting stories about tourism destinations or services, and build relationships with potential tourists. Tourism is all about visuals, so managers are encouraged to share high-quality photos and videos, use destination photos, travel videos, and eye-catching images to attract attention, building social media platforms to tell interesting travel stories, presentation of stories from the experiences of people who have visited the destination. This can inspire others to travel. Managers are also advised to communicate actively with followers, namely replying to comments and messages from them. Building interaction and engagement is key to building a strong relationship with your audience. Regularly posting local events, restaurant reviews or travel tips is also a tip (Aftab & Khan 2019).

Synergizing beach tourism programs with government programs is one of the recommended strategies. A business program synergized with the government is a collaboration between the business sector and the government to achieve common goals that are profitable for both the government and business people. This kind of synergy often creates conditions that support economic growth, job creation, and local community development. The government can create a more conducive business climate by reducing unnecessary regulatory barriers, simplifying business procedures, and ensuring fairness in regulations. The government can collaborate with businesses in building the infrastructure needed for economic growth. This includes roads, ports, airports, and energy resources that can support business activities (Suroija et al 2022).

Collaboration in workforce education and training that is relevant to business needs can help create a skilled and competent workforce. The government can collaborate with tourism businesses to promote destinations and attract investment in the tourism sector. There are some North Rupal ecotourism development programs with the government. For example, assessing ecotourism potential, namely identifying and evaluating ecotourism potential on North Rupal beach, including natural, cultural, and historical attractions that can attract tourists. Consultation with local communities in program planning and development will provide input and an in-depth understanding of their needs, aspirations, and concerns. This is important to ensure that the program provides equitable benefits to residents and actively engages them (Koure et al 2023).

Developing tourism infrastructure and facilities that suit the character of ecotourism is certainly part of the government's responsibility. For example, there is road and transportation access, mangrove forest trekking routes and coastal habitats, research facilities, information centers, rubbish bins, and environmentally friendly public toilets. Providing training to residents to understand and manage ecotourism businesses, such as managing restaurants, tourist guides, handicrafts, and local souvenirs can also collaborate with the local government. Collaboration with private companies in developing ecotourism, including accommodation providers, tour operators, and local transportation providers is no less important (Ramyar & Halim 2020).

Conclusions. The potential for coastal ecotourism in this area lies in the beauty of natural resources in the form of white beaches and clean seawater. The Malay culture of the people around the location is considered to be a particular strength in developing coastal ecotourism. The condition of the mangrove forest which is still relatively well maintained has its charm as well. Limited road infrastructure, crossings in the Rupal Strait, availability of tourist amenities and the skills of the community managing ecotourism are constraining factors. Synergism between the local Malay community, the tourism industry community, and the government in building infrastructure, providing tourist amenities, and ecotourism attractions, and developing human resources is a recommended strategy. More effective promotion through contemporary social media is also considered an effective strategy for improving the local ecotourism industry.

Therefore, developing human resources for coastal ecotourism actors and improving instructors is a challenge in the future.

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Authors:

Fatkhurahman Fatkhurahman, Faculty of Economy and Business, University of Lancang Kuning, Pekanbaru 28265, Indonesia, e-mail: fatkhurahman@unilak.ac.id

Irwan Effendi, Faculty of Fisheries and Marine Sciences, University of Riau, Pekanbaru 28293, Indonesia, e-mail: helpingirwan@gmail.com

Izzatulmila Effendi, Faculty of Psychology, University of Diponegoro, Semarang 50275, Indonesia, e-mail: izzatulmila.e@gmail.com

Hadiyati Hadiyati, Faculty of Economy and Business, University of Lancang Kuning, Pekanbaru 28265, Indonesia, e-mail: hadiyatisuroto@yahoo.com

Muhammad Rizal Akbar, Department of Islamic Economy, Institute of Islamic Religion Tafaquh Fiddin, Dumai 28816, Indonesia, e-mail: abisofyserly@yahoo.com

Dawami Dawami, Department of Islamic Economy, Institute of Islamic Religion Tafaquh Fiddin, Dumai 28816, Indonesia, e-mail: dawami@iaitfdumai.ac.id

Ahmad Jamaan, Faculty of Social Sciences and Politics, University of Riau, Pekanbaru 28293, Indonesia, e-mail: ahmad.jamaan@lecturer.unri.ac.id

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