Prospect of Natural Ecotourism Cluster Around the Great Mosque Islamic Centre of Rokan Hulu, Riau Province, Indonesia.

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Abstract. Ecotourism is an environmentally activities of seeing, watching, studying, admiring nature, flora and fauna, socio-cultural local ethnicity, take responsibility for the preservation of the surrounding environment by involving local residents. Rokan Hulu is a regency in Riau Province, with population livelihoods in agriculture 52.42%, industry 11.49%, trade 7.14% and other sectors 28.95%. Ecotourism is not yet the economic backbone of this area. But this area has potential in that direction. This study aimed to analyse the prospect of some natural ecotourism objects located within reach of the iconic Great Mosque Islamic Centre (GMIC) Rokan Hulu. Using the survey method, the respondents were selected through a purposive sampling method. The data obtained was associated with the concept of 4A (attraction, amenity, accessibility, and ancillary service). Followed by a SWOT analysis, WTA (willing to accept) and WTP (willing to pay), and a descriptive analysis of economic potential. At least there were 3 ecotourism objects within the reach of GMIC of Rokan Hulu, namely Sipogas Lake Ecotourism, Hapanasan Hot Spring and Huta Sikapir Cave Ecotourism. Based on SWOT, WTA and WTP analysis, it was concluded that the objects have the economic potential to be developed as a natural ecotourism. It is recommended that the GMIC be the main icon tourism in this regency and while some other supporting tourism objects will naturally be developed.

1. Introduction

Tourism is an activity carried out for one's physical and spiritual refreshment. Ecotourism is a type of tourism that is environmentally friendly with activities of seeing, watching, studying, admiring nature, flora and fauna, socio-cultural local ethnicity, and tourists who do so contribute to the preservation of the surrounding natural environment by involving local residents [1]. Ecotourism focuses on three main things namely; natural or ecological sustainability, providing economic benefits, and psychologically acceptable in social life [2]. In the late 1970s the idea of ecotourism began to be discussed and considered an alternative to traditional tourism activities. During the 1980s several world bodies, researchers, environmentalists, experts in tourism and several countries began to try to formulate and start carrying out these activities in their own ways.

Ecotourism program prioritizes environmental insights by prioritizing aspects of nature conservation, aspects of socio-economic empowerment of local communities and aspects of learning and education. This activity indirectly gives everyone access to see, know, and enjoy the natural,
intellectual and cultural experiences of the local community. Ecotourism activities can increase income for nature conservation which is used as a tourist attraction and generate economic benefits for people who are in the area and surrounding areas [3].

Rokan Hulu is one of regency in Riau Province, which is located in the North West of Sumatra Island on 1000-1010 52 ° East Longitude and 00 15 ° -10 30 ° North Latitude. This regency has an area of 7,449.85 Km2 of 515,724 people in 2019. Economic growth over the past 5 years averaged 6.46% per year, with a population livelihood in agriculture 52.42%, industry 11.49%, trade 7.14% and other sectors 28.95% [4] [5]. Tourism activities in this area have not contributed much to the development of the local economy. But that does not mean that this district does not have a tourist attraction. Evidently there are enough natural, cultural, artistic and social tourism locations that might be developed for natural ecotourism purpose. This study aimed to analyse the prospect of some natural ecotourism objects located within reach of the iconic Great Mousque Islamic Center (GMIC) Rokan Hulu.

2. Methodology
This research was conducted in January to June 2020 in Rokan Hulu Regency, Riau Province, Indonesia. Some equipment used was geological positioning system (GPS), digital cameras, and stationery along with questionnaires. Bu using a survey method, the locations of the tourist attraction were visited and observed directly. The selection of respondent samples for interviews was carried out using the purpousive sampling method. Respondents consisted of local people, tourists, tourism businesses, and other stakeholders. Survey data are associated with the concept of 4A (attraction, amenity, accessibility, and ancillary service). The data obtained were analyzed by SWOT, measurement of WTA (willing to accept) and WTP (willing to pay), and analysis of its economic potential.

3. Result and discussion
From the results of this study, several tourist sites were identified that are included in the caster of the GMIC area and are ideally integrated with religious tourism activities at the GMIC of Rokan Hulu. These tourist spots are described as follows;

3.1 Sipogas Lake Ecotourism
The local community named it "Lake Sipogas". But actually this place is not a lake, but an artificial reservoir due to the damming of the Kaiti River. Located in Sialang Jaya Village, Rambah District, Rokan Hulu Regency. This lake is used for irrigation purposes for rice fields and fish ponds. However, it has also developed into a location for natural ecotourism for the community (Figure 1).

In the rainy season, when the water stock is abundant, the reservoir area is around 50 hectares with a depth range of 0-40 meters. This dam also creates a pool of water upstream of the river along the 5 kilometers. The river banks are covered with primary forest plants and are lined with steep and towering rock cliffs, creepy, but refreshing, so that some tourists call it the Amazon River of Rokan Hulu (Figure 2). It is said that this place used to be used as a place for meditation to gain knowledge and supernatural powers.

Sipogas Lake and the Kaiti Dam are about 4 kilometers from the city of Pasir Pengaraian by using four-wheeled or two-wheeled vehicles. Stagnant lake water and river bodies upstream of the dam are used as water ecotourism locations. Water tourism facilities available includeed speed boats, water bikes or duck boats (Figure 3) and small canoes, all of which were equipped with safety facilities. In addition, the upstream part of the river is not far from walking, there are steep cliffs for rock climbing activities, here it is always used as a natural rock climbing competition activity organized by the Indonesian Rock Climbing Forum. The atmosphere and natural atmosphere like this is clearly the attraction of an ecotourism [6].

3.2 Hapanasan Hot Spring
Hapanasan Hot Spring located about 2 km from the center of City of Pasir Pengaraian (Figure 4). The area has a natural hot spring. This tourist area is in a location that is still beautiful and cool in the
foothills of the Bukit Barisan. This hot water is sourced from volcanic activities from the Bukit Barisan row. This water has been channeled to several ponds, so that several ponds with different temperatures are obtained. The first pool is the first water reservoir. The atmosphere boils with temperatures above 80 °C. The second pond is larger with a temperature of 50-60 °C (Figure 5). This pool can be used to soak the feet and body in warm water. The next pool is a normal pool with a little warm water and is used as a swimming pool, especially for children and adolescents (Figure 6). This tourist location is very popular in Rokan Hulu Regency. The local community is very accepting of the presence of this tourist location. Likewise, the price of admission is still very affordable. On normal days this location is relatively quiet. But on holidays on weekends starting to be visited. Tourist arrivals will burst and beyond capacity on Islamic holidays. For example during the celebration of Eid al-Fitr, Eid al-Adha and New Year.

![Figure 1](image1.png)

**Figure 1.** Sipogas Lake. Sialang Jaya Villlage, Rambah District, Rokan Hulu Regency.

![Figure 2](image2.png)

**Figure 2.** One the tourist activity in Sipogas Lake.

Hapanasan Hot Spring has became a popular tourist destination. Hot springs are the main attraction of this tourist attraction. The visitors come from various regions even some foreign countries. In the
holiday season and public holidays this place is visited by local people. Visitors can dip their hands and feet into the second pool. The reasons are quite diverse, ranging from just trying, warm the legs to reach the goal of treatment. There is also a special swimming pool for children, teenagers and adults. The atmosphere this tourist attraction is arranged in such a way that it looks cool and beautiful. Conditions and such atmosphere are certainly the typical reasons for visitors to come to this location [7] [8] [9].

Figure 3. Amazone River of Rokan Hulu. Sipogas Lake.

Figure 4. Hapanasan Natural Hot Springs gate
3.3 Huta Sikapir Cave Ecotourism.

The ecotourism object is a collection of 41 natural caves. This location is approximately 3 kilometers from the city of Pasir Pengaraian or about 1 km from the location of the Hapanasan Hot Spring. Exactly located in Pawan Village, Rambah Subdistrict, it is a group of caves that formed naturally through a long geological process. Along the road to the location, secondary and primary forests are found with a lot of large wood growing tall. Some of the trees were seen wrapped in root crops. The
forest is relatively dark and humid, at first glance it looks very creepy. Local residents suspect that this atmosphere and nuance have led people to name the Huta Sikafir. That is the village of bad people. But now is of course much different, tourists don't need to worry. This area is very safe from disturbance by wild creatures, humans or other creatures. In fact, in this forest many tourists will find beautiful and amazing caves. All caves have names according to the shape and condition of the cave (Figure 7).

Hedgehog Cave, this cave is like a hedgehog nest hole, Tupai Cave is like a long, not too narrow trench. Of the many caves that are famous for their beauty, they are Mata Dewa Cave and Lepong Cave, and Kulam Cave. These caves are enough to make you not bored with adventure in them with a guide who is ready to serve. Visitors will experience an unforgettable cave adventure, because the Huta Sikapir Cave is different from the others, like the twists and turns in the cave. Some are large and some are small, some are long and some are short, some are wide and some are narrow.

This object is a natural adventure tourism in the mountains. This is a cave tour that seems deliberately lined up and lined up at the foot of the Bukit Barisan. The sound of birds chirping, the buzzing sound of insects and a spooky, quiet, slightly dark atmosphere are the main attractions for visitors. Various biodiversity of primary forest plants along the road, the sound of insects along the way make visitors feel like they are in another realm. [7] [10] [11].

Figure 7. The Eyes of Angle Cave and Lepong Cave at the Sikafir Cave tourist site.

3.4 Great Mosque Islamic Centre of Rokan Hulu
Great Mosque Islamic Center (GMIC) of Rokan Hulu, was established on an area of 22 hectares with a building area of 15,800 m2 and a capacity of reaching 15,000 to 20 000 worshipers. It is commonly referred to as the great mosque or the Islamic centre. It is a mosque that acts as a centre for the spread and development of Islam in Rokan Hulu Regency. Located in the government office complex in Rokan Hulu Regency. The construction of the mosque was initiated by the Regent of Rokan Hulu for the period of 2006-2016. The mosque is now an icon of Rokan Hulu Regency (Figure 8).

The main features of this mosque building consist of the main mosque building and plaza building which is surrounded by an arcade. Mosque architecture adopts modern Arabic-style mosque building with a large dome with a diameter of 25 m. The main building is flanked by four towers (66.66 meters
high) in each corner of the mosque building plus one main tower (99 meters high) which is separated from the main mosque building.

The main activity of GMIC of Rokan Hulu is the five-day prayer meeting in congregation, especially during Zuhr and Asr, where all civil servants totaling nearly 3,000 are required to pray in congregation at this mosque. Other activities are religious lectures which are held routinely every Thursday with materials and lecturers that have been determined by the manager. GMIC of Rokan Hulu also organizes breaking the fast every Monday and Thursday. Ik'tikaf (midnight gathering) together once a month and Islamic holiday commemoration activities, especially the month of Ramadhan is provided either sahur (early breakfast) or breaking fast for 500 people every day.

The ritual worship activities above are actually not much different from the activities carried out by other mosques. However, due to the comfortable environment, the beautiful and physical appearance of the GMIC of Rokan Hulu is extraordinary, so many worshipers who come while enjoying these activities. The pilgrims not only the surrounding community, but came from various regions, even from neighboring countries such as Malaysia and Singapore. Over time GMIC has become a favorite tourist destination in Riau. The phenomenon of change or addition of functions as often happens, even the development of functions is sometimes designed from the start [12] [13] [14].

![Great Mosque Islamic Center of Rokan Hulu. A night view.](image)

**Figure 8.** Great Mosque Islamic Center of Rokan Hulu. A night view.

### 3.5 GMIC of Rokan Hulu as main magnet of tourism.

GMIC of Rokan Hulu had a predicate as the best plenary mosque in Indonesia in 2015. The predicate has brought about its own promotions and impressions. The number of visits to GMIC increased significantly from year to year, both local and foreign tourists. The motives for going for recreation and sightseeing are also experienced by tourists who visit the GMIC. The results of interviews with GMIC visitors stated that the motive for their visit to GMIC was to go out to take a break from their daily routine while praying. [15]

Similar results were obtained from the study. Visitors have several reasons why GMIC is a tourist destination. Its popularity as a national plenary mosque is its main attraction (Figure 9). Many people want to see for themselves what the physical condition of the best national mosque GMIC will be.
Religious programs and activities at GMIC are clearly a special attraction too. Visitors who come have the opportunity to worship together and gain religious insight through a study conducted by GMIC managers. The lecturers are national scholars and lecturers and even international preachers.

Figure 9. GMIC of Rokan Hulu. Worship and tourism.

The visit of GMIC of Rokan Hulu tourists has had a positive impact on natural ecotourism activities in the vicinity. The visitors who number in the thousands each week can actually become visitors to the three natural attractions that were mentioned at the beginning of this paper. They can be directed to fill their spare time between dawn prayers and midday prayers between Asr and sunset prayers. The distance is not too far and the access is relatively easy to make these attractions complement each other. The results of the SWOT analysis, WTA analysis, WTP analysis and economic aspects study show that this is very prospective. Visitors are generally willing to pay, and local people can accept the situation.

The combination and complementarity of fellow tourist objects is an ideal model for the development of a tourist cluster. The visitors who come not only enjoy one tourist attraction, but also enjoy other attractions with different nuances. Those who were tired after traveling long distances will be able to enjoy a therapeutic bath or dip their feet or hands in warm water and breathe fresh air and enjoy the cool mountain temperatures that some natural ecotourism objects have. On the other hand, natural ecotourism lovers can also enjoy the nuances of religious tourism. [16][17]

4. Conclusion and remark
Based on SWOT, WTA and WTP analysis, it was concluded that at least three ecotourism objects (Sipogas Lake Ecotourism, Hapanasan Hot Spring and Huta Sikapir Cave Ecotourism) within the reach of GMIC of Rokan Hulu have the economic potential to be developed. It is recommended that the GMIC be the main tourism icon and while some natural ecotourism objects will be supporting and naturally be developed.

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