

Identification of Lematang River Flow Area as Tourism Destination Based Sport Tourism at Lahat Regency – South Sumatera Province

Muhammad Iqbal^{1*}, Dilla Pratiyudha², Daniel Sihombing³, Melati Pratama⁴

^{1,2,3,4} Palembang Polytechnic of Tourism

*Corresponding author. Email: muidjohan@poltekpar-palembang.ac.id

ABSTRACT

Lematang river flow area in Lahat district had a big potential tourism point. There were 19 points like Teras bukit asam tepian Lematang/Plaza Lematang, Jembatan banteng, Taman mang can, Tepian air lematang, air terjun tangga manik, bendungan air beku kota lahat, Taman ayek lematang, Bendungan PDAM tirta lematan, Muare air mulak Lematang, and etc can be developed to potential sport tourism, but that 19th points had various accessibility, amenities and organization of manager. The objective of this research were to identified the best points that can developed be potential sport tourism and designed indicator program. The method to identified best potential tourism point by AHP and designed indicator program for that by SWOT analysis. The result showed that the best potential tourism point at Taman ayek lematang, and that indicator program by S-O strategies like manage of visitor management, formula of comprehensive blue print that involves all of stakeholders, making tourism family rafting package and maintenance facilities and infrastructure.

Keywords: Lahat district, Lematang river flow, Sport tourism

1. INTRODUCTION

Lahat is one of the districts at South Sumatra where located 250.2 Km from Palembang city. Lahat is also one of district in South Sumatra whose a river with long 4.412 Km. The name of the river is Lematang river. Lematang river has streams including Enim river, Selangis river, Endikat river, and Lengi river (R. Masriatini et al, 2019)^[1]. The river and streams have various potential of tourism especially sports tourism. Sports tourism is a kind of tourist that makes sport activity as main attraction. The tourists can be audience and participate actively as sport participants both commercial and non-commercial (Z.Z Masrurun, 2020)^[2].

Sport tourism that conducted in Lematang river utilize river flow area. Some of tourism point that can be developed in the Lematang river flow area

such as Teras bukit asam tepian Lematang/Plaza Lematang, Jembatan banteng, Taman mang can, Tepian air lematang, air terjun tangga manik, bendungan air beku kota lahat, Taman ayek lematang, Bendungan PDAM tirta lematan, Muare air mulak Lematang, and etc.

Utilization and development river flow area, especially at Lahat district area expected can give benefit as regulated in laws and regulations so it become an interesting thing to be known further about dynamics that occur on the field. (Sudaryono)^[3] said, the integrated of river flow management has long been applied by introduce some of activities was characterized cross-sectoral and multidisipliner, but much of river flow that have not handled properly. Even what happens is damage to the river flow and getting worse.

(I.G Pitana, 2009)^[4] said that there was some of technical requirements to determine tourist object can be developed. It was various of tourist attraction include accessibility, amenities and organization of manager. It was supported by (O.A Yoeti, 1996)^[5] opinion that facilities and infrastructure minimum standart should have by tourist object was object, access, accommodation, facility, transportation, safety, cleanliness, place of worship and promotion.

Beside that, it should have regulation means standart of recreational park that was also published in Tourism and creative economy minister regulation number 27 at 2014 and others regulation that related to the same regulation about rafting business standard. Based on theory and that probles so it was needed data mining and deep information to identification destination point which can be developed and analysed based on strenghtness, weakness, oportunites, and threatness.

2. LITERATURE REVIEW

2.1 River Flow Area

Some of the experts use term of river flow area with various different mean. Some of the experts make synonym between river flow with catchment area, watershed or drainage basin. (Notohadiprawiro, 1985)^[6] said that river flow area was single system area, so it can means catchment area, whereas (S.Martopo, 1994)^[7] gave definition river flow was area where limited by topography of water separator that was dried by river or interconnected system so all of river flow that falls inside will come out from single loose channel from that area.

(Soemarwoto O, 1985)^[8] also said that river boundary was area where limit by mountains that all of surface flow to the main river, so river flow area have definition as unit space consisting of abiotic element (land, water, air), biotic (plants, animals and other organism), and human activity who interact with each other and dependence each other. (Notohadiprawiro, 1985)^[6] was added opinion that the management of river flow area should organized in an integrated manner because:

- 1) Linkages between various activity in management of natural resources and construction of human acticies in used
- 2) In terms of base science, the management of river flow has multidiscipline characteristic

- 3) The organize management of river flow has cross sectoral so it is not institution that havr full authority

The management of river flow based on (Sudaryono)^[3] opinion has a purpose to utilization natural resources to contunity so it's not be dangerous in local, regional, national and global environment. (2002)^[9] gave illustrations about contunity management of river flow based on function incule at conservation function, utilization of water river that give benefit to social and economy interest.

2.2 Sport Tourism Concept

Spot tourism is utilization of natural resources base on sports. Natural resources can be utilized as tourism to exercising and can develop to be sport tourism destination. Sport tourism inclue all of activity or sport practical or enjoy sport activity as performance or entertainment that need journey from residence or work place. (S. Gammon, 2002)^[10] said sport tourism at active or passive has definition as journey was conducted especially residence with the purpose that involved in sport recreation sport activity. (A. Wardana., B. Sanawiri)^[11] said that sport tourism has a role in develop city, country so give effect to the economy.

That was strengthened by (M. Peric.)^[12] opinion that sport tourism give effect to the economy, the opportunity of business and investor. Sport tourism combine potency and sport achievement, combine some of component between natural resources and local wisdom, so give their characteristic and tourist attractiveness. Sport tourism produce more value that make tourist come and do good participation as spectators or directly involved as participant.

Sport tourism regarded as part of tourism that be made by sport and tourism integration. Sport torusim gave positif effecet to that area and signification to the tourist visit. The examples are sport event at Hawaii like Honoulu Marathon, Ironman Triathlon dan Pro Bowl. Other sample at mega-sport event like summer Olympic games, winter Olympic games. FIFA eorkd cup, cricket world. The result of that increase tourist visit to that country (J.Fourie, et al)^[13]

In Indonesia, the sport tourism was start at Mega sport even Asian games at 18th 2018, that make sports in Indonesia start was ogled and make Indonesia into agenda of world sport tourism by show

event success. (T.M. Astuti, 2015)^[14] said development of sport tourism potential include some of factor between facility, human resources, competence and collaboration, and regulation and strategy that prioritize implementation of tourism management. Previous research related to the implementation of sports tourism conducted by Karo found that Banyuasin, as an area bordering Lematang, Lahat City, showed environmental quality as the indicator with the highest impact in organizing a sports tourism activity. In other words, planning in Lematang can also prioritize improving the quality of the environment first (Karo Karo, 2021).

3. RESEARCH METHODS

3.1 Methode and research approach

The method was used in this research are mix method include descriptive of quantitative and qualitative, by data processing used Analysis Hierarchy Process (AHP) and SWOT Analysis. That purpose was to identified by choose the best alternative from 19 point tour in Lematang river flow, and analysed to program indicator at tour point area was chosen to applied be tourism destination by sport tourism basis.

3.2 Kind and Data resources

Kind and data resources was used in this research such as:

1. Primary data was taken by observation. The observation be conducted by watched and do check list to minimum criteria that should owned by destination
2. Secunder data was used are data about RIPDA/RIPARDA that owned by Lahat district, journal, E-book and book

3.3 Collecting Data Technique and Information

The collecting data technique and information in this research such as :

1. Observation
The observation was conducted by watched minimum standard of facilities and infrastructure whose each destination based on (O.A Yoeti, 1996)^[5]. The criteria was had by each destination be checked list in questionnaire column that has been provided.

The minimum standard of facilities and infrastructure that should had by each destination were object, access, accommodation, facility, transportation, catering service, recreation activity, learning, communication, bank system, healthy, safety, cleanless, place of worship and promotion.

2. Interview
3. FGD (*Focus Group Discussion*)
FGD was conducted to validate and consider result of decision making by AHP method. FGD was conducted with Government tourism office of Lahat district and relevant government.
4. Literature study
Literature study was needed to help in data process and describe alternative and criteria.

3.4 Data Process Technique

The data in this research was process by AHP (Analysis Hierarchy Process) and SWOT (*Strengthness, Weakness, Oportunities, dan Threat*) analysis.

3.4.1 Analysis Hierarchy Process (AHP)

AHP method are a model that be introduced by Thomas L Saaty at 1971. This method was conducted by determine criteria and alternative that arranged as hyrarcy at first level such as purpose, then at second level such as criteria to achieve that object. The third level was filled by choice alternative that should do to achieve that object.

The AHP was used to determine the best point of 19 point tour in Lematang river flow area in Lahat district. The data processing use AHP was conducted base on steps such as:

1. Defining problem and determine solution that wanted
2. Making hyrarcy structure that started by main purpose
Making comparision matriks in pairs that drawn relative contribution or effect each element to purpose or criteria one level above. The following comparision matriks in pairs can see table below
3. Define comparison of pairs so it needed amount of the entire appraiser are $n \times [(n-1)/2]$ by n are amount of element compared. Table of comparision pair of scale are below

Table 1. Matriks in pairs

	Criteria – 1	Criteria - 2	Criteria - n
Criteria – 1	K11	K12	K1n
Criteria – 2	K21	K22	K2n
Criteria – n	Kn1	Kn2	Kn3

Tabel 2 Comparison pair of scale

Intensity of importance	Information
1	Both of element are important
3	One element more least important than other
5	One element more important than other
7	One element most important of all
9	One element absolute most important of all
2,4,6,8	Adjacent value
Opposite	If activity of i get one number than activity of-j so j has opposite value from i

The data from comparison was obtained done

- Calculating eigen value and examine that consistency
- If it is not consistent, so collecting data was repeated like make a comparison matriks, definition comparison pair and calculate eigen value again

Calculating vector of eigen from each comparison matriks pair that was weight each element to determine priority of each element at low hysarchy level to the goals. The calculation was conducted by add value of each row and share it by amount of element to get average. If A is comparison pair matriks, so weight vector are :

$$(A) (W^T) = (n) (W^T) \tag{1}$$

It means :

- Normality each column of j in matriks A, so :

$$\sum_i a(i,j) = 1 \tag{2}$$

Called A'

- Calculating average of each row of i in A':

$$w_i = 1/n \sum_i a(i,j) \tag{3}$$

by w_i are weight of goal of I from weight vector

Examine consistency of hierarchy. If A is matriks of comparison pair and w is weight vector, so consistency from weight vector can be test below

- Calculate : $(A) (w^T)$

$$t = \frac{1}{n} \sum_{i=1}^n \left(\frac{\text{elemen ke-i pada } (A)(w^T)}{\text{elemen ke-i pada } w^T} \right) \tag{4}$$

- Calculate consistency indeks

$$CI = \frac{t-n}{n-1} \tag{5}$$

- Indeks of random RI_n is CI average was chosen by randomized at A and give it as

n	2	3	4	5	6	7	...
RI_n	0	0,58	0,90	1,12	1,24	1,32	...

- Calculate ratio of consistency

$$CR = \frac{CI}{RI_n} \tag{6}$$

- if $CI = 0$, so hierarchy is consistent
- if $CR < 0,1$ is hierarchy fairly consistent
- if $CR > 0,1$ is hierarchy is not very consistent

3.4.2 SWOT (Strengthness, Weakness, Oportunities, dan Threat) analysis

SWOT analyis in this research was used to compiled indicator program at tourism potential point that was chosen to applied be destination based sport touris in Lahat district. Analysis was used such as external and internal SWOT analysis. Eksternal factor based on (I.G Pitana, 2009)^[4] such as accesibiliy like transportation, amenity like facility and organization like management/human resources. While internal factor such as attraction of tourist.

4. RESULTS AND DISCUSSION

4.1 Identification of destination potential point

Based on AHP (Analysis Hierarchy Process) method, from 18 tourism potential point was got the best destination potential to developed based on Lothar A Creck. The observation and interview showed that average of eigen value at Tabel below.

Table 3 Identification of potential destination point

Potential destination point	Average of eigen value
Jembatan banteng	0,085
Plaza lematang	0,179
Taman mang can	0,154
Tepian air lematang	0,071
Taman ayek lematang	0,217
Bendungan PDAM tirta	0,058
Muare air mulak	0,082
Green canyon	0,053
Start rafting	0,098
Total	1

Lamda max = 9,95

CI = 0,12

CR = 0,08

Average of the highest eigen value at Taman ayek lematang. The Taman ayek lematang was analysed at minimum standart should have by a tourism destination based on Lothar A Creck theory. Bellow eigen value of Taman ayek lematang

Table 4 Identification of minimum criteria Taman ayek lematang

Criteria	Eigen value of Taman ayek lematang
Object	0,124
Access	0,116
Acomodation	0,030
Fasility	0,068
Transportation	0,091
Catering service	0,085
Relaxation activity	0,088
Learning	0,089
Communication	0,089
Bank system	0,021
Healthy	0,049
Safety	0,041
Cleanliness	0,038
Means of worship	0,035
Promotion	0,028
Total	1
Lamda max	16,947
CI	0,139
CR	0,087

Taman ayek lematang had criteria like object and access, where located center of Lahat distric. The destination was found by tourist, and tourism object also fairly interesting like view of Lematang river flow. But there were some of criteria should be had to reach minimum standart like accommodation,

facility, transportation, catering service, relaxation activity, learning, communication, bank system, healthy, safety, cleanliness, means of worship and promotion.

Taman ayek lematang was one of family destination where the tourist come to this place to spend their time together with family. The existing condition of Taman ayek lematang still should be developed to interested tourist, such as

4.2 SWOT analysis Taman ayek Lematang

Taman ayek lematang had strengthness, weakness, opportunities, and threatness.

4.2.1 The strengthness of Taman ayek lematang

- a. Taman ayek lematang had land area 3.2 Ha and can accommodate much activity from tourists.
- b. Taman ayek lematang had Lematang river view as main attraction
- c. Taman ayek lematang has been had management process, the management is PT. muara Alam Sejahtera (MAS) as person responsible
- d. Taman ayek lematang as start rafting location. Rafting is a tourism attraction in Lematang river flow

4.2.2 The weakness of Taman ayek lematang

- a. Promotion utilization and awareness product by social media was not optimal
- b. Facility and infrastructure like signage, park location, means of worship, the culinary tenant, gate, access, medis, information center, lighting and energy resources was not adequate
- c. The street access to the location was not adequate
- d. Tourism area and mining management area was not clear. Based on the table means that visitor management was needed management to processing Taman ayek lematang. Beside that, blue print formula was comprehensive needed. Taman ayek lematang had stakeholder like PT.MAS, PDAM Tirta Lematang, mining product business, village government. Taman ayek lematang area had

potential to develop idea of business. Family rafting package was needed as main

4.2.3 The Opportunity of Taman ayek lematang

- a. Positif trend of visit tourist to the location showed increasing at Maret-Agustus 2021
- b. Taman ayek lematang had *stakeholders* (PT.MAS, PDAM Tirta Lematang, processing mining product business, village government) whose potential to develop business ide.
- c. Taman ayek lematang was be part of local regulation
- d. Taman ayek lematang location was strategies to tourism stop.

4.2.4 The Threatness of Taman ayek lematang

- a. Mining utilization was not controlled at Lematang river flow, so it made flood, erotion, and other natural disasters
- b. Development program for human resources was minim
- c. There were not code of conduct for tourists who visited

Table 5 Analysis SWOT Taman ayek lematang

	Strength	Weakness
Opportunities	Strategy (S-O) 1,75 + 1,00 = 2,75	Strategy (W-O) 1,40 + 1,00 = 2,40
Threats	Strategy (S-T) 1,75 + 0,50 = 2,25	Strategy (W-T) 1,40 + 0,50 = 1,90

Based on the table means that visitor management was needed management to processing Taman ayek lematang. Beside that, blue print formula was comprehensive needed. Taman ayek lematang had stakeholder like PT.MAS, PDAM Tirta Lematang, mining product business, village government. Taman ayek lematang area had potential to develop idea of business. Family rafting package was needed as main attraction in Taman ayek

lematang. Gate, signage, means of worksip, TIC, park and tenant.

5. CONCLUSION

Based on observation, interview and FGD we can conclude that the best potensial tourism point by AHP method was in Taman ayek lematang. SWOT analysis showed that to developed Taman ayek lematang be Lematang river flow as sport tourism was by the combination between strength and opportunities. Some of them were Taman ayek lematang need management to processing Taman ayek lematang like PT.MAS, PDAM tirta lematang, village govermen etc.

AUTHORS' CONTRIBUTIONS

Iqbal. M., Pratiyudha. D., Sihombing, D., and Pratama, M contributed to the design, analysis and writing the manuscript.

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