ANALYSIS OF TOURISM DEVELOPMENT OF LAKE SINGKARAK IN ORDER TO IMPROVE THE COMPETITIVENESS OF TOURISM DESTINATION AND NATIONAL TOURISM INDUSTRY

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ABSTRACT

The objectives of this research are: 1. To identify natural, cultural, religious, historical, culinary, and handicraft tourism objects. 2. To find out the position of the strengths and weaknesses and opportunities of tourism objects. 3. To determine the right strategy for the development of tourist objects. 4. To create a cluster of tourist objects in Lake Singkarak tourism. Inductive Method, SWOT (Strength, Weakness, Opportunity, Threat) Analysis, and Hierarchical Cluster. The results, 1) there are 19 natural tourism objects, 16 cultural tourism objects, 17 religious tourism objects, 18 historical tourism objects, 17 culinary tourism objects, and 9 handicraft tourism objects. 2). The position of natural tourism objects and culinary-handicraft tourism objects in quadrant I (strong and likely), the position of cultural tourism objects in quadrant II (diversification-combination), and the position of religious-historical tourism objects in quadrant III (Turn Around and Stability). 3). The strategy for developing natural and culinary-handicraft tourism objects with the S-O (strength opportunities) strategy, the strategy for the development of cultural tourism objects of S-T (strength-thread), and strategies for developing religious and historical tourism objects of W-O (weak-opportunities). 4). a). The cluster of natural beauty objects in the western region of Lake Singkarak b). The cluster of culinary and handicraft tourism objects in the eastern region of Lake Singkarak. c). Cultural tourism object cluster in the northern region of Lake Singkarak. d). The cluster of Religious and Historical tourism objects in the southern region of Lake Singkarak.

Keywords; Tourism, Culture, Culinary, Handycraft, Religion.

INTRODUCTION

The tourism business must be able to create satisfying services to consumers and at the same time compete effectively in local, regional, and even global contexts. The right strategy is based on the ability to identify oneself and their environment so that the strategy can actually be realized from the strengths one has, take advantage of opportunities and be aware of weaknesses and be able to face existing challenges (Setiawan Hari Purnomo and Zulkieflimansyah, 1999). This means that the tourism industry is able to create strategies against new trends in order to maintain and achieve a competitive position.

The success of tourism development depends on the availability of tourist objects and attractions, the accessibility of facilities and infrastructure that allows tourists to visit a tourist area, and the availability of tourism facilities that can provide services to the public or tourists. Tourism is one of the industries that can increase economic growth in terms of employment opportunities, income, standard of living and can activate other production sectors. (Wahab, 2003).

Lake Singkarak tourism is one of the tourism destinations, the position of lake tourism is very strategically located in the middle of the West Sumatra Province, bypassed by the Sumatra highway and the icon of the International Tour de Singkarak event in the form of a tourism promotion, and there is a water tunnel panoramic park of Hydroelectric Power of Lake Singkarak, then Lake Singkarak tourism is a strategic tourist spot to be developed. However, until now the tourism object of Lake Singkarak is not well organized, is underdeveloped, very minimal supporting facilities, so it just looks like it is, even though there are so many kinds of tourist objects such as cultural tourism objects, natural tourism, religious tourism, historical tourism, culinary tours and handicraft tourism in the area of Lake Singkarak.

Lake Singkarak tourism is located in two-level two areas, namely Regency of Solok and Regency of Tanah Datar, with four districts and nineteen Nagari (villages) namely District of Junjung Sirih with 2 Nagari namely Nagari Paninggahan and Nagari Muaro Pingai; District of X Koto Singkarak with 8 Nagari namely Sandiang Baka, Sumani, Koto Sani, Singkarak, Aripan, Kacang, Tikalak, and Nagari Tanjung Alai; District of Rambatan with 5 Nagari, namely Balimbing, Rambatan, Padang Magek, Simawang, and Nagari Tigo Koto; and District of Batipuh Selatan with 4 Nagari, namely Nagari Sumpur, Batu Taba, Guguk Malalo and Padang Laweh Malalo. (West Sumatra Tourism Office of 2015). However, the people of these villages are not getting enough proceeds from the tourist objects in their area, this is because the existing tourist objects are not well managed and the groups of tourist objects are not clear and there are

no instructions on existing tourist objects, and there is still a lack of role of local government for the development of Lake Singkarak tourism.

The objectives of this research are: 1. To identify natural, cultural, religious, historical, culinary, and handicraft tourism objects. 2. To find out the position of the strengths-weaknesses and opportunities-challenges of natural, cultural, religious, historical, culinary, and handicraft tourism objects. 3. To determine the right strategy for the development of natural, cultural, religious, historical, culinary, and handicraft tourism objects. 4. To create a cluster of tourist objects in Lake Singkarak tourism.

The significance of this research is, Theory about revenue from the regional tourism industry where tourist attraction is anything that has uniqueness, beauty, and value in the form of the diversity of natural and cultural wealth, the environment and man-made products that are the target or purpose of tourist visits in increasing the income and economic growth of the community. Kon Mayers (2009).

REVIEW OF LITERATURE

Tourism Industry. Tourism enterprises are all business entities which, by combining various means of production, provide goods and services of a special tourist nature" W. Hunzieker (Yoeti, 1994:38). Tourist objects and attractions are one of the important elements in the world of tourism, which can succeed in the program of preserving natural tourism objects, cultural tourism objects, infrastructure tourism objects, culinary and handicraft tourism objects that can be sold to tourists. (Suwena, Widyatmaja 2010).

The development of a tourism object, like a tourist object, can be developed if it has the following conditions: Attraction, anything that is characteristic or uniqueness and becomes a tourist attraction; Accessibility, ease of way to reach tourist attractions; Amenity, facilities, and infrastructure available in the area of tourist attraction, such as accommodation, restaurant; Institution, an institution or organization that processes the tourist attraction. (Suwantoro Gamal 1997).

The Boostern approach (B Rusyidi, M Fedryansah 2018). 1) Approach to community involvement in the planning process and supporting capacity of the region. 2) The economic industry approach. 3) The physical spatial approach. 4) The community approach. 5) Sustainable approach.

Bambang Sunaryo 2013, a. Objects and attractions which include, b. Accessibility and other modes of transportation c. Amenities (food and beverage) d. Supporting facilities (Ancillary Services) e. Institutions, including the local community as the host.

Integrated Tourism. Suharso (2009), The development of an integrated tourism area is the development of a tourist area that takes into account the center of tourist activity, the characteristics of the tourist attraction, and is connected to the tourist circuit or route. Pelupessy, Julia, Prescella (2011), Development of core zone Determination Area, there is a concentration of objects and centers of main attractions which are the main destination for tourists to visit the area. Determination of the support zone, where there is an accommodation center, tourism support facilities, an information center, and various other facilities that support tourism activities.

SWOT Analysis. Porter (1985). Identification of strategic factors systematically in formulating appropriate strategies based on the ability to identify oneself and their environment to achieve goals so that strategies can be realized from the strengths they have and the opportunities they face. Robert Simbolon (1999).The right analysis to compile this item is a SWOT analysis, which is an effective and logical tool in helping structure problems, understanding all information in a case, analyzing the situation to find out what issues are going on from the internal strategic environment, namely strengths and weaknesses and the external environment with various opportunities and threats.

SWOT Analysis is an analysis of identifying various factors systematically to formulate a strategy in business development. This SWOT analysis is based on the logic that explains that a business must maximize strengths and opportunities, and minimize deficiencies and threats, and SWOT analysis is an analysis of the Internal and External Environment using the IFAS (Internal Factor Analysis Summary) and EFAS (External Factor Analysis Summary) matrix analysis methods. Philip Kotler, and Kevin Lane Keller (2009).

Theory of Hierarchical Cluster. Cluster analysis is a multivariate analysis technique that aims to cluster observational data or variables into the cluster in such a way that each cluster is homogeneous in accordance with the factors used to perform the clustering. Homogeneous cluster based on the similarity of the analyzed scores. Data regarding the size of the similarity can be analyzed with cluster analysis so that it can be determined where each object is located from the similarity in the cluster. (Wahyuningsi Nuri, et. al. 2013)

Empirical Study

Adityaji, R. (2018). Strategy Formulation of the Development of Tourism Destination Using SWOT Analysis Method: Case Study of Kapasan Chinatown Area, Surabaya. This study aims to find out the strategy to develop the Chinatown area of Kapasan Surabaya as a tourism destination using the SWOT analysis tools. The strengths, weaknesses, opportunities, and threats of Kapasan as one of the oldest tourist attractions in Surabaya will be analyzed comprehensively.

From the study, it is expected to obtain strategic formula to develop the Chinatown area of Kapasan to be a well known tourist attraction by local and international visitors,

Ildha N. Maiwa (2016). Management of Tourism Destinations by the Government of the Regency of Solok 2014-2015 (Study of Lake Singkarak Tourism Objects), the planning of Lake Singkarak tourism objects has many obstacles because the planning for Lake Singkarak that has been compiled is not realized. There are no investors, no land acquisition by the local community, less professional human resources, people who are not aware of tourism and there is no mutual agreement between the government and the community.

Emelia, Fitri (2009). Alternative use of lakes for tourism development through the concept of sustainability of marine and fishery resources in Lake Singkarak, West Sumatra: first, collaborating in promoting tourism of Lake Singkarak as an area where the naturalness and preservation of its resources are maintained; second, attracting investors for the development of Lake Singkarak tourism while still paying attention to the sustainability of its resources; third, to coordinate in overcoming problems and threats in Lake Singkarak.

Nila Virgo Lestari and Hamdi Rifai (2020). Preliminary analysis of Bukik Chinangkiek edupark's potential as a learning resource for physics in senior high school at X Koto Singkarak Solok. The analysis shows that learning physics has not been integrated into the surrounding natural environment so students have not understood the concept of contextual physics and most students tend to use IT in learning.

Andhalia Liza Marie, Rintis Eko Widodo (2020). Analysis of Foreign Tourist Visit Factors and the Hotel Occupancy Rate to the Locally-Generated Revenue (*Pendapatan Asli Daerah* or PAD) of the Tourism Sub-Sector in the Tourism Industry in the Special Region of Yogyakarta (*Daerah Istimewa Yogyakarta* or DIY) in 2007-2018. There is a positive influence between the number of foreign tourist visits and the Hotel Occupancy Rate to the Locally-Generated Revenue (PAD) of the Tourism Sub-Sector in DIY in 2007-2018.

Yudin Citriadin, Yunita Marliana (2020). Collaboration Management of Nature Tourism in the Regency of Dompu. The increased understanding of tourism service managers and introducing natural tourism in the Regency of Dompu widely (nationally and internationally).

Andreas Agung Widhijanto, Esti Yulitriani Tisnaningtyas (2018). Identification of supporting residential areas related to Lake Toba tourism in the form of (1) Areas for Supporting Settlements in Free Beach Parapat, Ajibata, Tomok, Muara followed by (2) Increasing Dock; (3) Lakefront City (4) Geopark and Lake Toba and Secondary Tourist Destination Areas; (5) Parkland Ride System (6) Development of terminal as a tourist terminal and parking area for tourists.

Andi Maya Purnamasari (2011). Improving the quality of the community is able to create tourism products that have competitive and comparative advantages in the international market and tourism potential can increase the income of the community.

METHODOLOGY

The method of this research is descriptive quantitative in inductively identifying tourist objects with SWOT analysis (Strength, Weakness, Opportunity, Threat), which is an analytical tool that examines internal strategic factors (strengths and weaknesses) and external strategic factors (opportunities and threats) as well as to record the main factors and translate them into values and the determination of tourist attraction clusters using quartile analysis techniques and Hierarchical Cluster Analysis. (Coman A. and B. Ronen 2009). Hierarchical methods are clustering techniques to form a hierarchy or based on certain levels so that they resemble a tree structure, the grouping process is carried out in stages or gradually.

Sampling and data collection

Sampling is done by simple random sampling technique, on tourist respondents, local communities, related governments and tourism actors with the assumption that the population is considered homogeneous (Sugiyono 2012). The population of Singkarak Lake tourism research is 19 Nagari / Village, namely: Nagari Paninggahan, Muaro Pingai, Sandiang Baka, Sumani, Koto Sani, Singkarak, Aripan, Tikalak, Kacang, Tanjuang Alai, S lumpur, Batu Taba, Guguk Malalo, Koto Laweh Malalo, Simawang , Rambat ,, Balimbing, Padang Magek, Tigo Koto which is in 4 sub-districts in Solok Regency and Tanah Datar Regency, West Sumatra Province. From tourist visitors, local government, community and local tourism actors, 20 respondents were taken from the population, thus the number of respondents is : (20 x 4 x 19 = 1,520 respondents)

Inductive Analysis of Tourism Object Identification

This inductive analysis uses a bottom-up approach, the researcher has insight and an open mind, is objective and there are no existing idealistic ideas (Glaser and Strauss, 1980). The researcher obtains data utilizing observation, interviews, and so on. The thought process begins with something specific that leads to the general and at the time of deciding the conclusion uses logic with the aim of finding the right answer to the research problem that is being worked on.

SWOT Analysis

SWOT Analysis with the IFAS (Internal Factor Analysis Summary) and EFAS (External Factor Analysis Summary) matrix analysis methods, which explain that a business must maximize strength and opportunities, and minimize shortages and threats: Freddy Rangkuti,

(2009) Space Matrix models and stages used in the SWO analysis are as follows: IFAS - EFAS (Internal-External Strategic Factor Analysis Summary), model is shown in Table 1 below.

Table 1
Analysis of Internal and External Factors (IFAS and EFAS)

MODEL	Strategic Factors	Weight	Value	Weight x Value
IFAS	**Strength**: the factors that become a strength	Professional Judgment	Professional Judgment	The sum of the multiplication of the weight by the value for each factor of strength
	Total	Total strength weights	Total strength value	Total weight x strength value
	Weakness: the factors that become a weakness	Professional Judgment	Professional Judgment	The sum of the multiplication of the weight by the value for each factor of strength
	Total	Total weakness weights	Total weakness value	Total weight x strength value
EFAS	Opportunities: the factors that become strengths	Professional Judgment	Professional Judgment	The sum of the multiplication of the weight by the value for each factor of the odds
	Total	Total strength weights	Total opportunity value	The number of weights x the opportunities value
	Threats: the factors that become weaknesses	Professional Judgment	Professional Judgment	The sum of the multiplication of the weight by the value for each factor of the threat
	Total	Total threat weights	Total threat value	Total weight x threat value

Source: Freddy Rangkuti, 2009

The questionnaire filling category (Likert scale) is: Strongly agree = score 5; Agree = score 4; Fairly agree = score 3; disagree = score 2; Strongly disagree = score 1

Criteria for Weighting SWOT Analysis (IFAS and EFAS)

a. Column 1. Input Arrange 5 to 10 factors from strengths-weaknesses and factors from opportunities-threats
b. Column 2. Give weight to each strategic factor in, on a scale of 1.0 (very important) to 0.0 (not important). The total of all weights shall not exceed the total score = 1.00.
c column 3. Calculate the rating in for each factor by giving a scale ranging from 4 (very profitable) to 1 (very detrimental) based on the influence.
d. Column 4. Multiply the weight by the value (rating) to get the weighting factor in. The result is a weighted score for each factor whose values vary from 4.0 (prominent) to 1.0 (weak).

Space SWOT Matrix; Position of Strengths, Weaknesses, Opportunities, and Threats of Tourism Objects

In the IFAS table, the difference between the value of the strength factor and the total value of the weakness factor is used to determine the X-axis and in the EFAS table, the difference from the number of opportunity factor values and the total threat factor values are used to determine the Y-axis. (Oka A. Yoeti,1996)

Quadrant I: Growth-Oriented Strategy means the Rapid Growth Strategy, namely increasing the growth rate and maximizing the use of all opportunities, and the Stable Growth Strategy, maintaining existing growth (stable the increase, do not let it decline).

Quadrant II: Survival means the Turn around strategy, Guirelle strategy (strategy to change functions) is a strategy to change the function that is owned by another completely different function.

Quadrant III: Stability means Aggressive Maintenance strategy, Improvement of weakness factors to maximize opportunity utilization, and Selective Maintenance strategy, namely an internal consolidation strategy by making improvements to something that is a weakness.

Quadrant IV: Diversification. This retrenchment is a very unfavorable situation, the tourism business is facing various threats and internal weaknesses. The focus of the strategy is to take rescue action so that it is released from greater losses (defensive).

SWOT Matrix; Formulation of the Development Strategy for Lake Singkarak Tourism Object

The determination of the right strategy for tourism object development is based on the results of the IFAS and EFAS table analysis using the S-O (strength opportunities) strategy, W-O (weak-opportunities) strategy, S-T (strength-thread) strategy, and W-T (weakness-thread) strategy; the SWOT matrix results are showed in the SWOT matrix in Picture 1. below.

IFAS / EFAS	Strength (S)	Weakness (W)
Opportunity (O)	**S-O Strategy (I)** Strategies that use strengths and take advantage of opportunities	**W-O Strategy (III)** Strategies that minimize weaknesses and take advantage of opportunities
Threat (T)	**S-T Strategy (II)** Strategies that use strength and overcome threats	**W-T Strategy (IV)** Strategies that minimize weaknesses and avoid threats

Source: Freddy Rangkuti, 2009   Picture 1.
SWOT Analysis Matrix Model

Cluster Analysis of Lake Singkarak Tourism Objects

Determination of the Lake Singkarak tourism object cluster using Quartile Analysis and Hierarchical Cluster techniques. The initial stage of the regional cluster formation is based on the contribution value of each tourist attraction using the Quartile Analysis output description. Cluster analysis is a multivariate (multiple variables) clustering method with the main objective of classifying objects based on their similar characteristics. Cluster analysis using the Hierarchy Cluster Method. Hierarchical methods are clustering techniques to form a hierarchy or based on certain levels so that it resembles a tree structure. Thus, the process of grouping is carried out in stages or gradually.

Agglomerative (integration method) is a hierarchical grouping strategy that starts with each object in a separate cluster then forms a growing cluster. So, the number of initial clusters is the same as the number of objects. (Supranto, J, 2004). The grouping techniques in the

agglomerative method are: a. Single linkage (shortest distance or single link) means a technique that combines clusters according to the distance between the closest members between two clusters. b. Average linkage (average distance or average link) means a technique that combines clusters according to the average distance of each member pair on the set between two clusters. c. Complete linkage (farthest distance or complete link) means agglomerative hierarchy cluster analysis with a complete linkage technique that combines clusters according to the distance between the farthest members between the two clusters. Here is an agglomerative hierarchy cluster algorithm:

1. Calculating the distance matrix. The distances used with the Euclidean Distance Formula are as shown below.

$d_{ij} = \sqrt{\sum_{k=1}^{p}(x_{ik} - x_{jk})^2}$	Information:
	d_{ij} : distance between object i and j
	x_{ik} : the value of object i in the kth variable
	x_{jk} : the value of object j in the kth variable
	p : the number of variables observed

2. Integration of the two closest clusters. If the distance between objects a and b has the smallest distance value compared to the distance between other objects in the Euclidean distance matrix, then the combination of the two clusters in the first stage is d_ab.

3. Update the distance matrix according to the agglomerative method clustering technique. If d_ab is the closest distance from the Euclidean distance matrix, then the formula for the agglomerative method is:

$d_{(ab)c} = \min \{d_{a,c} ; d_{b,c}\}$	$d_{(ab)c} = \text{average} \{d_{a,c} ; d_{b,c}\}$	$d_{(ab)c} = \max \{d_{a,c} ; d_{b,c}\}$
single linkage formula	Average linkage formula	complete linkage formula

4. Repeat steps 2 and 3 until only one cluster remains
5. Create a dendrogram

RESULT AND DISCUSSION
The results of the Identification of Lake Singkarak Tourism Objects are as shown in table 2 below.

Table 2

Lake Singkarak Tourism Object

No	Lake Singkarak Tourism Object					
	Natural Tourism	**Cultural Tourism**	**Religious Tourism**	**Historical Tourism**	**Culinary Tourism**	**Handicraft Tourism**
1	Gaugauan Peak and Ahmad Sadin Paninggahan Peak	Traditional Batagak Panguluk Datuk Kaum	Old Surau at Rimbo Hulu Paninggahan	Dutch quinine coffee plantation in Rinbo Lasi	Pangek, curry, and fried side dishes of Sasau fish	Pandan Woven Mat
2	Ngalau Tabing Paninggahan	Traditional Marak Muaro Pulai-Anak Daro	Cemetery of Angku Junjung Sirih Paninggahan	Dutch heritage coffee plantation in Rimbo Hulu Paninggahan	Pangek, curry, and fried side dishes of Bilih fish	Mansiang woven mat
3	Alahan Muaro River to Catch Bilih Fish	Traditional Anak Dijapui Bako	Indoor Cemetery of Sandiang Baka	Beo Building the Dutch heritage Sandiang Baka	Curry and Palai side dishes of Rinuk	Unjui Pandan
4	Spring Bath of Junjung Sirih	Traditional Speech of Mandudukan Nyinyik Mamak baralek	Tuo Mosque of Nagari Padang Magek	Water wheel of Kamba Tigo in Ombilin River	Rendang Padang	Kampie Mansiang
5	Gobah Hill	Caranao Traditional batirai bungo ameh contains betel, areca nut, sadah and gambier	Cemetery of Syeh Angku Duo Baleh Guguk Malalo	Lake Singkarak Edge Railway Station	Gulai Cincang and Gajeboh	Wallet, Pandan Mansiang woven bag, and wallet
6	The mouth of the Batang Lembang River	*Turun Mandi* for Child	*Turun Mandi* for New Born Child	Lake Singkarak Side Railway	Goat Curry	Kapok mattresses and pillows
7	Setu Ujung Ladang Koto Sanai	Suling Sarunai	Child Akikah	Customary Hall dan NagariHall	Lamang Ketan	Clay Jugs and Cutting Boards
8	Cinangkik Peak	Randai	Maulid of Prophet of Muhammad SAW	Balairung of Nagari	Abuk Cake	Sinaeh's rope
9	Bathing Beach of Tikalak	Plate Dance (Tari Piring)	Sacrificial Animal Slaughter	Pasangerahan Singkarak	Garubik and Golok-golok	Unjui Sampayo
10	ParaLayang Hill of Singkarak	Traditional Silat	Islamic New Year	Gadang House of Bagonjong	Tungkuih-Tungkuih	
11	Kacang Ateh Hill	Sewa Dance	Idul Adha Religious Holiday	Surau and Mosque	Lapek Bugih Cake	
12	Panorama Tajung Alai	Indang Dance	Idul Fitri Religious Holiday	Hydroelectric Power Plant of Lake Singkarak	Sunsulung Cake	
13	Resort Charm of Sumpur	Talempong and Gandang	Fasting in Ramadhan	Livestock Market of Rambatan	Onde-Onde	
14	Tanjung Mutiara White Sand Beach	Tabuh	Recitation at the Place of the Death	Kerapatan Adat Nagari	Amping	
15	The peak of Macau Duo	Saluang	Mangaji Kasurau	Sumpur Restaurant	Galu-Galu	
16	Natural Enchantment	Rabab	Musabaqah Tilawatil Quran	The path of the Revolution of	Tapai Ketan Hitam	

	Stone Palano		(MTQ)	Rimbo Ulu Paninggahan		
17	The peak of Aur Duri Tigo Koto		Lailatul Qadar	Medan Nan Bapaneh	Eel Curry	
18	Rafting in Sumpur River			Japanese Hole Cave of Padang Belimbing Koto Sani		
19	Hot Water of Koto Sani					

Source: 2020 research results

From the research results, the identification of Lake Singkarak tourist objects in table 2 above, where there are 19 natural tourism objects, 16 cultural tourism objects, 17 religious tourism objects, 18 historical tourism objects, 17 culinary tourism objects, and 9 handicraft tourism objects.

SWOT Analysis Results

The results of the IFAS (Internal Factor Analysis Summary) Matrix for Lake Singkarak Natural Tourism Object are shown in table 3 below.

Table 3.
IFAS Matrix for Lake Singkarak Natural Tourism Objects

No	Internal Strategy Factors	Weight	Score	f(x)
The Strength of Lake Singkarak Natural Tourism Object				
1	Lake Singkarak's natural tourism is interesting and has amazing natural scenery and has natural beauty.	0.0976	4	0.3904
2	Natural tourism of Lake Singkarak has a unique and beautiful tourist object, cool air, an atmosphere that provides comfort and safe conditions	0.0952	4	0.3808
3	The natural tourism area of Lake Singkarak is a strategic tourism area of the function and carrying capacity of the environment	0.0914	3	0.2742
4	The natural coastal tourism area of Lake Singkarak can be used as a means of sports such as swimming, diving, rowing boats, beach volleyball, etc.	0.0938	3	0.2814
5	The hilly natural tourist area of Lake Singkarak can be traced by motorized vehicles and footpaths, safe to visit	0.0886	3	0.2658
6	Lake Singkarak has a unique fish species Mystacoleucus padangensis or non-existent fish found in other areas is a tourist attraction	0.0974	3	0.2922
7	Lake Singkarak tourism object is a popular Lake tourist destination in West Sumatra.	0.0811	3	0.2433
	Sub Total			**2.2181**
Weaknesses of Lake Singkarak Natural Tourism Objects				
8	The natural tourism of the hills of Lake Singkarak is less known by tourists and there are no clear instructions.	0.0742	3	0.2226
9	Lake Singkarak's natural tourism is not very well-promoted so that this area is not widely known to visitors.	0.0839	3	0.2517
10	Lake Singkarak hilly nature tourism, accessibility to these attractions is difficult to reach so it is less desirable	0.0621	3	0.1863
11	Natural tourism on the shore of Lake Singkarak is not yet in a regional, national and international tourism travel agency.	0.0713	2	0.1426
12	The natural tourism area of Lake Singkarak is difficult to develop because the location of the land around the tourist attraction is customary land belonging to the people.	0.0634	2	0.1268
	Sub Total			**0.9300**
	Total	**1,00**		**3.1481**

Source: 2020 research results

The results of the EFAS (External Factors Analysis Summary) Matrix for Lake Singkarak Natural Tourism Objects, are as shown in table 4 below.

Table 4.

EFAS Matrix of Lake Singkarak Tourism Object

No	External Strategy Factors	Weight	Score	f(x)
Opportunities of Lake Singkarak Natural Tourism Object				
1	Lake Singkarak natural tourism can create jobs for local people such as selling food and handicrafts or tourist guides	0.1756	4	0.7024
2	Opportunity to make residents' homes for homestays for tourists on natural tourism of Lake Singkarak.	0.0923	4	0.3692
3	Opportunity to make residents' homes for homestays for tourists on natural tourism of Lake Singkarak.	0.0972	4	0.3888
4	The high interest of tourists to tour the natural tourism of Lake Singkarak has the opportunity to be included in domestic and foreign tour packages	0.0967	4	0.3868
5	Lake Singkarak tourism requires transportation services that require a business service bureau business to support tourism.	0.0851	3	0.2553
6	The natural tourism of Lake Singkarak is a competitor in its beauty, uniqueness, and natural authenticity, which is different from other regions to attract tourists to visit this tourism.	0.0838	3	0.2514
	Sub Total			**2.3539**
Threats of Lake Singkarak Natural Tourism Objects				
7	Lack of public awareness around Lake Singkarak natural tourism about the importance of the existence of a tourist attraction.	0.0843	4	0.3372
8	There was environmental damage due to the arbitrary development of the natural tourism of Lake Singkarak	0.0735	3	0.2205
9	The development of other tourist objects that increase competition is a threat to the natural tourism of Lake Singkarak	0.0721	3	0.2163
10	The lack of proper infrastructure to support the natural tourism of Lake Singkarak makes tourists feel uncomfortable and no longer interested in coming next.	0.0633	3	0.1899
11	The existence of bullying by thugs against tourists is a threat to Lake Singkarak natural tourism tourists	0.0534	2	0.1068
12	Lack of maintenance and maintenance costs for Lake Singkarak natural tourism is less attractive, less desirable for visitors.	0.0326	2	0.0652
13	Sub Total			**1.1359**
	Total	**1.00**		**3.4898**

Source: 2020 research results

Results of the Analysis of the Position of Strengths, Weaknesses, Opportunities, and Threats of Lake Singkarak Natural Tourism Objects

The results of the IFAS matrix table for natural tourism of Lake Singkarak above shows that the total value of the strength factor is 2.2181 and the value of the weakness factor is 0.9300; the difference between the values of the strengths and weaknesses, that is 1.2881, shall be used to determine the X-axis; while the results of EFAS table of natural tourism object of Lake Singkarak above shows that the total value of the opportunity factor is 2.3539 and the total value of the threat factor is 1.1359, the difference in the value of the opportunity and threat factor, that is 1.2180, shall be used to determine the Y-axis. The results of the quadrant image of the development of natural tourism in the Lake Singkarak tourism area as shown in Picture 2 below:
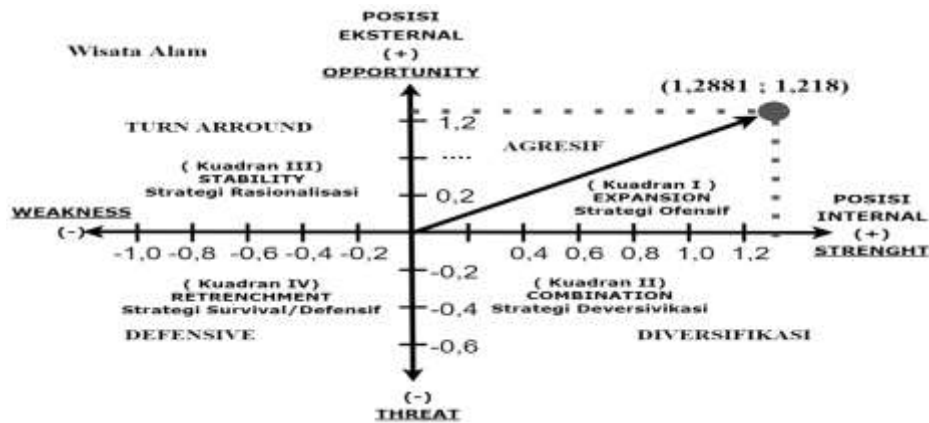
Picture 2.

SWOT Space Matrix for Lake Singkarak Nature Tourism

The position of the quadrant of the development of the natural tourism object of Lake Singkarak is in quadrant I, precisely at point (1.2881 ; 1.2180). This position shows that the tourism object of Lake Singkarak is in a strong position and has the opportunity to develop. The recommended strategy given is Progressive, meaning that the development of tourism objects is in the prime and steady condition so that it is possible to continue to develop natural tourism objects and increase promotions. This quadrant lies between external opportunities and internal strengths (growth strategies), namely strategies designed to achieve maximum development in order to achieve the number of tourist visits on Lake Singkarak tourism. The strategy for the natural tourism object of Lake Singkarak is included in the Rapid growth strategy, which is a strategy to increase the growth rate of tourist visits with more time, improving quality which is a strong factor to maximize the use of all opportunities.

Results of the Analysis of the Development Strategy of the Lake Singkarak Natural Tourism Object

The results of the formulation of the strategy for developing natural tourism objects in Lake Singkarak with the S-O (strength opportunities) strategy, W-O (weak-opportunities) strategy, ST (strength-thread) strategy, and W-T (weakness-thread) strategy, the results of the SWOT matrix are as shown in Picture 3 below.

IFE EFE	*Strength* (S)	*Weakness* (W)
Opportunities (O)	**I) S-O Strategy (Aggressive)** **2,2181 + 2,3539 = 4,572**	III) W-O Strategy (Turn-Around) 0,9300 + 2,3539 = 3,2839
Thread (T)	II) S-T Strategy ST (Diversification) 2,2181 + 1,1359 = 3,354	IV) W-T Strategy (Defensive) 0,9300 + 1,1359 = 2,0659

Source: 2020 research results   Picture 3.

Combination of the Natural Tourism SWOT Matrix Strategy

The results in Picture 3 above occupy the Growth-Oriented Strategy with the main strategy of S-O because it is in the position I with the highest value of 4.572, this shows the use of all strengths to seize and take maximum opportunities with the Rapid Growth Strategy, increasing the rate of growth and maximizing the use of all opportunities and the Stable Growth Strategy, maintaining the existing growth (steady increase, don't let it decrease). This is a favorable situation for tourism businesses to have opportunities and strengths so that they can take advantage of existing opportunities.

S-O STRATEGY

a. Organizing natural tourism events such as gliding, mountain climbing, motorbike crossovers, rafting, beach volleyball, and others at Lake Singkarak natural tourist sites as a tourist attraction.

b. Increasing and using various promotional media for natural tourism of Lake Singkarak in order to reach tourists.

c. Utilizing natural tourism locations which are located on the slopes of the hills of Lake Singkarak by adding and improving facilities and infrastructure such as parking areas, restaurants, clean water, toilets, places of worship, and lodging in the area of Lake Singkarak natural tourism objects.

d. More utilizing the role of the surrounding community so that it can help develop natural tourism objects of Lake Singkarak.

The results of the IFAS Matrix for Lake Singkarak Tourism Cultural Objects are as shown in table 5 below.

Table 5.

IFAS Matrix of Lake Singkarak Tourism Cultural Objects

No	Internal Strategy Factors	Weight	Score	f(x)
Strengths of Lake Singkarak Cultural Tourism Objects				
1	Indonesia is benefiting from the increasing interest of tourists in cultural tourism.	0.0999	4	0.3996
2	The high attention and community participation of the residents towards the cultural tourism of Lake Singkarak as an asset that needs to be preserved and protected	0.0897	4	0.3588
3	The large variety of cultures and cultural heritage from their ancestors that have passed down are the main attractions for the cultural tourism of Lake Singkarak.	0.1705	3	0.5115
4	The friendliness of the residents of the surrounding village in serving tourists will cause a high desire to visit tourists to Lake Singkarak.	0.1756	3	0.5268
5	Villagers around Lake Singkarak. Innovation and creativity in the development of local cultural products	0.0765	3	0.2295
	Sub Total			**2.0262**
Weaknesses of Lake Singkarak Cultural Tourism Objects.				
6	Lack of promotion and less attractive appearance of Lake Singkarak cultural attractions so that it is not so widely recognized and attracted by tourists.	0.0721	4	0.2884
7	Limited budget costs by the local government for cultural tourism make Lake Singkarak cultural tourism objects less developed	0.0614	3	0.1842
8	The infrastructure for displaying cultural attractions of the people of Lake Singkarak is lacking	0.0565	2	0.1130
9	Lack of attention, direction, and guidance by the government towards culture as a tourism object that exists in the communities around Lake Singkarak	0.0531	2	0.1062

No		Weight	Score	f(x)
10	The existence of a negative image about Indonesian cultural tourism as a whole is unsafe which lingers for a long time in the minds of other nations.	0.0567	1	0.0567
11	Cultural tourism of Lake Singkarak is not available in travel agents for regional, national, and international tourism visits and there are no signs to guide cultural tourism sites.	0.0485	1	0.0485
12	Lack of security, cleanliness, courtesy of services, and supporting infrastructure are a threat to Lake Singkarak tourism.	0.0395	1	0.0395
	Sub-total			**0.8365**
	Total	**1,00**		**2,8627**

Source: 2020 research results

The results of the EFAS (External Factor Analysis Summary) Matrix of the Lake Singkarak Tourism Cultural of the Tourism Object, are as shown in table 6 below.

Table 6.
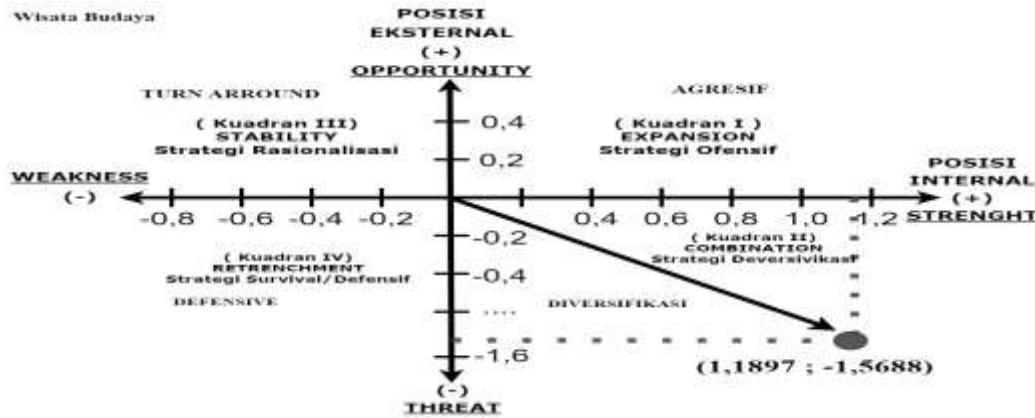EFAS Matrix of the Lake Singkarak Tourism Cultural Objects

No	External Strategy Factors	Weight	Score	f(x)
Opportunities of Lake Singkarak Cultural Tourism Objects				
1	Lake Singkarak cultural tourism opens up opportunities and provides opportunities for cultural attraction performances by the people around Lake Singkarak	0.0782	3	0.2346
2	Satisfaction and a good impression for tourists in enjoying friendly and polite cultural treats and offerings is indirectly a promotion for Lake Singkarak tourism	0.0669	3	0.2007
3	The historical tourism of Lake Singkarak has given the area a reputation for being known to the outside world	0.0568	2	0.1136
4	Tourism business opportunities for investors to sell traditional Lake Singkarak cultural packages to domestic and foreign tourists	0.0479	2	0.0958
5	Cultural tourism which is increasingly developing and increasingly in demand can absorb labor in the area around Lake Singkarak	0.0389	1	0.0389
6	The cultural tourism of Lake Singkarak can preserve the culture and cultural history that is not lost and forgotten from time to time	0.0288	1	0.0288
	Sub Total			**0.7124**
Threats of Lake Singkarak Cultural Tourism Objects.				
7	The diverse behavior of tourists makes life less comfortable for the people around them.	0.1871	4	0.7484
8	Excessive development of cultural tourism facilities if not controlled properly can disturb the comfort and damage the environment	0.0943	4	0.3772
9	The authenticity of culture will be lost with the existence of innovative changes from excessive outsiders, even though this is seen as subjective change.	0.0879	4	0.3516
10	Strong competition between other regional cultural tourism objects is a threat to the cultural tourism of Lake Singkarak.	0.1723	3	0.5169
11	The lack or absence of maintenance and repair costs for buildings that have historical-cultural value causes damage and a lack of cultural values in the villages around Lake Singkarak.	0.0731	3	0.2193
12	The lack of understanding of residents of the cultural-historical values of the villages around Lake Singkarak has made cultural tourism endangered	0.0678	3	0.0678
	Sub Total			**2.2812**
	Total	**1.00**		**2.9936**

Source: 2020 research results

Results of the Analysis of the Position of Strengths, Weaknesses, Opportunities, and Threats of Cultural Tourism Objects

The results of the IFAS matrix table for the Lake Singkarak Cultural Tourism Object is above the value of the strength factor, namely 2.0262 and the value of the weakness factor is 0.8365, the difference in the value of the strengths and weaknesses of, which is 1.1897, shall be

used to determine the X-axis; and the results of the table of the EFAS matrix shows that the value of the opportunity factor is 0.7124 and the value of the threat factor is 2.2812, the difference in the value of the opportunity and threat factors, that is -1.5688, shall be used to determine the Y-axis. The image results of the analysis of the Development Strategy for Cultural Tourism Objects in the Region of Lake Singkarak tourism as shown in Picture 4 below

Picture 4.
SWOT Space Matrix for Lake Singkarak Cultural Tourism Objects

The position of the quadrant of the development of the Lake Singkarak cultural tourism object is in quadrant II, precisely at point (1.5688; -1.1897). This position shows that the cultural tourism object of Lake Singkarak is in a strategic position to use strength to overcome threats. Despite facing various threats, the tourism business still has strength from an internal perspective. The strategy that must be applied is to use strength to eliminate long-term threats utilizing a tourism product diversification strategy.

Results of the Analysis of the Development Strategy of the Lake Singkarak Cultural Tourism Object

The results of formulation of the strategy for the development of the Lake Singkarak cultural tourism object with the S-O (strength opportunities) strategy, W-O (weak-opportunities) strategy, S-T (strength-thread) strategy and W-T (weakness-thread) strategy, the results of the SWOT matrix are as shown in Picture 5 below.

IFE / EFE	*Strength* (S)		*Weakness* (W)	
Opportunities (O)	(I)	S-O Strategy (Aggressive) 2,0262 + 0,7124 = 2,7386	(III)	W-O Strategy (Turn-Around) 0,8365 + 0,7124 = 1,5489
Thread (T)	**(II)**	**S-T Strategy (Diversification) 2,0262 + 2,2812 = 4,3074**	(IV)	W-T Strategy (Defensive) 0,8365 + 2,2812 = 3,1177

Source: 2020 research results   Picture 5

Combination of SWOT Matrix Strategies

The results in Picture 5 show that the main strategy produced is the S-T strategy with the highest value of 4.3074 in the quadrant II position, which means that this strategy is made based on the mindset of the tourist object. Turn-around strategy, which is a strategy to reverse negative tendencies to be positive by the manager, and Guirelle strategy, which is to change the function it has with other functions that are completely different and have positive values. Despite facing various threats, the tourism business still has strength from an internal perspective. The strategy that must be applied is to use strength to eliminate long-term threats utilizing a tourism product diversification strategy.

S-T STRATEGY

a. Lake Singkarak tourism objects have distinctive cultural tourism attractions, namely: Randai, Traditional Pencak Silat, Sewa Dance, Plate Dance, Indang Dance, and others in each Nagari / Village in the Lake Singkarak area which is continuously maintained and preserved as regional assets.

b. It is necessary to have public transportation facilities to facilitate visitors from the city center to the location of the Lake Singkarak cultural tourism center.

c. Expect the role of the surrounding community and government to fulfill supporting facilities in preserving the tourism culture of Lake Singkarak.

The results of the IFAS Matrix for the Religious and Historical Tourism Objects of Lake Singkarak are as shown in table 7 below.

Table 7.
IFAS Matrix for Religious and Historical Tourism Objects of Lake Singkarak

No	Internal Strategy Factors	Weight	Score	f(x)
Strengths of Lake Singkarak Religious and Historical Tourism Objects				
1	The road accessibility on historical and religious tourism objects of Lake Singkarak is well available, the eastern ring road of Lake Singkarak has the status of the National road and the western ring road of Lake Singkarak has the status of the provincial road.	0.0752	4	0.3008
2	Lake Singkarak is used as an icon for the Tour de Singkarak which is held annually and is followed by national and international riders as well as a promotion especially for religious and historical tourism objects of Lake Singkarak.	0.0620	3	0.1860
3	The existence of historical and religious tourism objects in Lake Singkarak tourism is the main and attractive tourist attraction for the community because of its strategic location close to the city center of Solok, Batu Sangkar, and Padang Panjang and not so far from the city of Padang and Bukit Tinggi.	0.0617	2	0.1234
4	The Lake Singkarak area provides sufficient land for the development of facilities and infrastructure for historical and religious tourism objects	0.0503	1	0.0503
5	Lake Singkarak is located in the middle of the province of West Sumatra, which is a special force in the development of facilities and infrastructure for historical and religious tourism objects as a destination for the National tourism industry.	0.0638	3	0.1914
6	The facilities and infrastructure for historical tourism objects of artificial water tunnels for Hydroelectric Power Plant (PLTA) are one of the attractions of historical tourism in Lake Singkarak tourism.	0.0571	3	0.1713
	Sub Total			**1.0232**
Weaknesses of Lake Singkarak Religious and Historical Tourism Objects				
7	Weak integrated management system and do not have a good tourism concept from historical and religious infrastructure so that it seems that way it is	0.1476	4	0.5904
8	Lack of stakeholder involvement and promotion in the management of historical and religious facilities and infrastructure in the Lake Singkarak tourism area (weak cooperation & promotion)	0.1753	4	0.7012

9	Lack of supporting facilities and infrastructure for historical and religious tourism objects such as parking areas, toilets, lodging, places of worship, and others	0.0872	4	0.3488
10	The process and development of facilities and infrastructure for historical and religious tourism objects in Lake Singkarak tourism become difficult because it is hindered by the status of land ownership which belongs to the community / customary land.	0.0850	4	0.3400
11	The closeness of religious and historical tourism objects to natural coastal tourism objects will split tourism visits to Lake Singkarak tourism	0.0686	3	0.2058
12	Lack of road access to religious tourism sites and historical attractions is a weakness for Lake Singkarak tourism	0.0662	3	0.1986
	Sub Total			**2.3848**
	Total	**1.00**		**3.4080**

Source: 2020 research results

The results of the EFAS Matrix for the Religious and Historical Tourism Objects of Lake Singkarak are as shown in table 8 below.

Table 8.

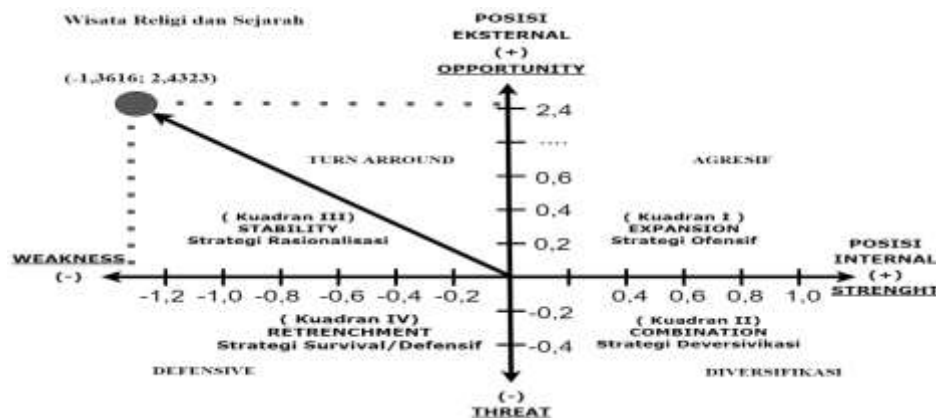EFAS Matrix for Religious and Historical Tourism Objects of Lake Singkarak

No	External Strategy Factors	Weight	Score	f(x)
Opportunities of Lake Singkarak Religious and Historical Tourism Objects				
1	Lake Singkarak is a prospective strategic location in the buffer zone of the second-tier capital city and the province of West Sumatra can invite investors to invest and make Lake Singkarak Beach a major tourist area in religious and historical tourism objects	0.1889	4	0.7556
2	Investments for investors because the Lake Singkarak area is included in the Regional Tourism Development Master Plan (RIPDA) of the Regency of Solok, Regency of Tanah Datar, and Padang Panjang City as a leading tourist attraction area located close to the city, making it easy for visitors to reach.	0.1762	4	0.7048
3	Opportunities for developing special interest tourism facilities and infrastructure for historical and religious tourism objects in Lake Singkarak tourism	0.1675	4	0.6700
4	The development of interesting and unique historical and religious infrastructure development will get positive opinions or talk from visitors to other people.	0.1324	3	0.3972
5	Tourists are satisfied and want to return with the existence of adequate religious and historical facilities and infrastructure for Lake Singkarak tourism (tourist satisfaction is the opportunity for tourism development)	0.0723	3	0.2169
6	Opportunity for the government to develop the tourist area of Lake Singkarak Beach through the development of facilities and infrastructure for religious and historical tourism objects	0.0567	2	0.1134
	Sub Total			**2.8579**
Threats of Lake Singkarak Religious and Historical Tourism Objects				
7	Lack of public understanding of historical and religious tourism is an obstacle to the development of facilities and infrastructure for these attractions in Lake Singkarak tourism	0.0618	3	0.1854
8	Historical and religious tourism objects of Lake Singkarak compete with the same tourist objects in other areas and are a threat to the development and tourist visits.	0.0252	1	0.0252
9	Lack of support from the Regional Government in the promotion and construction of infrastructure for historical and religious tourism objects of Lake Singkarak	0.0421	2	0.0842
10	Inadequate support for historical and religious tourism object facilities and infrastructure for Lake Singkarak tourism such as health facilities, the availability of lodging, villas, and homestays, hotels, restaurants, toilets, places of worship, and parking areas cause anxiety for tourists who travel.	0.0539	2	1.1078
11	Attitudes and behavior that are not good and disrespectful as well as violence from security officers and parking officers create a bad, coercive, and frightening impression for visitors to religious and historical tourism objects of Lake Singkarak	0.0230	1	0.0230
	Sub Total			**0.4256**
	Total	**1,00**		**3.2835**

Source: 2020 research results

Results of the Analysis of the Position of Strengths, Weaknesses, Opportunities, and Threats of Religious and Historical Tourism Objects.

The results of the IFAS matrix table for religious and historical tourism objects of Lake Singkarak in table 6 shows that the value of the strength factor is 1.0232 and the value of the weakness factor is 2.3848, the difference between the values of the strengths and weaknesses, that is -1.3616, shall be is used for determining the X-axis, and the results of the EFAS table of the value of the opportunity factor is 2.8579 and the value of the threat factor (threat) is 0.4256, the difference in the value of the opportunity and threat factor, that is 2.4323, shall be used to determine the Y-axis.

The position of the quadrant for the development of religious and historical tourism objects in Lake Singkarak is in quadrant III, precisely at point (2.0870; 2.4323). This position shows that the religious and historical tourism objects of Lake Singkarak are in a strategic position that minimizes weaknesses and takes advantage of opportunities. This is a tourism business-facing enormous market opportunities, but on the other hand, it faces several internal constraints/weaknesses. The focus of the tourism business strategy is to minimize or solve the internal problems of the tourism business so that it can seize a better market (turn around) or rationalization. The quadrant position is as shown in Picture 6 below.

Picture 6.
SWOT Space Matrix for Religious and Historical Tourism Objects of Lake Singkarak

Results of the Analysis of the Development Strategy for Religious and Historical Tourism Objects of Lake Singkarak

The results of the strategy formulation for the development of religious and historical tourism objects in Lake Singkarak with the S-O (strength opportunities) strategy, W-O (weak-opportunities) strategy, S-T (strength-thread) strategy, and W-T (weakness-thread) strategy, the results of the SWOT matrix is as shown in Picture 7 below.

IFE / EFE	Strength (S)	Weakness (W)
Opportunities (O)	(I) S-O Strategy (Aggressive) 1,0232 + 2,8579 = 3,8811	**(III) W-O Strategy (Turn-Around)** **2,3848 + 2,8579 = 5,2427**
Thread (T)	(II) S-T Strategy (Diversification) 1,0232 + 0,4256 = 1,4488	(IV) W-T Strategy (Defensive) 2,3848 + 0,4256 = 2,8104

Source: 2020 research results   Picture 7

Combination of SWOT Matrix Strategies

The results in Picture 7 show that the main strategy produced in the W-O strategy with the highest score of 5.2427 in position III, which means minimizing weaknesses and taking advantage of opportunities. The strategy used is the Aggressive Maintenance strategy (aggressive improvement strategy), correcting the weaknesses to maximize opportunities, and the Selective Maintenance strategy, which is an internal consolidation strategy by making improvements to something that is a weakness. Maximizing the improvement of the weaknesses to take advantage of opportunities. This is an attempt to face enormous market opportunities, but on the other hand, it faces several internal constraints/weaknesses. The focus of this tourism strategy is to minimize the internal problems of tourism so that it can seize the tourism market better (turn around) or rationalization.

W-O STRATEGY

a. More attention is needed for the cleaning sector, such as the addition of cleaners and trash cans.

b. Increase the promotion of facilities and infrastructure for the religious and historical tourism objects of Lake Singkarak.

c. It is necessary to have a guide to the location of religious and historical tourism objects to make it easier for visitors.

d. Repair and add supporting facilities and infrastructures such as public toilets, parking areas, places of worship, lodging.

e. Adding tourism object materials such as banana boot, beach swimming pool, children's playground, and others in the Lake Singkarak tourist area

The results of the IFAS Matrix for Culinary and Handicraft Tourism Objects of Lake Singkarak are as shown in table 9 below.

Table 9.

IFAS Matrix for Culinary and Handicraft Tourism Objects of Lake Singkarak

No	Internal Strategy Factors	Weight	Score	f(x)
Strengths of Lake Singkarak Culinary and Handicraft Tourism Objects				
1	The variety of types of unique and interesting culinary and handicraft businesses is the strength of the tourism market segment of Lake Singkarak.	0.1863	4	0.7452

2	Local culinary and handicrafts are easily found all over the coast which is served at shops and stalls in the Lake Singkarak tourism area	0.1432	4	0.5728
3	Availability of skilled labor and raw materials in producing Lake Singkarak culinary and handicraft tourism	0.0923	3	0.2769
4	The unique taste and aroma that attracts special interest in enjoying the culinary tourism of Lake Singkarak	0.0889	3	0.2667
5	There are many restaurants and food stalls with regional culinary menus in the Lake Singkarak tourism area	0.0834	3	0.2502
6	The strong support of the local community and local government in developing the culinary and handicraft business of tourism of Lake Singkarak	0.0767	2	0.1534
	Sub Total			**2.2652**
Weaknesses of Lake Singkarak Culinary and Handicraft Tourism Objects				
7	The culinary business and handicrafts of Lake Singkarak tourism are not well organized and have a very simple management	0.0828	3	0.2484
8	Limited capital in developing the culinary business and handicrafts of Lake Singkarak tourism	0.0749	2	0.1498
9	The culinary and handicraft packaging of Lake Singkarak tourism is less attractive	0.0623	2	0.1246
10	There is no central place to accommodate the culinary business and handicrafts of Lake Singkarak tourism	0.0552	1	0.0552
11	There is no market segment for the products of culinary business and handicrafts of Lake Singkarak tourism in the export market	0.0540	1	0.0540
	Sub Total			**0.6320**
	Total	**1,00**		**2.8972**

Source: 2020 research results

The results of the EFAS Matrix for Culinary and Handicraft Tourism Objects of Lake Singkarak are as shown in table 10 below

Table 10.
EFAS Matrix for Culinary and Handicraft Tourism Objects of Lake Singkarak

| No	External Strategy Factors	Weight	Score	f(x)
Opportunities of Lake Singkarak Culinary and Handicraft Tourism Objects				
1	Opportunities for regional and central tourism offices to support the culinary and handicraft tourism of Lake Singkarak in developing tourism destinations	0.1872	4	0.7488
2	Opportunities for entrepreneurs of culinary and handicraft of Lake Singkarak tourism to develop	0.0975	4	0.3900
3	Business opportunities for media entrepreneurs in marketing promotion of business products of culinary and handicraft of Lake Singkarak tourism.	0.0867	3	0.2607
4	Opportunities for local governments to develop culinary and handicraft of Lake Singkarak	0.0843	3	0.2529
5	Opportunities for the Regional Government in making training programs to improve the skills of business of culinary and handicraft of Lake Singkarak tourism	0.0834	3	0.2502
6	A positive impression is a promotion without cost from tourist visits for the satisfaction and interest of product of culinary and handicraft of Lake Singkarak	0.0789	2	0.1578
7	The attitude of positive support from the local community for the development of handicraft and culinary tourism is an opportunity to develop more advanced tourism for Lake Singkarak	0.0727	2	0.1454
	Sub Total			**2.2058**
Threats of Lake Singkarak Culinary and Handicraft Tourism Objects				
8	The emergence of new objects of the products of similar culinary and handicraft of Lake Singkarak tourism in other areas	0.0741	3	0.2223
9	Threats to Lake Singkarak culinary tourism with the emergence of fast-food restaurants such as Pizza Hut, KFC, catfish *pecel,* etc.	0.0733	3	0.2199
10	The products of culinary and handicrafts of Lake Singkarak tourism are less attractive to tourists because they are not competitive in the market.	0.0642	2	0.1284
11	Less developed and low management of culinary and handicraft of Lake Singkarak tourism	0.0542	2	0.1084

12	Lack of involvement and support from empowerment institutions and training in the skills of culinary and handicraft of Lake Singkarak tourism	0.0435	1	0.0435
	Sub Total			**0.7225**
	Total	1.00		**2.9283**

Source: 2020 research results

Results of the Analysis of the Position of Strengths, Weaknesses, Opportunities, and Threats of Culinary and Handicraft Tourism Objects

The result of the IFAS matrix table for Culinary and Handicraft Tourism Object of Lake Singkarak is above the value of the strength factor, namely 2.2652 and the value of the weakness factor is 0.6320, the difference in the value of the strengths and weaknesses, that is 1.6332, shall be used to determine the X-axis and EFAS matrix shows that the value of the opportunity factor is 2.2058 and the value of the threat factor is 0.7225, the difference in the value of the opportunity and threat factor, that is 1.4833, shall be used to determine the Y-axis.

The position of the quadrant for the development of culinary and handicraft tourism objects of Lake Singkarak is in quadrant I, precisely at point (1.6332; 1.4833). This position shows that the tourism object of Lake Singkarak is in a strong position and has the opportunity to develop. The recommended strategy given is Progressive, meaning that the development of tourism objects is in the prime and steady condition so that it is possible to continue to develop natural tourism objects and increase promotions. This quadrant lies between external opportunities and internal strengths (growth strategies), namely strategies designed to achieve maximum development in order to achieve the number of tourist visits on Lake Singkarak tourism. The strategy for the natural tourism object of Lake Singkarak is included in the Rapid growth strategy, which is a strategy to increase the growth rate of tourist visits with more time, improving quality which is a strong factor to maximize the use of all opportunities. The results of the analysis are as shown in Picture 8 below.
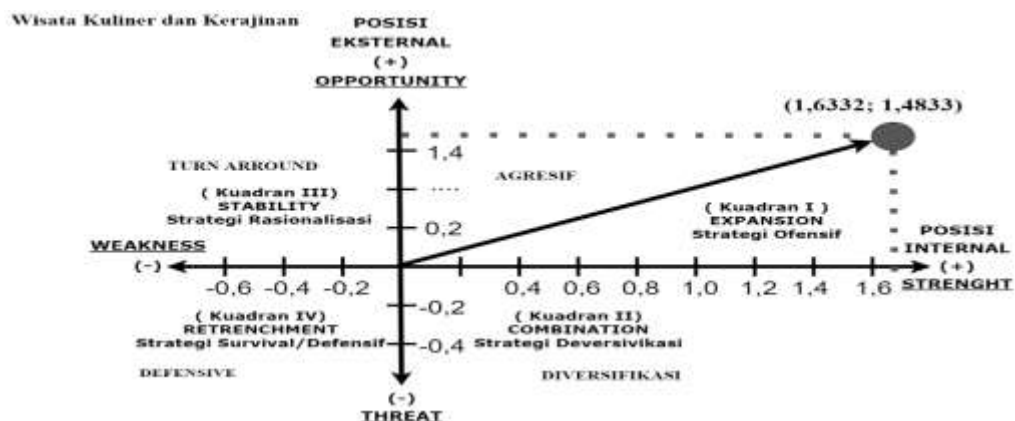
Picture 8.
SWOT Space Matrix for Culinary and Handicraft Tourism Objects

Results of the Analysis of the Development Strategy for Lake Singkarak Culinary and Handicraft Tourism Objects

The results of the strategy formulation for the development of culinary and handicraft tourism objects of Lake Singkarak with the S-O (strength opportunities) strategy, W-O (weak-opportunities) strategy, S-T (strength-thread) strategy, and W-T (weakness-thread) strategy, the results of the SWOT matrix are as shown in Picture 9 below.

IFE / EFE	*Strength* (S)		*Weakness* (W)	
Opportunities (O)	**(I)**	**S-O Strategy (Aggressive)** **2,2652 + 2,2058 = 4,471**	(II)	W-O Strategy(Turn-Around) 0,6320 + 2,2058 = 2,8378
Thread (T)	(III)	S-T Strategy (Diversification) 2,2652 + 0,7225 = 2,9877	(IV)	W-T Strategy (Defensive) 0,6320 + 0,7225 = 1,3545

Source: 2020 analysis results   Picture 9.
Combination of SWOT Matrix Strategies

The results in Picture 9 show that the main strategy produced is the S-O strategy with the highest value of 4.471 in the position I, which means that it uses all strengths to seize and take advantage of the greatest opportunities. Growth Oriented Strategy with the Rapid Growth Strategy (fast-growth strategy), increasing the growth rate and maximizing the use of all opportunities and the Stable Growth Strategy (stable growth strategy), maintaining existing growth (stable increase, don't let it decrease). This is a favorable situation for tourism businesses to have opportunities and strengths so that they can take advantage of existing opportunities.

S-O STRATEGY
a.   Hold a cultural and handicraft week event at the tourist site of Lake Singkarak as a tourist attraction.
b.   Using all media in promoting the quality and handicraft of Lake Singkarak tourism so that it can reach all levels of society.
c.   Take advantage of the location of the Lake Singkarak tourist area by adding and improving the facilities and infrastructure for culinary and handicraft.
d.   Make more use of the role of the surrounding community in improving the quality of quality and craft in developing Lake Singkarak tourism objects.

Results of Cluster Analysis of Lake Singkarak Tourism Objects

Determination of the Lake Singkarak tourism object cluster using Quartile Analysis and Hierarchical Cluster techniques. The formation of clusters of tourism development areas is determined based on the results of the internal factors and external factors of natural tourism

objects, cultural tourism objects, religious tourism objects, historical tourism objects, culinary tourism objects, and handicraft tourism objects (the sum of the multiplication of weight by value) in each Nagari / Village of the 19 Nagari in Lake Singkarak tourism. The results are as shown in table 11 below

Table 11

The weight value of tourism objects in each tourism area of Lake Singkarak

No	Tourism Nagari	Natural Tourism	Cultural Tourism	Culinary Tourism	Handicraft Tourism	Religious Tourism	Historical Tourism
1	Paninggahan	0.3904	0.5996	0.7452	0.4199	0.5904	0.3078
2	Muaro Pingai	0.0808	0.3588	0.5728	0.1284	0.3012	0.0842
3	Sandiang Baka	0.2742	0.3115	0.2769	0.1084	0.3488	0.3252
4	Sumani	0.0814	0.4268	0.2667	0.1435	0.3400	0.0230
5	Koto Sani	0.1658	0.4295	0.2502	0.2007	0.2058	0.2305
6	Singkarak	0.2922	0.3884	0.1534	0.1136	0.1986	0.2163
7	Aripan	0.1433	0.2842	0.2484	0.0958	0.1914	0.1899
8	Tikalak	0.2226	0.3130	0.1498	0.0389	0.1713	0.1068
9	Kacang	0.2517	0.4062	0.1246	0.0288	0.3008	0.1652
10	Tanjuang Alai	0.1863	0.2567	0.0552	0.0205	0.1860	0.2207
11	Sumpur	0.3426	0.5485	0.0540	0.2163	0.1234	0.1136
12	Batu Taba	0.2268	0.4395	0.7488	0.1899	0.0503	0.0958
13	Guguk Malalo	0.4024	0.4484	0.3900	0.1068	0.7556	0.4389
14	Padang Laweh Malalo	0.3692	0.3772	0.2607	0.0652	0.7048	0.3288
15	Simawang	0.3888	0.3516	0.2529	0.1078	0.6700	0.2814
16	Rambatan,	0.3868	0.5169	0.2502	0.1842	0.3972	0.2658
17	Balimbing,	0.2553	0.2193	0.1578	0.0252	0.2169	0.2268
18	Padang Magek	0.2514	0.2678	0.1454	0.0230	0.1134	0.2295
19	Tigo Koto	0.3372	0.2346	0.2223	0.0252	0.1854	0.2884

Source: 2020 Research Results

1) Quartile Analysis

The initial stage of the regional cluster formation is based on the contribution value of each tourist attraction by using the quartile analysis output description. Following are the results of the calculation of the Quartile analysis from the data above as follows

Table 12
**Quartile Analysis Output Description**

Tourism Objects	Value of Contribution (%)	
	Low	High
Natural Tourism Objects	≤ 0,4658	0,4659 – 0,7904
Cultural Tourism Objects	≤ 0,1265	0,1266 – 0,2139

Religious Tourism Objects	≤ 0, 1084	0,1085 – 0.1272
Historical Tourism Objects	≤ 0,0986	0,0987 – 0,1079
Culinary Tourism Objects	≤ 0,2186	0,2187 – 0,3167
Handicraft Tourism Objects	≤ 0,1158	0,1159 – 0,1854

Source: 2020 Research Results

2) Hierarchical Cluster

The results of the Hierarchical Cluster analysis, namely the formation of a cluster for the development of the Lake Singkarak tourism object as shown in Picture 10 below.
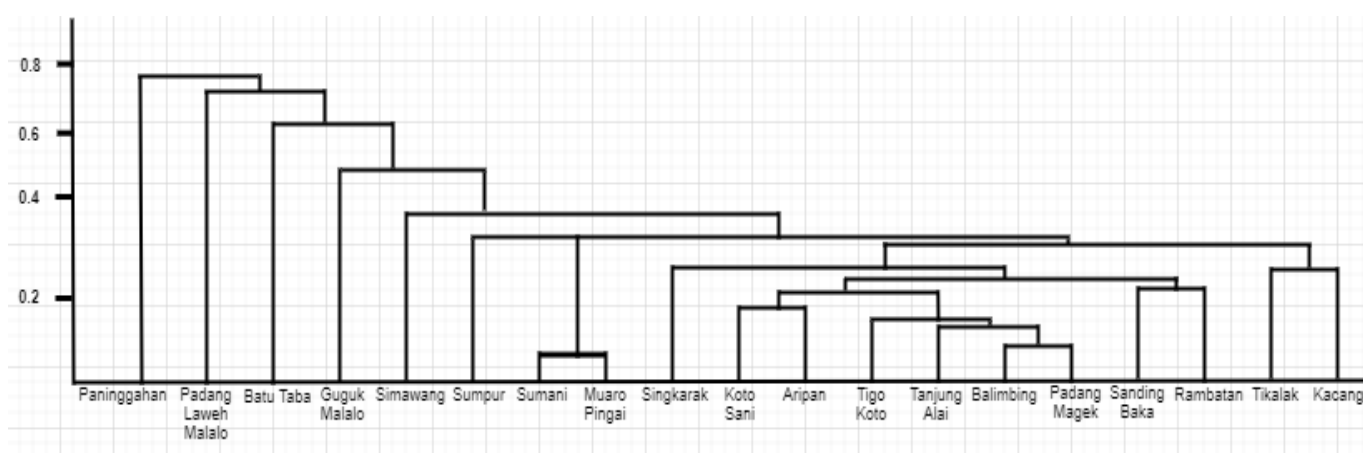
Picture 10. Dendrogram.

The results of the cluster of regional tourism objects are based on the output of the Hierarchical Cluster analysis which is oriented towards the existence of the majority of tourist objects, easy access, availability of labor, and the availability of supporting infrastructure. From the dendrogram and orientation, a cluster of Lake Singkarak tourism object areas can be made as shown in table 13 below:

Table 13

The cluster of Lake Singkarak Tourism Object Development Area

Development Area Cluster Classification	
Regional Characteristics The cluster of tourism development areas which is oriented towards the existence of the majority of tourist objects: Natural Tourism Objects	**The cluster of Natural Tourism Objects:** Paninggahan, Padang Laweh Malalo, Batu Taba and Guguk Malalo
Regional Characteristics Cluster areas for developing tourist objects, availability of facilities and infrastructure: Culinary and Handicraft Tourism Objects	**The cluster of Culinary Tourism Objects:** Simawang, Sumpur, Kacang, Tikalak and Singkarak
	The cluster of Handicraft Tourism Objects: Koto Sani, Aripan and Tigo Koto
Regional Characteristics The cluster of tourism object development areas that are oriented towards the availability of labor: Cultural Tourism Objects	**The cluster of Cultural Tourism Objects:** Padang Magek, Balimbing and Tanjung Alai

Regional Characteristics The regional cluster of tourism object development that is oriented towards easy access: Religious and Historical Tourism Objects	**The cluster of Religious Tourism Objects:** Sandiang Baka and Rambatan
	The cluster of Historical Tourism Objects: Muaro Pingai and Sumani

Source: Research Results 2020

DISCUSSION

The development and identification of Lake Singkarak tourist objects, where there are 19 natural and attractive natural tourist objects, there are also 16 original traditional cultural tourism objects, and there are also 17 religious and historical tourism objects, and there are many culinary and handicraft tourism objects with local flavor and aroma.

Internal factors that support the tourism object of Lake Singkarak, especially the beauty of the beach and its beautiful nature, the presence of unique pandemic fish, mystacoleucus padangensis fish species, or non-existent fish found in other areas. There are many interesting and exciting natural phenomena, stable river water sources, safe and comfortable environments, strategic environmental support functions, beach bathing, diving, rowing boats, gliding, hiking, rafting, and various natural attractions. cultural tourism objects, religious tourism objects, historical tourism objects, handicraft tourism objects, and culinary tourism objects.

Religious and historical tourism objects that are visited by many tourists are the surau and the grave of inyik junjung sirih in rimbo Hulu paninggahan, the cemetery of the grave of syeh anku dubelas in malalo, the Tuo Mosque of Nagari Padang Magek. Cultural Tourism witnesses the Silat dance event, Sewa Dance, Randai Dance, Plate Dance, Indang Dance, Arakan Talempong, Gendang, seruling sarunai that accompanying the Anak Daro-Marapulai, caranao batiray that contents with betel-nut-sadah-gambir in traditional events at the traditional ceremony of manduduk ninik mamak datuk, manti, panito, and dubalang adat during the marriage of the children of the Minang nephews. Natural tourism panoramic views of Gagauan Peak and panoramic views of Ahmad Sadin Peak, spring baths, Cinangkik, Tanah Merah Tabek, Gobah Hill, Para Layang, White Sand Beach, Pariangan Beach, Macau Duo Peak, Kincia Kamba Tigo, Aur Duri Peak and Lake Singkarak Hydroelectric Power Plant. Culinary of pangek fish sasau, tapas padeh fish rinuk, fish curry tilan, fried jabuih, fried balingkah fish, fried turik fish and fried and pangek sasau and fish bilih, lamang tapai, abuk cake, garubik, dumplings, atoms, lapek bugih, sunsulung, and other cakes. Mansiang plait woven handicrafts, hats, prayer mats, kampie, unjui, pillows, mattresses and others.

External factors that are supporting are accessibility, namely the ring road of Lake Singkarak is good, public transportation from the city center is smooth, supporting facilities around tourism objects, namely health facilities, communication facilities, hotels/inns already

exist and restaurants are widely available. Internal factors that become obstacles/weaknesses are the lack of maintenance and management of public facilities, toilets, parking areas, places to stay, lack of promotion, and a threat to the culinary tourism of Lake Singkarak with the emergence of fast-food restaurants such as Pizza Hut, KFC, catfish pecel and other better tourist spots.

The position of the development of Lake Singkarak tourism objects as shown in Picture 11, the position of natural tourism objects and culinary-handicraft tourism objects is located in quadrant I which means Aggressive and expansion, this position shows a strong and likely tourism object, a progressive strategy, meaning that it is in prime and steady condition. The position of cultural tourism objects is located in quadrant II which means diversification-combination and the position of religious-historical tourism objects are located in quadrant III which means Turn Around and Stability.
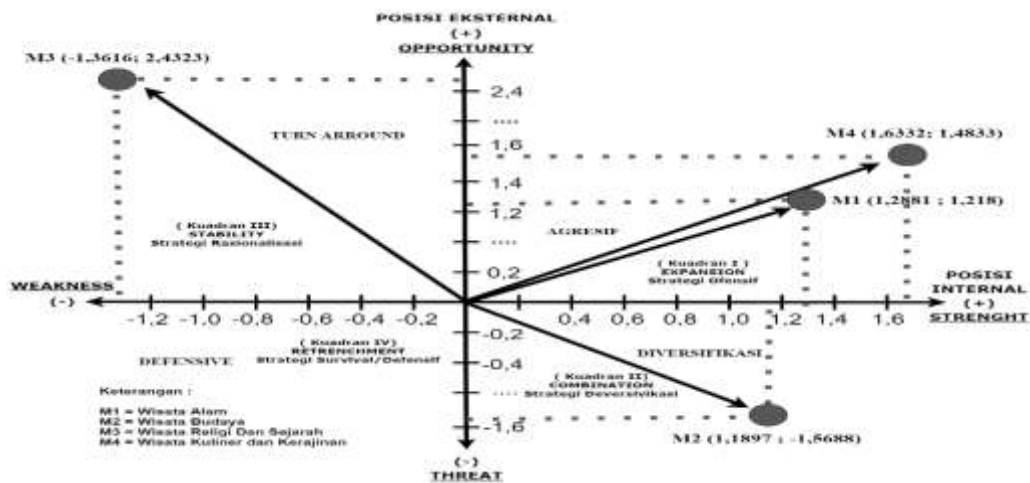
Picture 11.
Combined Lake Singkarak Tourism SWOT Quadrant

The results of the strategic formulation of natural tourism objects and culinary-handicraft with the S-O (strength opportunities) strategy are a Growth Oriented Strategy with a Rapid Growth Strategy, increasing the rate of growth and maximizing the use of all opportunities and the Stable Growth Strategy, maintain existing growth (steady increase, do not let it go down). The formulation of a cultural strategy with the S-T (strength-thread) strategy is a Turn around strategy, which is a turning strategy to reverse a negative trend to a positive one by the manager and Guirelle strategy, which is to change the function it has with other functions which are completely different and have positive values. Formulation of religious strategies and historical strategies of W-O (weak-opportunities), namely minimizing weaknesses and taking advantage of opportunities with the Aggressive Maintenance Strategy, improving the weaknesses to maximize

utilization. Opportunities and Strategies Selective Maintenance strategy is an internal consolidation strategy by maximizing the improvement of weakness factors to take advantage of opportunities.

Clusters of natural, cultural, religious, historical, culinary, and handicraft tourism objects, namely 1. The cluster of natural tourism object development areas is in the western region of Lake Singkarak, namely Paninggahan Village, Padang Laweh Malalo, Batu Taba, and Guguk Malalo because in the western region there are hills with the majority of the panoramas are interesting. 2. The development cluster for Culinary and Handicraft tourism objects is in the eastern region of Lake Singkarak, namely the Villages of Sumpur, Simawang, Kacang, Tikalak, and Singkarak because the area is supported by the railroad and the Sumatra crossing as well as the number of shops and restaurants where culinary and handicrafts are located. 3. Cluster of Cultural Tourism Objects in the northern region of Lake Singkarak, namely the villages of Padang Magek, Balimbing, and Tanjung Alai, the majority of the people of the region have the expertise and pursue cultural tourism objects. 4. The religious and historical tourism object cluster is located in the southern part of Lake Singkarak, Villages of Sumani, Sandiang Baka, Muaro Pingai, and Rambat. The tourist attraction cluster shows in the map below.

CONCLUSION

Identification of Lake Singkarak tourism objects, there are 19 natural tourism objects, 16 cultural tourism objects, 17 religious tourism objects, 18 historical tourism objects, 17 culinary tourism objects, and 9 handicraft tourism objects.

The position of the strengths, weaknesses, opportunities, and threats of Lake Singkarak tourism objects from the Swot quadrant, where the position of natural attractions and culinary-

handicraft tourism objects is located in quadrant I, the position of these attractions shows a strong tourism object and has the opportunity to develop and the position of a tourist attraction. culture is in quadrant II, this position is diversification-combination and the position of religious-historical tourism objects is in quadrant III, this position is Turn Around and Stability.

The strategy for developing Lake Singkarak tourism objects with strategies, namely: Natural and culinary-handicraft tourism object strategy with S-O strategy (strength opportunities), Growth-Oriented Strategy with Rapid Growth Strategy and Stable Growth Strategy. Cultural strategy with S-T (strength-thread) strategy and Guirelle strategy. Religious strategy and historical strategy with W-O (weak-opportunities) strategy with Aggressive Maintenance Strategy and Selective Maintenance Strategy.

The cluster for the development of tourism objects for Lake of Singkarak, namely: 1. The cluster of the Natural Tourism object development area is in the western region of Lake Singkarak 2. The cluster for developing culinary and handicraft tourism objects is in the eastern region of Lake Singkarak. 3. Cluster of Cultural Tourism Objects in the northern region of Lake Singkarak. 4. The religious and historical tourism object cluster is located in the southern part of Lake Singkarak.

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