Pusaka: ***Journal of Tourism, Hospitality, Travel and Busines Event***
Volume 4, No. 1 (2022) 70-75
ISSN 2656-1301 (Online) 2656-1336 (Print)

Arrangement of Makassar City Water Sports Tour Packages based on Geographic Information Systems

Zulkifli Harahap
Politeknik Pariwisata Palembang
Enos Julvirta,
Politeknik Pariwisata Palembang
Yayan Dian F.
Politeknik Pariwisata Palembang
Muh. Musawantoro
Politeknik Pariwisata Makassar
Darsyaf Hadi W.
Politeknik Pariwisata Makassar

Corresponding email: dian.fitriansyah@rocketmail.com

ABSTRACT

This study aims to model the Tirta Tour package in Makassar City. This research method uses a qualitative approach, the data sources are obtained through surveys with field notes, interviews and documentation, while the data processing techniques use the help of ArcGIS 10.5 software. The data collection techniques used in this study are: Focus Group Discussion (FGD), interviews, study comparison and literature study were used for qualitative data. Based on the processed data, it was found as follows: 1) Water tourism potential in Makassar City as a result of analysis 3A: Accessibility, Amenity and Activities in general, the cluster of islands in the Spermonde Archipelago has the potential to become superior marine tourism with current conditions it can be said to be natural. heritage landscapes. 2) Mapping model for Tirta Tour Packages in Makassar City in the form of Tirta Travel Routes with a Stopover Movement Pattern with 4 Tourist Attractions. This study recommends the preparation of an online water tourism information system for Makassar City so that it can be accessed anytime and anywhere.

KEY WORDS: Tirta Tourism; Mapping; Tour Packages

INTRODUCTION

Indonesia is a maritime country, the Geospatial Information Agency (BIG) states that the total length of Indonesia's coastline is 99,093 km² (Geospatial Information Agency, 2018) which has the longest coastline after America, Canada and Russia. Furthermore, almost two-thirds of the total area of Indonesia or around 3,273,810 km² is marine waters which makes Indonesia the largest archipelagic country in the world (Geospatial Information Agency, 2018). Seventy percent of Indonesia's territory is waters, mostly sea (Hasriyanti. 2019). This geographical condition then makes Indonesia a very strategic country because it is located in a tropical area between the continents of Asia and Australia as well as the Pacific Ocean and the Atlantic Ocean (Laurence A Manullang, 2020). sea, coast and islands.

Recreation is defined as a fun activity, enjoying a new social environment as well as the experience (Simmons, 2016). While in a psychological context defines recreation as an emotional and inspirational human experience arising from recreational acts (A. Mandic, 2018). Thus, tourists / visitors arrive at a destination to relax. (Smith, 1992) uses the term recreation as an activity to renew or recreate experiences.
The current recreational trend is transforming from indoor models to outdoor activities, such as jogging, river walking, unique spot photography, camping, diving and so on. In line with that, (Buckley, 2000) suggests that there has been a shift from a simple non-commercial outdoor recreation culture to a more modern demand-driven commercial sector with new forms of recreation with take advantage of multiple industries.

Makassar City is a tourist destination that has potential marine tourism resources to be developed. Geographically, Makassar has a lot of potential to be developed. Physically, historically the city of Makassar was formed from sedimentary rocks as alluvial deposits from two major rivers, namely the Jeneberang River and the Tallo River. Furthermore, the city of Makassar originated from a small

Pusaka: *Journal of Tourism, Hospitality, Travel and Busines Event*
Volume 4, No. 1 (2022) 70-75
ISSN 2656-1301 (Online) 2656-1336 (Print)

village that grew along the coastline starting from the formation of two cities, namely Tallo as the capital of the Tallo Kingdom at the mouth of the Tallo River and Sombaopu as the capital of the Gowa Kingdom at the mouth of the Jeneberang River (Yudono, et al, 1998).

Makassar City as a Center of Excellence (CoE) for marine tourism. Located on the southern coast of Sulawesi Island, which has 11 small islands. These small islands have coral reefs and seagrass beds, beautiful beach and sea panoramas, are rich in diversity of potential resources and are supported by tourism service utilization activities. The small islands include Kayangan Island, Samalona Island, Kodingarengkeke, and Lanyukang Island, with a total area of 178.5 hectares or 1.1 percent of the land area. In addition, Makassar City has developed the coastal and marine areas of Makassar City both directly and indirectly, such as Losari Beach, Akkarena Beach, Tanjung Bunga Beach Tourism, with tourism activities, such as boating, swimming, sky water, fishing tours, amusement park tours. and outbound developments located at Trans Studio and Akkarena Beach.

Problems in the development of tourism in Makassar City have identified a lack of alternative tourist attractions on offer. So that an integrated plan is needed that aims to optimize the potential for marine tourism. (Goddall 1991) suggests that tourism products are tangible and intangible, packaged in a unified series of trips that can only be enjoyed, if the entire series of trips can provide a good experience for people who travel or use the product. Thus, it is necessary to package tour package products that combine several tourism components such as transportation, accommodation, eating and drinking, and tourist objects that are packaged into a tourist product.
Tour packages are linked to the movement of tourists in their activities. Gigi & McKercher (2006) summarized the movement of tourists into three main patterns, namely single patterns, multiple patterns, and complex patterns. The single pattern movement pattern is single point, while the multiple pattern movement pattern is divided into three types, namely base site, stopover, and chaining loop. For movement patterns, complex patterns are divided into two types, namely destination region loops and complex neighbors. Thus, it can be realized in the packaging of water tourism products by compiling a visualization of the movement of tourists through water sports tourism products in Makassar City.

Geographic information systems can be used to visualize tour packages. Remote sensing techniques and geographic information systems (GIS) have been used as tools for various purposes of spatial analysis in the tourism sector. Ridwan (2018).

uses the Geographic Information System to describe data on the distribution of tourism destinations in North Toraja Regency which consists of graphic data and attributes of each tourist attraction.

RESEARCH METHOD

This study uses a qualitative approach involving survey research techniques, interviews, field notes and documentation (Moleong, 2007). Primary data was obtained by conducting surveys to research sites, recording phenomena that occurred and documenting objects. Secondary data obtained by observation and interviews. a number of related parties, for example the Makassar City Tourism and Culture Office, Tourism Object Managers and reference studies. Meanwhile, the results of observations and findings in the field were analyzed using a qualitative description method and using ArcGIS software to visualize the data, in the form of spatial data and descriptions. Thus, it is obtained a comprehensive picture in the form of graphic-attribute data and a description of each water tourism object in Makassar City.

RESEARCH SITE

Administratively, Makassar City is divided into 15 sub-districts with 153 sub-districts. Among the 15 sub-districts, there are seven sub-districts bordering the coast, namely Tamalate District, Mariso District, Wajo District, Ujung Tanah District, Tallo District, Tamalanrea District, and Biringkanaya District. The administrative boundaries of Makassar City include the north bordering Maros Regency, the east bordering Maro Regency, the south bordering Gowa Regency and Takalar Regency and the west bordering the Makassar Strait.

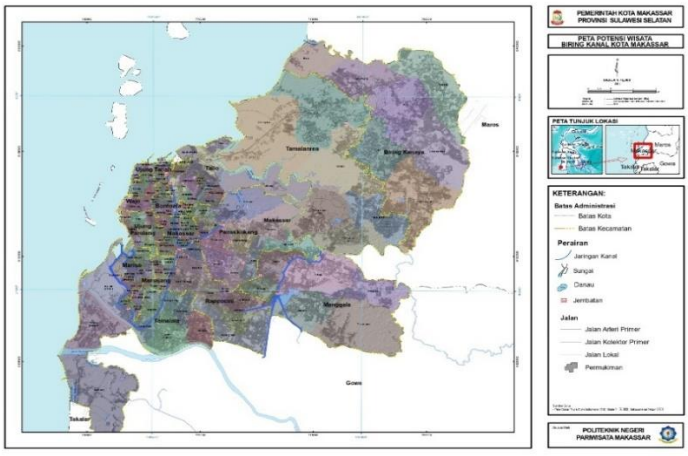

Fig. 1. Makassar City Administration Map

Pusaka: *Journal of Tourism, Hospitality, Travel and Busines Event*
Volume 4, No. 1 (2022) 70-75
ISSN 2656-1301 (Online) 2656-1336 (Print)

RESEARCH DATA AND EQUIPMENT

The data used in this study are: a. Data for the distribution of Tirta tourism objects in Makassar City in 2021. b. DEMNAS-BIG National Elevation Model Data. c. Field Survey Data. The tools used in this research include hardware and software. The hardware used is an Acer brand computer with AMDA Ryzen 52500 U Radeon Vega Graphics (R) Core (tm) i5-2450 M CPU @ 2.50 GHZ specifications, Memory 8 GB; Operating System: Microsoft Windows 10 and the software used includes:

1. ArcGIS version 10.5 as software;
2. Word processing and spreadsheet software (MS Word and MS Excel) for report preparation and tabular data processing;
3. Global Positioning System (GPS) brand Garmin, used as a tool in determining the direction or position in the field; and;
4. Canon camera to record important objects in the field.

IMPLEMENTATION

Broadly speaking, the process in the following research is divided into four stages, namely:

a. Preparation phase The preparation stage includes identifying problems with the object of study and reviewing literature related to the scope of the study.
b. Data collection process At the stage of the data collection process in the form of spatial and non-spatial data such as the coordinates of tourist sites taken using GPS, photos of tourist sites, and other non-spatial data taken through observation and interviews with the relevant agencies or communities.
c. Data processing At this stage of the data management process, by inputting the coordinates of tourist locations into the ArcGIS 10.5 software, then creating a database that will be equipped with non-spatial data such as names, types, tourist attractions, etc.
d. Data visualization process At the data visualization stage, after getting the coordinates of each location and database, then carrying out the map layout process, namely by displaying each point of the water tourism location on the map, then visualizing the tour package using a tourist movement model.

RESULTS AND DISCUSSIONS

Field surveys were carried out using handheld GPS devices and cameras to obtain spatial data and non-spatial data from each water tourism object along with other tourism components such as accommodation, amenities and accessibility.

Table 1. The location of the Tirta Tourism Attraction in the Small Islands of Makassar City

No	Destination	Coordinate point	
		South latitude	East Longitude
1.	Pulau Samalona	5° 7'31.01"S	119°20'36.38"E
2.	Pulau Lanjukang	4°58'47.80"S	119° 4'33.10"E
3.	Pulau Kodingareng Keke	5° 2'53.05"S	119°19'45.04"E
4.	Pulau Badi	4°58'3.53"S	119°17'14.47"E
5.	Pulau Khayangan	5° 6'50.96"S	119°24'1.93"E

Table 2. The location of the Tirta Tourism attraction in the Makassar City area and its surroundings

No	Destination	Coordinate point	
		South Latitude	East Longitude
1.	Rammang-Rammang	4°54'55.81"S	119°36'44.82"E
2.	Leang-Leang	4°57'52.46"S	119°41'59.84"E
3.	Pelabuhan Paotere	5° 6'43.38"S	119°25'12.65"E
4.	Pantai Losari	5° 8'36.97"S	119°24'27.20"E
5.	Phinisi Sailing	5° 8'38.69"S	119°24'24.78"E
6.	Jalan Somba Opu	5° 8'27.08"S	119°24'26.18"E

Table 3. Restaurant and Accommodation Location

No	Destination	Component	Coordinate Point	
			South latitude	East longitude
1.	Ratu Gurih Seafood Market & Resto	Restaurant	5° 8'48.17" S	119°24' 40.25"E
2.	Phinisi Meals	Restaurant	5° 9'7.64"S	119°24' 15.47"E

Pusaka: ***Journal of Tourism, Hospitality, Travel and Busines Event***
Volume 4, No. 1 (2022) 70-75
ISSN 2656-1301 (Online) 2656-1336 (Print)

3.	The Rinra	Accomodation	5° 9'10.18" S	119°24' 14.18"

GIS-based Tour Package Planning

a. Map of Tirta Tourism Distribution in Makassar City and its surroundings.

These locations are spread across several locations, such as Samalona Island, Pulau, Lanjukg, Kodingareng Keke Island, Badi Island, Khayangan Island, Rammang-Rammang, Leang-Leang, Harbor, Paotere, Losari Beach, Phinisi Sailing and Jalan Somba Opu. The following is a map of the distribution of tourist attractions:

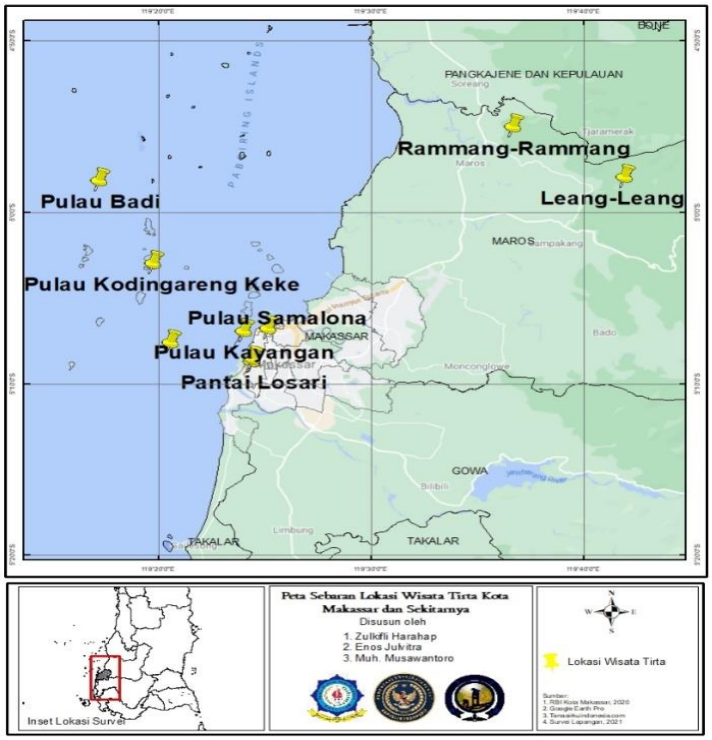

Fig. 2. Map of Tirta Tourism Distribution in Makassar City and its surroundings

b. Accommodation Distribution Map
Many tourists prefer the island as a destination because the facilities are quite complete. There are also many local residents who provide some food sales, rental of snorkeling facilities and individual accommodations. However, if visitors also want luxury facilities then there are several choices of restaurants or accommodations available. around the destination.

Table 4. Restaurant Selection

Restaurant	City	Breakfast	Lunch	Dinner
Ratu Gurih Seafood Market & Resto	Kota Makassar	Rp 80,000	Rp 80,000	Rp 80,000
Phinisi Meals	Kota Makassar	Rp 80,000	Rp 80,000	Rp 80,000

Table 5. Accomodation Selection

Hotel	Type	Price			Ss
		Single	Double	Ex bed	
The Rinra	Deluxe	Rp 880,000	Rp1,005,000	Rp225,000	Rp565,000
The Rinra	Premiere	Rp1,650,000	Rp -	Rp225,000	Rp -
The Rinra	Paviliu m Suite	Rp3,750,000	Rp -	Rp225,000	Rp -

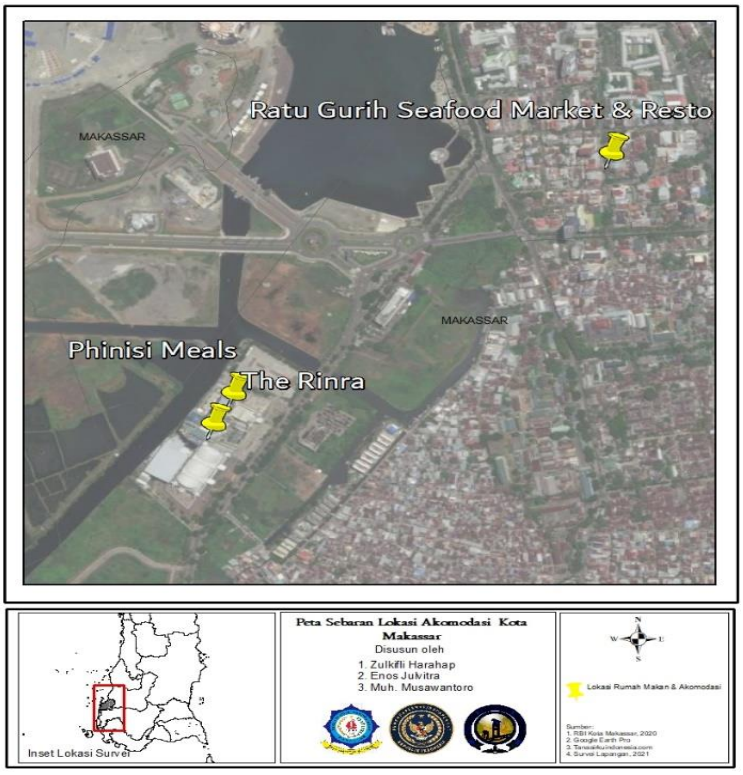

Fig. 3. Makassar City Accommodation Location Distribution Map

Pusaka: ***Journal of Tourism, Hospitality, Travel and Busines Event***
Volume 4, No. 1 (2022) 70-75
ISSN 2656-1301 (Online) 2656-1336 (Print)

c. Stopover Tour Package Planning

Based on the results of data analysis, it can be concluded that the movement pattern developed is a stopover model. This model is used due to the location of tourist attractions which are quite far from the city center, especially small island tours which are the leading water tourism in Makassar City. This tour package has the potential for Tirta Tourism Activities in Makassar City and its surroundings, both in terms of Attractions, Amenities, Accessibility, Activities, and Anselari. The islands that are currently highly recommended that are unique based on the activities carried out by tourists are the islands of Samalona, Lanjukg, and Kodingareng. The beauty of the island and curiosity about rides, as well as activities that can be done on the island are the main attractions of the islands while special interest tourism activities, such as jet skiing, sailing, camping, snorkeling, fishing, and swimming.

Table 6. Tirta Travel Route on a Stopover Movement Pattern with 4 Tourist Attractions

Pola Pergerakan	**Keterangan**	**Daya Tarik wisata utama**
	Pergerakan yang menuju satu titikdestinasi utama dimana mengunjungi titikdestinasi lain (sekunder) dalam proses pergerakannya Daya Tarik Pendukung Pulau Khayangan: Pulau Lanjukang, Pulau Badi, dan Pulau Kodingareng Keke. Daya Tarik Pendukung Pulau Samalona: Pelabuhan Paotere, Jalan Somba Opu,	Pulau Khayangan Pulau Samalona Rammang-Rammang Leang-Leang Phinisi Sailing

Fig. 4. Tirta Tourism Makassar City and its surroundings with a stopover movement

CONCLUSION

Based on the results of the study, it is concluded as follows:

1. Water tourism potential in Makassar City as a result of analysis 3A: Accessibility, Amenity and Activities in general, a group of islands in the Spermonde archipelago has the potential to become superior marine tourism with current conditions it can be said as a natural landscape heritage.

2. Mapping model for Tirta Tour Packages in Makassar City in the form of Tirta Travel Routes with a stopover Movement Pattern with 4 Tourist Attractions. Supporting Attractions 1 include Lanjukg Island and Paotere Harbor: Supporting tourist attractions 2 include Badi Island, Jalan Somba Opu; 3 supporting tourist attractions including Kodingareng Keke Island, Losari Beach; The main tourist attractions include Khayangan Island, Samalona Island, Rammang-Rammang, Leang-Leang and Phinisi Sailing. This study recommends the preparation of an online water tourism information system for Makassar City so that it can be accessed anytime and anywhere.

REFERENCES

Agus, (2019). Analisis Daya Dukung Potensi Wisata Bahari Baru Di Kawasan Wisata Pulau Weh Sebagai Pulau Terluar. Jurnal Pusaka. Vol 1, No 2, pp 2-13.

Agus & Ridwan. (2019). Pemetaan Objek Wisata Alam Kabupaten Kepulauan Selayar Berbasis Sistem Informasi Geografis Arcgis 10.5. Jurnal Pusaka. Vol 1, No 2, pp 2-13.

Buckley, R. (2000). Net trends: Current issues in nature, eco and adventure tourism". International Journal of Tourism Research, Vol. 2, pp. 437-444.

Goddall. (1991). Pengaruh Kualitas Wisata. Media.neliti.com

Gigi, L. McKercher, B. (2006). Understanding Tourist Movement Patterns in A Destination: A GIS Approach. Hongkong

Hasriyanti. (2021). Fisherman Perception According to Social Stratification on Child Education in Aeng Batu-batu Village, North Galesong District, Takalar District. LA GEOGRAFIA VOL. 17 NO 2 Februari 2019 p-ISSN: 1412-8187 e-ISSN: 2655-1284

Manullang, L. A. (2020). Geograpis Indonesia. Universitas Timbul Nusantara, https://utira-ibek.ac.id/3832-2/

Mandic, et al. (2018). Tourism Infrastucture, Recreational Facilities and Tourism Development. Tourism and Hospitality Management, Vol.24, No.1 2028. Htpp://doi.org/1.0.20867/thm.24.1.12

Moleong, L. J. (2007). Metodologi Penelitian Kualitatif. Edisi Revisi. Bandung: PT Remaja Rosdakarya

Ridwan, M. Indonesia. Peta Sebaran Daerah Tujuan Wisata Kabupaten Toraja Utara Berbasis Sistem Informasi Geografis (SIG). LP3M: Politeknik PariwisataMakassar (Vol 2,1 (2018): Jurnal Kepariwisataan, Februari 2018

Simmons, D., Moore, K. (2016). Recreation, In: Jafari, J., Xiao, H. (eds.), Encyclopaedia of Tourism, Springer Reference, Switzerland, pp. 777-780.

Smith, S. (1992). Dictionary of Concepts in Recreation and Leisure Studies. New York: Greenwood. DOI:10.1002/1522-1970(200011/12)2:63.3.CO;2-R

Widjaja, H. R. (2021). Inventarisasi Sarana dan Prasarana, Daya Tarik Wisata Kabupaten Barru dengan Pemodelan Sistem Informasi Geografis. Jurnal Pusaka. Vol 3, No 2, pp 94-96.

Yudono, et al. (1998). Expert System Supporting Land Use Planning in U. Pandang City, in Proceedings Enviromental Management in Asian Countries, (Ed: Satoshi Hagishima), January 9-10, p51-67, Japan.