



Applied Study of Community-Based River Ecotourism Model In Gowa Regency

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Abstract

Tourism is one of the major industries that continues to grow in university studies. This study aims to reveal a model of tourism business development by supporting the improvement of community enterprises in the Biroro River Bontolung area, Gowa Regency. The applied method is descriptive-qualitative with unit analysis of product resources and social resources at the level of the research site. This research identified the concept of tourism activities that could be developed in the Biroro Bontolung river area based on the concept of experiential tourism. In addition, this research and interests in the mapping of relevant stakeholders, to be further explored in development decision-making for government and community.

Keywords: ecotourism models; river excursions; visit to the community base

PRELIMINARY

The COVID-19 pandemic that has occurred since 2019 has had an impact negative to tourism growth global (Ioannides & Gyimóthy, 2020), marked by a decrease in arrivals international travelers 65% or equivalent 440 million visits in the first half of the year 2020 (UNWTO, 2020). Asia Region- Pacific recorded to suffer growth the biggest negative of tourist visits international by -96% above average global ie -87% (UNWTO, 2021) ¹. international travel restrictions, regional and local have influenced tourism system, namely travel international, domestic tourism, day visit and air transportation industry, ship cruises, public transport, accommodation, restaurant, convention, festival or event sport (Gössling, Scott, & Hall, 2021). On the other hand, the pandemic brought positive impact on decreasing over tourism and provide opportunities for region sub-urban for develop draft tour environmentally sustainable (Koh, 2020) and smart tourism (Susanto et al., 2020). This indicator shows the impact pandemic to changing preferences, market perception and behavior on travel tourism (Peters et al., 2020). Responding to this change, policy makers tourism needs to follow up with appropriate product development with these changes (Brouder et al., 2020) ².

South Sulawesi Government in Plan Master of Tourism Development 2015-2030 (RIPPARDA) ³ has established 7 Provincial Tourism Destinations (DPP) which consists of a Tourism Strategic Area Province (KSPP) and Tourism Area Province (South Sulawesi Provincial Government, 2015). The DPP area consists of three Regional Tourism Destinations (DPD). First, the Southern

¹UNWTO. (2021). Tourism In The 2030 Agenda. Tourism In The 2030 Agenda. <https://www.unwto.org/tourism-in-2030-agenda>

²Brother et al., 2020

³Tourism Development Master Plan 2015-2030 (RIPPARDA) South Sulawesi

Regional DPD, namely Makassar, Gowa and its surroundings, Bulukumba and its surroundings, the Selayar Islands and its surroundings. Second, the Central Region DPD, covering Wajo and its surroundings, Pare-Pare and its surroundings. Third, the DPD for the North region, covering Palopo and its surroundings. Toraja and its surroundings. Gowa Regency is one of the one KSP P with the theme of nature tourism with the iconic Malino City which relevant to the issue of behavior change tourists during a pandemic. Tourism development in this area has a nature tourism theme mountains and their inherent features including rivers, valleys, hills, and countryside with effort environmental conservation, especially Mount Bawakaraeng .

In another policy document (Bappeda, South Sulawesi , 2017) ⁴, Gowa Regency is designated as a Tourism Area Superior. This matter related to regional resources suitable for adventure activities based on mountains, jungles and rivers . The designation of this area provides impact on development strategy activities at a site scale that do not requires physical development massive, but still meets the rules Standard service tourist.

Development is intended for support *quality-tourism experiences* (Beardsley et al., 2018) and *experiential tourism* (Kozak & Kozak, 2018) ⁵. Malino City , Tinggimoncong District , Gowa Regency is one of the designated area as a development area tourist. Malino town is in the mountains with landscapes in the form of mountains, hills, valley with several streams and waterfall as the main attraction. Land cover in the form of forest and tea plantations (although no longer producing) complete the attraction this area, reinforcing the theme special interest tourism development river based. One of the tourist spots existing ones, namely 'Takapala' waterfall and 'Meet your soulmate' waterfall located in Bontolerung Village. In fact, this area has been frequented by local tourists . However, the development of activities tourism in this area has not been carried out optimally. The potential of the area Variable has not been able to be used for provide a visiting experience for traveler. This is related to no development directions river-based tourism activities and governance manage tourism that is still based on on government initiatives. In fact, several studies have shown that that the development of river tourism can have a positive impact on regional economy (Ajake & Amalu, 2012; Budisetyorini et al., 2021; Putro et al., 2021), environmental conservation (Mafruhah et al., 2020), and social change (Sheldon & Fesenmaier, 2017).⁶

Alternative Bontolerung river tourism development using a combination of approaches community-based tourism (Khalid et al., 2019) ⁷and experiential tourism (Meacci & Liberatore, 2018; Smith, 2006) so that obtained formula strategy development of river tourism activities based Experience which exploit the potential of the community as the main actors

⁴Bappeda, South Sulawesi, 2017

⁵Beardsley, M., Graaf, E. van der, Grandpré, F. de, Hohn, A., Ilves, R., Kadijk, H., Komppula, R., Konu, H., Maris, DK, LeBlanc, M. ., Matteucci, X., Mitas, O., Nawijn, J., Naudé-Potgieter, R.-A., Peperkamp, E., Pesonen, J., Puczkó, L., Royer, C., Smith, MK. , ... Zátori, A. (2018). Managing Quality of Life in Tourism and Hospitality (M. Uysal, MJ Sirgy, & S. Kruger (eds.)). CABI Publishing.

⁶Ajake, AO, & Amalu, TE (2012). The relevance of tourism on the economic development of Cross River State, Nigeria. *Journal of Geography and Regional Planning*, 5(1), 14–20. <https://doi.org/10.5897/jgrp11.122>

⁷Khalid, S., Ahmad, MS, Ramayah, T., Hwang, J., & Kim, I. (2019). Community Empowerment and Sustainable Tourism Development: The Mediating Role of Community Support for Tourism. In *Sustainability* (Vol. 11, Issue 22). <https://doi.org/10.3390/su11226248>

in tourism. Tourism development research in river area through the principle experiential learning and community- based tourism still has a chance to expand. It is known that area development concept tourism has focused on physical development of the area, or at least starting from the thought that mass-tourism is an option the best for the tourism area.

This research seeks to provide different perspectives on how a river area is packed into a product that delivers experiences and express interests and the interests of the stakeholders in in it. Considering these conditions, applied research was carried out for dig up data and information about river tourism product resources and social resources in the village Bontolerung , Tinggimoncing District , Gowa Regency .

The research aims to formulate a model development of tourism based activities river in the Bontolerung River, Bontolerung Village , Tinggimoncong District, Gowa Regency.

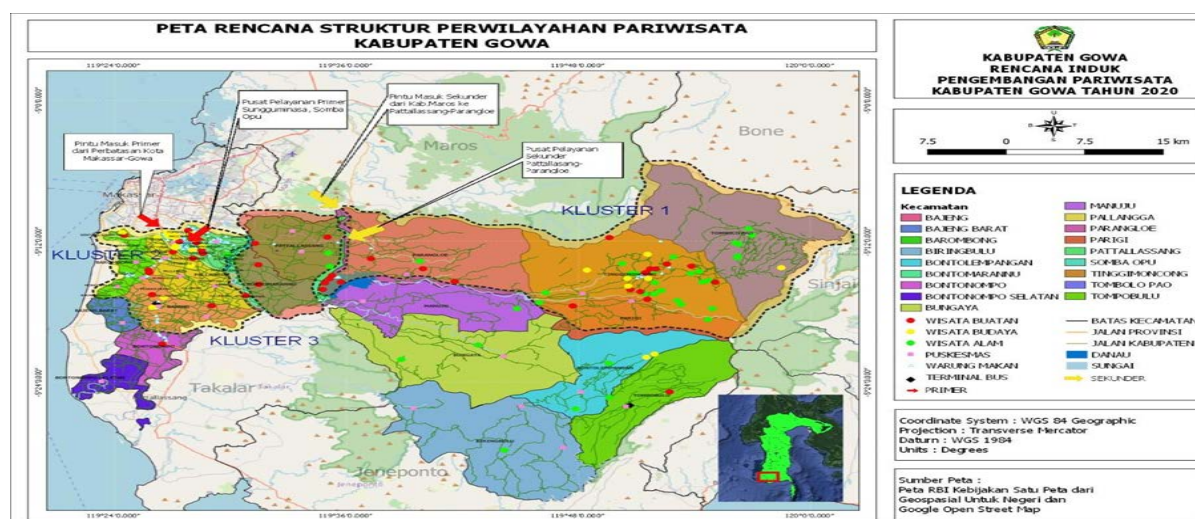


Figure 1. Map of the Gowa Regency Tourism Territorial Structure plan
Source:RIPPARKAB Gowa (2021-2035)

RESEARCH METHODS

This study uses a descriptive study method through a qualitative approach (Cresswell, 2018) ⁸. A study that describes the resource potential of an object and its development model. The research location is the Bontolerung river area in Bontolerung Village, Tinggimoncing District, Gowa Regency. The research was conducted in July-August 2022. The method of data collection was through field observations, open interviews and desk studies for library research. The selected informants were the Head of the Department and Staff of the Tourism and Culture Office of Gowa Regency, the Head of Tinggimoncong Sub-district, the Lurah and Staff of the Bontolerung Village, tourism business actors, especially those managing river tourism and the Bontolerung community. Analysis of river tourism development uses a *community-based tourism approach* (Khalid et al., 2019) ⁹and *experiential tourism* (Meacci & Liberatore, 2018; Smith, 2006). An antithesis approach to the previous approach which exploited the physical development of the area or *mass-tourist* as a measure of tourism

⁸Creswell, JW, & Crewell, JD (2018). *Research design* (5th ed.). SAGE Publication

⁹(Khalid et al., 2019)

performance. On the other hand, these two approaches will provide different perspectives, namely how an area is packaged into a product that provides experience *and* reveals the interests and interests of the stakeholders in it.

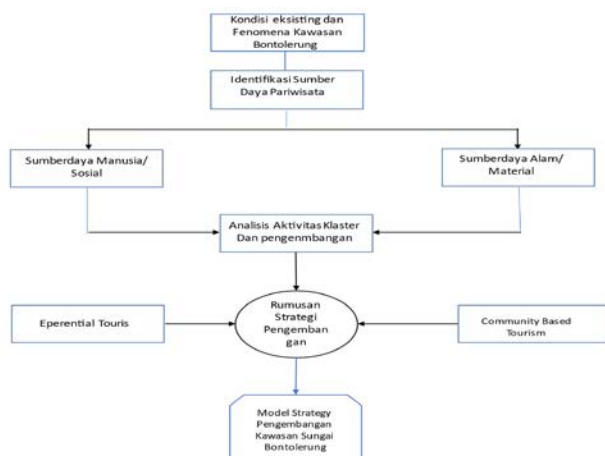


Figure 2. Research Operational Framework

RESEARCH RESULTS AND DISCUSSION

General condition

Gowa Regency, one of 24 regencies/cities in South Sulawesi. Located 10 km from the center of Makassar City, the area is flanked by a number of regencies/cities. The northern part is with Makassar and Maros, the southern part is with Takalar and Jeneponto, the western part is with Makassar and Takalar, the eastern part is Sinjai, Bulukumba and Bantaeng. It has an area of 1,888.33 km² (3.01% of South Sulawesi's area), divided into 18 sub-districts with 167 villages/kelurahan. The characteristics of the area can be divided into two, namely lowlands and highlands, each with 9 sub-districts. The city of Sungguminasa, the capital of the district, includes three sub-districts: Somba Opu in its entirety, Partially Pallangga and Partly Bontomarannu. There are three largest sub-districts which are all located in the highlands, respectively: Biringbulu (11.26%), Kuncio Pao (251%) and Parang Loe (11.75%) of the area of Gowa Regency.

In terms of population, Gowa Regency is the third area after Makassar City and Bone Regency which has the largest population of 659,513 (2011). The main occupation of the community is still dominated by the agricultural sector (46.98%), followed by trade (17.74%), services (11.90%), and industry (10.74%). With this pattern and structure of work, the Gross Regional Domestic Product (GRDP) per capita in 2020, based on constant 2010 prices, is 27.45 million with an average economic growth rate of 6.5 percent. This is quite interesting. Because even though it is in the midst of the Covid-19 pandemic, the growth trend remains positive at 1.76 percent, while South Sulawesi experienced a contraction of 0.70 percent. In addition, this area was previously the epicenter of the transmission, in addition to Makassar City and Maros Regency. However, this achievement does not mean that it has been able to overcome a number of problems in this area. A number of regional development problems are described below.

1. The quality of life of the community is not yet optimal. Although in the last 10 years, the Human Development Index has increased, this area is still in the middle caste of the 24 regencies/cities in South Sulawesi. The problem of the poverty rate, although it has decreased from 7.53 percent (2019) to 7.38 percent (2020), however, the quality of poverty has not changed. Efforts to reduce poverty, create job opportunities, and improve the quality of human resources. This includes issues of access and service quality as well as pro-people, pro-growth, pro-jobs, pro-poor, and pro-environment programs.

2. The regional economy is not yet optimal. Although a number of macroeconomic indicators have increased, such as; economic growth, increase in GRDP, income per capita, the amount of public saving, investment, but it does not guarantee the creation of a proportional distribution of income. Most of the people still have low to middle income. High-income groups are still enjoyed by a small part of the population. Therefore, high economic growth on the one hand needs to be accompanied by the movement of the real sector, especially sectors that absorb a lot of labor, such as agriculture, mining and the manufacturing industry.

3. The availability of adequate infrastructure is still limited. Infrastructure in Gowa Regency is still limited. Although the budget for the allocation is quite large, the coverage area of this area is very wide, plus nine of its areas are located in highlands full of ravines and cliffs. As a result, the existing infrastructure is not evenly distributed between regions, so there is a gap between the highlands and lowlands as well as urban and rural areas.

4. The development of sub-district, village and sub-district areas is not yet optimal. Because the regional development has not been evenly distributed, it also affects the service quality that is not yet excellent. The span of control that is too wide and high makes services to the community inefficient and ineffective. The types of public services that can be delegated to lower authorities should only be carried out, namely from the district to the sub-district to the sub-district or village. Especially the strengthening of village institutions, as stated in Law Number 6 of 2014. Where villages that manage large funds need to be supported by the readiness of the superstructure to be encouraged to become independent villages. The extent to which these funds are effective has an impact on improving the performance of the agricultural sector which in turn is able to improve the welfare of rural communities. In addition, how to minimize irregularities in the use of village finances due to limited capacity, quality and accountability of human resources, especially in rural areas.

5. The implementation of good governance is not yet optimal. The quality of public services still requires improvement, especially the integrated service system for licensing and investment. Bureaucratic capacity is still relatively low, constrained by institutional and management issues, the use of information technology, information systems and e-government management that have not been integrated and comprehensive.

Topography and Climate as Basis for River Tourism

The topography of Gowa Regency is mostly hilly highlands, which is about 72.26% covering 9 sub-districts, namely Parangloe, Manuju, Tinggimoncong, Kuncio Pao, Parigi, Bungaya, Bontolempangan, Tompobulu

and Biringbulu sub-districts. The remaining 27.74% are lowlands with flat topography covering 9 sub-districts, namely Somba Opu, Bontomarannu, Pattallassang, Pallangga, Barombong, Bajeng, West Bajeng, Bontonompo and South Bontonompo sub-districts.

Of the total area of Gowa Regency, 35.30% has a land slope above 40 degrees, namely in the Parangloe, Tinggimoncong, Bungaya, Bontolempangan and Tompobulu sub-districts. With the shape of the topography of the area which is mostly highlands, the Gowa Regency area is traversed by 15 large and small rivers which have great potential as a source of electricity, irrigation and river tourism objects. One of the largest rivers in South Sulawesi is the Jeneberang river with an area of 881 Km² and a length of 90 Km. Above the Jeneberang river flow by the Gowa Regency Government in collaboration with the Government of Japan, has built the Bili-Bili DAM multifunction project with an area of + 2,415 Km² which can provide irrigation water covering an area of + 24,600 ha, clean water consumption (PAM) for the people of Gowa and Makassar Regencies of 35,000,000 m³ and for hydroelectric power plants with a power of 16.30 Mega Watts.

Based on this, the principles and concepts of tourism development in Gowa Regency are prepared with reference to a number of important points mentioned above, coupled with an international tourism perspective in encouraging the development of Gowa Regency tourism at an international standard. The arrangement is at the same time in order to build the ideology and concepts that become the basis for formulating the direction of tourism development in Gowa Regency in accordance with the functions that have been determined by the central government (based on the Minister of Tourism Regulation Number 10 of 2016), so that consistency in tourism development is also achieved. In Gowa Regency, the contribution starts at the regional (provincial), national, and even international levels. Thus, the principles of tourism development in Gowa Regency are based on three main principles that are considered important in accordance with a number of considerations set out in each relevant regulation. The three principles are; first, community-based and local wisdom. In this case, the tourism development of Gowa Regency emphasizes the community base sector and carries the values of local wisdom that exist and develop in the community. In addition, the people of Gowa Regency are also positioned not only as objects but also subjects in their tourism development. Second, Integrative. In this case, Gowa Regency always optimizes its role actively in achieving goals and standards that apply at the provincial, national, and international levels. Thus, tourism in Gowa Regency is expected to contribute not only to Gowa Regency itself, but in real terms it can contribute significantly to the development of tourism around and at various levels. Fourth, sustainable. In this case, the tourism development of Gowa Regency in principle must prioritize important aspects that are in accordance with sustainable tourism. This is in order to maintain the sustainability of the resources owned by this region.

Based on the three existing development principles, the concept of tourism development in Gowa Regency will focus on the basic sectors in its community while still referring to and carrying out the values of local wisdom that exist and develop and make the people of Gowa Regency the

subject of tourism development. The tourism development is compiled collectively by referring to every effort to achieve goals and standards that apply at the provincial, national, and international levels in ensuring the role and contribution of tourism in Gowa Regency broadly. In addition, the tourism development of Gowa Regency is also structured by upholding sustainability aspects as the main principle in ensuring that its tourism development has a positive impact on the environment and its territory in the long term.

Based on the Minister of Tourism Regulation Number 10 of 2016, it is explained that district tourism destinations are tourism destinations in which there are tourist attractions that have a suitability of district/city scale themes (provincial competitiveness) and have been determined to be the authority of the district/city. The tourism destination plan is a direction for the development of tourism destinations in the tourism zoning system which consists of two parts, namely:

1. Determination of the scope of the Gowa Regency Tourism Destination (DPK) area.
2. Determination of the Gowa Regency Strategic Tourism Area (KSPK) and the Gowa Regency Tourism Development Area (KPPK), which later became the direction for the development of Gowa Regency tourism destinations.

The Gowa Regency Tourism Destinations (DPK) were determined by taking into account several things, namely the National RTRW, RIPPARNAS, RTRW of South Sulawesi Province, RIPPAPROV of South Sulawesi, and RTRW of Gowa Regency. In addition to observing several documents, the determination of Gowa TPF is mainly made on the basis of similar characteristics of tourism attractiveness, as mentioned in Chapter 4 regarding tourism destinations. The following are the tourism areas of Gowa Regency with their respective themes:

1. Ecotourism area of Malino and its surroundings with the theme of adventure ecotourism and agrotourism.
2. Cultural and Historical Edurecreation Area of Somba Opu and its surroundings with the theme of cultural and historical recreation of the kingdom of Gowa.
3. Pattallassang Family Recreation Area with a family recreation theme.

The division of the Gowa Regency tourism area development plan which is divided into three tourism areas can be seen in Figure 3 below.



The main source of the Biroro River comes from the “Ketemu Match” waterfall which has a land area of about 3ha. The river meanders through several neighborhoods in the Bontolerung Village, before ending at Takapala Waterfall in the same village. The length of the river flow, from the Ketemu Mate Waterfall in the Biror neighborhood to the Takapala waterfall in the Bontolerung neighborhood is about 1000 meters. Of course this is a natural resource potential that is very useful.

The Biroro river area with the waterfall "Meet the Match" has an attraction as one of the natural river attractions in Tinggimoncong District along with the Bulu Balea waterfall, Lembanna waterfall, Bulan waterfall, Tonasa waterfall, and Gallang waterfall which then empties into the river. Jeneberang and then headed to the Makassar Sea. The Ketemu Matchmaking Waterfall and the Takapala Waterfall form a river with a width of about 2-4 meters. This river is a source of clean water and rice fields for people in Bontoelrung and Bulutana Villages.

Table 1: DTWU and DTWP Development Plans in Tinggimoncong District; Gowa District

¹⁰Gowa Regency Tourism Development Master Plan (2021-2035)

Target Development area	Realization area ecotourism adventure and agrotourism which Empower competitive and sustainable
Scope Region	Subdistrict muzzle height, Subdistrict Parangloe, Parigi District, Buttono District Pao
Theme Product	Ecotourism Adventure and agrotourism
Power Pull Tour Superior	Mountain Bawakaraeng, Valley ramma, Lake tanralili, Water Fall Lembanna, Forest Pine Lembanna, Garden Strawberry, Forest Pine Malino, Malino highland, Water Fall Takapala, Valley Green, Water Bantimurung Falls Gallang
Power Pull Tour Supporter	Water Fall Parangbugisi, Water Fall Bissoloro, WaterFall Meet Partner, Ecotourism Butta Gowa, Water Falls , HarlandGarden Tourism, Parigi Dam, Bili-Bili Dam, Blue Valley

Source: RIPPARKA Gowa (2021-2035).

Table 2: Interests and Influence of Stakeholders

Stakeholders	Interests and Interests	Influence
Bontolerung Village Community	<ul style="list-style-type: none"> • Road infrastructure improvements • Expansion of job opportunities and access to welfare through tourism • Degree of importance: high 	<ul style="list-style-type: none"> • The main basis in tourism development • Degree of influence: high
Food sellers and at least local	<ul style="list-style-type: none"> • Increased revenue from tourist visits 	<ul style="list-style-type: none"> • Provision of food and drinks for visitors • Degree of influence: moderate
Local tour guide	<ul style="list-style-type: none"> • Get increased revenue and tour guide services • Degree of importance: low 	<ul style="list-style-type: none"> • Quality of tourism services • Degree of importance: low
local farmer	<ul style="list-style-type: none"> • Become a supplier in the tourism supply chain 	<ul style="list-style-type: none"> • Stability of food supply for local supply chains • Degree of importance: low
Lodging/Homestay providers	<ul style="list-style-type: none"> • Increased revenue from tourist visits • Degree of importance: high 	<ul style="list-style-type: none"> • Provision of lodging/homestay facilities • Degree of importance: low
Gowa Regency Tourism and Culture Office	<ul style="list-style-type: none"> • Regional tourism development to support IKU Dinas • Addition of PAD in the tourism sector • Degree of importance: medium 	<ul style="list-style-type: none"> • Tourism development policy makers • Degree of influence: high
Tourism association in Kab. Gowa	<ul style="list-style-type: none"> • Tourism product and market development • Degree of importance: low 	<ul style="list-style-type: none"> • Strengthening tourism institutions • Degree of influence: low
Provision of public transportation	<ul style="list-style-type: none"> • Improving the quality of roads and transportation • Increased revenue from inter-regional transportation • Degree of importance: medium 	<ul style="list-style-type: none"> • Public transportation provider for visitors • Degree of importance: medium

Pokdarwis/Community Bontolerung Sungai Biroro	<ul style="list-style-type: none"> • Improved welfare in tourism development • Degree of importance: high 	<ul style="list-style-type: none"> • Drivers of tourism initiatives in the development area • Degree of importance: high
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Source: Outreach Results/FGD. Processed research data, 2022.

The Biroro river area in Bontolerung which is flanked by highlands, valleys and hills with natural vegetation cover in the form of forests, cabbage, mustard and potato vegetable plantations, and rice fields is a complementary attraction with the features of the Ketemu Jodoh waterfall and the Takapala waterfall. This view can be enjoyed, from the main access to Bontolerung Village, from entering Malino City, then turning east, to the trekking route to the waterfall location, it takes 15 minutes to get to Biroro village, as a visitor distribution point. Along the way, there is the potential for natural and cultivated plant species developed by the community.

Tourism support facilities such as lodging/homestays are adequate. However, the facilities for restaurants and stalls are still in the pilot stage. The number of lodging/homestay hotels in Bulutana Village and Bontolerung Village is about 32 units, with the highest price of IDR 1,600,000 per night and the lowest price of IDR 250,000 per night. However, there are also resorts that rent up to IDR 7,000,000 per night *including* meals. Usually this is for family gathering classes. But unfortunately the road infrastructure is not supportive. The road is still narrow, so when the volume of vehicles increases, traffic jams will quickly occur.

Social Resources

The fourth element in tourism institutions is tourism human resources (HR). Tourism HR is an important element because of its role as a provider of labor in the tourism industry. The available, competent and reliable tourism human resources are certainly a driving force for tourism development in Gowa Regency, so it needs to be a concern for policy makers.

Based on data obtained from Disparbud in the last six years, it shows a consistent increase in the workforce in the tourism sector in Gowa Regency. However, when viewed from the side of growth in the last three years, it tends to decline (see Table 3). In a survey conducted by Local Government (Logov, 2021) on 45 business actors operating in Gowa Regency, it was found that the majority of business actors absorbed less than five workers (51.11%), followed by the category of employment of 5-20 people (31.11%). The results of this survey indicate that employment in the tourism industry in Gowa Regency relies on small to medium scale businesses. In detail, the results of the study are presented in Table 3 below.

Table 3: Gowa Tourism and Culture Workforce

No	Field	Type Perpetrator Effort	Unit	Amount					
				2015	2016	2017	2018	2019	2020
1	Accommodation	Hotel	person	76	76	76	76	76	76
		Lodging		23	61	76	80	88	98
		Villa		32	43	59	59	59	99

		Cottage/Homestay		15	45	75	75	75	89
		Restaurant		12	33	47	83	168	168
		House Eat		108	286	286	359	362	392
		Shop		12	402	402	417	417	451
		Catering		0	0	0	9	31	35
		Lesehan		0	30	30	44	44	44
		Café/Warkop		0	0	0	61	72	79
3	Bureau Journey		person	59	59	63	94	100	116
4	Entertainment and Recreation		person	114	114	114	171	258	288
Amount Power Work Tourist and Culture (person)				451	1149	1228	1528	1750	1935
Growth Power Work Tourist and Culture (%)					154.76	6.87	24.42	14.52	10.57

Source : Gowa Regency Tourism and Culture Office (2021)

Bureauro River Development Strategy in Bontolerung

The Biroro river area in Bontolerung to the Takapala waterfall can be developed as a natural tourism area based on *experiential tourism*, which is a tourist area that provides flexibility for visitors to explore the area with a family adventure approach, agro and education. This principle is in line with several studies on the development of tourist areas in different destinations (Meacci & Liberatore, 2018; Serdane et al; 2020) ¹¹. This development scenario is realized through the packaging of activities as follows. 1) *Trekking*, which is exploring the Biroro river flow with the Takapala waterfall as the final destination. It can also be expanded by exploring thematic paths of geology, botany and river ecosystems; 2) *Agro Adventures*, namely packaging tourism activities to explore protected forests and tea plantation areas (Malino High land), vegetable plantations in the Pattapang and Kanreapia highlands to get to know various types of plants, *bird watching* and enjoy the processed products of local vegetable plantations with vegetarian culinary activities as the *main attraction*. ; 3) Automotive tourism by developing off-road motorcycle lanes with separate lanes from non-motorcycle activities.

To support the packaging, the pattern of area development is divided into at least three, namely: 1) core zone: covering the Ketemu Jodoh Waterfall and the Biroro river as the main attractions and binding tourist activities in the core area; 2) buffer zone: includes a buffer area from the Biroro river flow which is used in a limited manner by prioritizing the preservation of ecological functions and the spread of tourism activities to reduce the burden on the core zone; 3) development zone: an area that is reserved as a zone for the development of activities and facilities in the future; 4) support zone: an area used as a distribution point for visitors, commercial facilities and a visit circulation center area located at the front/entrance area of the Area.

The recommended circulation of visits is by *loop-line* and *back-trekking* where the flow of incoming and outgoing visitors uses one access gate that is currently available. On the inside, different circulation paths are arranged between the paths leading to the core zone and exiting the core zone. This is done to reduce the impact of the density of visiting activities within the Area, spread tourism activities and optimize the visiting experience (Morrison, 2013; Albrecht, 2017) ¹².

In the management aspect, a management strategy is recommended by strengthening the function of the Bontolerung River Ecotourism Management Community group which has currently been formed through Community Service

¹¹Meacci & Liberatore, 2018; Serdane et al; 2020)

¹²Morrison, 2013; Albrecht, 2017

activities carried out by LPPM Unhas, in accordance with the principle of *community based tourism* (Khalid et al., 2019).

Institutional strengthening can be pursued through the following strategies: 1) the establishment of a tourism object management community that is built through the synergy of the community, local government and universities, by strengthening its formal juridical aspects; 2) training to increase human resource capacity gradually, starting with visitor service training, OHS and Business training; 3) strengthening the inclusion of the tourism supply chain by prioritizing products from within the Bontolerung and Bulutana Villages, Tinggimoncong Subdistrict, Gowa Regency.

Conclusion

The Biroro River area in Bontolerung can be developed as a natural tourism area with the theme of *experiential tourism*, which is a tourist area that gives visitors the flexibility to explore the area with a family adventure approach, agro and education. In the management aspect, a management strategy is recommended by strengthening the functions of the Bontolerung Tourism Awareness Group and the Bontolerung River Ecotourism Management Community which are currently newly formed. The model for developing river-based tourism activities on the Biroro Bontolerung river is directed to a sustainable community-based tourism development model (Kahlid et al; 2019) ¹³.

To achieve this, the development approach does not rely on government initiatives, but can elaborate on the interests and interests of each stakeholder. This study has provided an information regarding tourism resources in the Biroro Bontolerung River Area and contributed to the enrichment of applied science of tourism management as a consideration for tourism development in Tinggimoncong District, Gowa Regency.

The limitation of this research is that it has not revealed the technical aspects of physical, service and operational planning. This provides an opportunity for further research that will make an important contribution to the object of research. In the aspect of community empowerment, this research provides an opportunity for applied research in the form of a guide to the activation of social and cultural elements in the development of the Bontolerung and Bulutana areas.

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