

# 04

## LOCAL CONCEPT FOR TOURISM DEVELOPMENT OF THE NGABATATA WATERFALL AREA, EAST NUSA TENGGARA, INDONESIA

\*Risal Rasyid and Mila Karmilah

\*Urban and Regional Planning Pattimura University, Urban and Regional Planning Sultan Agung Islamic University

### ABSTRACT

Ngabatata Waterfall is famously regarded as a natural tourist attraction with a unique natural charm, despite the inevitable problems to be solved in optimizing the potential of this waterfall. The problems include difficulty to access the location through revamped roads, absence of signage and entrance gates, and unavailability of tourist facilities such as toilets, camping grounds, and other tourist supporting facilities. Therefore, this study aims to propose a development concept for the Ngabatata waterfall based on local characteristics to reinforce the image of this area. This study applied a qualitative method to identify the potential and problems of the area by conducting descriptive analysis and formulating the concept and design of the Ngabatata waterfall area. The output of this research includes the development concept of Ngabatata waterfall as a Tourism Triangle based on nature and local culture in the Heart of Flores Island.

**Keywords:** Concept Plan, Waterfall Area, Ngabatata, Tourism Development

\*Corresponding author: work.risalaryid@gmail.com

### INTRODUCTION

Tourism has become one of the main drivers for the global economy with a fast rate of development. East Nusa Tenggara is regarded as an archipelagic province in Indonesia containing 22 regencies and cities, from which all regencies have significant tourism potential, one of which is the Nagekeo Regency. Nagekeo Regency Tourism Master Plan for 2014-2025 stated its vision through the actualization of Nagekeo tourism as a nature and culture-based destination by engaging with a more significant role in the local community.

Ngabatata Waterfall is considered the highest waterfall in Nagekeo, with a height of 86 meters surrounded by greeneries and shady trees, allowing the tourists to enjoy the existing natural beauty (Plaituka 2021). The exquisiteness of Ngabatata waterfall and its lake has served as the main tourist attraction. However, some problems are evident, including 1) difficulty to access the location due to its revamped road, 2) no camping ground, thus tourists use the edge of the waterfall to build camping tents, 3) Invisible and limited facilities such as toilets for tourists, 4) Unavailability of signage and entrance gate to the area, and 5) no other tourism supporting facilities.

Based on Nagata's potential and problems, this study aims to propose a concept for the development of the Ngabatata waterfall to support this area's potential. Fig.1 depicts the image map of the Ngabatata Waterfall area, and Fig. 2 illustrates a photo of the Ngabatata waterfall.



Figure 1: Map of Ngabatata Waterfall area  
(Source: Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

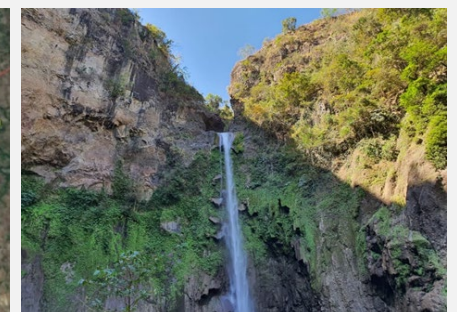


Figure 2: Ngabatata Waterfal  
(source: Author)

### METHOD

This study applies a qualitative method, including interviews, focus group discussions, and other qualitative approaches. Traditionally, multidisciplinary sciences widely implement qualitative methods to describe the phenomenon; for example, participant observation in the cultural anthropology of society documents beliefs and practices within a particular culture (Hamilton & Finley, 2020). The research stages performed in the Ngabatata waterfall area planning project include:

1. Preparation: performed initial coordination, data requirements, and work plans.
2. Identification of areas: identifying potential and problems, literature review, and policy review.
3. Survey: collecting data through primary and secondary survey
4. Analysis: conduct data analysis and survey results to determine the development concept.
5. Concept: developing the local concepts based on urban design and tourism elements by analyzing the area's character and potential.
6. Design: designing the area based on the concept findings.

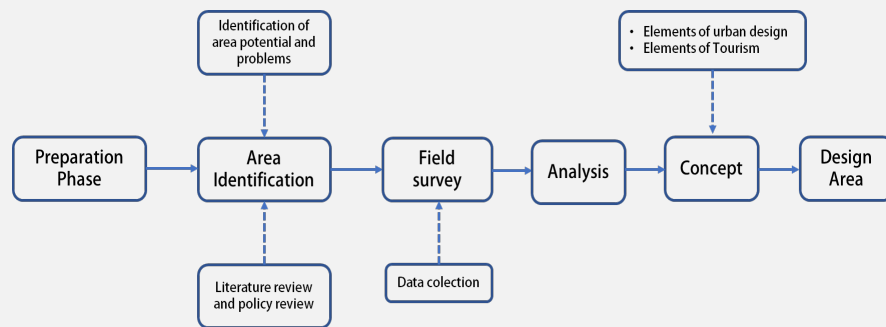


Figure 3: The Ngabatata waterfall area planning method/process  
(Source: Author, 2022)

## RESULTS AND ANALYSIS

### SITE CONDITION

Most of the study areas comprise hilly and mountainous topography. The location is distant from settlements along with the poor condition of the road, which hinders the accessibility to the waterfall location, which is also impossible for this waterfall area to be reached by domestic and foreign tourists.

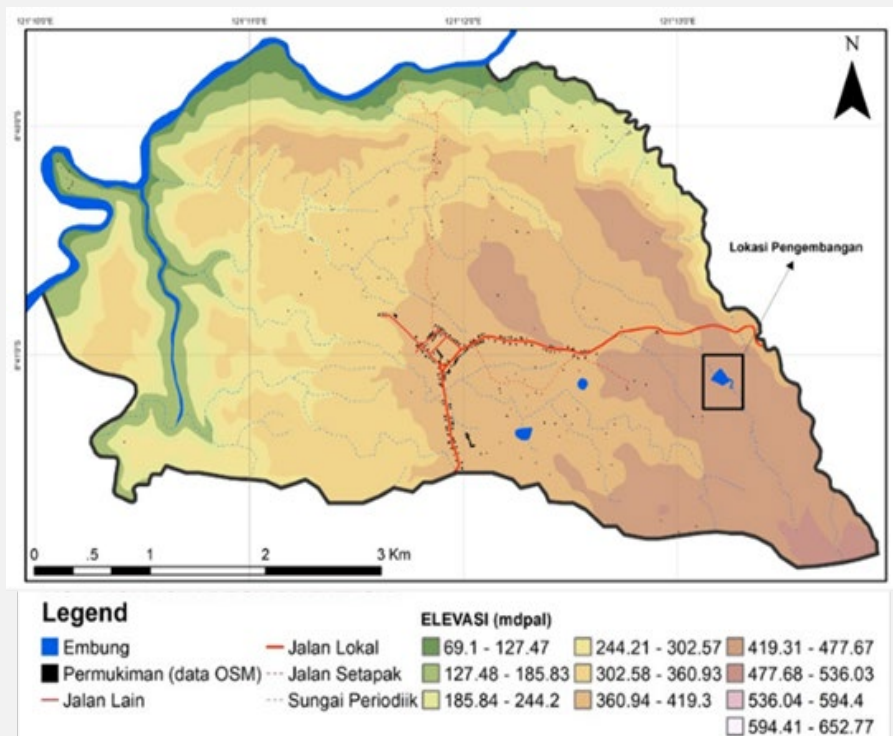


Figure 4: Topographic Map of The Study Area  
(Source: Ngabatata Waterfall, 2020)

### ACCESSIBILITY CONDITION

The Rendubutowe Village is about 20 km from the capital city of Nagekeo Regency. Tourists must stop at Rendubutowe Village and do a 4 km tracking to Ngabatata Waterfall. The road conditions are dirt roads and cliffs. From the top of the cliff to the waterfall can take about 30 minutes, and visitors must hold wood and forest ropes while heading to the waterfall. There are stairs provided in this area, but the condition is improper and unsafe.



Figure 5: Condition of Stairs to Ngabatata Waterfall  
(source: Author)

### ATTRACTION ANALYSIS

#### 1. The Ngabatata Waterfall

The main potential in this area lies in the beauty of the Ngabatata waterfall and the Tata lake. Ngabatata Waterfall becomes one of the tourism potentials in Nagekeo Regency, which deserves as a natural tourist destination. In this area, tourists are served with natural scenery and Ngabatata waterfall, towering to a height of 86 meters and is the highest in Flores.

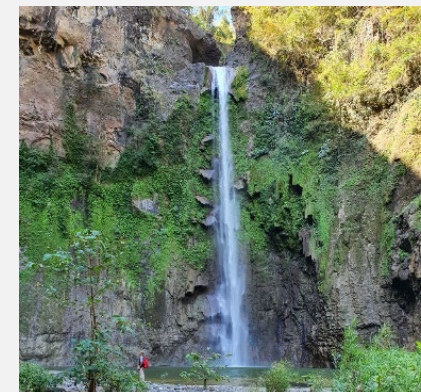


Figure 6: Ngabatata  
(source: Author)

#### 2. Rendu Ola Traditional Village

Rendu ola, a traditional village, is another potential tourist destination besides Ngabatata waterfall. Traveling to this traditional village, tourists are provided with the existing and well-preserved local community's life, social life, economy, and customs.



Figure 7: Rendu Ola Traditional Village  
(Source:Sari, Murti, and Hilmy 2021)

### 3. Amenity Analysis

Ngabatata Waterfall has a spot used as a camping site which could accommodate 20 tents. The camping site is situated around Ngabatata Waterfall lake. Visitors camp in the area due to its uncontaminated condition and the ground is flat, enabling the setting up of tents and bonfires' lighting.



Figure 8: Camping Area Around The Ngabatata Waterfall  
(Source: Ngabatata Waterfall, 2020)

### 4. Toilets

Toilets are available from youth organizations for the needs of tourists, especially those who do camping activities in the waterfall area. However, the condition of these toilets is not feasible and is limited for tourists. So, it is necessary to plan good toilet facilities in this area.

### 5. Selfie Spot

Tourists take advantage of the rocks around the waterfall to take selfies with the background of the waterfall. Unfortunately, no special place is provided for tourists to take selfies from a good and safe angle.



Figure 9: Selfie Spot  
(source: Author)

### 6. Parking Area

Currently, the parking space uses the empty space in the village. Therefore, a good parking space for tourists must be planned, because parking space is essential in tourist areas.

### 7. Small shop and rest areas

There are no small shops or rest areas for visitors along the way to the waterfall. Causes these small shops or rest areas are essential, considering the topographical conditions are tiring for some tourists.

### 8. Trash cans

The unavailability of trash cans in the area causes many tourists to litter. Therefore, it is necessary to provide attractive and representative trash cans to invite tourists to behave environmentally friendly.

### 9. Signage

Signage in this area is, however, minimal, inappropriate, and unattractive. The representative gate as a marker to enter the tourism area is notably absent. Hence, it is essential to assist the tourists in navigating the location of Ngabatata waterfall, due to its distant location and limited access. In addition, it will be better if the nearest city could provide the signage placed strategically to guide the tourists.

### 10. Ticketing

Ticket counters have yet to be available; therefore, ticket counters and tourist information centers must be provided to help tourists get information and help area managers monitor the number of visitors.

### 11. Accommodation

Accommodation facilities in this tourist area have also yet to be available, and hotels or hostels have not visible in Ngabatata tourist area. Therefore, in the future, proper accommodation must be planned.

## CONCEPTUAL PROCESS

A tourist area refers to an allure location that attracts tourists. In this context, an attraction is considered a location character that provides a new experience that tourists in their home area have previously never experienced. In a broader context, the definition of tourist attractions also refers not only to the places that are considered existing tourist destinations, but also it refers to tourists' experience of a journey in finding out the tourist attractions (Leiper, 1979). In terms of Ngabatata Waterfall Development Concept, it refers to the Mission of the Regional Medium-Term Development Plan (RPJMD) of East Nusa Tenggara Province for 2018 to 2023 and the Master Plan for Regional Tourism Development of Nagekeo Regency for 2014 to 2025. The mission of the Regional Medium-Term Development Plan (RPJMD) of East Nusa Tenggara Province 2018-2023 declares as "Building East Nusa Tenggara as one of the gates and centers of national tourism development (ring of beauty). Meanwhile, the vision of Nagekeo Regency Regional Tourism Development Master Plan (RIPARDA) 2014-2025 declares as "the actualization of Nagekeo Regency as a nature and culture-based tourism destination by engaging with a greater role to local communities to encourage regional development for community welfare." Referring to the stated mission and vision, the development concept plan for the Ngabatata Waterfall area becomes a "Tourism Triangle in the Heart of Flores Island, based on nature and culture." Further, The Tourism Triangle concept is divided into economic, social, and environmental aspects.

Table 1: Comparison of Development Vision and Tourism Development Concept of Ngabatata Waterfall

Regional Medium-Term Development Plan (RPJMD) of East Nusa Tenggara Province 2018-2023	Nagekeo Regency Regional Tourism Development Master Plan 2014-2025	The concept plan for the Ngabatata Waterfall
<b>Mission:</b> Building East Nusa Tenggara as one of the gates and centres of national tourism development (ring of beauty)	<b>Vision:</b> Actualizing Nagekeo Regency as a nature and culture-based tourism destination by giving a greater role to local communities to encourage regional development for community welfare	<b>Concept:</b> Building the Tourism Triangle in the Heart of Flores Island, based on nature and culture

(Source: Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

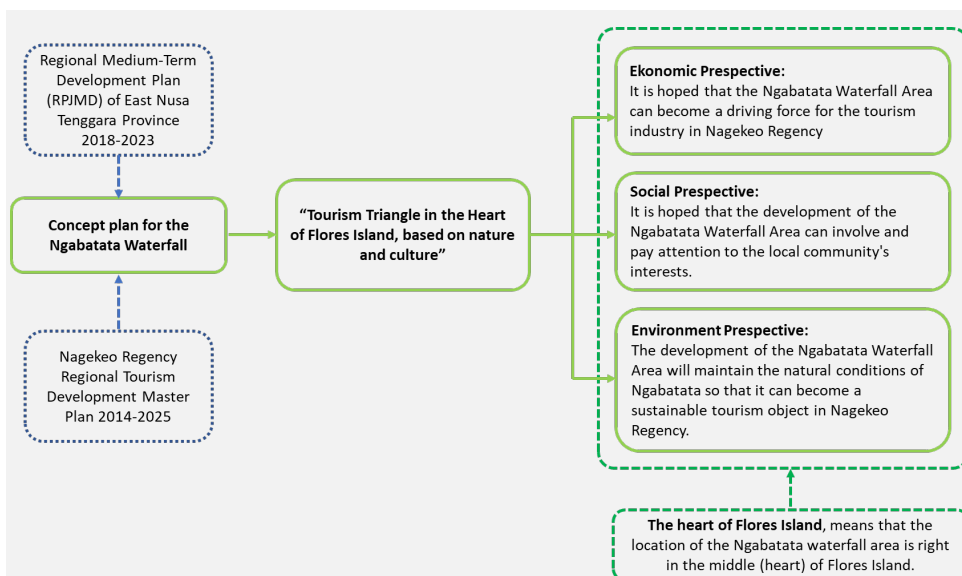


Figure 10: Concept Plan of Ngabatata Waterfall  
(Source: Processed from Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

In addition, the tourism triangle is seen as a potential tourism area located in the Ngabatata waterfall area and its surroundings, where the potential of the tourism area, if connected, will form a regional triangle, comprising: Boamara Traditional Village, Raja Market, and Ngabatata Waterfall Area.

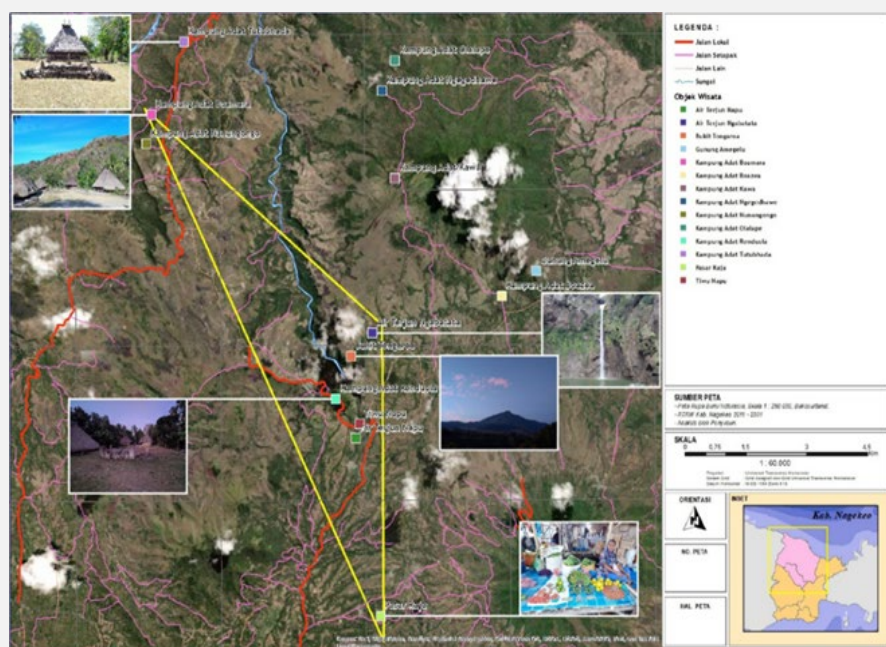


Figure 11: The constellation of the Ngabatata Waterfall area with the surrounding tourist area is the basis for the development concept  
(Source: Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

### TOURISM ZONE CONCEPT

The Ngabatata waterfall area is divisible into several tourist attraction clusters based on the central theme of tourism products. The field survey results carry out zone delineation based on the area's functions and characteristics. The zones are:

### 1. Core Zone

The core zone includes the Ngabatata Waterfall area and its supporting areas. In this core zone, several supporting facilities and infrastructure will be developed, namely in the valley of Kesambi, and the concept of a nomadic camp equipped with toilets, pathways/tracks to waterfalls equipped with walkways, stairs and railings, photo stops, and mini shelters. Then the development zone will also be conceptualized as a culinary area, Tourist Information Center, toilets, souvenir shop, (gazebo), dam, water tower, ticket counter, and parking area with an area of 6,628 m<sup>2</sup> which can accommodate 200 cars and 100 motorbikes.

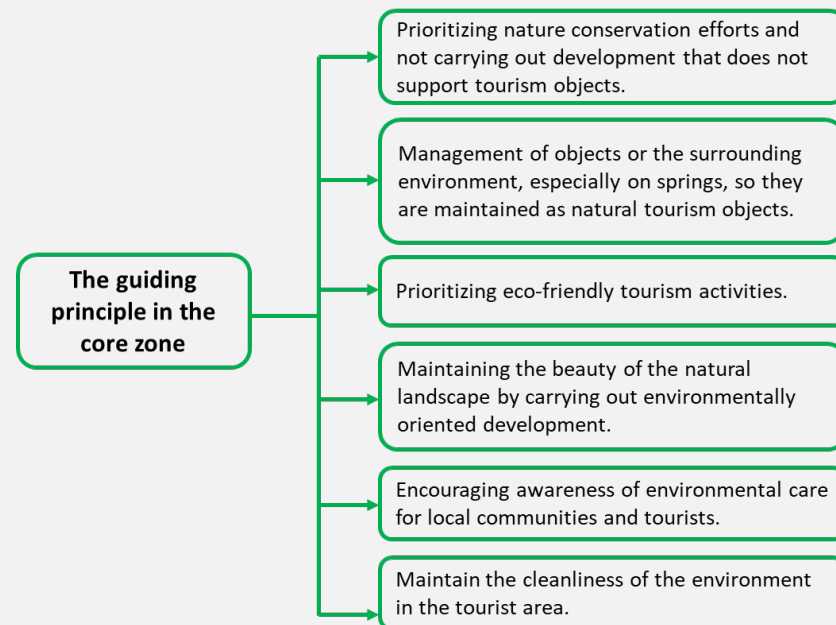


Figure 12: Guiding Principle of the Core Zone  
(Source: Processed from Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

### 2. Buffer Zone

This study propose the conceptualization of Buffer zone as the entrance to Ngabatata Waterfall area which enables the tourists to access it from several directions, such as: Jawatiwa hamlet and Roga-roga backwoods. Additionally, the development concept as proposed in this study also conceptualizes medium bus parking, homestays, and gift shop.

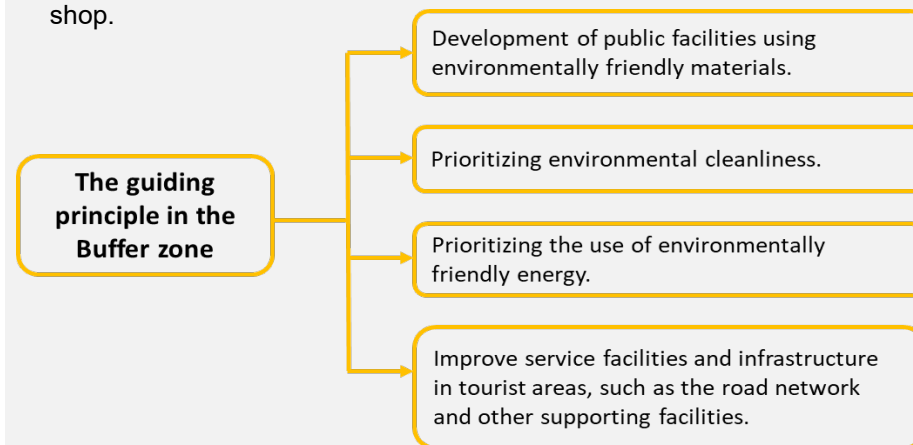


Figure 13: Guiding Principle of the Buffer Zone  
(Source: Processed from Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

### 3. Development Zone

The development zone is proposed as the outer or furthest zone from the main object of Ngabatata waterfall, providing the main attraction of Rendu Ola traditional village. This village is one of the traditional villages in Nagekeo Regency that maintains local culture, one of which is exhibited by the existence of a traditional house. This concept aims to develop the Ngabatata waterfall area focused on natural tourism and cultural attractions as a good tourism unit and to support the vision and concept of tourism development plans.

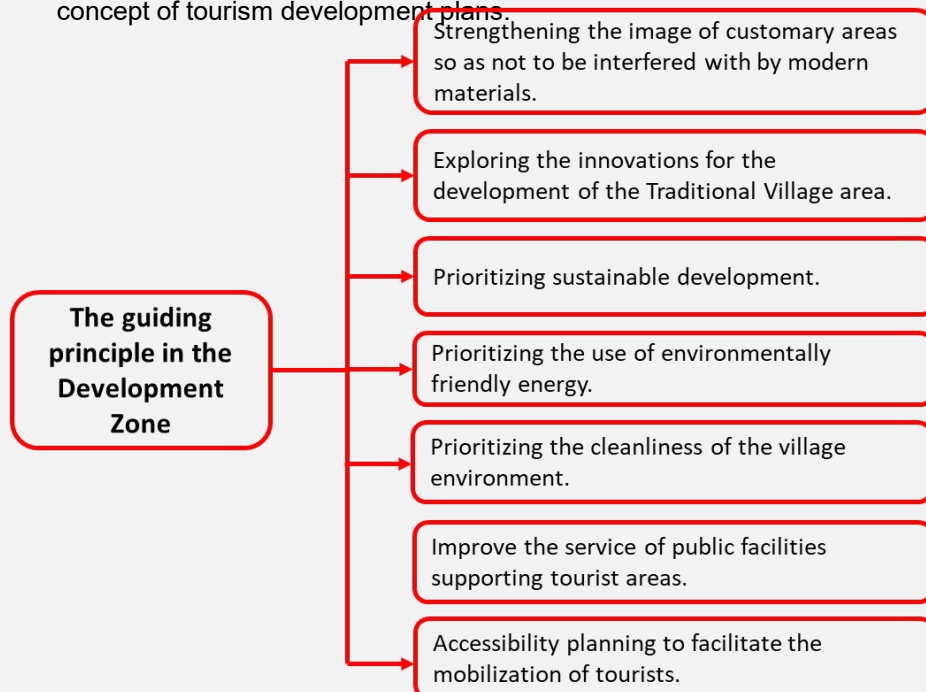


Figure 14: Guiding Principle of the Development Zone

(Source: Processed from Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

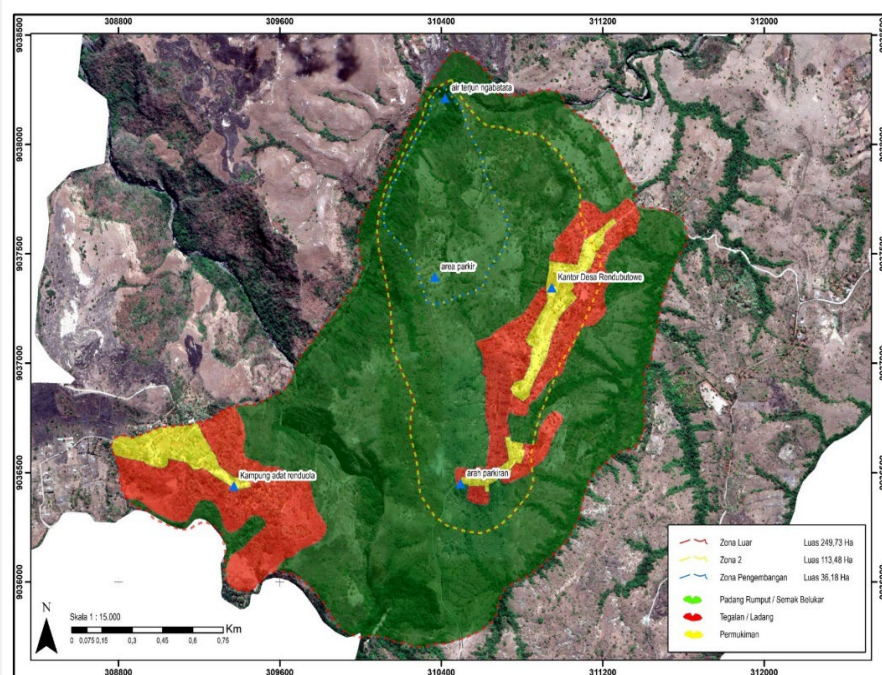


Figure 15: Zone Concept Map

(Source: Processed from Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

### CONCEPT OF ACCESSIBILITY, CIRCULATION AND PARKING

In the traditional sense, accessibility generally refers to an individual or personal movement, moving from one place to another, and is closely related to activities of human life (such as: working, socializing, studying, traveling, etc.) (Le Vine et al., 2013). In preparing the concept of accessibility, it is deemed necessary to focus on the circulation and parking system in the area. According to (Wicaksono, 1989), several indicators in planning the parking system include both on-street and off-street parking (Iswanto & Dance, 2007). The circulation concept aims to provide comfort for tourists as the concept of circulation planning serves as a liaison between space and tourist objects in the area. The development of this circulation is planned by adding and widening several roads to facilitate the management of the area and for tourists to access various tourist sites. The following items are the concept of Accessibility, Circulation, And Parking in the Ngabatata waterfall area.

Table 2: Comparison of Development Vision and Concept of Ngabatata Waterfall Tourism Development

Aspect	Existing Condition	Concept Plan
<b>Tourist attraction</b>	Ngabatata waterfall nature tourism	Maintaining forest areas; Optimizing the potential of existing vegetation to protect the spring area.
<b>Accessibility</b>	There is no adequate accessibility for tourism activities	<ul style="list-style-type: none"> <li>Improving the main road network, both in terms of road quality and road quantity.</li> <li>Improving and developing the road network in residential areas.</li> <li>Developing the paths/tracks to waterfalls equipped with walkways, stairs and railings.</li> </ul>

(Source: Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

Based on the analysis results, the need for parking space in Ngabatata Waterfall Area comprises approximately 6,628 m<sup>2</sup>, which can accommodate 200 cars and 100 motorbikes. The parking points will further be divided into 3 points to serve and reach tourist attractions. The existence of parking lots positioned throughout tourist attractions with adequate land capacity is expected to easily accommodate the tourists' parking facility.



Figure 16: Footpath and Rest Area Concept

(Source: Processed from Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

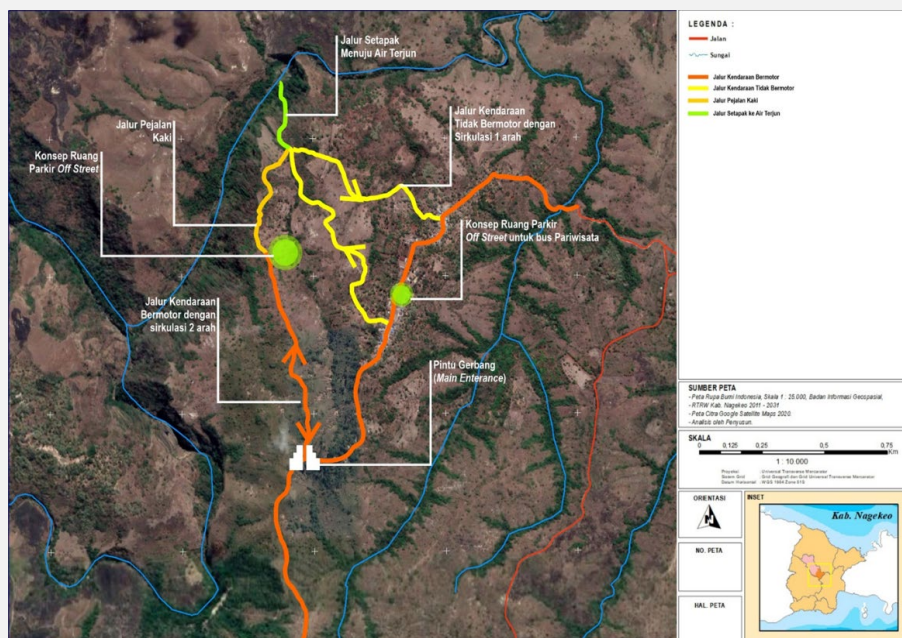


Figure 17: Concept Map of Circulation and Parking in Ngabatata Waterfall Area  
(Source: Master Plan for Tourism Development: Ngabatata Waterfall, 2020)



Figure 18: Concept Map of Parking in Ngabatata Waterfall Area  
(Source: Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

## CONCEPT OF ACTIVITY AND FACILITY

Tourism activities typically occur inside, outside, or around a tourist attraction (D. P. Sari 2018). Tourism activities are driven by tourist attractions, referring to the attractiveness of being unique in items such as beaches, parks, historical buildings, distinctive topography, cultural characteristics, unique local events, etc. (Hadinoto 1996). The concept of activities and facilities adapts to the existing zone concept. For example, supporting activities in Ngabatata Waterfall include traveling tourism in an area with natural and cultural objects. With this tour activity, all tourist attractions will be exhibited to visitors. The supporting activity is initiated from the development zone, which is the traditional village. In the traditional village, tourists could directly experience local history, cultural customs, and related activities that tourists can and cannot do while in a tourist area. Elaborating further, in the buffer zone, tourists could reach the provided tourist objects, such as viewing posts, Kesambi valley, Kesambi rest area, souvenir center, and souvenirs to the main tourist attraction, which is Ngabatata waterfall in the core zone. The concept of amenities planned in this zone also includes toilet facilities and gazebos.



Figure 19: Toilet Facility Concept  
(Source: Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

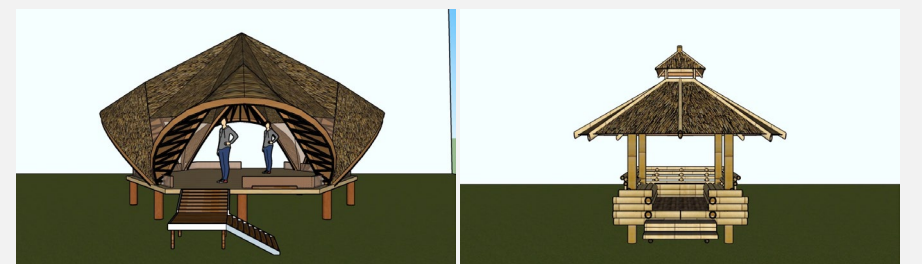


Figure 20: Gazebo Facility Concept  
(Source: Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

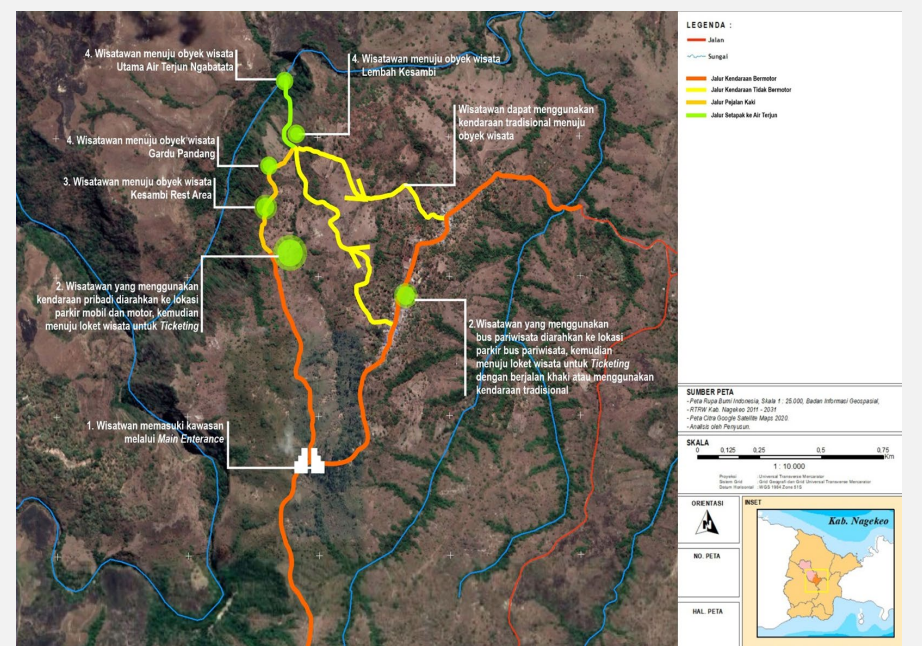


Figure 21: Concept Map of Ngabatata Waterfall Area  
(Source: Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

## ACCOMMODATION CONCEPT

Based on the analysis results, there are currently no facilities for accommodation around the tourism area. Therefore, it is deemed necessary to conceptualize such an adequate and comfortable accommodation for tourists by constructing and developing accommodation facilities such as villas and hotels. This effort is possibly actualized by approaching the community through the development of homestays in community houses or traditional houses that tourists can utilize as lodging facilities.



Figure 22: Accommodation Concept (Homestay)  
(Source: Master Plan for Tourism Development: Ngabatata Waterfall, 2020)

## SIGNAGE CONCEPT

Based on the identification and survey results, the signage in the Ngabatata Waterfall area, generally, has not provided convenience for visitors to reach the existing tourist attractions. Furthermore, the representative gate which can be used as signage to enter the tourist area is also absent. Hence, the existence of signage is essential to easily guide tourists in navigating the location of Ngabatata waterfall.

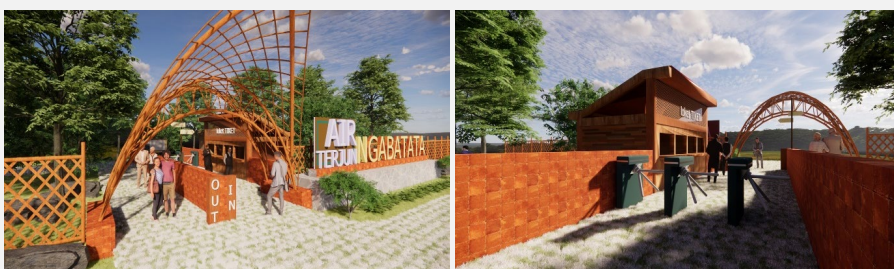


Figure 23: Main Gate Concept  
(Source: Master Plan for Tourism Development: Ngabatata Waterfall, Nagekeo 2020, and Sari, Murti, and Hilmy 2021 )

## CONCLUSION

In summary, Ngabatata waterfall comprises an area of 662.7 hectares, with the development concept plan as a "Tourism Triangle in the Heart of Flores Island, based on nature and culture." The development of the concept aims to encourage Ngabatata Waterfall Area as a driving force for the tourism industry in Nagekeo Regency. Subsequently, the concerned parties such as developers are required to involve and address the interests of the local community by nourishing the natural conditions of Ngabatata as a sustainable tourism object in Nagekeo Regency.

## ACKNOWLEDGEMENT

Ngabatata Waterfall Tourism Object Development Master Plan Project (RIPOW) 2020 was crafted by the Nagekeo Regency Government. The authors developed this project report, focusing mainly on regional design, development concepts, and spatial planning. The authors finally acknowledge the Nagekeo Regency administration for its support of this project.

## REFERENCES

- Hadinoto (1996). *Perencanaan Dan Pengembangan Destinasi Pariwisata*. Jakarta: UI Press.
- Hamilton, Alison B., and Erin P. Finley (2020). Reprint of: Qualitative Methods in Implementation Research: An Introduction. *Psychiatry Research* 283 (November 2019): 112629. <https://doi.org/10.1016/j.psychres.2019.112629>.
- Iswanto, Danoe (2007). Tinjauan Keberadaan Pedagang Kaki Lima (PKL), Aspek Pedestrian Area, Dan Parkir Di Kawasan Solo Grand Mall (Sgm). *Jurnal Ilmiah Perancangan Kota Dan Permukiman*. Vol.6 (2): hlm 79-86.
- Kabupaten Nagekeo, Pemerintah Daerah. n.d. "Rencana Induk Pengembangan Kepariwisata Daerah Kabupaten Nagekeo Tahun 2014-2025." Nagekeo, Nusa Tenggara Timur, Indonesia.
- Leiper, Nell (1979). The Framework of Tourism. Towards a Definition of Tourism, Tourist, and the Tourist Industry. *Annals of Tourism Research*, 6 (4): 390-407. [https://doi.org/10.1016/0160-7383\(79\)90003-3](https://doi.org/10.1016/0160-7383(79)90003-3).
- Nagekeo, Pemerintah Kabupaten (2020). Rencana Induk Pengembangan Obyek Wisata Air Terjun Ngabatata. Nagekeo, Nusa Tenggara Timur, Indonesia.
- Pemerintah Provinsi Nusa Tenggara Timur. n.d. Rencana Pembangunan Jangka Menengah Provinsi Nusa Tenggara Timur Tahun 2018-2023. Kupang.
- Plaituka, Christina Welly Plaituka (2021). Partisipasi Masyarakat Lokal Dalam Pengelolaan Daya Tarik Wisata Alam Studi Kasus: Air Terjun Ngabatata Di Desa Rendu Butowe. *Journey* 78 (4): 57-64. <https://doi.org/10.21856/j-pep.2021.4.08>.
- Sari, Dhanik Puspita. 2018. Apakah Ada Peranan Aktivitas Wisata Dalam Peningkatan Ekonomi Daerah Di Kota Bogor? *Barista: Jurnal Kajian Bahasa Dan Pariwisata* 5 (1): 12-22.
- Sari, Suzanna Ratih, Nindita Krena Murti, and Muhammad Fariz Hilmy (2021). The Sustainable Development of Natural Tourism Area Based on Ecological-Humanism: A Case Study of Ngabatata Waterfall, Nagekeo Regency, East Nusa Tenggara, Indonesia. 12 (7): 1739-48.
- Vine, Scott Le, Martin Lee-Gosselin, Aruna Sivakumar, and John Polak (2013). A New Concept of Accessibility to Personal Activities: Development of Theory and Application to an Empirical Study of Mobility Resource Holdings. *Journal of Transport Geography* 31: 1-10. <https://doi.org/10.1016/j.jtrangeo.2013.04.013>.