

THE DEVELOPMENT OF TOURISM WATERFALL TUMBURANO AREA BASED ON ECOREGION APPROACH IN KONAWE ISLAND

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ABSTRACT

Tourism is a sector that contributed greatly to economy. In order to accomplish this program, it requires skill in managing existing tourism assets, good assets in the form of natural and cultural wealth. The tourism sector developed by the Local Government of Konawe Islands is expected to spur regional economic growth and to improve the welfare of society since the potential of natural resources provided is relatively abundant. The elaboration activities particularly the physical development should consider the appropriateness of their potential to be used optimally for the welfare of society. Physical development includes structuring the region; it is expected to realize a new space in order to carry out the activities, thus, this development program will establish a synergy territory, effective and sustained implementation of the mechanism through a comprehensive and integrated planning. It is expected that the tourism sector would not only be a source of revenue, but also can impulse the economic growth. Specifically, this research aims to design an alternative arrangement of tourism area based on ecoregion approach, the study area include waterfalls Tumburano in Konawe Island.

The research was done by outlining the potential, characteristics and existing problems in the waterfall Tumburano and linkage analysis of each aspect of the study on the need for space, mass and composition and spatial planning study area, as well as the accessibility.

Concepts and principles of development of tourism potential can be done with regional and regional approaches. Tourism development of waterfalls Tumburano includes the concept and direction of development of the area that creates a relationship between the tourist areas with the development of the area Konawe Island.

Keywords: Ecoregion; Tumburano; Waterfall

1. INTRODUCTION

Tourism is a sector that contributes greatly to the economy. In order to be able to make to make this sector successful, the skills in managing existing tourism assets, good assets in the form of natural and cultural wealth are needed. The management and development of attractions sector are some of the efforts to improve the economic, social and environmental criteria in a country.

Konawe Island is a division of Konawe which is currently still a new autonomous region. It was established on April 12, 2013, i.e., simultaneously with the issuance of Law No. 13 of 2013 on the establishment of Konawe Island. As a new autonomous region, Konawe Island is currently getting ready to come out of isolation backwardness and underdevelopment regions in all sectors of development.

One of the strategic sectors which are being developed by the Local Government of Konawe Island is the tourism sector. This sector is expected to spur regional economic growth and improve the welfare of society since the potential of the available natural resources is quite abundant. Various regional environmental ecosystems in the region

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inland, coastal and marine waters in this area are considered very potential to be developed into a tourist destination. It is expected that the tourism sector would not only be a source of revenue, but also can spur the economic growth (RIPDA Konkep , 2015).

One of the potential tourism objects in Konawe island is Tumburano waterfall, located in the District of North Wawonii. This waterfall has its own charm and is easily accessible by the residents of various regions outside the Wawonii island. The visitor could enjoy the panorama of waterfalls in the middle of the environmental setting and atmosphere of the beautiful nature, the area is cool and comfortable. Unfortunately, up to today, the potentials of the waterfall as a tourist destination is not yet optimal. Thus, it still does not contribute significantly to the socio-economy of the local community and for the region as well. This is mainly caused by the factors such as the lack of supporting infrastructure and other tourism facilities in and around the area of the waterfall.

In addition, the condition of tourism development in order to meet the needs of the activities related to tourist accommodation has not considered the condition of the natural environment and the physical characteristics of the waterfall Tumburano. Besides, the lack of public understanding on the importance of physical improvement and development of environmentally responsive region, increases the patterns of development of the area without regard to ecological aspects of environmental and natural conditions. Therefore, it should be noted from the outset that condition so there is no environmental degradation and damage to the surrounding ecosystem.

Mc. Harg in Asyra 2011, suggested several methods related to the development of the area for a function based approach to ecological, among which are: 1) The natural phenomenon is a process of interaction dynamic, responsive to the provisions of (legal) nature, and that the opportunities and barriers that exist are for human use. Therefore they can be assessed that each area of land has intrinsic suitability for a specific use, whether they are single or multi-use, and a tiered rules in categories such use (Mc.Harg, 1971: 121). 2) Development of a region is "speculative" and can have a devastating effect on the overall potential of the embodiment, in which an uncontrolled growth would certainly wipe out the historical character of the area as well as convenience (Mc.Harg, 1971: 123). 3) Some of the methods proposed by Mc. Harg are the concepts of land use that is complementary, based on the investigation of areas that can support more than one land use, where the introduction of a certain region can be seen both as a conflict that requires zoning with separation of land use or as an opportunity to combine multiple functions of land use.

Ecoregion approach is a concept or a way of understanding or an approach to biological resources management position in a great unity of the land and the sea and the life of the various characteristics of the species, communities, dynamics and environmental conditions. Where interdependent with each other and there is a strong link between biological resources and ecosystems on a scale region (Silas , 2012).

In connection with the concept of ecoregion-based tourism development, the factors to be considered in the framework of ecoregion approach are as follows:

- 1) Economic factor, directly related to development activities, and is represented by the conversion of the land cover types of land use, land-use intensity ;
- 2) Ecological factor, associated with a natural ability to support development activities taking place, which is associated with impacts occurring (as a result of factors) ;

- 3) Factor of proportional allocation of space, which is the fulfilment of the minimum requirement of the natural lands (30% of the region), before the people can do the conversion of land for the benefit of the development sectors;
- 4) Factor of integration approach, in accordance with the concept of sustainable development ;
- 5) Population income factor. (Asyra, Iwan ., 2011)

2. METHODOLOGY/ EXPERIMENTAL

The research was done by outlining the potential, characteristics and existing problems in the waterfall Tumburano and linkage analysis of each aspect of the study on the need for space, mass and composition and spatial planning study area, as well as accessibility. The final result of this research is the development of the concept for structuring waterfall tourist area Tumburano based on ecoregion concept that responds to the environmental degradation caused by the intensity of physical development. The object of this research is the waterfall area with a diversity of conditions of the landscape (forests, plantations, hills and cliffs) in the Tumburano village.

In this stage, the defined planning area refers to the aspects of regional policy of the Regional Tourism in Konawe Islands, as well as data collection plan to be carried out, both with regard to the primary data, as well as secondary data obtained from the department or related agency. Stages survey was conducted to obtain primary and secondary data about the condition and potential of the study area, through the initial interview, the survey visually uses photographs to obtain a picture of the environment and the activities of visitors in the area of planning, surveying physical data concerning topography, area boundaries, roads, buildings and vegetation.

The data retrieval aims to determine the intensity of the development of the study area is a representation of policy interventions to obtain a regional concept that would affect the interaction of human activities and interactions with the surrounding environment resulting from land use change on the incomes of the population in various sectors around the study area. The concept can later be used as a consideration in the arrangement of space in Tumburano waterfall tourist area.

3. RESULTS

Location planning which is located in the center of the North Wawonii District with the existing condition or baseline of a waterfall with a height of ± 90 m , with border pond width filled with rocks and has a depth of about 10 m , with the condition of vegetation is heterogeneous and becomes the characteristic owned by this waterfall. The surrounding community activities that occur in this zone is gardening.

Typology of Tourism Tumburano locations that can be reached by walking along the 1.5 km from residential areas in the village Tumburano has varied characteristics, there is a ramp to reach the waterfall area, while the condition of the soil itself from visual observation is the clay making it slippery and very dangerous when it rains, the general conditions along the way to the location is still dominated by primary forest and coconut plantations.



Figure 1 Location Characteristics of Tumburano Waterfalls
Sources: Observations, 2015

Tumburano waterfall has 3 steps of the waterfall where the staircase to - 1 16.387 meters high, while the step 2nd 31.716 meters, then steps into the 3rd 48.2 meters. Tumburano waterfall is also flooded during the rainy season. It indicates that the functioning of ecosystems in the upstream has been disturbed. In addition, the color of muddy water (yellow) proves that there has been exploitation activities which affect the water conditions. The topography of the area shows some levels of tilt angle which tends to become very steep sloping area around the waterfall. These are the basic areas that were flooded in the event of rain. From the context of biodiversity, it can be said that around the waterfall is very natural, the evident is from the forest surrounding the waterfall area as well as the structure of the rock formations showed no exploitation activities at the waterfall area.

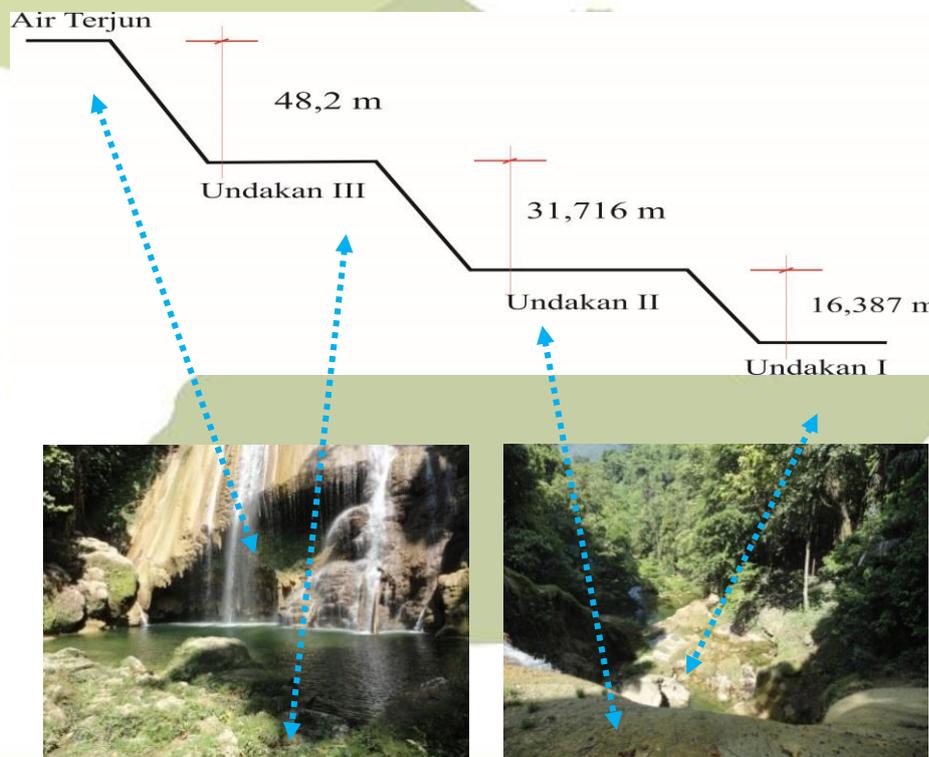


Figure 2 The stairway in Tumburano Waterfalls
Sources: Observations, 2015

Related to the issues of development and the development of Waterfall Tumburano based on the field observations, it can be explained as follows;

- The waterfalls are in the field of primary forests and unspoiled coconut plantation so the accessibility to the site is still low;
- The physical condition to the location of the waterfall has a topographically complex terrain on the condition of the ramp so that the safety of visitors is still lacking;
- The clay soil makes the area very slippery when rains, thus, it is dangerous to visit.

Characteristics of tourism Tumburano waterfall region in the identification of the road (entrance) to the location of the waterfall (destination), there are three characteristics of the location waterfall region as follows;

- Ramps; topographical characteristics that tend ramps with slopes 2° - 3° ;
- Ascending / Descending ; topographical characteristics of the hill located in the area of Waterfall Tumburano with a slope of 5° - 10° ;
- Waterfall; the waterfall has a special characteristic therefore here is analyzed separately, the characteristics of waterfall as a tourist attraction identified as having three steps where the waterfall with the height of steps varies. Waterfall in the context of tourism, the existence of the stairs as the attraction becomes the main point (point of interest) for visitors to this place .

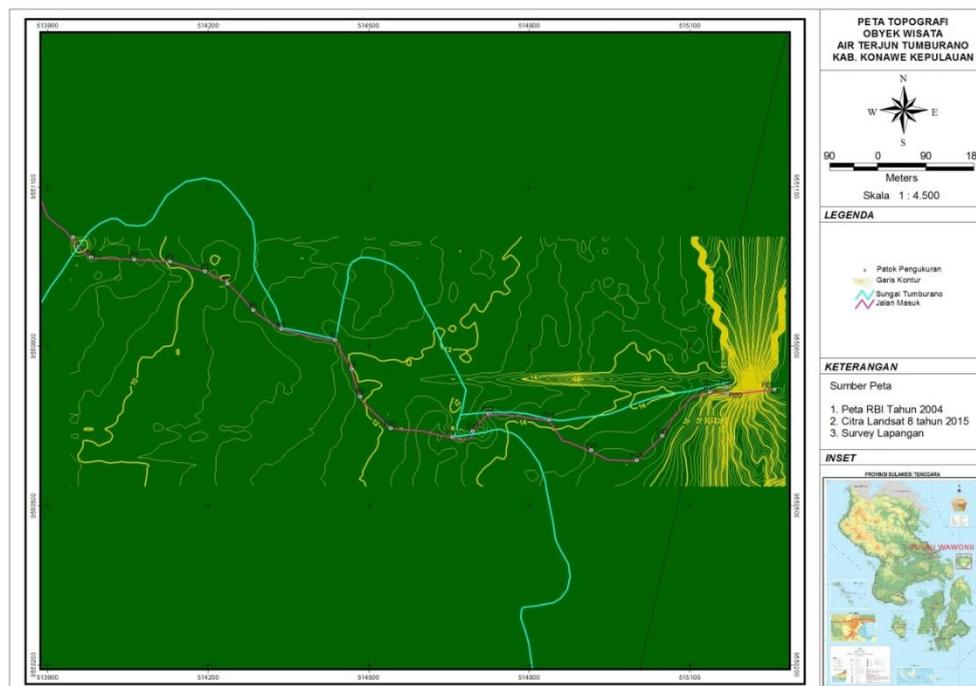


Figure 3 Tumburano waterfall topographic Map

4. DISCUSSION

Land Use Patterns Concepts

Based on the characteristics of the land in the study site, functionally, the location of the waterfall Tumburano tourist area can be divided into four categories as follows;

- 1) The entrance and main exit (main gateway); functional area which is the main access to toward the area of tourist sites in Tumburano waterfall, typical tourist

sites in waterfalls Tumburano is to use one entrance so that the functional area can serve as the Entry (main gate in) and also a certain area of the exit of regional tourist locations (main gate out);

- 2) Road (pathway); the main road leading to the waterfall Tumburano tourist sites;
- 3) Rest (rest point); a location point for resting place for visitors pedestrians, usually located in an area that has a good view or in the area analysed is the limit of the maximum range of walkers to rest as standard, the results of conformity based on the analysis will indicate the areas to rest (rest area);
- 4) The entrance and exit location of the main object (entrance and exit); an area which serves as the entrance to the site of main attractions (waterfalls);
- 5) Destination; is the final destination of visitors in the context of travel to waterfall Tumburano and other recreational areas such as waterbooms and garden area.

1.2 Area Development Manager

The direction of development of the area should be based on a consideration of the physical conditions of the region, environmental balance and sustainability of the natural resources. Regions need physical development, related to the provision of facilities and infrastructure (accommodation, roads, recreation areas and attractions). The development is of course with due regard to the carrying capacity of the environment.

- 1) The assertion edge region can also benefit from the movement path in the form of a corridor / walkway through the planning hierarchy and capacity as liaison between the movement paths attractions in consideration of the capacity development based on the carrying capacity of the region.

For conditions where the waterfall tour due to their distribution to adults the convenience of walking is targeted around 300 m, then any road access to 300 m are planned for the place of rest to get back in shape. Resting place in each places of the area would seem chaotic and may disturb other pedestrians. The well placement of the resting place is done by adapting to the contours of the ground state so that the construction of buildings is in a stable state and the pedestrians feel comfortable. The effective width of the sidewalk space based on the needs of people is 60 cm plus 15 cm to sway without carrying goods, so the total minimum requirement for 2 hikers or 2 pedestrians passed without going bumped is up to 150 cm.



Figure 4 Design Circulation Road and Staircase

- 2) As a buffer zone, plantation areas can be used as a transition area between the settlements with community attractions (area development facilities and tourist accommodation). It can be enhanced and tailored to the needs required for tourist activities, so that its presence will be part of a community of tourist attractions. An

increased space in residential areas could be: a) an area for open space; b) areas for the location of the home stay; c) area for placement of souvenir shop; d) areas for the location of the home industry.



Figure 5 rest area

- 3) Plantations used as public open spaces that can be used by tourists or local communities to exercise, cycle while the plantation area as a buffer zone is used as a tourist area restrictions to prevent the growth of other areas.



Figure 6 the river waterfall

- 4) Undeveloped riverbank is designated as a protected area that has the function to prevent the irregular development that may in decrease the ecological function and aesthetic value of the waterfall area.

5. CONCLUSION

Concepts and principles of development of tourism potential can be done with regional and regional approaches. Tourism development of waterfalls Tumburano includes such concept. The direction of development of the area creates a relationship between the tourist areas with the development of the area of Konawe Islands. Tourism development is in line with the policy of Spatial Konawe Islands with the Regional Tourism Master Plan. This is to control the activities of land users in the region. Direction of the development of the region will bring order to the environment by creating some activities that can improve the quality of the ecological environment, meet the travel accommodation for visitors, improve the economic and social surrounding communities, and improve the aesthetic value of the area.

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