

STUDY OF CHANGES IN LAND USE REVIEWED FROM TOURISM DEVELOPMENT FACTORS IN ARTERI ROAD CORRIDOR, BALIGE DISTRICT (YEAR 2009-2019)

Anthoni Rantho Sianipar, Nurlisa Ginting, and Amy Marisa

Architecture Department, Faculty of Engineering, University of North Sumatera, Medan, Indonesia. Telephone +62(61) 8219525 Postal Code 20155

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ABSTRACT

Presidential Regulation Number 81 of 2014 stipulates the Lake Toba area and its surroundings to become a National Strategic Tourism Area (KSPN) where Balige District is one of the Primary Service Centers which has main service facilities that connect between activity centers in the surrounding area. This policy is a stimulant in areas where there is a change in the function of agricultural land into commercial land with the growth of commercial buildings that affect land use changes in the arterial road corridor of Balige District. There are two problem issues that will be studied, namely: first, how changes in land use before and after the enactment of Presidential Decree Number 81 of 2014 at the research location from 2009-2019, second, how the influence of Presidential Decree Number 81 of 2014 on changes in land use which is a component tourism at the research location from 2009-2019. The research objectives are: first, to identify changes the land use before and after the enactment of policies at the research location from 2009-2019, second, to find the effect of policies on changes in land use which is a component of tourism in the research location from 2009-2019. The study used a descriptive qualitative method with a time series approach using the land use map of Balige District from 2009, 2014 and 2019. The results showed that the tourism component includes: accommodation facilities, eating and drinking facilities, transportation services, and travel agencies, changing commercial functions to commercial functions in the tourism sector. The results of this study show that as a result of the policy, changes in land use for the 2009-2019 period from 0.87ha to 1.27ha, secondly, as a result of this policy, there was a change in land use which was a component of tourism for the 2009- 2019 period from 0.61 ha to 1.24 ha.

KEYWORDS: Land Use, Tourism Development, Balige District, Arterial Road Corridor

INTRODUCTION

Land availability is fixed, meanwhile the demand due to higher urban activity has resulted in land conversion which is considered more profitable. The cons between the interests of land use due to the rapid population growth in line with the increasing community demand for land, there is often a conflict between land use and its allotment plan (Khadiyanto, 2005). The rapid growth, especially in urban areas, can be seen from the spread of centers of economic activity in the region. The physical growth of urban areas can be seen from changes in land use functions, for example agricultural land into trade and services land. From a political aspect, the existence of government policies and

regulations on the development of an area also has an influence on land use (Widayanti, 2010). The establishment of a special government policy towards a tourism area is an incentive for the community, government and private sector to develop and make tourism activities in an area (Pamungkas, 2015). In fact, the tourism industry is a factor that can affect land use patterns that can be seen physically even though there have been many changes in land functions (Isnaini, 2015). From some of these research references, it can be concluded that government policies can influence land use patterns in an area. Balige District is an area that has developed on the shores of Lake Toba

which is also the capital of Toba Regency. By looking at the potential for natural beauty it has, the central government issued Presidential Regulation Number 81 of 2014 concerning the spatial plan for the Lake Toba area and its surroundings, as well as establishing Balige District as a Primary Service Center (PPP) which is a National Tourism Strategic Area (KSPN) which has facilities. supporting the main services in the tourism sector. This policy has stimulated regional growth with the growth of commercial buildings on agricultural land and housing, hotel buildings, shop houses, educational areas, coastal tourism areas, open spaces, and so on. The change in land use, which was previously agricultural land, has shifted its function to commercial land which affects changes in land use, especially along the arterial roads of Balige District. This is the basis for researchers to study the influence of government policies through Presidential Decree Number 81 of 2014 on land use changes in the area, especially the arterial road corridors in Balige District. The approach is carried out by comparing the trend of land use patterns before and after the enactment of the policy. Therefore, research objectives study are: first, to identify changes in use before and after the enactment of policies at the research location from 2009-2019, second, to find the effect of policies on changes in land use which is a component of tourism in the research location from 2009 to 2019.

2. LITERATURE REVIEW

Change in Land Use

According to Wijaya (2004), there are several factors that cause land conversion, such as: population growth, employment, infrastructure and facilities as well as government regulations. The increasing number of populations which is increasingly dense and the level of living needs in an area stimulates the population to change land functions and open new land for settlements, cultivated land for livelihoods. Mansur (2001) argues that there are three factors that influence land use change, namely population growth, urbanization, and increasing middle and upper income in urban areas. Meanwhile, Nastain and Purwanto (2003) state that there are four factors that cause changes in land use, among others: high urbanization and slow development in rural areas, an increase in the number of middle and upper income people in urban areas which have an impact on the high need for housing / settlements, structural changes. the economy of the surrounding community which in time will shift agricultural or plantation activities, especially in urban areas, as well as the breakdown of land ownership into small and inefficient economic business units. For clarity regarding land use patterns in urban and rural areas, see the map of land use change in Figure 2.1.

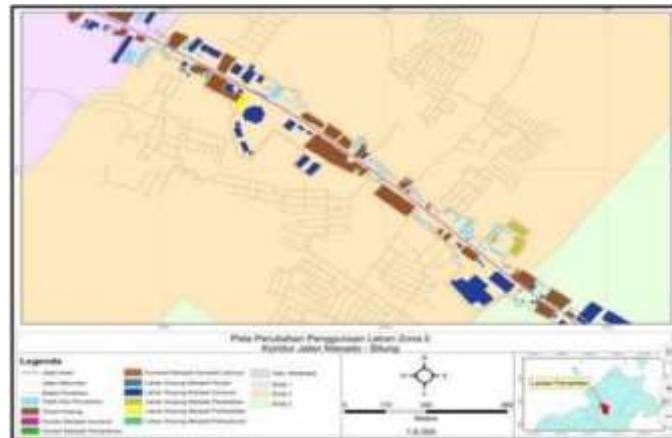


Figure 2.1 Land Use Change Map on the Manado-Bitung Road Corridor Source: Tujuwale, et al, 2017

In Figure 2.1 is a map of land use change on the Manado-Bitung Road Corridor, which illustrates the changes in land use that occurred in the time span between 2002 and d. 2016 (15 years). The pattern of land use obtained in the Manado-Bitung Road Corridor in the period 2002 s.d. 2016, among others: housing becomes commercial and offices, commercial becomes other commercial, and vacant land becomes other functions (residential, commercial, education, worship, and offices). From their study, Tujuwale, et al. (2017) concluded that there are several factors that influence the pattern of land use change in the Manado-Bitung road corridor, namely accessibility, land carrying capacity, infrastructure, and land value. Another factor that is sufficient to influence changes in land use functions on the Manado- Bitung road corridor is economic factors.

Tourism Development Components

The tourism industry is an industry that consists of several components in it which are the supporters of all tourism activities. Holloway (2002) suggests 3 (three) components of tourism that can bring in large numbers of tourists, consisting of attraction, amenities, and accessibility. Adding the opinion of Holloway (2002) above, Sugiyama (2011) states that there are 4 (four) components of tourism which are also called 4A, the components include: attraction, accessibility, amenities, and ancillary. Suyitno (2001) states that there are six components of tourism, namely: accommodation facilities, transportation facilities, eating and drinking facilities, tour guides, entertainment facilities, and souvenir shops. Transportation facilities are supporting facilities that bring tourists to tourist destination locations comfortably. Pendit (1999) in Santi (2017) states that there are six components / elements in the development and management of natural tourism, including: accommodation, catering services, transportation services, tourist attractions, souvenirs, and travel agents. So it can be concluded that the main components in the tourism industry are tourist attractions, transportation services, accommodation facilities, eating and drinking facilities, souvenir shops, and institutions (travel agencies).

Arterial Road Corridor

Zahn (2012) suggests that a corridor is formed with two rows of masses of buildings and trees which form a space to neutrally connect two urban areas. There are several elements that form the image of the corridor as forming regional architecture according to Krier (1979), including: building forms, figure ground, and Street and Pedestrian Ways. Bishop (1998) suggests that a road corridor has a major influence on the movement and form of trajectories (traffic) in an area. The existence of a corridor can be a solution to some of the main problems of regional growth. As a space for human movement (circulation) in their activities by means of transportation, corridors have two influences on the environment, namely: the continuity of activities and the visual quality of the urban spatial structure. The spatial structure in this corridor is formed by a comparison of several of its constituent elements, namely the length of the road, the width of the road, the pedestrian path, the height of the building, the function of the activities that occur, the shape of the mass and the building facade (Moughtin, 1992). Law Number 38 of 2004 explains that primary arterial roads are roads that serve as a service function for the distribution of goods and services for regional development at the national level, by connecting all distribution nodes to regional activity centers. The requirements that must be met by primary arterial roads are a design speed rate of > 60 km / hour and a road width > 11 meters, efficiently the number of entrances is limited, the arrangement of road junctions in accordance with traffic density and characteristics, having traffic signs, road markings, traffic lights, street lights, special lanes for bicycles and slow vehicles, having four or more lanes with a median according to requirements, if possible a slow lane is provided as well as a special lane for vehicles without motorbikes such as bicycles, pedicabs and others.

From the description above it can be concluded that the corridor on arterial roads has a very vital function because in addition to representing the city face and being dense with the routine main activities of the city, it must also meet the requirements that have been set.

3. RESEARCH METHODOLOGY

The method used in this study uses a qualitative method with a time series approach. By using the land use map for 2009, 2014, and the existing land use map in 2019 on the Balige sub- district arterial road corridor. The arterial road corridor studied is limited by the closest parallel / lateral road to the Balige sub-district arterial road corridor. Data collection techniques include field observations, document review, and interviews. Observations are made through observations of research subjects, both in the area of the research area carefully and in detail as well as by respondents (Nasution, 2009). This observation was carried out as a step to obtain preliminary information from the literature that had been prepared. Interviewing is a dialogue conducted by two or more people to share information or ideas by means of question and answer interactions, so that summaries can be drawn to reach conclusions from certain topics (Esterberdg in Sugiyono, 2015: 72). Secondary data is related to time series patterns / changes in land use. For more details, the methods carried out and used to achieve the

objectives of this study will be explained including: methods of determining research locations, methods of determining variables, methods of data collection, and methods of analysis.

4. DESCRIPTION OF THE RESEARCH AREA

Research Location Orientation

The research location is in Balige District, Toba Regency, North Sumatra Province, and is on one side (bank) of Lake Toba in the southeast with an altitude of ± 905 s.d. 1,200 masl, and has an area of 91.05 km², as seen in Figure 4.1.



Figure 4.1 Geographical Location of Balige District

The zoning and scope of the research area are located in the city center of Balige District, to be precise on the arterial road corridor covering Jalan Patuan Nagari - Jalan Sisingamangaraja along ± 1.53 km, with ± 40 m delineation on the left and right sides (unbuilt land) or the most front building on the road corridor (constructed land) as shown in Figure 4.2.



Figure 4.2 Research Corridor

In Figure 4.2, it can be seen that this research corridor is part of the Sumatran Central Highway network system which is located right across the center of the city of Balige District.

Existing Condition of the Arterial Road Corridor in Balige District

This route is a route from Medan City (the capital of North Sumatra) to Padang City (the capital of West Sumatra). Thus, the arterial road corridor of Balige District has a vital function and role, especially for the mobility of goods / people between provinces. The condition on the arterial road in Balige Subdistrict has a road width of 12 m as the primary arterial road as shown in Figure 4.3.

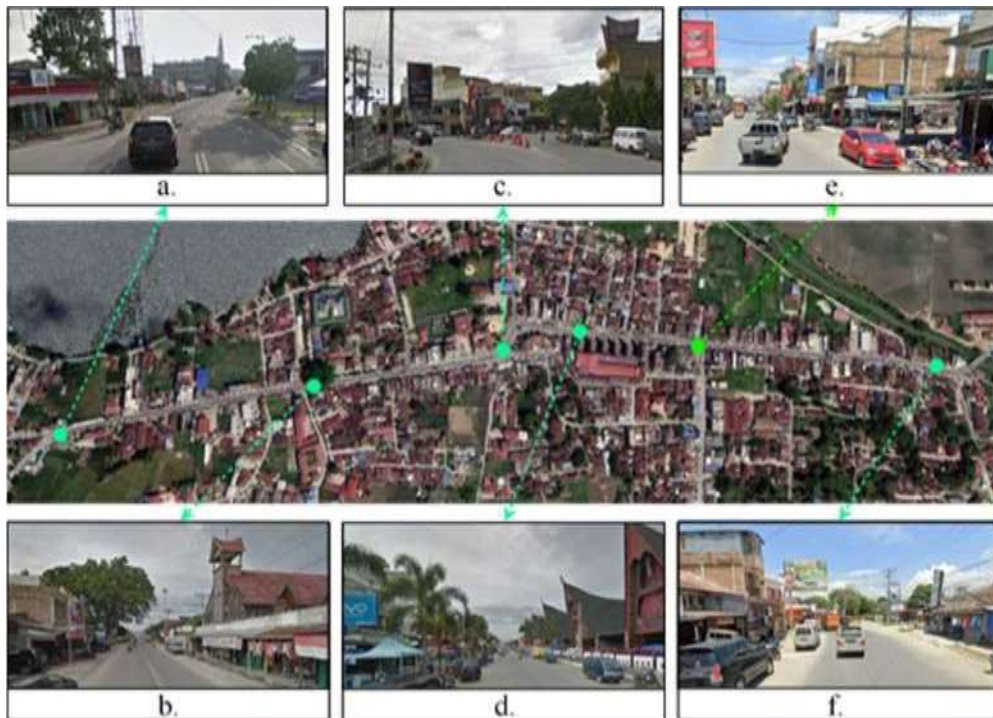


Figure 4.3 Condition of the Arterial Road Corridor in Balige District

Figure 4.3 generally describes a fairly good condition even though there are several vehicles parked on the shoulder of the road because it is in a shopping area, but the road availability is lacking and the vegetation is very inadequate.

The physical condition of the building on the arterial road corridor of Balige District The physical condition of the buildings in the research location in the arterial road corridor of Balige District has various physical conditions. There is a new building with a modern style with many glass openings, there is a minimalist style building, and there is an old building with a traditional Toba Batak style. For more details, the physical conditions of several buildings in the study area (arterial road corridor, Balige District), can be seen in Figure 4.4.



Figure 4.4 Physical Condition of Arterial Road Corridor Building in Balige District

In Figure 4.4 it can be seen that several commercial buildings are in good condition and are well maintained with modern building styles. There are also buildings that are quite old but still well maintained and government buildings with a classical architectural style, namely the Balige District Court Building and the mixed (eclectic) architectural style in the State Prosecutor's Office and the Balige Market building which has been established since 1936 but is well preserved and maintained.

General Description of Land Use in the Research Area

The arterial road corridor in Balige Subdistrict, which acts as the main route for the area's traffic, has resulted in varied land uses as a service facility to meet district level needs. This can be seen from the presence of vital land use functions (very important) in the research area which is the center of the city of Balige District. Some of the vital land use functions in the study area are shown in Figure 4.5.

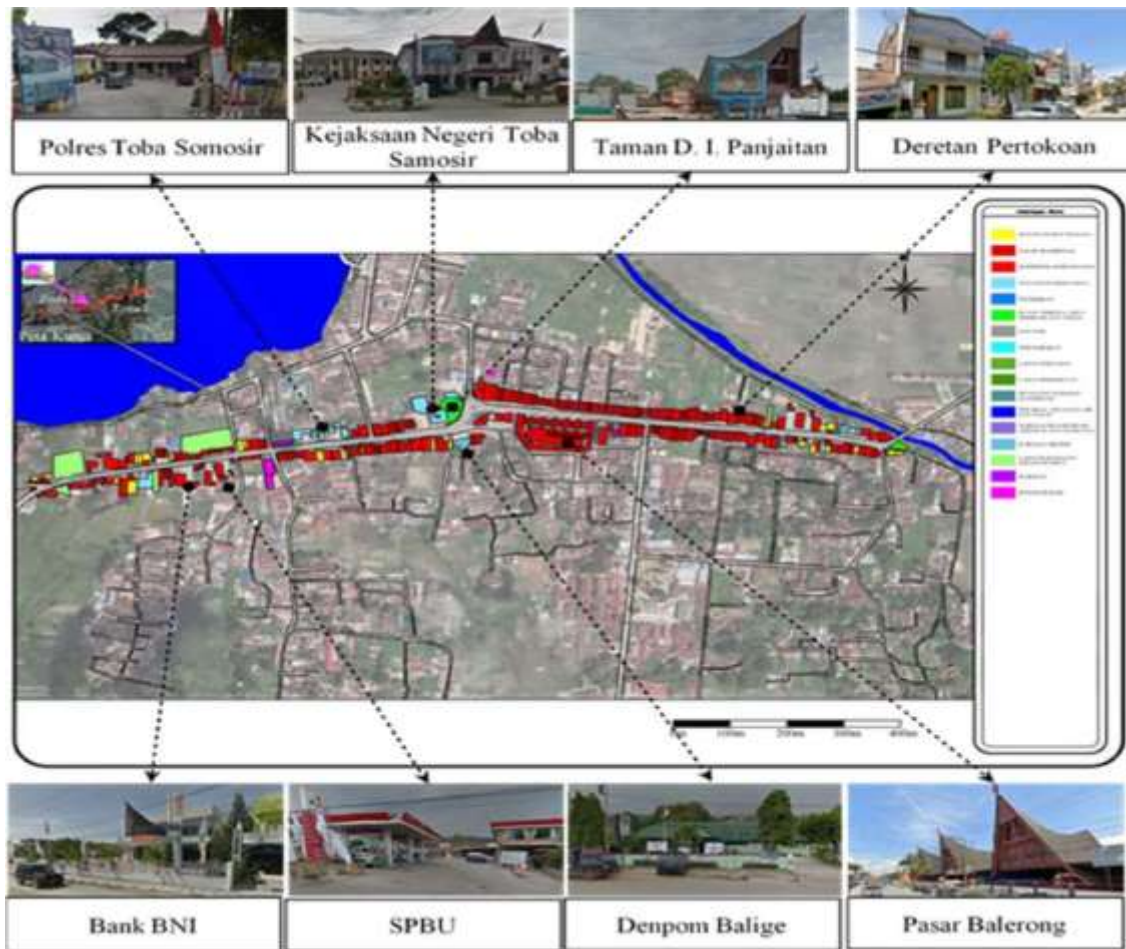


Figure 4.5 Land Use in Research Corridors in 2019

In Figure 4.5 you can see a map of land use on the arter road corridor of the Kecamatan Balige zone 2, some of the vital land uses in this area include: Polsek Balige, Balige District Court, Toba Samosir District Attorney, Balerong Market, Denpom Balige, Dipanjaitan Park, rows of shops, gas stations, and government offices. As well as, several other land use functions such as residential houses, houses of worship, empty land, agricultural land, graves, and so on.

Overview of Tourism Components in the Research Area

The land use function, which is a part or component of tourism, includes: tourist attractions, transportation services, accommodation facilities (hotels or motels), food and drink facilities, souvenir shops, and travel agencies (tourism institutions). In the corridor of the arterial road in Balige Subdistrict, which is the area of this research, several functions are found that are components of the tourism. Among them are the functions of accommodation (hotel), eating and drinking facilities

(restaurants), souvenir shops, and so on. For more details regarding the general description of the tourism component in the research area, it can be seen in Figure 4.6 below.



Figure 4.6 Tourism Components in the Research Area

In Figure 4.6 it can be seen that several land uses are components of tourism variables on the arterial road of Balige District, including: components of tourist attractions (Balerong Market and Taman DIPanjaitan), accommodation components (Mutiara Balige Hotel, Mezra Hotel, and Gelora Inn), and components of eating and drinking facilities (Dallas Fried Chickhen). Based on observations at the research location, it was identified that there are a number of land uses which are components of tourism. In the research corridor, there is a typological configuration of each land use which is a

tourism component, where the tourism component is in a densely populated city with building masses causing the typology to adjust to limited land.

5. DISCUSSIONS

Results of a Study on Land Use Before and After the Establishment of Presidential Decree 81/2014
 The results of this discussion are to answer the first problem issue, namely how land use changes before and after the enactment of Presidential Regulation Number 81 of 2014 on the

Balige sub-district arterial road corridor from 2009 to 2019. Based on the identification results, there is land use in the sub-district arterial road corridor. Balige prior to the enactment of the policy, namely in the period 2009 to 2014, included: vacant land / agriculture became commercial, commercial became other commercial, and vacant land became offices. Meanwhile, the change in land use in the arterial road corridor of Balige District after the enactment of the policy, namely in the 2014-2019 period, the change in land use was relatively larger than in 2009-2014. This change is dominated by changes from commercial to other commercial, vacant land to commercial, residential to commercial, and so on as shown in Figure 5.1.

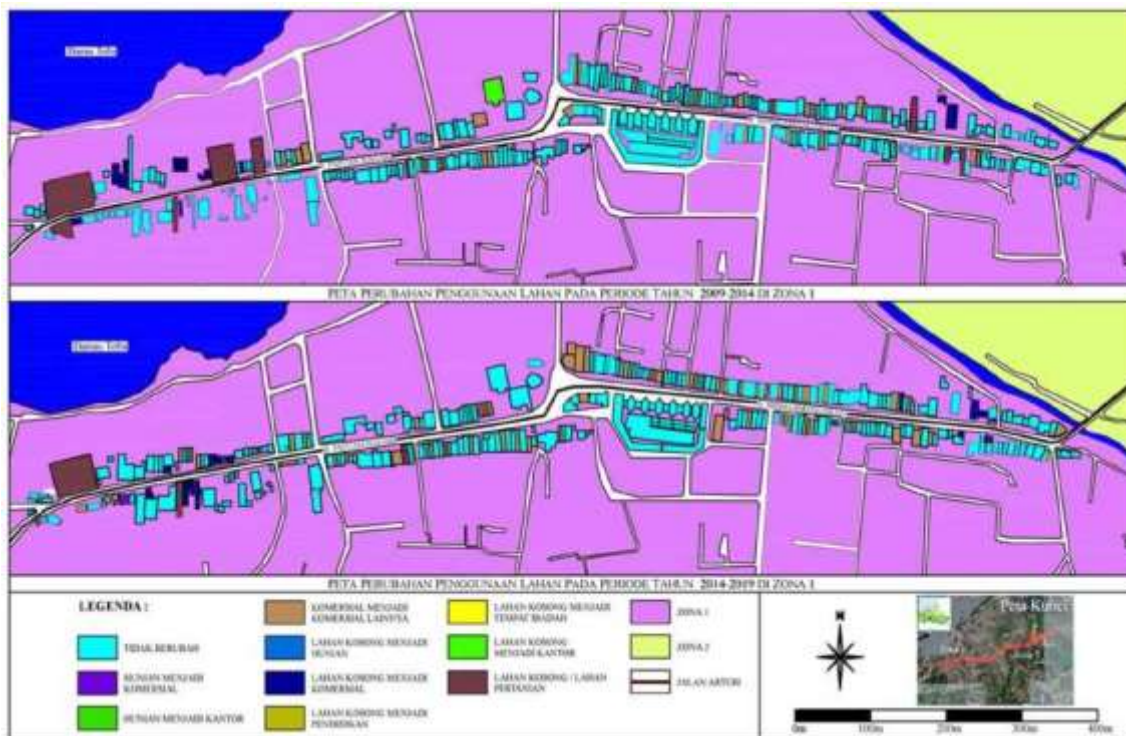


Figure 5.1 Map of Changes in Land Use in the 2009-2014 and 2014-2019 Periods

Figure 5.1 is a map of land use change in the period from 2009 to 2014 (before the policy) and in the period from 2014 to 2019 (after the policy) in the arterial road corridor of Balige District. In the period

before the policy was enacted, land use was very much dominated by the function of land use for trade and services, such as the conversion of vacant land and agricultural land to commercial use in the form of hotels, public fueling stations (SPBU), shops and others. Meanwhile, changes in land use in the period after the policy in terms of quantity seem to have increased from the number of built-in land uses that are more numerous than in the previous period. The conversion of vacant land that previously existed between buildings has turned into a built-in function with the dominant function of the commercial type. Likewise with built-up land, in the period after the policy of changing the function of buildings was dominated from commercial to other commercial functions, followed by changes in residential to commercial functions. This is an attempt by the community to take advantage of the land value in the main corridor in the city center with the presence of Balerong Market as a driving force / center of activity, main infrastructure, and so on. The results of the analysis of changes in land use in the period 2009 to 2014 and the period 2014 to 2019 are presented in Table 5.1, with a record of land use that has not changed and agricultural land / land is not calculated.

Table 5.1 Calculation of Changes in Land Use Before and After Presidential Decree 81/2014 on the Balige Arterial Road Corridor

No.	Change in Land Use	Period Years 2009-2014			Period Years 2014-2019		
		Amount (Unit)	Basic Building Area (Ha)	(%)	Amount (Unit)	Basic Building Area (Ha)	(%)
1.	Residential became commercial	0	0	0	1	0,02	1,57
2.	The residence becomes an office	0	0	0	0	0	0
3.	Commercial becomes another commercial	37	0,53	60,91	66	1,00	78,74
4.	Vacant land becomes occupancy	0	0	0	0	0	0
5.	Vacant land becomes commercial	17	0,25	28,74	19	0,25	19,69
6.	Empty land becomes education	0	0	0	0	0	0
7.	Empty land becomes a place of worship	0	0	0	0	0	0
8.	Vacant land becomes an office	1	0,09	10,35	0	0	0

The pattern of placement of building masses in the 2014-2019 period was increasingly compacted and concentrated, by filling in the gaps in the form of empty / agricultural land between existing buildings until 2014. Changes in land use from the placement of compacted building masses have increasingly adapted to the needs of the existing buildings. needed by all sectors. Based on the analysis and

calculations that have been carried out and shown in table 5.1, in general it was found that in the research corridor there was an increase in the rate of change in land use, an increase of 0.40ha (1.27ha - 0.87ha) or by 45.98% in the year period. 2014-2019, when compared to the percentage rate of land use change in the 2009- 2019 period, it is assessed from the basic area of buildings whose land use has changed. It can be seen that the basic building area whose land use changed in the 2009-2014 period was 0.87 ha (2009-2014), an increase in the basic area of buildings whose land use changed by 1.27 ha (2014-2019). This indicates an increase in the 2014-2019 period when compared to the previous period, namely 2009-2014. Government policy through the stipulation of Presidential Regulation Number 81 of 2014 affects the increase in land use changes in general in the research corridor located in the city center of Balige District. So it can be concluded that government policy is a factor causing land use changes in the research location as stated by Wijaya (2004).

Study Results of the Effect of Presidential Regulation Number 81 of 2014 on Land Use for the Tourism Component in the Balige Arterial Road Corridor (2009-2019)

The results of this discussion are to answer the issue of the second research problem, namely how the influence of Presidential Regulation Number 81 of 2014 on changes in land use which is a component of tourism in the arterial road corridor of Balige District from 2009 to 2019. In the period 2014 to 2019, the arterial road corridor in In this downtown area, there is an increase in the use of land which is a component of tourism when compared to the period 2009 to 2014, and this increase is shown in Figure 5.2.

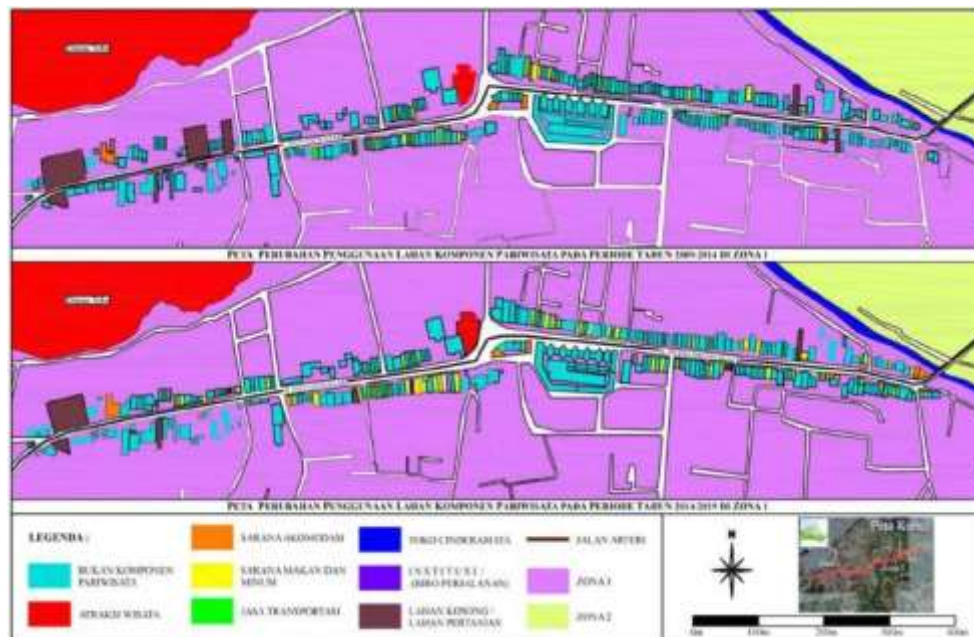


Figure 5.2 Map of Changes in the Land Use of Tourism Components in the 2009-2014 and 2014-2019 Periods

Figure 5.2 shows a map of changes in land use for tourism components before and after the issuance of the Presidential Decree 81/2014. Previously, it has been explained that the overall increase in land use change rate in the arterial road corridor in Balige District was 45.98% in the 2014-2019 period (after the policy), when compared with changes in land use in the 2009- 2014 period (before the policy). The components of land use that have experienced an increase include: accommodation facilities, eating and drinking facilities, transportation services, and travel agents. The increasing number of tourism components is dominated by changes in the use of existing buildings, so it can be assumed that land use changes are dominated from commercial functions to other commercial functions in the tourism sector. The changes in land use for the tourism component are summarized in Table 5.2 below.

Table 5.2 Calculation of the Effect of Presidential Regulation No. 81 of 2014 on Changes in Land Use for Tourism Components for the Period of 2009-2014 and Years of 2014-2019

No.	Tourism Component Land Use	Period Years 2009-2014			Period Years 2014-2019		
		Amount (Unit)	Basic Building Area (Ha)	(%)	Amount (Unit)	Basic Building Area (Ha)	(%)
1.	Tourist attractions	1	0,25	40,98	1	0,25	20,16
2.	Means of accommodation	4	0,12	19,67	6	0,19	15,32
3.	Means of eating and drinking	30	0,22	36,07	62	0,73	58,87
4.	Transportation services	1	0,02	3,28	5	0,05	4,03
5.	Travel agency	0	0	0	2	0,02	1,62
6.	Souvenir	0	0	0	0	0	0
Amount		36	0,61	100	76	1,24	100

In Table 5.2 above, we can see the details of changes in land use for the tourism component in the period 2009 to 2014 and 2014 to 2019. The number and extent of land use which is a component of tourism in the arterial road corridor between the period 2009 to 2014 and the period 2014 to 2019 are as follows: first, the tourist attraction between the period 2009 to 2014 and the period 2014 to 2019 is still 1 unit (Taman DIPanjaitan and Batak Traditional House) with an area of ± 0.25 Ha. Second, there are 4 units of accommodation facilities in the 2009-2014 period with a built-in area of 0.12 ha, an increase in the 2014-2019 period to 6 units with a total built-up area of 0.19 ha. Third, there are 30 food and drink facilities in the 2009-2014 period with a built-in area of 0.22 ha, an increase in the 2014-2019 period to 62 units with a built-in land area of 0.73 ha. Fourth, transportation services, which initially amounted to 1 unit in the 2009-2014 period with a built-in area of 0.02 ha, increased in the 2014-2019 period to 5 units with a built-in area of 0.05 ha. Fifth, a travel agency that did not exist in

the 2009-2014 period then grew into 2 units with a built-in land area of 0.02 ha in the 2014-2019 period. Meanwhile, the tourism component in the form of souvenir shops was not found in the 2009-2019 period in the arterial road corridor of Balige District.

Thus, the increase in the number of land use units as a component of tourism in the 2009- 2014 period amounted to 36 units to 76 units in the 2014-2019 period. Likewise with the total area of built land which is the land use component of tourism, where in 2009-2014 an area of 0.61 ha became 1.24 ha in the 2014-2019 period and if a percentage the increase was $\pm 103\%$ when compared to the period. 2009-2014. So that the result shows that the impact of the Perpres policy affects the land use of the tourism component in the corridor of the Balige sub- district arterial road. In the period 2009-2014, the number of built land uses (agriculture / residential / commercial) was 55 units with a built-up area of 0.87 ha, then the land use as a tourism component was 36 units with a built area of 0.61 ha. So, it can be concluded that the land use change which is a component of tourism is ± 19 units (55 units - 36 units) with a built-up area of ± 0.26 ha (0.87ha - 0.61 ha). Meanwhile, in the 2014-2019 period, the number of built land uses (agriculture / residential / commercial) was 86 units with a built area of 1.27 ha, then land use as a tourism component was 76 units with a built area of 1.24 ha. The results show that the land use change which is a component of tourism is ± 10 units (86 units - 76 units) with a built-up area of ± 0.03 ha (1.27ha - 1.24ha).

From the results of this analysis, it can be calculated that the percentage increase for the tourism component in the downtown corridor of Balige District is $(0.61 \text{ ha} / 0.78 \text{ ha} \times 100) = 70.11\%$ before the Presidential Regulation is enacted and becomes $(1.24 \text{ ha} / 1.27 \text{ ha} \times 100) = 97.64\%$ after the enactment of government policy through Presidential Decree No. 81/2014. Thus, government policies greatly affect land use changes in terms of the tourism component, namely accommodation facilities, transportation facilities, eating and drinking facilities, tourist attractions, entertainment facilities, souvenir shops and travel agents (Pendit in Santi, 2017)

6. CONCLUSION

Based on the results of the analysis in an effort to answer the two predetermined problem issues, conclusions were obtained: first, based on the first problem issue, namely finding land use patterns before and after the enactment of Presidential Decree Number 81 of 2014 on the arterial road corridor of Balige District, the results of the analysis were that there was changes in land use in the 2009-2014 period (before policy) in the research corridor from 0.87 ha to 1.27 ha in the 2014-2019 period (after policy). Second, based on the second problem issue, namely finding the effect of Presidential Decree Number 81 of 2014 on changes in land use which is a component of tourism in the arterial road corridor of Balige District, the results of the analysis show that there has been a change in land use which is a component of tourism for the 2009-2014 period (before the policy). from 0.61 ha to 1.24 ha in the 2014-2019 period (after the policy). Third, the percentage increase for the tourism component is 70.11% before policy and to 97.64% after policy. Fourth, government policy through the enactment of Presidential Regulation Number 81 of 2014 has an impact on increasing changes in land use in general

/ as a whole and changes in land use for the tourism component in the arterial road corridor in Balige District.

The results of this study are expected to be useful as material for the government's consideration in taking appropriate policies and actions for the success of a good and sustainable urban physical development program. On this occasion, the authors recommend several, among others: first, the local government is expected to develop the number of tourist attractions in the research area, by utilizing the potential of the beauty of Lake Toba as a waterfront concept ecotourism, introducing local wisdom as a new attraction, by utilizing empty land while maintaining preserving Lake Toba with the concept of sustainability. Second, local governments can plan special zoning for land use which is a tourism component to provide travel clarity for tourists visiting Balige District. Third, the government and the private sector have the energy to empower, grow, develop, and encourage micro, small and medium enterprises to play an active role in the tourism sector from various sectors, especially the socio-cultural and economic sectors. Fourth, this study only focuses on land use changes associated with the tourism component in the arterial road corridor of Balige District. Therefore, further research is needed on other land uses in the arterial road corridor of Balige District.

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