

Technical Note

# Land-use and road development pattern of downtown makassar since 19th century until now

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## ABSTRACT

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The study aims to determine the development of land use and road patterns in downtown Makassar since 19th century and its influencing factors. The study intends to provide an understanding of the growth and development direction of the city based on the history, to figure out the factors which later can be used as a basis of coastal city planning policy. The collection of information obtained by observation, in-depth interviews, and referring to the city development history. The data were analyzed using GIS-based spatial technique and qualitative analysis to determine factors that affect urban development. The study found that land uses such as residential, trade/services, port, and social facilities have been developing dynamically in the downtown Makassar until nowadays. These phenomenon lead to subsiding or disappearance of other land uses such as paddy fields, township, gardens, open spaces, grave, and jail. The development were strongly influenced by the dynamics of economic development, science, and urban technology, especially on trade and settlement facilities. The direction of urban development is dominant to the East and South due to the availability of vacant land and access to hinterland. Similarly, the development of roads in the downtown area also occurs dynamically as the loss of some roads as a result of infrastructure and housing construction. It is strongly associated with urban urbanization process due to the modernization. Facing that, it is necessary to maintain urban heritage strategy among others: actualization of local wisdom and heritage, involving each ethnic in development, revitalizing area based on history and culture, and area management.

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## 1. Introduction

Makassar city as one of the cities in Indonesia that was originally created and planned by the Dutch. The initial planning used a concentric pattern where Fort Rotterdam was the main zone and contiguous to the elite housing, as well as other zones include trade and public housing. The formation of the city until now has unique

characteristics such as land use, road patterns, as well as other forms of building, especially seen in the District of Ujung Pandang and Wajo. The coastal area potential grows sporadically due to the complexity of the case. These conditions will have a negative impact if not addressed in a planning, precisely in the field of managing the area effectively. Some cities of the world experiencing an active transformation caused by the

process of urbanization in the form of landscape activity (Shafaghat et al., 2017). The facts show that urban development causes an intense pressure in the cities, inflict a serious damage to existing resources, and ultimately leading to the aesthetics of a poor natural landscape. This is in line with Kaplan et al. (1998) that urban transformation is a major cause of declining urban landscapes. The most concerning thing when the city characteristics was no longer the pride of its people. Many cases of historic cities then lose their identity due to the uncontrolled urbanization. For example, the Malaysian Government reports that rapid urban development is cause of the urban physical changes that have resulted in the disappearance of historic sites and urban heritage, the lack of attachment between local culture and lifestyle today (Shafaghat, et al., 2017). One of the most important issues in urban studies that inheritance cities should be respected, understood and preserved for future generations to provide and restore a sense of identity and society in urban areas (Tweed and Sutherland, 2007). It is important to be a learning forward especially in the area.

The retention of heritage buildings in the downtown is one of the aspects often considered in the developments of city (Ismail, 2016). The land use of Downtown Makassar has actually formed long ago. Initially downtown region has been formed and started bustling in the 17<sup>th</sup> century. Fort Rotterdam and several elite residential surrounding autonomy acts as a central colonial city period followed by port establishment which acts as a trading, followed by the establishment of several local community housing. The urban growth form has a different character to other cities. When the colonial government was replaced by the Indonesian government, the role of the fort began to be ineffective. At that time, the city hall turned into a centre of government and the city centre orientation itself was led to Karebosi Square.

The development of urban life is increasingly complex, marked by increasing population growth every year. Makassar city's population in the early colonial period (1730) were 4.985 people, in 1971 there were 431.000 people, and in 1980 as many as 625.000 people (Sumalyo, 2002). While the population of Makassar in 2015 amounted to 1.4 million people (Statistic Board of Makassar). The population growth is in line with economic growth of the city. At this time, symptoms of the growing modern buildings appeared in keeping with the complexity of the community activities, on the other hand cultural heritage buildings are being lost, the meaning and legacy heritage city area are forgotten (urban heritage). The area has a rich heritage in the historical site form, historical cultural and historical district

(Shirvani, 1985). Urban development continues to grow is an expectation, but retains some components, spatial, and visual valuable urban heritage are a necessity.

The development of heritage buildings in downtown is one aspect that is often noticed in the development of the city. There are many reasons why buildings need to be maintained, among others, if authorities indicate that local heritage buildings can contribute to improving the economy of the place. Another reason is due to the value of heritage building to the owner, to the area, and to the community (Ismail, 2016). One of the urban economic development efforts in arrangement context of creative economy is doing city heritage preservation activities covering a wide range of buildings heritage in the area. This order is very important because there is a tendency of losing cultural heritage assets such as coastal urban Makassar downtown. The cultural development assets requires the creation of spatial as a place of cultural activities that magnitude in providing the enhanced quality of life (Tajuddin, 2003). Sporadic urban development tends to forget the meanings of unique heritage that has been fought for and built by our predecessors, were no less exciting as building a replacement. Order cities that have formed appropriately preserved or enhanced vitality. The changing pattern of land use and road seen from the time variable is an interesting to be studied in depth, as well as if it is associated with factors that influence or motivate its development. It can be a basic philosophy for the future of urban planning.

### 1.1 Urban Morphology

Gallion and Eisner (1992) defined the city as a laboratory to find physical form testing be experimented freely. Attaching woven into the city's physical rules that express symbols patterns of economic, social, political, and spiritual and civilization. The morphology is related to the physical form of the city or region. Morphology is one approach that is used in geography, architecture and town planning, particularly to examine the physical forms cities' or regions' products, aiming to manage and design the layout. Morphology is a logical approach to understanding the shape of city/region as a product of socio-spatial changes (Hillier and Hanson, 1984). Morphology is related not only to the physical form alone, but also explaining the phenomena that underlying the occurrence, ideology, and the factors behind these forms (Zaidulfar, 2002). In other words, coverage morphological approach is not limited to the physical aspects alone, but also the non-physical (historical, political, social, economic, military, and cultural). Morphology also examines the history of spatial patterns formation, the

past and the current development of a city or region, hence we will get diachronic overview of both aspects, and the change physical forms as well.

Yunus (2012) stressed on several aspects of the elements that can be observed in the morphological analysis: 1. City shape include forms of a city or region seen at the macro level of geometric shapes such as squares, rectangles, circles, shapes are not patterned, or split form, and others. This element is included in the factors affecting the formation of cities or regions such as geographical factors or landscape, historical socio-economic, regulatory and policy. 2. Land use includes the arrangements regarding the use of land for building or open space. 3. Linkage includes lines connecting pseudo-elements inter-city, inter-city neighborhood in the form of roads or open spaces shaped slits. 4. Buildings includes building types, architectural style, as well as functions.

Kuntowijoyo (2003) revealed that the morphological approach can be explored both synchronic and diachronic. Synchronic study emphasis on observation and analysis of morphological elements to see the city shape at one time. This assessment is generally used to evaluate the present layout of city to problems solve the spatial existing. Studies in diachronic emphasis on observation and analysis of the elements of the morphology of a city or region from time to time (Kuntowijoyo, 2003). These studies look at the process of development of a city or region from the beginning until today. Besides used as the basis for the evaluation of the problems and designing the layout, the diachronic viewpoint will produce a history of the city development and the processes that occur therein, and the result is an expression of the city identity.

### 1.2 Urban Forming Elements

#### Urban Land Use

Gallion and Eisner (2002) revealed that the distribution of urban land is divided into five main areas of development: 1) housing; 2) commercial; 3) industry; 4) open space, and 5) of farmland. Each region is divided into several spatial function, ranging from basic needs to function most desirable, from the most tied or sealed to function most free, from the most dense to the most open function. In a city there are hierarchy of settlements or service center activities. The types of space utilization areas or cities, among others, are residential area, governance area, trade and services, as well as open space area. The diversity of utilization types of urban space depends on the city functions within the scope of the wider region. The principle of land use According to the Land Agency of Indonesia (Hardjowigeno and

Widiatmaka, 2015), include: development aspects, land use suitable national development plans; legal aspects, land use appropriate regulatory; organizational aspects, land use appropriate administrative; and technical aspects, land use appropriate carrying capacity and land suitability.

#### Urban Road Pattern

Road pattern becomes a factor that encourages activities development and contrarily the development of an activity requires support of road development. Roads were formed on a local scale in any building or around the open space, then be formed into a settlement, and formed a city or a larger area with typo-morphology unique. According to Krier (1979), the road is a product of the spread of settlements through the construction of every home in the spaces provided. This is a basic framework in terms of land distribution and provide access to each housing unit.

Kostof (1992) and Yunus (2001) revealed that the road pattern in urban is one of establishment city form elements. The road pattern is the manifestation of the most obvious in determining periodicity city formation in western countries. According to Pontoh and Iwan Kustiwan (2009), the road is a key indicator in the city form so that the city spatial planning and road development can not be separated from the existing space utilization pattern or to be realized. Moughtin (1992) asserts that the street is not only meant as a connecting line, but also an arena for social expression.

In the form of the city establishment, there are three types of systems known street pattern, namely (summarized from Northam, 1975):

a. Irregular street pattern (irregular system). Seen any irregularity home placement and lanes in either direction and width. This can be seen in cities in Europe and Islamic cities in the North Africa also cities in Asia. This pattern was seen in the early growth of cities but at this stage of development towns in western countries follow the type of planned city regularly.

b. Radial road pattern of concentric (radial concentric system). The design of the road with this fortification pattern appears to anticipate the progress of weapons and war tactics. The road pattern is predominantly found in Europe, can not be found in Asia.

c. System-shaped road pattern rectangular lattice or grid (rectangular or grid system). In this system, the city is divided into rectangular blocks with streets parallel to form a right angle.

The road pattern is the character of the fortified cities (bastides cities) which divides the city area to blocks form (Yunus, 2000). The main road runs from the main gate to the town square or the main market in the city center. The pattern is widely applied in the United States, Europe,

and the cities of the development countries such as in Asia. Grid street pattern that is applied in Europe, America, Japan, and China, relatively regular and the dominant grid-shaped. While the grid pattern that occurred in the cities of developing countries as well as Indonesia, relatively less regularly and tends to be patterned rectangle.

### *1.3 Urban Heritage development in the Developing Country*

In some old cities of developing countries have experienced the process of urban growth in the long term but still retain its traditional activities including physical elements of the city, such as road patterns. On the other hand, the development of modernization and globalization is also gradually progressing. Ancient buildings, road, and communal spaces are used as a traditional urban tourist area.

The heritage assets of areas and cities in developing countries, which generally have relatively low per capita incomes, are also generally small. Residential buildings and communal facilities are formed from local architectural-style buildings. Community activities developed in the form of economic activities such as small businesses and craftsmen who produce traditional creative-based products and services. The historic heritage city acts as an independent area, although the surrounding has developed modern cities. The center of the heritage city is increasingly experiencing problems of urban development, due to the difficult implementation of city development strategies such as the increasingly limited land behind the growing needs of residential, public and commercial facilities. As a way out by government and society seems to lead to continuous development followed by the destruction of old buildings and replaced them with modern structures. Some indigenous peoples have sold their land and buildings and then moved to other, less expensive and developed areas. Against the people who buy the building, immediately renovate with other functions such as commercial buildings and transform into modern shapes and structures. Cases of the city area are generally seen in cities in Africa, India, Malaysia, Indonesia, etc.

In other cases there are also some areas of the heritage city that survive even though some of the city's infrastructure is changing for urban quality improvement. It retains the traditional activities of the community as well as maintains some heritage buildings, maintains the basic form of community buildings although its functions are developed to have another activities running, such as commercial. Thus the economic, social and cultural life of the city still exists, and continues to promote its cultural identity. There are three strategies to revitalize the

existing urban heritage buildings. First, adapt existing buildings with new activities that may be more financially attractive to develop. Second, redevelopment by tearing down existing buildings is a wasteful step financially. Third, improve the quality of the environment and cultural values in the heritage area through the involvement of active local community participation (summarized from Throsby, 2015).

The preservation of indigenous culture is very interesting for every visitor, so it needs to be developed into a cultural tourism area of the city. This positive benefit will be lost if the urban cultural object must be dismantled. The traditional potential can be seen in the conservation of the historic area of the Patan Center, Nepal, through conservation activities for city tour activities (Throsby, 2015). It provides an important attraction for travelers seeking authenticity of local culture. Urban citizens recognize these values and can engage in sustainable conservation activities. Such an approach has been used in the revival of the city's heritage within the walled city of Ahmedabad in India (Throsby, 2015). Rooted in detailed case studies of cities in Nepal, Malaysia, Korea, and Japan, four alternate approaches to "culturally sustainable urbanism" are: internal cultural transformation, multiculturalism and enlightened localism, urban cultural identity, cultural mode of production (Duxbury and Jeannotte, 2010).

## **2. Methods**

This paper aims to reveal more about the development of land use and street pattern in the Makassar downtown area from 19th century to present, and look at the influencing factors. This study will be helpful in providing policy recommendations for city center development future, especially the coastal city that acts as a commercial city as well as the city's cultural attractions with their sporadic development opportunities in future. The research location was situated on a coastal area which includes the Makassar city, District of Ujung Pandang and Wajo which was the region's legendary starting point of Makassar city formation to grow as now. The data collection among others by search a city map (19th to 21th century); observations of the study area; and conduct interviews to several public figures are mainly looking for information: development and formation of land use and urban roads pattern, as well as the influencing factors. Analysis technique using GIS-based spatial analysis approach. Spatial analysis was done from scratch by creating a map long been a geo-referencing program. Further analysis was a map overlay based on a variable period maps and thematic maps to

be analyzed. Furthermore, to determine factors that influence its development used qualitative analysis using diachronic reading. The study was expected to contribute against planning policy in the downtown area of Makassar as an anticipatory and adaptive steps to the development trend of sporadic development in the future.

### 3. Results and Discussion

Makassar city lies between 119°24'17.38" East Longitude and 5°08'6.19" South Latitude. Total area is 175.77 km<sup>2</sup>, covering 14 districts with 7.132 people/km<sup>2</sup> density. The population in 2015 recorded 1.449.401 people, consisted of 28.278 people in Ujung Pandang District and 30.772 people in Wajo District (Statistic Board of Makassar). Downtown Makassar is located on the west coast in the middle area of Makassar as shown in **Fig 1**.

#### 3.1 Physical Development of Downtown Makassar Since 19th-20th Century

Referring to the theory of urban form by Ardian (2007), assumed that the characteristics of downtown Makassar area formation shows the dualism between organic and geometric. Said to be classified in the category of organic city because the growing and rise early in the 17th century grew spontaneously and naturally with relatively irregular pattern along the sea coast, especially on the two axis which is Jeneberang River estuary and Tallo River estuary. The geometrical development was caused by the urban design ideas initiated by the Dutch in the 17th century since the formation process of Makassar city, subsequently re-grow organically due to the ineffectiveness of urban management at the time. The concept of urban planning started to emerge in the 1970s era, followed by the drafting of a city plan guidelines set by the government of Makassar, which were guided to day.

Morphological development of Downtown Makassar since 19th to the 20th century in general shows a non-rapid development. Its development to the North, East, South by filling spaces in settlements, several residential and trading/services facilities by filling the empty spaces in the city center, and housing on the road south (See **Fig 2 and Fig 3** below).

In general, major change occurred in the land use of downtown area within 19th to 20th century are:

- Settlements turned into settlement, counted to 47.22 Ha

- Settlements into educational and trading facilities, which are 3.81 Ha and 3.57 Ha respectively.

- Farm (paddy field) into settlements for about 45.5 Ha

- Grave became Township measuring 4.09 Ha

- Open space into as many grave plots of 3.34 Ha and settlement 4.05 Ha.

The most extensive land use of the downtown area in 19th Century, among others: township land (134.63 Ha), settlement land (97.74 Ha), paddy (30.78 Ha), garden (27.88 Ha), grave (22.82 Ha), firing field (15.26 Ha), government facilities (12.68 Ha), educational facilities (12.14 Ha), trading facilities (11.82 Ha), office facilities (8.74 Ha), and open space (8.69 Ha).

#### 3.2 Physical Development of Downtown Makassar Since 20<sup>th</sup> to 21<sup>st</sup> Century

The land use development of Downtown Makassar since 19th to 20th century are very widespread. The development of land use that occurred showed progress towards the North by filling in a residential area that is still vacant in Jalan Seram (Seram Street). Further to the East with the establishment of several residential and trading facilities / services by filling the empty area in center of the city. To the South there were development of settlements filling the empty area of the township. In general, the process of city formation are still growing geometrically due to spatial planning (urban planning), initiated by the government.

**Figure 3 and 4** depicts the rapid development of buildings in coastal areas. In addition, this map generally shows the function of the downtown has undergone, many land use changes from the 19th to 20th Century, including (See **Fig 3 and Fig 4**):

- Township became settlement measured to 75.8 Ha

- Township became trade/services for about 46.92 Ha

- Settlement became a trade/service facility are 38.66 Ha, office facilities are 8.56 Ha, and government are 0.1 Ha.

- Farm (paddy field) became settlement 13.39 Ha, trade 9.67 Ha, governance 3,05 Ha, prayer 0.78 Ha, offices 0.97 Ha, and educational facilities are 0.8 ha.

The most narrow area was land use for prayer facilities (3.22 Ha). For details, change of land use from 19<sup>th</sup> century to the 20<sup>th</sup> century can be seen in the following **Table 1**:

#### 3.3 Road developments since 19th to 20th century

Based on the development map of downtown area since the 19<sup>th</sup> until 20<sup>th</sup> century, the roads were shown to be developed in accordance with the increase of existing building. For details can be seen **Fig 5** below.

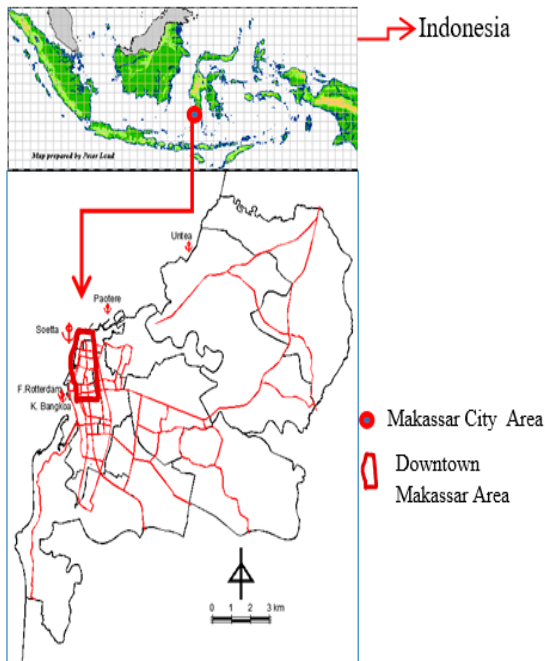


Fig. 1. Downtown area of Makassar City

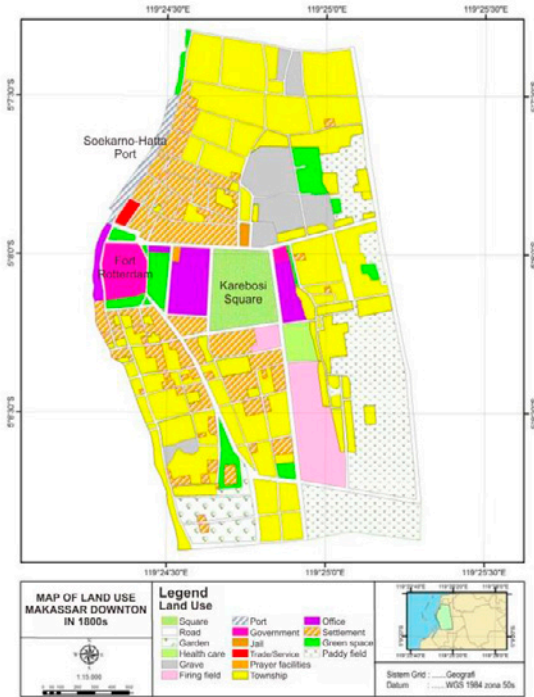


Fig. 2. Land Use Condition in 19<sup>th</sup> Century

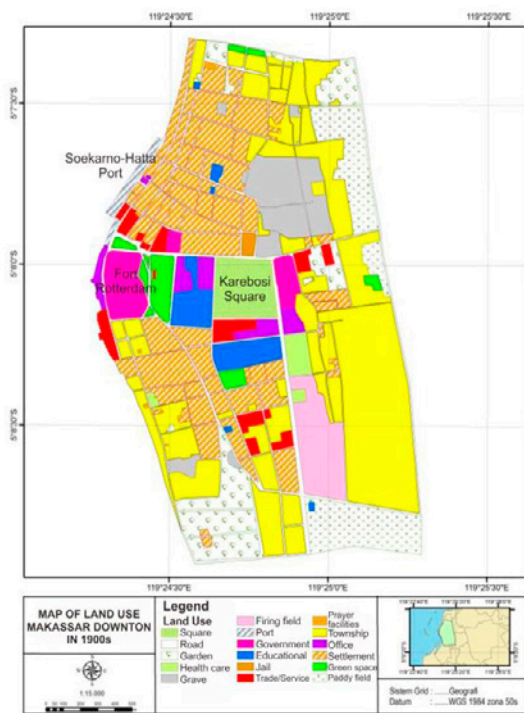


Fig. 3. Land Use Condition in 20<sup>th</sup> Century

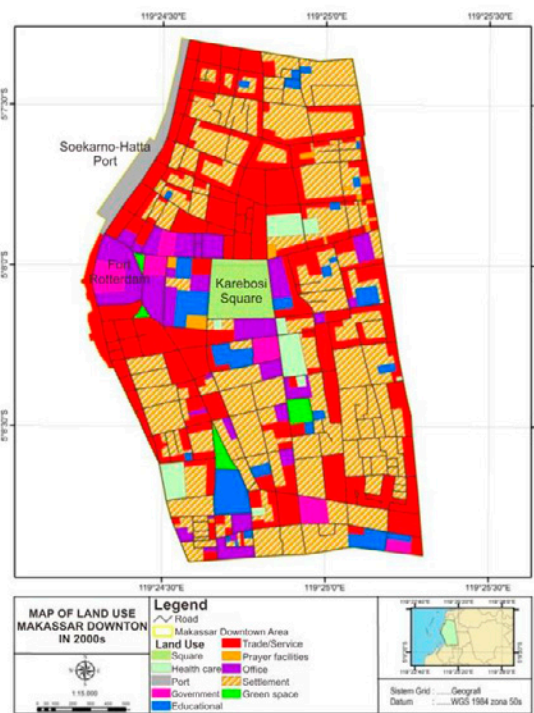


Fig. 4. Land Use Condition in 21<sup>st</sup> Century

The picture below depicts a minor change occurred in the road development of Downtown Makassar within 19th to 20th century. This was because the road pattern in the 19<sup>th</sup> century has been more built up compared to the needs of land use.

The development occurred within this region besides the expanding land use toward the outer area, is excessive urban development intensification or vacant land streamlining in the middle of the settlement. Some

trails were experiencing changes include: the elimination of lanes at the end of Karunrung Street heading to Sultan

**Table 1.** Development of Land Use in the Downtown Makassar Since the 19th to 20th Century.

| No | Type Land Use     | Land Development Area (Hectare) |            |            | Decision   |
|----|-------------------|---------------------------------|------------|------------|------------|
|    |                   | 19 Century                      | 20 Century | 21 Century |            |
| 1  | Square (OS)       | 15.85                           | 11.63      | 11.63      | subside    |
| 2  | Garden            | 14.34                           | 27.88      | 0.00       | disappear  |
| 3  | Health Care       | 3.69                            | 4.13       | 10.81      | increase   |
| 4  | Grave             | 22.12                           | 22.82      | 0.00       | disappear  |
| 5  | Firing field      | 17.50                           | 15.06      | 0.00       | disappear  |
| 6  | Port              | 4.28                            | 2.51       | 6.23       | increase   |
| 7  | Government        | 8.29                            | 12.68      | 11.20      | subside    |
| 8  | Jail              | 1.05                            | 1.05       | 0.00       | disappear  |
| 9  | Trade/ Services   | 1.20                            | 11.82      | 131.12     | increase s |
| 10 | Prayer facilities | 0.34                            | 0.65       | 3.22       | increase   |
| 11 | Township          | 158.73                          | 134.63     | 0.00       | disappear  |
| 12 | Office            | 14.54                           | 8.74       | 33.71      | increase s |
| 13 | Settlement        | 56.20                           | 97.74      | 171.33     | increase s |
| 14 | Green Space       | 17.47                           | 8.69       | 4.21       | subside    |
| 15 | Paddy field       | 69.12                           | 30.78      | 0.00       | disappear  |
| 16 | Educational       | 0.25                            | 12.14      | 18.44      | increase   |
| 17 | Others            | 0.00                            | 2.03       | 3.07       | increase   |
|    |                   | 404.97                          | 404.97     | 404.97     |            |

Source: Results of Analysis, 2016

**Table 2.** Developments of Road Since the 19th to 21st Century in Downtown Makassar.

| No | Period                   | Existing Length Road (km) | Reduction of Road Length in 19 <sup>th</sup> C (km) | Increasing of Road Length in 20 <sup>th</sup> C (km) | Reduction of Road Length in 21 <sup>st</sup> C (km) |
|----|--------------------------|---------------------------|---|--|---|
| 1  | 19 <sup>th</sup> Century | 39.85                     | -   | -  | -   |
| 2  | 20 <sup>th</sup> Century | 43.69                     | -3.84   | -0.06  | 3.90  |
| 3  | 21 <sup>st</sup> Century | 60.55                     | -16.86  | -0.4   | 17.26   |

Source: Results of Analysis, 2016

Hasanuddin Street, and the addition of several new roads such as: part of Nusantara Street, Sarappo Street, Pasar Butung Street, Gunung Merapi Street, and addition of roads inside Casteel Fort Rotterdam.

### 3.4 Road developments since 20<sup>th</sup> to 21<sup>st</sup> century

In line with the development of roads in 20th to 21st century, the development of space function in 20th century also affects the formation of the road. Road formation or otherwise affect the formation of several smaller plots. Based on the following map, the development of roads still follows building development. For the details can be seen in **Fig 6** below.

**Fig 6** below shows a major change ensued on the road development within 20th to 21st century. It is

strongly associated with the era of physical development in Indonesia as a result of science and technology development factors. The development occurred within this region besides the expanding land use toward the outer area, is excessive urban development intensification or vacant land streamlining in the middle of both residential settlements and environmental facilities. Several changed paths are: the elimination of roads in coastal areas around Nusantara Street, Ports, roads around Yuliana Park, and around Seram Street. There are also new additional roads such as H. Ramli Street, Tjokroaminoto Street, Timor Street, as well as build roads in the settlements around Gunung Merapi Street, Monginsidi Street, Gunung Latimojong Street, and Rusa Street. Details can be seen in **Table 2**.

The road development within 19th to 21st century is correlated to the physical space. Its pattern is gridiron (grid), and remained like that until now. The road pattern corresponds with the character of Buginese-Makassarese cultural, in which the form similar to rectangular shape. According to Arifuddin Akil (2014), Buginese character resembles the philosophy of grid pattern, which has a strong connectedness and access to all directions, so as to facilitate the movement of social and economic activities.

## 4. Makassar City Heritage Planning Strategy Towards Modernization

Planning for relatively high-rise coastal cities, inhabited by complex societies and strongly influenced by modernization, some policies are necessary. The first policy is the implementation of development should be based on clear government policies and implemented in accordance with procedures for improving the quality of cities through government and community cooperation. The second, urban planning should be based on technical considerations according to conditions of carrying capacity and land suitability and environmentally friendly. And the last, a policy that considers the efficiency aspects of land use with productive impact, considering the identity creation of the and its community.

Referring to the cultural-based sustainable urban development approach proposed by Duxbury and Jeannotte (2010), it is then deduced the implementation of Makassar city heritage planning policy in the future. These policies include: a) culture becomes a command in defining sustainability through a dialogical balance: between human and economic, between human and human (social heterogeneity); And between humans and nature (ecology). b) Development of integrated multi-cultural understanding in directing environmentally and

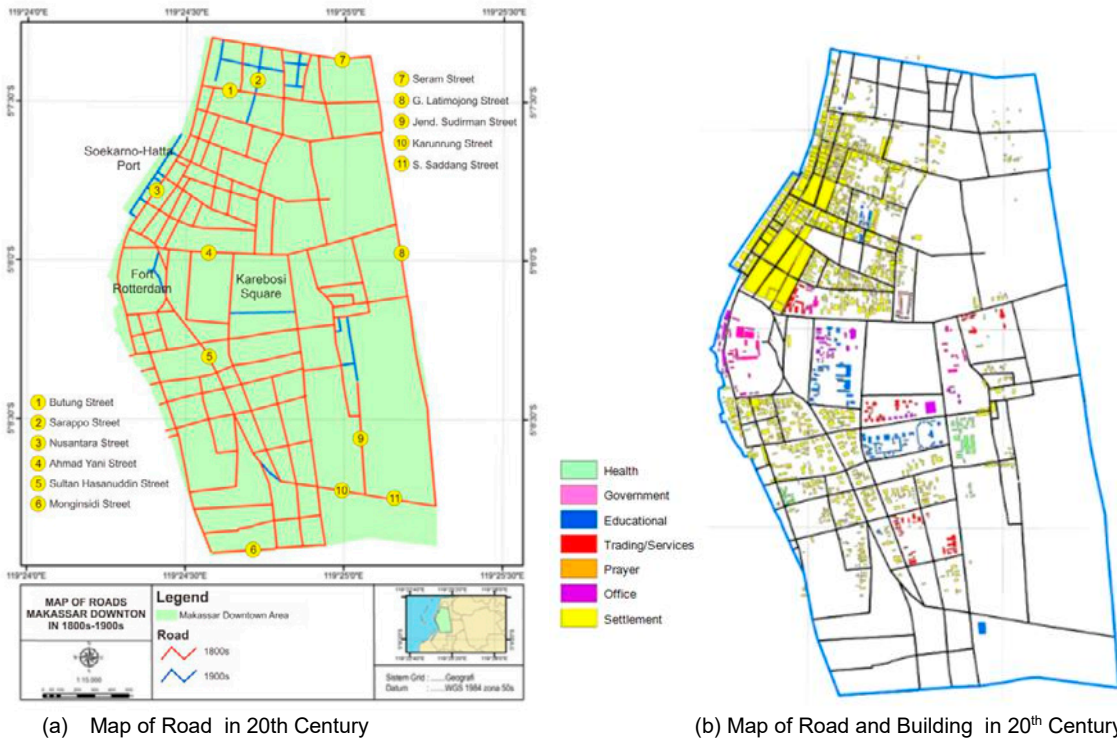


Fig. 5. Road Development Condition in 20<sup>th</sup> Century.

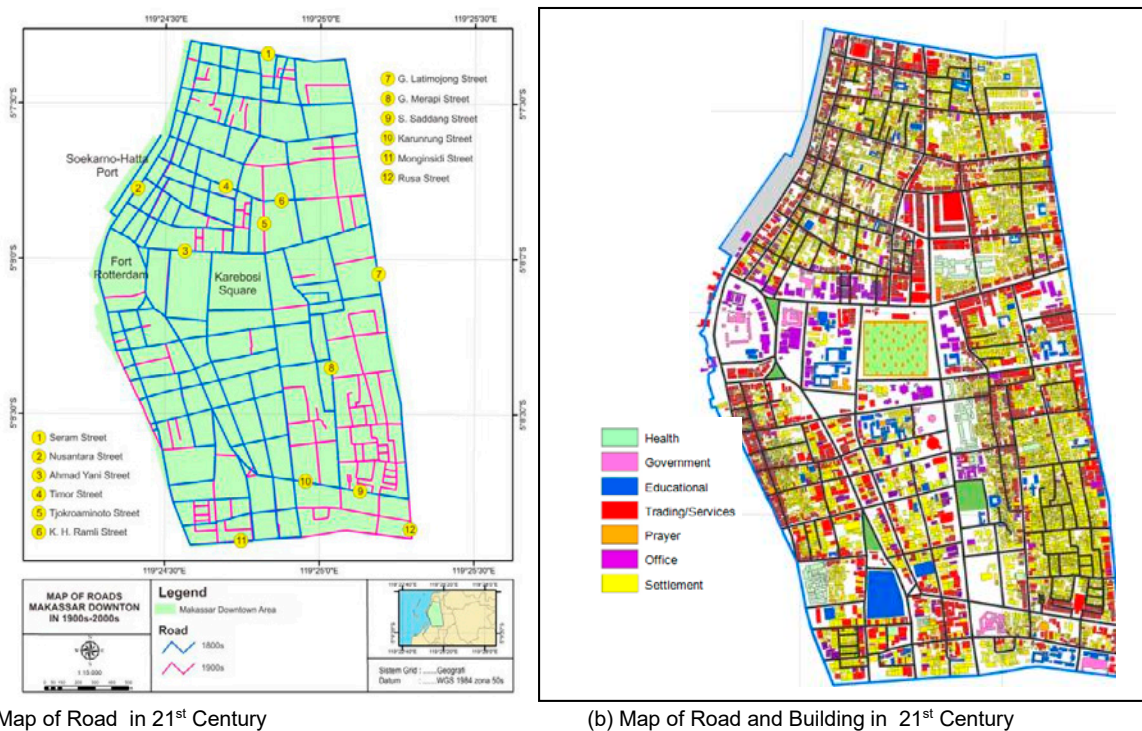


Fig. 6. Road Development Condition in 21<sup>st</sup> Century.

culturally based city development. c) integrating local culture into five functional sectors: government, economy,

environment, physical planning of urban space development, and community system. d) actualize the



local culture harmonized with the development of modernization such as tourism development.

Based on the policy above, it is proposed some heritage planning strategy in downtown Makassar area in order to anticipate the rapid development of modernization. Some of these strategies include: Firstly, preserving local wisdom through socio, economic and cultural development (intangible culture) through such marine festivals, ethnic dances, Becak parades, boat races, typical culinary business, which can entirely attract the tourism sector. The second strategy involves each ethnic group in developing the physical character of ethnically based heritage area, such as the dominant ethnics (Makassar, Bugis, Toraja, Mandar, Melayu, and Tionghoa). The third strategy is done by developing the heritage area according to the government spatial planning and building policy through the involvement of the community, such as activities of determining zoning area of cultural heritage, identification and preservation of the cultural heritage building. Furthermore, the fourth strategy is to revitalize the physical area and historical buildings by improving the quality and its benefits while maintaining the history and culture, such as improving the infrastructure of the region to support tourism needs, eliminating buildings that disrupt the environment aesthetics, especially in the coastal border area, apply the space pattern in accordance with wisdom such as building orientation, road patterns, creating collective and inclusive spaces, creating green spaces, improving the quality of urban township (kampong), local building landmarks, and regulating traffic circulation in heritage areas. While the fifth strategy is done by completing the strategy with the establishment of institutional management of the area and the formulation of policies that can regulate mechanism implementation the strategy.

## 5. Conclusions

The road development of Downtown Makassar since 19th, 20th and 21st Century indicates the removal of some roads that are affected by the urbanization process and land requirements for trading, services facilities, and settlements. On the other hand, there is also road addition, especially in the residential area both in 20th to 21st Century, associated with the urban development due to modernization.

The land use development of Downtown Makassar since 19th, 20th and 21st Century shows the characteristics of increasing land use as function of settlements, ports, trade/services, grave, offices, and educational institution; dominantly in trading and settlement. In addition, a decline of land use such as

township, fields, gardens, open space, grave, health care, firing field, and jail, and dominantly seen in farm and township. While land use with relatively consistent growth are space of open square and government, affected by urbanization process. Reduction of land use are influenced by the urbanization process as a result of economic developments and technological as well due to the efficiency of land use. Development of the city in 20th and 21st Century is dominantly directed to East and South, which are affected by land availability and links access to the hinterland areas. The rapid development was relevant to modernization of the city.

To anticipate the rapid process of urban change, several urban planning strategies that need to be developed in order to maintain the urban heritage order in this area are: To preserve local wisdom through socio-economic and cultural development, involving each ethnic in developing the physical character of cultural heritage based area ethnicity, develop heritage area according to the policy of space and building planning by government through community involvement, physical revitalization of area and heritage building by improving the quality and its benefits while maintaining historical and cultural conservation, and establishment of area institutional management and formulation of the policy that can arrange mechanism of implementation the strategy.

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