

Evaluation of the Land Use Zoning Concept in the Detailed Spatial Plan for Medan City 2015-2035 (Case Study: Central Area of Medan City)

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ABSTRACT

This study aims to formulate evaluation of the land use zoning concept in the detailed spatial plan for Medan City 2015 to 2035, case study of Central Area of Medan City. The research method is carried out in a descriptive qualitative manner. An analysis of the facts of existing land use in the Central Area in 2022 is carried out using descriptive qualitative based on the results of field observations of the physical characteristics of the area and the results of a questionnaire survey related to the characteristics of the land-using community. The results show that there are three development models of land use from mix use in Central Area of Medan City, namely 1) the mix use model in one building unit, 2) the mix use model in one area block, and 3) the mix use area model in a combination of several area blocks.

Keywords: Evaluation, Land, Zoning, Spatial

INTRODUCTION

Land use or what is commonly referred to as land use is the regulation of land use by humans at certain locations. Land use is an important element in urban or regional spatial planning. Policies on regulating urban land use will have an influence on urban development in the future.

The downtown area as the center of urban population activity is generally of particular concern because it tends to have many problems such as inefficient land use, land use conflicts, congestion, and the level of

regional security. Therefore, planning for land use in the downtown area must be studied better for the sustainability of the city in the future. Many studies state that urban land use planning with the concept of mix use has succeeded in solving various kinds of urban problems and is claimed to be a sustainable land use planning concept.

Developing cities extensively horizontally by relying only on road networks and private vehicles will result in cities growing larger, inefficient, wasteful and uncontrollable. The worst consequence is that the productive middle class is increasingly marginalized outside the city, causing social inequality both within the city and outside the city. In addition, open space is increasingly being lost and city infrastructure cannot keep up with the pace of city expansion, resulting in public services falling far below standard.

Medan City already has regional regulations regarding land use, namely Regional Regulation Number 2 of 2015 concerning Detailed Spatial Plans and Zoning Regulations for Medan City 2015-2035. The Detailed Spatial Plan and zoning regulations regulate the land use of Medan City for the 2015-2035 period. However, the land use regulations in the Detailed Spatial Planning and Zoning Regulations are deemed not successful in overcoming all the problems that generally occur in urban center areas. This Detailed Spatial Plan and Zoning Regulations also do not specifically regulate

land use in the downtown area. Provisions regarding land use zoning have the same provisions for all areas of Medan City without regard to location, physical appearance of the area, and the social and economic conditions of the people who use the land. In other words, the existing land use regulations are considered not to be effective and sustainable.

Learning from cities in the world that have succeeded in developing the concept of mixed use land use, Medan City as one of the rapidly growing cities in Indonesia needs to apply the concept of mixed use land development as a concept of sustainable land use development. However, how the zoning concept for mixed use land use is in accordance with the physical characteristics of the area and the socio-economic conditions of the downtown community is something that needs to be studied.

This study aims to formulate evaluation of the land use zoning concept in the detailed spatial plan for Medan City 2015 to 2035, case study Central Area of Medan City.

LITERATURE REVIEW

Urban Land Use Management

Over time, land in one area or urban area will continue to change. This change is caused by many things such as urbanization, population growth, or the result of economic growth that causes humans to need space to support their activities. In managing changes in land use so that it is aligned and produces benefits for the continuity of people's lives, land use management is needed. Land use management or land use management is a series of processes consisting of planning, organizing, utilizing, controlling and evaluating land use (Kaiser et al., 1995).

Planning has various meanings. According to Branch (1995), comprehensive urban planning is urban planning as system planning because it has a wider scope and is more inclusive than subsystem planning which combines several functions or activities of the city government that are

closely related to one another. It is said to be comprehensive because it is the form of urban planning that has the most complex position, and is the most difficult conceptually and analytically because it includes all urban elements that determine all activities that are currently being carried out and development for the future.

City space requires good urban planning and urban design by paying attention to all aspects so that it can become a place for urban communities to carry out their activities and interact. Furthermore, so that the city plan can be implemented, it requires control in the implementation of the plans that have been made.

Various forms of land use control. The basic purpose of controlling land use is usually to determine restrictions on land use and development that are considered important and are the wishes of the general public. There are several spatial use control instruments that are in accordance with urban planning objectives (Branch, 1995), including: (1) building regulations; (2) parcel distribution; (3) zoning regulations; (4) imposition of sanctions; (5) providing incentives and disincentives; and (6) environmental impact analysis.

In general, spatial planning in the world can be divided into two systems, namely the regulatory system and the discretionary system. In a regulatory system, space utilization is based on legal certainty in the form of zoning regulations. One country that implements this system is the United States. Regulatory system first existed in Germany then spread to the United States. Whereas in a discretionary system, decision making on a space utilization application is based on the considerations of the authorized planning agency. Countries that adhere to this system include England. In its implementation, the development plan is not used as a basic instrument in controlling the use of space. The plan contained in the land use map is not the only basis for making development decisions. The decision-making party has the right to consider other

aspects deemed important in making a decision.

Zoning and Land use

Zoning is a set of rules governing the use of private land in an area within a certain area. Zoning arrangements are expected to direct land use to protect the safety, health and welfare of the community and also create orderly development (Kelly, 2006). With zoning arrangements in urban spaces, harmony will be created between land use functions or activities between one another. The concept of good land use in one zoning or between zoning does not have a negative effect so that they support each other in one overall urban function unit.

Initially the concept of zoning was introduced in the 1900s with the concept of a single land use. This concept is applied in New York City with the aim of regulating the high development of the city due to the large number of residents migrating to New York City (Elliot, 2012). Land uses are classified into several categories such as residential, commercial, and industrial areas. This single land use is also known as euclidean zoning. In the era of development that followed, there were many criticisms of the single land use concept. The most famous critique is that of journalist and urban planning analyst Jane Jacob.

Single use has caused many problems in New York City such as wasteful development of public infrastructure, wasteful transportation system and social problems and crime in the city center. Starting from these criticisms, the concept of land use with the concept of mix use was proposed (Jangam, 2013).

Mix Use Land Use as Intensity-Based Development

The application of the theory of mixed use land use is the theory that is considered most appropriate in urban center areas. The concept of land use mix use according to Grant (2002) is the concept of land use regulation based on the intensity of land use. It is said that the development intensity-

based concept is due to the mix use concept encouraging diverse land uses in one development unit. Various land uses still have functions that support each other so that they do not cause negative externality effects on each other (Conrad, 2010). For example, commercial activities that also function as office activities and residential activities on the same land. This concept allows people to live, shop and work in the same location.

The mix use concept can also maximize land use in the downtown area which has limited land to develop and also high land value. Garnett (2017) termed the concept of mixed use land development with the term planning for density. The concept of density means that land use planning in the city center is designed with the concept of land use with high building density. Building density is designed with the concept of high density by minimizing the building's boundaries with the road, multi-storey building floors, and the use of the same land with more than one function.

RESEARCH METHODS

The research method is carried out in a descriptive qualitative manner. Study descriptive, namely a formulation of the problem that guides research to explore or photograph social situations that will be thoroughly, broadly, and deeply examined (Moleong, 2008). Qualitative research is research that is descriptive in nature and tends to use analysis. Process and meaning are highlighted in qualitative research (Hamidi, 2008).

An analysis of the facts of existing land use in the Central Area in 2022 is carried out using descriptive qualitative based on the results of field observations of the physical characteristics of the area and the results of a questionnaire survey related to the characteristics of the land-using community. The concept of land use regulated in the Detailed Spatial Plan is compared with the facts of existing land use in the field. From the results of a comparison of planned and existing land use, it is found that there is a

pattern of land use trends in Central Area and in the end this trend pattern would be linked to an ideal theory so as to produce a land use concept that is in accordance with Central Area.

RESULT

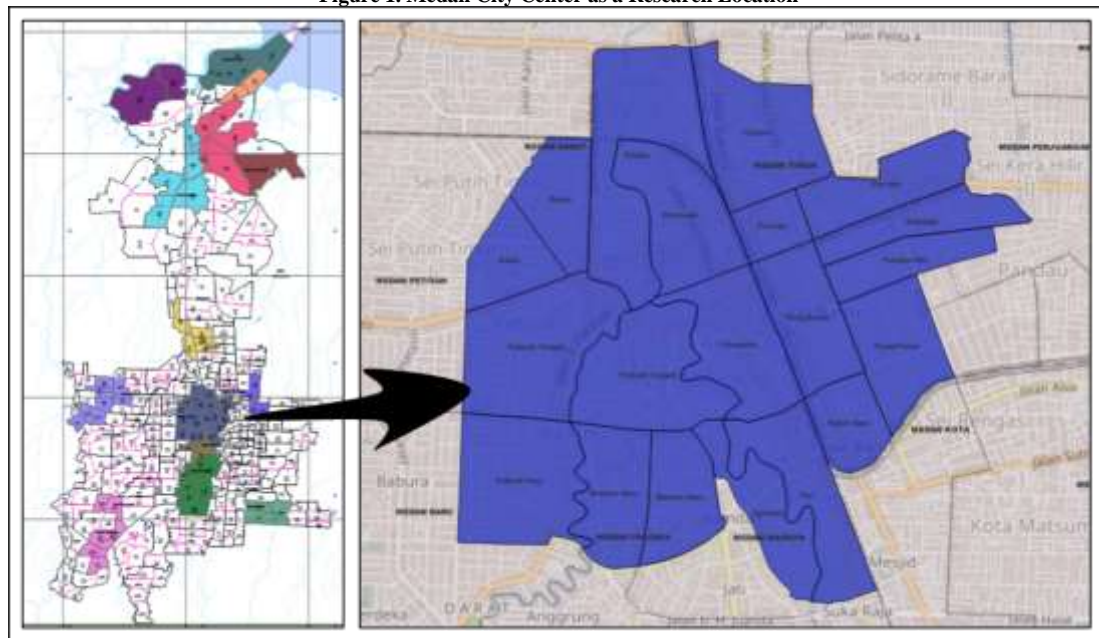
Research Sites

The research location is the central area of Medan City. The determination of the research location is based on the area that has been determined in the Detailed Spatial Plan for Medan City as the downtown area. The downtown area has a special

characteristic, namely the high intensity of development, so it needs special arrangements. Medan City Center according to the Detailed Spatial Plan for Medan City 2015-2030 is in 8 Sections of the Urban Area with an area of ± 918.97 hectares.

The downtown area is a part of Medan City that requires a land use management concept with high land use intensity. Land use in the downtown area tends to use mixed use land which is not only arranged horizontally but also requires vertical land use arrangements.

Figure 1. Medan City Center as a Research Location



Land Use in the Central Area of Medan City

Medan City is the capital city of North Sumatra Province, Indonesia. Administratively, Medan City consists of 21 sub-districts and 151 sub-districts. In the national urban system, Medan City has been designated as the National Activity Center. In the 2015-2019 National Medium-Term Development Plan, Medan City is included in the Mebidangro Metropolitan Urban Area and is directed as a global-scale National Activity Center which is directed as a cross-border administration center that functions as a marketing outlet for the eastern part of North Sumatra Province while continuing to

strengthen its functions the function of linkages with growth centers in the international area. Medan City is also included in the National Urban Strategic Area of Mebidangro. The downtown area of Medan is in the area around Merdeka Square, this area is in the core of the city which is the center of social, economic, cultural and political life, and is an area with dense building intensity and high accessibility.

The detailed spatial plan for Medan City divides Medan City into the Planning Area Section and the Planning Area Sub-Division. Planning Area Section is part of the planning area of the Detailed Spatial

Plan which has urban character and a unitary function of development as part of the City Center or Sub-City City stipulated in the Regional Spatial Plan with the approach of sub-district administrative boundaries while the Planning Area Sub-Division is part of Part of the Planning Area which is limited by physical boundaries with the administrative boundary approach of the kelurahan area and consists of several designation blocks which are one environmental development unit. The Detailed Spatial Plan for Medan City stipulates that Medan City Center Area consists of 8 Urban Areas with an area of ±918.97 hectares.

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Realizing a sustainable city is a goal that always wants to be achieved in urban development planning. Sustainable urban development must be able to minimize the negative impact of land use development policies. The idea of maximizing urban land use with the concept of mixed use land use has been proposed in various studies because it is able to reduce various urban problems which are believed to be the impact of urban land development such as congestion, inefficiency and wasteful use of resources. The concept of mixed use land use makes cities more compact, the distance between one activity and another is getting closer, thereby reducing the use of vehicles, reducing CO₂ emissions, increasing the safety and quality of the urban environment. There are three development models of land use from mix use in Central Area of Medan City, namely 1)the mix use model in one building unit, 2)the mix use model in one area block, and 3)the mix use area model in a combination of several area blocks.

The formulation of this concept is not final because it still requires studies on how to mix the right composition between trading activities, commercial services, residential houses, facilities, and open space for each

model so that it can maximize the function of the area.

Based on the survey, the willingness of people who have daily activities in the city center to live in the city center and their desired housing preferences has been confirmed. However, another challenge is how to attract investors to develop the downtown area with the proposed mix use concept. The concept of mixed use land use cannot be realized by individuals but must involve many people. Mechanisms for stakeholder involvement in mixed use land development also require a separate study. Government policies in the form of incentives for those who support mixed-use land development and disincentives for those who want to maintain single-use land use are absolutely necessary.

Mix use is also not limited to the embodiment of buildings but mix use is the embodiment of activity functions. Beautiful buildings in the downtown area with mixed use designations but not used for community activities will be a development failure. Therefore, affordability is important. The study of land development costs versus the community's ability to pay also needs attention.

The concept of mixed-use land use development is in line with transit-oriented development (TOD) based area development, therefore the development of Medan City center TOD concept is important by integrating the development of areas that can be reached on foot with mass transportation nodes, train stations and public buses.

CONCLUSION AND SUGGESTION

The results show that there are three development models of land use from mix use in Central Area of Medan City, namely 1)the mix use model in one building unit, 2)the mix use model in one area block, and 3)the mix use area model in a combination of several area blocks.

To realize mixed-use land development in downtown Medan City, several suggestions as further studies for both researchers and

the city government as policy makers include the following:

1. Study of land coverage limits in one mix use zone in the form of a zoning code as a planning unit.
2. Study of the mechanisms and procedures for proposing mixed-use land development involving stakeholders from the community who own the land, developers, and the government.
3. Study of incentive policies for those who support mix use and disincentives for those who stick with the old concept of single use.
4. The development of mixed use land must also pay attention to the harmony of the area's functions with other objects that must be maintained, such as historical objects and other objects that cannot possibly adapt to the new environment that will be developed.

Declaration by Authors

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