



AN APPLICATION TECHNOLOGY IN LAND AND REGIONAL PLANNING

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ABSTRACT

The land is a natural resource that is very important for human life. From the entire surface of the earth which is inhabited by about 5 billion people, only 25% is the land where humans can live and the rest is the surface of the ocean. In the use of land, water and space, besides land rights there are also other rights such as; business use rights, building use rights, usufructuary rights, building rights, the right to open land and collect forest products, land rights for sacred and social purposes, water use, maintenance and fishing, and space use rights. In ownership rights, there is a minimum determination of the maximum area and area. With the determination of the maximum area, in Indonesia, there will be no concentration of land ownership or landlords. Land is always the one that has an economy that is getting longer and higher in value, always in this case used by certain people to get more and more easily available profits, for this reason we need to keep understanding and understanding the importance of structuring or use planning land for our survival and our lives in the future, in addition to the interests of our beloved nation and state of Indonesia

Key words: Land, Region, Value.

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1. INTRODUCTION.

Land (land) is a natural resource that is very important for human life. From the entire surface of the earth which is inhabited by about 5 billion people, only 25% is the land where humans can live and the rest is the surface of the ocean. Actually not all land is land that can be inhabited by humans, because there are parts that are too dry, or too cold [1].

The Republic of Indonesia, which in 1990 had a population of approximately 180 million people, and an archipelago with 13,667 large and small islands (including more than 12,000 small uninhabited islands), had land area of 1,999,443 Km². Most of the population, which is around 65%, lives on the island of Java which is approximately 6.5% of the entire territory of Indonesia, and the remaining 35% inhabits the islands of Sumatra, Kalimantan, Sulawesi,

Irian, Nusa Tenggara Islands, Maluku Islands and other islands. Because Indonesia is an agricultural country, the land is the main resource for the entire population [2].

In the use of land, water and space, besides land rights there are also other rights such as; business use rights, building use rights, usufructuary rights, building rights, the right to open land and collect forest products, land rights for sacred and social purposes, water use, maintenance and fishing, and space use rights. In ownership rights there is a minimum determination of the maximum area and area. With the determination of the maximum area, in Indonesia there will be no concentration of land ownership or landlords [3].

In maintaining its life, residents use land as a resource, both in agriculture, as well as in livestock, forestry, mining, industry, trade, and so on. Because on the island of Java the population is very dense, so the ownership of agricultural land is very small, so the construction of land is more intensive than on other islands in Indonesia. The situation outside Java, because the population is still rare, and land is still wide, is the opposite; the population does extensive farming, maybe with a fuel system, shifting fields or milpa. Both the land which worked intensively on Java and the land which worked intensively on Java and the land which worked extensively outside Java could suffer losses, so that the population needed guidance and direction regarding the use of the land [4].

2. LITERATURE REVIEW.

Land and plants that have existed before we were born on this earth, have a fixed nature and are likely to be reduced, is a character that is far different from humans or other living things, whose existence in life is always increasing besides decreasing. Which will create or make a problem's if the growth rate or population growth is far greater than the death rate so that the earth in which we live will someday be full of various problems caused by living things in advance this earth, because of the imbalance of growth rates with limited land?

However, problems that are likely to arise can be solved, as long as we understand and understand the existence of land, land functions, soil properties and so on, which we have not cared enough about because we only prioritize things from the function, nature, and existence of the land [5].

Land use or what is often referred to as land use regulation, in which it is discussed or discussed not only regarding the use of the earth's surface on land but also regarding the use of the earth's surface in the ocean. Inland use there are several terms such as use - use, no use, no use - misuse or disuse, improper use - abuse. In this land use, the things that must be learned are covering the land with other natural elements, namely the body of the land, water, climate and so on, and human activities.

Based on the descriptions above, this paper tries to provide a boundary or understanding, an understanding of what is meant by land use and planning, as well as providing a brief example or explanation of the use of the land.

With the understanding or understanding of the descriptions contained in this paper, of course, it is expected that all users, actors, and rulers of the land, can be more aware that the lands that exist and we have today are not something that can develop or increase with itself based on increasing time or a certain period of time, because it has a static nature and can reduce its existence and function from the beginning it is on this earth.

According to the general geographical term, what is meant by space is the entire surface of the earth which is the layer of the biosphere, where plants, animals and humans live. According to regional geographic terms, space can be a social area, or government, which occurs from a part of the earth's surface and the subsoil and the air layer above it. A person

who buys land or land only pays for the plot of land, but he can use the entire space, so the use of land can also mean spatial planning.

According to the plan of the Republic of Indonesia Law 1988 on spatial planning, including land, space, and spatial planning, it is based on benefits, balance, harmony and sustainability, as well as the aim of continuously improving human quality and environmental quality.

A region in the sense of geography, is a natural unit that is all-natural, or homogeneous, or uniform, and human unity, namely the same society and culture that has distinctive characteristics, so that the region can be distinguished from other regions.

Geographical regions can contain geological areas, land areas, vegetation areas, language areas, economic regions, historical regions, and so on. The boundaries of the various regions coincide, so that geographic boundaries cannot be made precisely, and are transitional routes to other regions. Often the geography is called formal territory.

From the foregoing description, there are two types of regions, namely:

- 1) Definition of International; the region can include several countries that have natural unity and human unity, for example the region of Southeast Asia, the Southwest Asia region, the region of Western Europe, the Latin American region, and so on.
- 2) National Understanding; the area is part of the country, but the part has natural unity and human unity, for example, the east coast of Sumatra, the south coast of Java, the highlands of Bandung and so on.

Besides the definition above, the definition of another area, namely an area that is influenced by a development project. In this sense. The region does not need to always be a unity of nature and human unity. For the understanding of areas that have uniform and uniform human nature, there are many limitations, such as those described below

- An area whose physical condition are homogeneous.(W.L.G.Joerg).
- An area delineated on a basis of general homogeneity of land character and of occupance .(R.S.Platt).
- An area wherein has grown up one characteristic human pattern of adjustment to Environment..(American Sosiety of Planning Officials)
- An Geographic area unified culturally, unified at First economically and later by konsensus of thought, Education, recreation, etc, which distinguishes it from other areas.(K.Young)
- A complex of land, Water, air, plant, animal, and man, regarded in their Special relationship as together constituting a definite, characteristic portion of The earth's surface...(A. J. Herbertson)

Geographers use these terms as a part of the work method that is important in the description of geography. Many planning experts, nationals, sociologists and students and geographers need an area that really exists as a reality, so that it can be mapped, for example extensive rice fields, large industrial areas, and so on. Parts of the area used for a particular function, called a region, for example rural areas have settlement areas, agricultural areas, forestry areas, and urban areas occur from residential areas, office areas, industrial estates, and recreational areas.

Besides the term formal territory there are other terms, namely functional areas, namely a portion of the surface of the earth, where some natural conditions that complement each other in the lives of the population. Sometimes such areas are called organic regions. For example in a mountain, people on a mountain top live from forestry, on slopes from plantations and mining, on their feet from agriculture and livestock, and on the plains of the population living

from industry, trade, and services, so that all residents of the region can fulfill their needs. each. A similar concept is the theory of Von Thunen's land use; a city is surrounded by agricultural areas, which are completely alienated from other regions.

3. METHOD OF RESEARCH.

The rural area according to Wibberley, shows the portion of a country that shows extensive land use as a determining feature, both now and some time ago. Rural land is used for social life and economic life. Social life, such as family, school, worship, recreation, sports, etc., all of which are carried out in the village, while economic activities are like farming, gardening, raising, raising or fishing, cutting wood in the forest, etc. generally done outside the village, such as industry, trade and other service companies. So land use in rural areas is for settlements in the context of social activities, and for agriculture in the context of economic activities. Thus villages in rural areas are residences, and villagers in agricultural areas and fishing areas generally work outside the village.

Villages or settlements in rural areas are divided into two types, namely;

a) Centralized Settlements, namely those whose houses are clustered, and are hamlets or hamlets consisting of less than 40 houses, and villages consisting of more than 40 houses and even hundreds of houses. Around the village and hamlet there is land for agriculture, fisheries, livestock, mining, forestry, where residents work daily to make a living. In its development a village can achieve various forms, depending on physical and social conditions.

Previously villages in Indonesia had houses that were clustered or centralized, with different styles with settlements abroad, such as Western Europe, the United States, Canada, Australia, and so on, which had houses that were far apart, or scattered. This might be due to the mutual cooperation of the Indonesian people, so they wanted to live close to their neighbors, while the nations mentioned above, were more concerned about separateness, and perhaps also due to small land ownership in Indonesia and large land ownership in these other countries, which determine the nature of the village.

Originally in traditional villages in Indonesia, people were generally building his house with direction or orientation to social life, that is to religion in the broadest sense and on security, but in subsequent developments socio-economic insight becomes important.

In Indonesia generally villages have clustered housing, connected by small roads or village roads or paths. Outside Java there are villages that do not have connections through roads, but only through footpaths or rivers. The villagers went to their work in the early morning, for example to rice fields, gardens, ponds, forests, the sea and so on, and returned home when it was late afternoon or evening. So the movement made by the villagers is the daily traffic from the village to the work place in the morning, and from the workplace back to the village in the afternoon. Planting is done by hand, so a lot of time is needed.

In the village there is generally a small open space, a rectangular courtyard, children's playground, or a place where adults in the village meet in the afternoon to chat or negotiate something.

In the main village where the village office and village hall are located, this open space is wider and is usually located near the village hall. The village is a government entity, consisting of a number of villages and extensive agricultural areas. The village house usually has a garden, a small kebug in front of the house, a larger garden behind the house, to grow food. Houses that are located in the middle of the village, rarely have a garden, because they are built tightly. There are villages in Java that have large populations, up to thousands of people. In such villages, there are sufficient socio-economic infrastructure for the needs of the population.

b) Displaced settlements, whose houses are scattered by themselves, are found in Western European countries, the United States, Canada, Australia and so on. The scattered settlements in the country only consist of a remote peasant house but complete with machine warehouses, wheat mills, livestock pens, sometimes isolated houses. Roadside, a remote building on the edge of the road which is a restaurant, motel, gas station and so on. Often included in disseminated rural settlement groups.

c) Agricultural companies or livestock companies in these countries are generally large, the land area of one agricultural company can be thousands or tens of thousands of hectares. On the land of an agricultural company as large as that, usually there is only a complete farmhouse, which is the farmer's house that owns or rents the land of the agricultural company.

Agricultural company workers who run agricultural machinery, feed livestock, etc., usually do not settle on the land of the agricultural company, but far away in other places in a village, and they come to the farm with their vehicles. Thus, the distance from one farmer's house to another farmer's house is far apart, can be several kilometers, even tens of kilometers.

The scattered pattern of settlements is the influence that comes from Great Britain. Today in the United Kingdom and other countries mentioned above, there are developments that agricultural companies are becoming increasingly large, due to the unification of several agricultural companies, due to lack of labor, so that larger machines must be used for agriculture. In the United States, the mechanization of agriculture was carried out on a large scale, because of the vast agricultural land and limited labor.

Absolute rural development goals in Indonesia, according to Djojodibjodjo are "just and prosperous spiritual and material societies, based on Pancasila". According to Majid Ibrahim, rural area development essentially follows the principles of Community Development which have been initiated by various United Nations agencies. Community Development consists of two elements, namely 1). Fostering community initiatives to improve their own lives, and 2). Assistance from the government to further stimulate these initiatives.

Village development in Indonesia, according to the Directorate General of Regional Development, is; methods in carrying out businesses whose results can be enjoyed by the population directly, generally, relatively evenly and increasing, which in the process local people are located as subjects of development, and the government gives direction, coordination, control, supervision, and encouragement.

Rural planning, also called rural and regional planning, which in itself must include the objectives and principles of rural development. thus rural planning must have a basis for efforts to advance rural communities in socio-economic life.

To improve socio-economic life in rural areas, in village and regional planning, for example, the concept of the Five-Region System which was started to be developed by J. Jayadinata in 1975 in assisting plantation planning was a modification of the Neighborhood Unit Concept for cities in the countryside. This system can also be applied to small holdings, perennials and possibly rice fields.

Traditional villages (sedekala) in Indonesia are generally oriented towards trust and security. In subsequent developments, traditional settlements were oriented towards economic life. Economic activities in rural areas are mainly extractive and reproductive economic activities. Villages are usually located in the midst of rice fields, fields, on the beach, or rivers, so that the economic activities of the population generally have to go outside the village, which is to go to the fields or to farm to go to the sea or to catch fish, or to the farm.

Planned settlements, oriented to: a). In social life, for example people want to live close to their neighbors to be able to live together. b). In economic life, for example people want to live close to workplaces, namely land for agriculture, plantation, livestock, fisheries, forestry, industry, trade, transportation and so on, c). On the ease of achieving socio-economic infrastructure, for example living close to mosques or other places of worship, village halls, schools, roads, markets, cemeteries on the edge of villages and so on, where infrastructure can be classified according to their functions, namely social, economic and public functions. and can also be classified according to their form, namely spaces such as sports fields, markets, parks, homes, factories, school buildings and so on.

The concept of the Five Regions, for example, can combine the three things mentioned above, so that in a village unit people can live close to their neighbors, close to work and easily reach socio-economic infrastructure, namely the kindergarten infrastructure found in each small village. , elementary school infrastructure found in the main village, which serves the villages.

Planned settlements are mostly found in transmigration areas, plantation areas, and resettlement areas. The five-region system is an attempt to combine three conditions that facilitate the socio-economic activities of the population, namely; a). Stay close to neighbors (social orientation), b). Stay close to the place of work (economic orientation), c). Staying close to socio-economic infrastructure (socio-economic orientation).

4. RESULTS

In several developing countries and in developed countries today, such as Taiwan, Latin America, Japan, Germany and the Netherlands, an approach method has been introduced and developed known as land consolidation or also called Land Assembly.

Land consolidation is one of the land development models, which covers urban areas and agricultural areas, and aims to optimize land use in relation to utilization, increased production, and conservation for environmental sustainability.

Urban land consolidation seeks to improve environmental quality and achieve efficiency through mapping and rearranging scattered and irregular land, and then distributing it back to its owners in a regular form and equipped with infrastructure. The purpose of land consolidation is to develop cities with more just and social values.

Urban land consolidation, including the following rules:

1. Mandatory re-mapping or also called readjustment, namely form and area arrangements that are adjusted to local locations and plans.
2. Mandatory land sales on a mandatory basis. The government buys land from the owner, and after a plot is arranged, the land is resold to the person or entity who needs it.
3. Consolidation of agricultural and forestry land for city development. Agricultural land or forest land, with the consent of the owner, are sold and used for urban functions.

Mandatory mapping, is the division of land in plots with regular shapes and plot area according to location. This is done by adjusting the shape and area of the plot with the location plan and rules of development, and providing land for infrastructure (local roads, playgrounds, schools, places of worship, green patterns and so on).

Interim land sales (incremental) must be applied in the development area. In that case the government or body authorized by the government buys land from the owner, and then after it is plotted and arranged for infrastructure provision, land plots are sold to residents or bodies that need land.

Agricultural and / or forestry land consolidation often gives shares in urban land consolidation, if a part of that agricultural or forestry land can be changed for city development.

It is understandable that the rearrangement of plots required for the benefit of landowners, but that the purchase of land in an interim that is required by the government as an intermediary is carried out for the benefit of others, namely for the local government to be used as public welfare, or entity / company want to build.

In some countries, mandatory land sales are only permitted if the entity / company that wants to build cannot buy land according to the appropriate conditions. In Germany, the required sale of land in stages requires conditions, namely the development area is officially determined by state regulations.

The rearrangement of land plots, can be done by the local government or an agency or association, but the required land sales in stages must be carried out by the local government. If landowners are not willing to sell their land, they must be given compensation in the form of other land (substitution) which is located outside the land consolidation area, thus socio-economic aspects can be more secure.

In many countries, land consolidation and reprinting were mostly carried out after World War II, namely in the reconstruction of several areas damaged by bombings in the war. In addition, land consolidation is often applied in the expansion of cities to solve the problem of housing shortages.

City population growth in Indonesia increases the activities of socio-economic life in the city, which causes an increase in the need for land. Land needs of urban areas are mainly related to the expansion of urban space to be used as urban infrastructure such as housing, public buildings, road networks, drinking water networks and so on. The provision of land that is very limited to cover these needs tends to result in price increases which lead to land speculation and encourage less efficient land use patterns.

Thus, it turns out that land issues in urban areas in Indonesia are how to use them (make them effective), and how to use (to make them efficient) the limited land use. On the basis of experience in several other countries, land consolidation can be one model in land development in cities in Indonesia.

The example of the re-mapping of land that has gone through land consolidation can be seen, where the original land owned by a person or entity is land that is in a disjointed line, while the result after reprinting is the result of mapping being offered back to another person or entity who owned the land before, which was equipped with road lanes

5. CONCLUSIONS

1. Land Use, basically is planning the establishment of land use, both for rural areas and urban areas, by taking into account economic and social aspects as appropriate.
2. In the context of enforcing land use to achieve the intended results, both for rural areas and urban areas, it is necessary to enforce applicable regulations, especially regarding the limitation of ownership status, land use / land use status and so on.
3. Static and limited land, an effort or action is needed to maintain the continuity of its existence, through land consolidation efforts as previously described, while taking into account the factors of profit and loss to landowners and buyers of land or land use later.
4. For land managers who have been authorized by the government, sanctions should be given if the concerned person does not implement the existing provisions or regulations, especially in the context of acquiring land acquisition from the community for reasons of public interest.

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