Spatial analysis: overview of unfit for living in tanggamus regency-lampung

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Abstract. This study aims to conduct spatial mapping to obtain data on the distribution of uninhabitable houses in Tanggamus Regency. Data collection was carried out by survey related to the location of the coordinates of the uninhabitable house and its conditions, literature study, interviews, and documentation supported by data from related agencies. Data analysis was performed using ArcGIs software and qualitative descriptive with a spatial approach. The results showed: the location of the uninhabitable houses in Tanggamus Regency, based on the coordinates of as many as 6,042 houses and the map of the distribution of houses unfit for habitation in each district. The conclusions in this study indicate that the map of the distribution of houses unfit for habitation in each sub-district can be used for regional development planning, especially in Tanggamus Regency.

1. Introduction

In the context of the relationship between the availability of urban space with the need to accommodate the housing and settlement needs of Tanggamus Regency, the Tanggamus Regency settlement. Good management of housing and settlement control is an important requirement in realizing the effectiveness and efficiency of governance at development at the local level [1].

A regency can be said to be prosperous if the poor population in the area is absent or decreases over the years. There are certain indicators to determine the poverty level of an area, this refers to the National Statistics Agency (BPS) data as the agency responsible for providing information. BPS is a Non-Departmental Government Institution that reports directly to the President in order to provide complete, accurate, relevant, current and continuous statistical data and information that can describe the actual situation [2].

The hope of having a decent, clean and adequate infrastructure is everyone's dream. The idea to turn this decent house into a government program that was planned and handled specifically in order to help accelerate the development of the province through the empowerment of the respective regions (villages). This can be affirmed in Law No. 6 of 2014 concerning the Village Law whereby, that the need for livable homes is a right for every citizen, and the state in this case helps provide housing and residential areas as a single system consisting of guidance, housing management, implementation of residential areas, maintenance and repairs as well as financing and coaching in it [3].

Some problems related to assistance for restoration of unfit homes often occur in residents. The first problem is, there are differences in the data in several places so it is difficult to be used as a reference for related parties to carry out the renovation of a decent house to be assisted. This happens because there are different perceptions among officers in determining the criteria for uninhabitable residents. The second problem is that the criteria for renovation have not been well-formulated and standardized,

so there are many data found in officers that are still different [4]. Various needs for uninhabitable housing (RTLH) in Indonesia still have a big chance. This can be seen in several distribution areas such as in Tanggamus Regency based on data from the relevant service in 2018 that there were 6,402 uninhabitable houses spread across 20 sub-districts.

Geographically, the location of Tanggamus Regency is at $104^{0}18'$-$105^{0}12'$BT, and $5^{0}05'$-$5^{0}56$ 'LS. Tanggamus Regency has a land area of 2,885.46 Km2 and a sea area of 1,799.50 Km2, with a total area of 4,654.98 Km² [5]. According to the 2013 Tanggamus Central Statistics Agency, Tanggamus Regency has a population of 560,286 people, and administratively the location of the Tanggamus Regency is bordered by, namely: 1) In the West, the Tanggamus Regency is bordered by West Lampung Regency; 2). In the South, the Tanggamus Regency borders the Indonesian Ocean; 3) In the East, Tanggamus Regency is bordered by Pringsewu Regency; and 4) In the North, Tanggamus Regency is bordered by West Lampung and Central Lampung Regencies

Tanggamus Regency has varied topographic conditions, namely the highlands and lowlands, which are in part hilly to mountainous areas around 40% of the entire area. The Tanggamus Regency area has two main rivers that cross that cross these areas, namely the Way Sekampung and Way Semangka rivers. In addition to the two main rivers, there are also several rivers that flow through the Tanggamus Regency area: Way gatal, Way Pisang, Way Semah, Way Sengarus, Way Semoung and Way Bulok. The average temperature in Tanggamus Regency is of moderate temperature, this is because it is seen based on the height of the area from the sea level. Tanggamus Regency area is at an altitude of 0 to 2,115 meters. There are 5 mountains in the Tanggamus Regency, Mount Tanggamus (2,102 m), which is located in Kota Agung District, Mount Suak (414 m) in Cukuh Balak District, Mount Pematang Halupan (1,646 m) in Wonosobo District, Mount Rindingan (Mount Rindingan (Mount Rindingan) 1,508 m) in Pulau Panggung District, and mount Gisting (786 m) in Gisting District [6].

The Tanggamus Regency Government through the Department of Public Housing and Settlement Areas has allocated a budget to carry out work on the Drafting Data for Non-Occupable Housing. The activity as one of the implementation of government decentralization and development, is a tangible manifestation of the political will of the Tanggamus Regency government to provide services to the Tanggamus District Community [7].

Given the strategic role of information about housing and settlements, the management must be carried out effectively, efficiently and reflect a spirit of good governance starting from the aspects of policy, planning, development, control, monitoring and evaluation of housing and settlement development. in Tanggamus Regency [8]. Based on the review, study, and initial facilitation regarding the use of space for housing and settlements, it is indicated that there are several problems relating to aspects, technical, institutional, and good governance, especially in terms of spatial use policy. Procedurally, the main problem is the lack of synergy between the two parties, namely the community as the party served and the government as administrator and regulator in providing services to the community [9].

The help of personal computer devices large amounts of data can easily be arranged in a thematic spatial model [10]. Spatial thematic (also referred to as a statistical map or special purpose map) presents a patron of the use of space at a certain place according to a particular theme. In contrast to reference maps that show geographic specialization (forests, roads, administrative borders), thematic maps emphasize variations in the use of space rather than an amount or more of geographical distribution. This distribution can be a physical phenomenon such as climate or human characteristics such as population density or health problems.

Thematic Spatial is a process that shows data, both quantitatively and qualitatively from specific elements. These elements are related to topographic details. In the thematic spatial, the information presented in the picture uses statements and symbols that have certain themes or collections of themes that are related to one another. The theme is presented in a form related to the original elements of the earth or man-made elements. Sometimes when needed, thematic spatial also shows the real situation or situation. Spatial thematic (thematic maps) can help planning a region, administrative units, management, forest business, education, population, and others [11].

The growing data potential of various offices and agencies fostered the enthusiasm of various parties to try to make a more comprehensive approach to produce analyzes of various special or thematic needs. Called a special or thematic map because the map only depicts one or two features on the surface of the earth that you want to display. In other words, which are displayed based on a specific theme. Specific maps are maps that describe certain appearance (phenomenomenosphere), both physical and socio-cultural conditions [12].

Based on the results of a survey of the need for thematic spatial data, the Office of Housing and Settlement Areas of Tanggamus Regency wants the development of thematic spatial data. This is deemed necessary in the hope of being able to disseminate information widely, both matters related to information as a reference information for all parties who need information on uninhabitable housing related to coordinating investors and developing certain potentials in the regions. With the existence of thematic spatial data on uninhabitable houses, it is expected to become a reference for regional governments in the aspect of regional development.

The thematic spatial information that has been owned by the Tanggamus Regency Government should be a source of information that is able to bring opportunities to develop certain potential areas where and access to public openness Soeprapto [13]. The existence of this thematic information is expected to provide information on special potentials in Lampung Province so that it can be utilized by the private sector and government to participate in advancing and encouraging the community's economy [11].

The spatial data processing system utilizes the Geographic Information System which is used to map the spatial distribution of uninhabitable houses based on their coordinates, which later the results can be used by the government in future development planning [14].

2. **Method**

The research method used in this study is a survey research method. According to [15] survey is a research method that aims to collect large amounts of data in the form of variables, units or individuals at the same time. Based on this opinion, the research will collect data through individuals by finding the number of RTLH in the relevant Dinas, photos of research locations related to social and economic conditions with the aim of being able to generalize to what was studied.

The population in this study are all people in Tanggamus Regency based on RTLH criteria. The number of existing RTLHs is 6042 houses spread across 20 subdistricts. The district with the highest number of RTLHs is West Kelumbayan District and the lowest number of RTLHs is Kelumbayan District. Data collection techniques by observation, documentation, interviews, and questionnaires. The data collected was analyzed in a descriptive manner using a spatial approach.

The materials used in this study are: 1) SPOT 6 satellite imagery in 2015, for mapping terrain units and land physical information; 2) administrative map, to see the distribution of subdistrict territories; and 3) Tanggamus Regency Settlement Service data. While the tools used include: 1) GPS, a tool to find out the absolute location and height of dpal; 2) photographic cameras, for important field shots in accordance with research objectives, and 3) a set of computers: for processing data.

Data collection techniques are carried out by means of interpretation of satellite images based on interpretation elements, such as: hue/color, size, shape, pattern, texture, shadow, site and association as well as terrain characteristics including relief (morphology), geomorphological processes, rocks, soil and vegetation/land use. Field surveys function to complement and match interpretation results obtained from interpretations. In addition, data collection techniques are also carried out using a coordinate-based RTLH location survey. Data sources used in this study were divided into two, namely: 1) primary data, including survey data on uninhabitable home locations and 2) secondary data, including socioeconomic data from offices and related agencies. Data analysis was carried out by digital and descriptive method of data processing using a computer with a program (software) with a spatial approach with the unit of analysis is the district administration area, this aims to facilitate the analysis by comparing the distribution of each administration.

3. Result and Discussion

Results in this study are the distribution of uninhabitable housing locations with a total of 6042 scattered in 20 existing Districts, and RTLH distribution maps for each district.

3.1. Distribution of Non-Habitable Homes Based on Coordinates

The distribution of uninhabitable houses based on coordinates in Tanggamus Regency totaling 6042 houses spread in 20 existing districts (data attached). For details, the number of distributions in each

Table 1. Village/kelurahan/sub-district in each district.

No.	District	Sum. Pekon/Village/Kelurahan	Sum. RTLH
1	Ulu Belu	16	
2	Air Naningan	9	300
3	Pulau Panggung	21	325
4	Sumber Rejo	12	300
5	Pugung	19	300
6	Talang Padang	20	299
7	Gunung Alip	12	300
8	Gisting	8	293
9	Kota Agung Timur	4	168
10	Kota Agung Pusat	14	441
11	Kota agung Barat	16	300
12	Wonosobo	15	381
13	Bandar Negeri Semoung	9	219
14	Semaka	22	296
15	Pematang Sawa	10	300
16	Limau	13	298
17	Bulok	10	304
18	Cukuh Balak	20	300
19	Kelumbayan	5	195
20	Kelumbayan Barat	6	423
Sum. Uninhabitable Houses			**6042**

Source: Primary Data Processing Results, 2019

The table above, it can be seen that the number of non-livable houses in each district ranges from 195-423. This amount is related to the social and physical conditions of each region, such as the population, location of the region, the mountainous topography. West Kelumbayan District has the highest number of RTLH, namely 425 houses, if seen from its population, the area is 13,668 people with the number of 7,172 men and 6,496 women. The lowest number of households is Kelumbayan District with a total of 195. While for other districts, it is almost the same and evenly distributed with a total of 300 houses.

3.2. Spatial Data Distribution of Non-Habitable Homes

Spatial distribution of RTLH in Tanggamus Regency with a total of 6042 houses and spread in 20 districts can be seen on the following map.

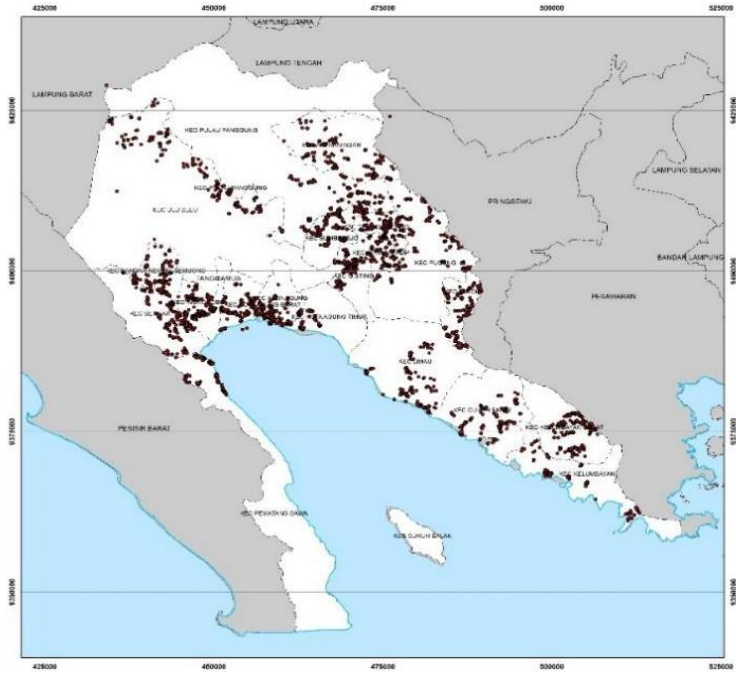

Figure 1. Map of Distribution of Inadequate Houses in Tanggamus Regency in 2018

The map above can be seen that the distribution of RTLH exists in all districts, which are mostly found in West Kelumbayan Subdistrict with a total of 423 houses and at least 195, namely Kelumbayan Subdistrict.

Uninhabitable housing based on poverty theory is a problem that occurs in development in every country, especially developing countries like Indonesia. Poverty causes a decrease in the quality of human resources so that productivity and income are low. In addition, the problem of poverty is a problem that is related to social factors, such as increasing crime in big cities, the emergence of slums, decreasing the level of health and others. Therefore, efforts to reduce poverty must be carried out comprehensively, cover various aspects of community life, and be implemented in an integrated manner [6].

Poverty is a very serious problem in development that afflicts every nation, even developed nations still have pockets of poverty [16]. The problem of housing is also referred to as one that can be used in setting poverty standards, where the poor occupy houses that are not suitable for habitation, when the implementation of housing construction activities is not suitable for habitation (RTLH) has been pursued optimally by beneficiaries, but from the process of implementing housing construction with the problems that arise, government agencies involved in the implementation of housing construction provide more input and advice without any real action, in this case it can be said of lack of seriousness and readiness of the government to overcome for the success of this activity.

Poor families are those who live below the poverty line having the following characteristics [17]: "1) on average do not have their own production factors; 2) have a low level of education; 3) mostly self-employed and small business; 4) mostly located in rural areas or certain urban areas; and 5) lack of opportunities to obtain basic necessities, clothing, housing, communication facilities and other social welfare ".

The Preamble of the 1945 Constitution listed national development goals, namely to create a just and prosperous, material, and spiritual society based on Pancasila, within the Republic of Indonesia, an independent, sovereign and united state of republic, in an atmosphere of peaceful, peaceful national life. , orderly, and dynamic, as well as in an environment of social interaction in an independent, friendly, orderly and peaceful world. But the rise of development activities and planning has not been fully able to prosper the nation and the State. Development in various sectors also has not been able to

accommodate and meet the needs of the community. We can see that until now the problem of poverty has not been able to be addressed properly. Even the more widespread development has added to the poverty line in this country. Mismatch between development goals and reality that occur in the field can cause various problems [18]. Development planning and programs have not been able to overcome poverty in Indonesia. In addition, the emergence of various factors that influence poverty reduction failure. Therefore, an appropriate development strategy is needed to reduce poverty in Indonesia.

The criteria for a decent house to live in are a house and its environment available with all facilities meeting basic needs can be accessed easily [19]. There are several other criteria a house is said to be livable. In this review it is minimized to convey the criteria for a decent housing ministry (Ministry of Public Housing).

Housing development policies became an instrument of the government to intervene in regional development. But the construction of livable houses (RLH) can be used as a means of community empowerment [11]. Implementation of RLH development policies needs to consider a combination approach, namely the top-down approach and the bottom-up approach, known as the hybrid approach. This paper aims to analyze the implementation of RLH development with a hybrid approach in Supiori Regency by taking into account the participation of local communities in the implementation of the policy. The combination of the role of the Supiori Regency Government and the District Head and Village Head, and the role of the community is really visible, which reflects a hybrid approach in the implementation of RLH development [20]. The community actively participates through three forms of participation, namely involvement in village outreach and deliberation, provision of materials and local labor, and management of social conflicts due to the appearance of discrimination in determining the priority of RLH development aid recipients. With standard operating procedures established, it is difficult for local governments to act dominantly in community intervention. Conversely, existing standard operating procedures enable communities to participate in and assist local government authorities in carrying out RLH development activities in each priority village [21].

The need for cleaning, orderly livable houses with adequate infrastructure facilities and infrastructure is the right of every citizen [22]. The state in this case the government has clearly regulated it in Law Number 6 of 2014 or known as the Village Law and Regulations of the Regent Number 5 of 2016 concerning the allocation of village funds. In this law the spirit of the community to build their own better villages does not become an impossible thing to realize, especially the transfer of funds from the center to the regions and villages more than activities for institutions. But the fact is that in the field many residents, especially in the villages, still do not have a place to live that can be said to be livable. In this study, trying to help build a Decision Support System (SPK) application to determine the model of providing assistance to residents / communities that will be used as objects in determining the provision of assistance for Restoration of Non-Occupable Homes (RTLH) so far still using old methods of restoration home that is the proximity factor of the officer. The constructive model method is one of them using a linear approach as a software development model [23].

In region, poverty is behind it, in addition to growth and income per capita, accessibility, to having the most favorable regional position in interacting with other regions, the distribution of regional development, the level of harmony between the distribution of poverty levels with regional development spatially, and find out the factors that influence the level of harmony between poverty with regional development and morphology [24].

4. **Conclusion**

The conclusions in this research are: 1) the number of coordinates based on coordinates in Tanggamus Regency is 6042 houses spread in 20 Districts, and 2) the data distribution of coordinates based on Livable Homes is presented in the form of maps in each district.

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