



The Study of Slum Area in Babussalam Village, Duri City, Riau Province

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Article Info

Article history:

Received : Nov 17, 2021

Revised : Dec 21, 2021

Accepted : Jan 10, 2022

Abstract

The rapid growth and development of Duri City will give pressure on the city's declining service levels and reduced land carrying capacity, reducing quality of life and productivity of population activities, and creation of slum area. Population growth exceeds provision of employment opportunities in the region added to the city problems. Economic pressure and high density population forced them to occupy suburban areas and eventually formed slums. The purpose of this study was to formulate slum settlement strategies in Babussalam Village and provide an alternative solution form to improve the function and quality of settlements. This research uses quantitative method, data collection was carried out by means of questionnaires and observations. The study consists of community characteristics and occupancy of slums, factors that influence slums and strategy of handling slum area in Babussalam Village. Results of study showed that slum area was located around the center of Duri City in condition of the house quite well and a small part functioning as a place of residence and place of business, inadequate conditions of solid waste management, and social interaction that occur in the community are also very diverse. Settlement in Babussalam Village has 2 types of slums: settlements near the center of socio-economic activities and slums in the city center. Recommended strategies are, improvement of basic infrastructure, land consolidation, and provision of simple housing.

Keywords: Basic Infrastructure, Poverty, Slum Area

1. INTRODUCTION

The rapid growth and development of Duri City will pressure on decreasing level of city service and reduced carrying capacity of the land, and reducing the life quality of population, reducing city activities, one of which is the creation of slums [1]. For cities that are starting to become densely populated, the population growth each year far exceeds the provision of employment opportunities in their area so that it is felt to add to the problems of the city. Economic pressures and overcrowding for urbanites forced them to occupy suburban areas (slum areas) to form slum neighborhood. Duri City is an industrial city of international scale because there are Oil and Gas Industries managed by PT. Chevron Pacific Indonesia. Based on this, various issues arise related to the development of the city.

Environmental issues in residential areas generally arise because they are triggered by a high level of urbanization and industrialization, and the effects of uncontrolled use resources and technology. The scarcity of basic infrastructure and facilities, inability to maintain and improve existing residential environment, and low quality of settlements both functionally, environmentally, and visually manifested environment, are the main issues for efforts to create a healthy, safe, harmonious and sustainable settlement environment. The issue also becomes more developed associated with the lack optimal implementation of minimum housing and settlement service standards based on sustainable development indexes in each region.

Urbanization in fast-growing areas is also a challenge for the government, both nationally and locally, to maintain more equitable growth, including efforts to meet housing and settlement

needs. Management of housing and settlement development must enable the development of community initiatives through their own chosen mechanism. On the other hand the ability to build housing and settlements by the community must be responded more precisely by the government within the framework of good governance, so that the need for local identity can still be maintained within the framework of a more comprehensive housing and settlement development. The research was conducted in Babussalam Village, Mandau District, Duri City, Bengkalis Regency, Riau Province.

The slums characteristics have a condition of housing with high density and the size of housing units is relatively small, houses roofs in slums are usually made of same material as the walls. The most prominent characteristic of slum settlement is the building quality which is not permanent, with high and irregular building density, very limited road infrastructure even if there are in the form of tortuous narrow alleys, the absence of drainage channels and garbage storage, so looks dirty [2]. Not infrequently also slums are located in areas that regularly experience flooding [3]. Slum conditions can reflect the economic, social and cultural conditions of the residents of these settlements. The characteristics of slums can be reflected from [4] :

1. The physical appearance of the building is poorly constructed, number of temporary buildings that stand and appear to be neglected and without maintenance,
2. Low income reflects their economic status, usually low income slum communities,
3. High building density, can be seen that there is no distance between buildings and unplanned locations,
4. High population density and heterogeneous society,
5. Sanitation systems that are poor or not in good condition,
6. Unkind social conditions can be seen with many crimes and crimes,
7. The large number of immigrant people who live by renting a house.

The main causes of the growth of slums are [5] :

1. Urbanization and migration are high, especially for community groups, low income groups.
2. It's hard to find work.
3. The difficulty of repaying or renting a house.
4. The lack of strict law enforcement.
5. Environmental improvements that are only enjoyed by homeowners and low citizen discipline.
6. The city as an attractive trading center for entrepreneurs.
7. The narrowing of residential land and the high price of land.

The emergence of slums can be grouped as follows [4] :

1. Internal factors: cultural factors, religion, place of work, place of birth, length of stay, home investment, type of house building.
2. External factor: land ownership, government policy.

2. RESEARCH METHOD

The purpose of this study was to handle slum settlements in Babussalam Village, Duri City so as to improve the function and quality of settlements. The research objectives are identification of community characteristics and residential slum areas, identification of settlement facilities and infrastructure, identification of factors that influence the creation of slums, and handling slums in Babussalam Village. This research includes basic research, that aims to comprehend the problem comprehensively, which can be used to make decisions about the solutions needed [6]. This research focuses on the point of view of infrastructure and the environment and extends to each field by combining direct surveys and library data regarding the material and related fields. The method used is quantitative descriptive method by gathering information about the status of an existing symptom, the state of the symptoms according to what they were at the time the research was conducted .

Babussalam Village is one of the urban villages which is included in the administrative area of Mandau District. Research time is 3 months, starting from 1 February to 30 April 2014. Primary data in this study are data obtained directly from respondents by distributing questionnaires or conducting direct interviews with questionnaire guidelines. The data asked is related to the characteristics of the community and the infrastructure condition. Secondary data sources were obtained from the department or related institutions, including the Central Statistics Agency of Bengkalis Regency, Development Planning Agency of Riau Province, PNPM Mandiri, and the literature. Because of the large number of population, the number of samples is calculated by the Slovin formula [7] :

$$n = N / (1 + Nd^2) \dots\dots\dots(1)$$

n = Sample

N = Population

d = % inaccuracy due to sampling errors.

The population size that will be used in this study is the Family (KK). The number of families living in Babussalan Village is 621 families, so the number of samples to be examined according to Slovin's formula are :

$$\begin{aligned} N &= N / (1 + Nd^2) \\ &= 621 / [1 + 621 \times (0,075)^2] \\ &= 621 / 4,49 \\ &= 138 \text{ KK} \end{aligned}$$

Table 1. Research Design

Theory	Factors	Variable	Explanation
Urbanization	Urbanization Factors	1. The driving factors : a. Limited employment b. Poverty in rural areas due to increasing population c. Village-city transportation is increasingly smooth d. The high level of wages of workers in the city than in the village e. Increased education level of the village community f. Procedures and customs which are sometimes considered a burden by the village community 2. The pulling factors : a. Job opportunities are wider and varied b. High wage rate c. More opportunities to advance d. Availability of goods needs more complete e. For certain people or groups in the city it provides an	

opportunity to avoid strict social control.

Slums	1. Urban attraction factors	1. Location 2. Accessibility 3. Service	The attraction of the city center will cause a high flow of urbanization which results in an increase in the population of the city.
	2. Economic Aspect	1. Income level 2. Type of work	
	3. Social Aspect	1. Level of education 2. Population density 3. Population status 4. Length of stay	Slum conditions reflect the economic, social and cultural conditions of the residents of these settlements
	4. Characteristics of slums	1. The physical appearance of the building is poorly constructed 2. Low income reflects their economic status 3. High building density 4. High population density and heterogeneous society 5. Sanitation systems that are poor or not in good condition 6. Unfavorable social conditions can be seen by the many crimes and crimes 7. The large number of migrants who live by renting a house	

Source: Results of Analysis, 2014

Table 2. Stages of Analysis

No.	Target	Variable	Indicators	Sub Indicators	Method of Analysis
1	Identify the characteristics of slums	1. Physical 2. Social 3. Economy 4. Environmental sanitation 5. Infrastructure	1. Type of house 2. Facilities 3. Infrastructure	a. Permanent house b. Semi-permanent and non-permanent house c. Infrastructure conditions; roads,	Quantitative descriptive analysis

		sanitation, drainage, clean water, and d. House condition e. Type of house f. Building density g. Number of residents h. Air circulation i. Solar lighting j. Level of education k. Population density l. Residence status m. Length of stay n. Health o. Habit of the population p. Customs q. Clean Water r. Sanitation s. Rubbish t. Waste Water (mining) u. Drainage v. Road w. Frequency of flooding x. Information and Communication	
2	Identify the factors that influence the existence of slums	1.Characteristics of occupancy and physical components (facilities and infrastructure) of settlements 2.Social and economic components	Quantitative descriptive analysis
3	Handling slums	1.Structuring of slums 2.Improving the quality of the environment 3.Livable settlements	Descriptive analysis

4.Social
rehabilitatio
n program,
through
community
empower
ment

Source: Results of Analysis, 2014

3. RESULTS AND ANALYSIS

3.1. Characteristics of the Community

The population in Babussalam Village has a high school level of education is 57.97%, and the undergraduate level is 30.43%. The type of work of the population is dominated by entrepreneurs (34.78%), and private employees (20.29%), the rest are civil servants. Social relations in the Babussalam Village based on a survey, 43.48% of the population stated good, very good (14.49%) and moderate (20.29%). Habit of the Babussalam Village community, less environmentally friendly (65.94%), environmentally friendly (21.01%). The number of residents in one house is 78.26%, numbering 3-5 people, 6-10 people in one house, 21.73%. The duration of residence in Babussalam Village is 1-10 years old (66.67%), 11-20 years 28.26%.

3.2. Condition of Settlement Facilities and Infrastructure

Based on survey, the building conditions in Babussalam Village with a fairly good condition of residential buildings 50.00%, good conditions 46.38% and bad conditions 3.62%. The function of the building in Babussalam Village that is good at 50.00%. The function of the majority building as a residence is 76.81% and for residences and businesses is 22.46%. Air circulation in the house with good condition (30.43%), sufficient condition (58.70%). The type of building is permanent with the amount of 77.54% and for semi-permanent 22.46%. The status of ownership of the house with the most number of houses is 50.72% own house and 49.28% rent house.

The type of road surface in Babussalam Village is asphalt pavement (39.86%), road pavement (34.78%), land road (4.35%) and semenisasi (21.01%). Drainage conditions were 44.93% moderate, 23.19% were good, 13.77% were bad, and 18.12% were very bad. The habit of the community in managing waste, 57.97% was burned, provided its own garbage bin 20.29% and was taken by garbage collection officers 15.94%, there was still a lack of awareness about waste management and the lack of janitors to collect garbage and the presence of garbage piles in front of house and roadside. Whereas for the solid waste management system there are still people in Babussalam Village who have not been served by cleaners, there is still a lack of temporary disposal sites. And there is still a lack of awareness of the community in terms of disposing of garbage, causing pollution of potentially slum environments.









Clean water sources located in Babussalam Village for the highest use are drill wells 51.45%, and government drinking water company in 48.55%. For the condition of the clean water system some already use government drinking water company connections and the other half use dug and drill wells. Good sanitation conditions 73.91% and moderate conditions 26.09%. The sanitation conditions in already have all the people using private toilets, with their sewerage septic tanks.


3.3. Factors Affecting the Establishment of Slums

The factors that influence the formation of slums in Babussalam Village are the condition of buildings, air circulation, the availability of basic infrastructure such as drainage and solid waste

with inadequate conditions. For more details, can be seen in Table 3 of the Environmental Conditions of Babussalam Village.

Table 3. Environmental Conditions of Babussalam Village

No	Location	Problems	Infrastructure conditions
1	Jl. Cengkeh	<ol style="list-style-type: none"> 1. Road conditions are not maintained 2. No roadside 3. Small drainage conditions 	
2	Jl. Imam Bonjol	<ol style="list-style-type: none"> 1. Lack of drainage 2. Incorrect road width 	
3	Jl. Kesehatan	<ol style="list-style-type: none"> 1. Inadequate drainage conditions 2. Garbage buildup 	
4	Jl. Bhakti Nusantara	<ol style="list-style-type: none"> 1. There are still roads that are damaged 2. The drainage conditions are still minimal 3. Garbage buildup 	
5	Jl. Khayangan	<ol style="list-style-type: none"> 1. Drainage conditions that do not run smoothly 2. Garbage buildup 	
6	Jl. Nusantara 1	Damaged and perforated asphalt road conditions	
7	Jl. Sudirman	<ol style="list-style-type: none"> 1. There is still a hollow road 2. Lack of illumination on Sudirman Road 	
8	Jl. Hang Tuah	<ol style="list-style-type: none"> 1. The eastern highway is a road that is still hollow 2. Lack of lighting 	

9	Jl. Babulhuda	<ol style="list-style-type: none"> 1. The road is in the form of cement 2. Drainage conditions are less conducive to residence 	
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Source: Survey Results, 2014

Based on the conditions and environmental problems of the neighborhood Babussalam District has 2 regional slums typologies, that is slum settlements near the center of socio-economic activities and urban slums because these two typologies have a distinctive character that gives a pattern of life to the neighborhood of Babussalam Village :

Table 4. Typology of Slum Settlements in Babussalam Village

No.	Typology of slums	Explanation
1	<p>Slum Settlement Near the Center for Socio-Economic Activities</p> <ol style="list-style-type: none"> a. Slums located around the centers of socio-economic activities b. Located around traditional markets, shops, educational / campus environments, around tourist objects and other socio-economic service centers 	<p>The settlements in Babusalam Village are located near the center of economic activity, where the socio-economic activities in this area are:</p> <ol style="list-style-type: none"> a. Dewi Sartika traditional market, b. Pasar modern Mandau Town Square, c. It is in the middle of a modern market, which is Ramayana, a hypermart that is quite well known which makes Babusalam village a center of trade d. There are hotels around Babussalam Village <p>There are several educational facilities in the Babussalam Village, elementary schools, junior high schools, and colleges. And the tourist attraction in Babussalam Village is an artificial lake located in the PT. Chevron Pacific Indonesia, Duri.</p>
2	<p>City Center Slums</p> <ol style="list-style-type: none"> a. Located in the middle of the city (urban core) b. Old or traditional settlements c. Settlements that used to be settlements intended for lower middle class occupancy 	<p>Babussalam Village is located in the middle of the city which is between Hangtuh road and Sudirman road which is an arterial road that connects every Kelurahan in Mandau sub-district.</p> <p>Previously the settlements in Babussalam Village were still semi-permanent.</p>

Source: Results of Analysis, 2014

3.4. Slum Settlement

Based on the analysis that has been carried out on the characteristics of the community, the socio-economic conditions of the community, the conditions of housing facilities and infrastructure, and the factors that influence the formation of slums in Babussalam Village, the slum settlement is handled as follows:

Table 5. Handling of Slum Settlements in Babussalam Village

No	Handling of Slum Settlements	Explanation
1	Repair of basic infrastructure	Changing the total scope of irregular residential areas by restoring them entirely and rebuilding by dividing the function of the area into organized residential areas and commercial areas in the same location. This is viewed from the activities in the settlement in the form of houses, shops or offices
2	Land consolidation	Land consolidation is structuring land that is equipped with public facilities and social facilities. The reason for the consolidation of land is to help regional governments to organize their irregular parts to become organized according to the Spatial Plan and Regional Development Plans.
	Provision of simple livable housing	Construction of residential simple houses for low-income communities

Source: Results of Analysis, 2014

Based on the existing conditions of the problems that exist in Babussalam Village, the appropriate handling is implemented by implementing improvements and construction of basic infrastructure and facilities because the problems in Babussalam Village are inadequate infrastructure conditions, such as roads that have not been fully paved and paved, conditions drainage that is neglected, damaged and not maintained.

Table 6. Babussalam Village Slum Settlement Program

No	Handling of Slum Settlements	Program
1	Repair of basic infrastructure	a. Conduct environmental road pavement which is still a dirt road b. Build primary and secondary drainage channels c. Involving the community to participate in planning and implementation d. Providing temporary disposal sites e. Adding a fleet of janitors so that all areas in Babussalam Village can be well served f. Providing counseling and training on the importance of maintaining cleanliness and being environmentally friendly.
2	Land consolidation	Consolidating land that has not been well organized, especially for slums with high population density
3	Provision of simple livable housing	The house can accommodate people in Babussalam Village

Source: Results of Analysis, 2014

4. CONCLUSION

Based on the research obtained conclusions :

1. The population in Babussalam Village has a high school education level, type of entrepreneurial work, good social relations, less environmentally friendly, the number of residents in one house 3-5 people, and the duration of 1-10 years.

2. Condition of the housing is quite good, the function of the building as a place of residence, adequate air circulation, the type of building that is permanent, own ownership status of the house, the type of asphalt pavement surface, poor drainage conditions, residents managing waste is burned, well water source and good sanitation conditions.
3. Factors that influence the formation of slums in Babussalam Village are building conditions, air circulation, the lack of basic infrastructure availability.
4. The appropriate handling is implemented with the implementation of repairs and construction of basic infrastructure and facilities.
5. Recommended strategies are, improvement of basic infrastructure, land consolidation, and provision of simple housing.

ACKNOWLEDGEMENTS

The author would like to thank Urban and Regional Planning Departement Universitas islam Riau who have provided financial support for this research.

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