

Slums Degree in Densely Populated Settlements in the River of Kapuas, Pontianak, as Sensitive Water Area

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Keywords: Settlement, River Area, Slums, Water Sensitive Area, Waterfront.

Abstract: The growth of residential areas and settlements that are less livable in the riverside area of Pontianak City, has an impact on the tendency of developing slum environment that is not in accordance with healthy living standards. The socioeconomic condition of the low income earners, the unavailability of public facilities and infrastructure, and the unofficial status of the land, have caused more slum settlements. The objectives of the study were to identify the causes of slum factors and to analyze the dominant factors of slum. Obtained from descriptive study approach with literature study technique and field survey, primary data and secondary data were analyzed quantitatively and scored as to formulate aspects that caused slum dwellings in densely populated settlements on the banks of the Kapuas River, especially in Sub-district of Benua Melayu Laut. The conclusion is that the causal factors in the settlement area of Kelurahan Benua Melayu Laut are population, residential building condition, condition of infrastructure and basic facilities, socio-economic condition.

1 INTRODUCTION

The essence of urban area planning based on the principles of sustainability is an important role in producing quality of urban built environment that is able to attract the care of residents and citizens of the city, and able to provide comfort for activities. Implementation of a responsive environment in the context of the urban environment can be explained as follows: The existence of places and spaces for urban activities, such as living, working, recreation, that provides security for every citizen, the Environment and urban areas that must have a good identity and identity to develop a sense of togetherness and to have a sense of belonging, the Environment and urban areas that must offer opportunities, imaginations of images and excitement / joy for every citizen, and the Urban Environment that must be able to give meaning to every citizen (design for all) and be able to offer a place to live decently and well. This study will discuss the condition of slums in settlements in the Benua Melayu Laut Village.

2 METHOD

The research method used is field observations to obtain an overview of the conditions, characteristics, and formulation of issues related to water issues in the settlement area of the Kapuas river bank. Secondary data is obtained through literature studies and related agency surveys. The analytical method used is qualitative descriptive analysis and interviews with relevant stakeholders, namely the Head of Benua Melayu Laut Village.

3 RESULTS AND DISCUSS

Benua Melayu Laut Village (BML) is 0.50 above sea level and is a riverbank area prone to flooding, with an area of 13.13 Ha / 1.31 Km². The boundaries of the north is with Darat Sekip Village, Pontianak City, the south is with the Bansir Laut Village in Southeast Pontianak, the west is with *Benua Melayu*, South Pontianak, and the east is with Tambelan Village, East Pontianak. Kelurahan BML has 11 government personnel. Total number of RW is 11 and number of RT is 41. The population of BML is 10,282 people,

consisting of 5,162 men and 5,120 women, with a population density of 1800 people / ha.

Data on potential of the village were obtained from the profile of BML Village. The village has educational facilities that are 1 kindergarten and 2 elementary schools. There is no Junior High School and Senior High School in the village. Places of worship in the village are 5 mosques, 7 musalla(s), 1 church, and 1 temple. Meanwhile, there are 3 units of health center, 6 units of *posyandu* (integrated service post), 5 medical practitioners, 6 pharmacies, and 1 drug store. The number of public sanitation facilities is 0 unit, public rainwater storage for 1003 families, 1 public hydrant, PDAM for 984 households, other sources for 794 households. The following will explain the analysis results of the level of slums in Benua Melayu Laut Village.

Table 1: Quality of Non Economic Vitality Criteria.

Criteria for Slum Settlements	Assessment	Weight Values	Values
Non Economic Vitality			
a	Spatial Suitability (RTRW)	<25%	50
		25%-50%	30
		>50%	20
b Building Physical Conditions			
b	1.b.1. Added illegal buildings	Very High	50
		High	30
		Low	20
	1.b.2. Building Density	>100 unit/ha	50
		80 – 100ha	30
		<80 unit/ha	20
	1.b.3. Temporary buildings	>50%	50
		25%-50%	30
		<25%	20
	1.b.4. Building's site	>70%	50
		50%-70%	30
		<50%	20
	1.b.5. Distance between buildings	<1.5 m	50
		1.5-3.0 m	30
		>3.0 m	20
c Population Conditions			
1.c.1. Population Density Level	>50 ppl/ha	50	
	400-500 ppl/ha	30	
	< 400 ppl/ha	20	
1.c.2. Population Growth Rate	>2.1%	50	
	1.7%-2.1%	30	
	<1.7%	20	
Maximum values		400	270
Minimum Value		160	
The criteria for Non-Economic Vitality are in the medium category, namely 319-239			
Percentage of Non-economic Vitality Criteria (%) = (highest number / Σ value) x 100			67,5%

Source: Results of Analysis, 2018.

Based on the analysis of the value of slums level in terms of Non-Economic Vitality Criteria, it can be concluded that the value of slums was 270, and the percentage of slum values from the entire study area was 67.5%. Because the value of 270 was in between 319-239, the value of the degree of slums was categorized as medium slum.

Table 2: Quality of Infrastructure Criteria and Facilities.

Criteria for Slum Settlements	Assessment	Weight Values	Values
Economic Vitality			
2.a Area strateginess	Very strategic	50	50
	Less strategic	30	
	Not Strategic	20	
2.b. Workplace distance	>10 km	50	30
	1 km – 10 km	30	
	< 1 km	20	
2.c. function around the area	Business & office center	50	50
	Government center	30	
	Settlements & others	20	
Maximum values		150	130
Minimum values		60	
The economic vitality criteria are in the HIGH category of 150-120			
Percentage of economic vitality criteria (%) = (highest number / Σ) x 100			87%

Source: Results of Analysis, 2018.

Based on the analysis of the value of slums level in terms of Economic Vitality Criteria, it can be concluded that the value of slums was 130, the percentage of slum values from all study areas, namely BML, was 87%. Because the value of 130 was inbetween 150-120, the value of the degree of slums was categorized as high slum. The degree of integrity was reviewed from the criteria of economic vitality.

Table 3: Analysis of the degree of slum that is rated based on the criteria for the status of soil vitality.

Criteria for Vitality of Land Status	Assessment	Weight Values	Values
2.a Domination of Land Certificate Status. Land Status 75% is ownership rights	Not yet certified	50	20
	Building Use Certificate (HGB)	30	
	Ownership Certificate	20	
2.b. Domination of Ownership Status. Land Status 75% is ownership rights	State-Owned Land	50	30
	Public Land	30	
	Land Dispute	20	
Maximum Values		100	50
Minimum Values		40	
Land Status Criteria are in the LOW category, 58-38			
Percentage of Land Status Criteria (%) = (highest number / Σ) x 100			50%

Based on the analysis of the slums level which was viewed from the Criteria of Land Status, it can be concluded that the value of slums was 50 and the percentage of slum values from all study areas was 50%. Because the value of 50 was in between 58-38, the degree of slums was categorized as low slum. The degree of integrity was reviewed from the Land Status criteria.

Table 4: Quality of Infrastructure Criteria and Facilities.

Infrastructure and facilities criteria	Assessment	Weight Value	Value
Vitality of Facilities and Infrastructure			
a	Road Condition	Very poor > 70%	50
		Poor 50%-70%	30
		Good < 50%	20
b	Drainage Condition	puddle >50%	50
		puddle 25%-50%	30
		puddle <25%	20
c	Clean water condition	Service <30%	50
		Service 30%-60%	30
		Service >60%	20
d	Wastewater condition	Service <30%	50
		Service 30%-60%	30
		Service >60%	20
e	Waste condition	Service <50%	50
		Service 50%-70%	30
		Service >70%	20
Maksimum values		250	160
Minimum Values		100	
The criteria for Vitality of Infrastructure and Facilities are in the Medium category, namely 199-149			
Percentage of Infrastructure and Infrastructure Criteria (%) = (highest number / Σ value) x 100			64%

Based on the analysis of the value of the slums level in terms of the Infrastructure Criteria and facilities, the value of the slum of 160 was obtained. The percentage of slum values from all study areas, witch is *Kelurahan BML*, was 64%. Because the value of 160 was in between 199-149, the value of the degree of slums was categorized as medium slum. The degree of integrity was reviewed from the criteria of infrastructure and facilities.

Based on the analysis of the slums level which is viewed from the Criteria for Land Status, it can be concluded that the value of slums was 140, and the percentage of slum values from all study areas is 56%. Because the value of 140 was in between 148-98, the value of the degree of slums was categorized as low slum. The value of this degree of integrity was reviewed from the criteria of Government Commitment.

Table 5: Analysis of Calculation of Degrees of Slum Levels Reviewed From Government Commitments.

Criteria for Slum Settlements	Assessment	Weight Value	Value
Vitality Criteria for Government Commitments			
a	Funding	Already available	50
		On Procces	30
		Not Available	20
b	Institutional	Already available	50
		On Procces	30
		Not Available	20
c	Form of Planning	Already available	50
		On Procces	30
		Not Available	20
d	Physical Improvement	Already available	50
		On Procces	30
		Not Available	20
e	Regional Management	Already available	50
		On Procces	30
		Not Available	20
Maximum value		250	140
Minimum value		100	
Vitality Criteria Government commitment is in the Low category, namely 148-98			
Percentage of Criteria for Government Commitments (%) = (highest number / Σ value) x 100			56%

Based on the analysis of the value of the slums level in terms of the Priority Handling Criteria, the slum value of 460 was obtained, and the percentage of slum values from all study areas was 92%. Because the value of 460 was in the range between 500-400, the degree of slums was categorized as high slum. The degree of severity was reviewed from the Priority Handling criteria.

4 CONCLUSIONS

Results of Weighting Criteria for Slum Settlement Areas in Benua Melayu Laut Village, South Pontianak Subdistrict concluded that from the six criteria for weighting slum areas in Benua Melayu Laut Village, the highest priority criteria for handlers with a percentage of 90% illustrates that this criterion has a very large impact on increasing slums in Melayu Laut Village While in criteria for land qwnership status with a percentage of 50% (lowest) indicate a low level of slum. It means that most people in the Kelurahan Benua Melayu Laut already have land that has certification for ownership.

ACKNOWLEDGEMENTS

We would like to thank Ministry of Research, Technology and Higher Education for funding assistance from the Decentralized Research Scheme of Higher Education Applied Research Schemes in 2018.

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