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## Strategy of Handling Slum Areas in an Effort to Support the Development of the National Tourism Strategic Area (KSPN) of Lake Toba in the Pangururan Cluster of Samosir Regency

## Ary Yondra<sup>1</sup>, Lita Sri Andayani<sup>2</sup>, Rujiman<sup>3</sup>

<sup>1,2</sup>University of Sumatera, Indonesia aryyondra2@gmail.com

## Abstract

This research has the background of Slum Decree No. 110 of 2020 Samosir Regency, Lake Toba National Tourism Strategic Area, inadequate residential environmental facilities and infrastructure. The purpose of this study is to analyze the level of slum slums and Pardomuan Village 1, analyze space patterns in slum deliniation areas to residential areas, analyze community participation in the handling of slum areas, and analyze strategies for handling slum areas in an effort to improve the quality of settlements. The methods used in this study are qualitative and quantitative approaches, and mixing. The total population of 2,490 family heads and a sample of 95 family heads. The data source is obtained from primary data, which is data obtained directly from respondents. And secondary data is obtained from village-level planning documents and policy documents at the District level. The results of this study are (1) The level of squalor of The Village of Pangururan Village Market and Pardomuan Village 1 has a mild slum status; (2) The results of overlaying the river border area and the distribution of settlements at the research site obtained a total of 75 units of buildings in line with the river border area; (3) The role of the community to maintain the environmental infrastructure of settlements, the role of community leaders, institutional influences and relationships and beliefs between individuals, is part that must be considered in strategizing the handling of slum areas in research locations; and (4) The results of SWOT analysis with S-O strategy that uses Strength to utilize Opportunity, obtained strategy that conducts structuring and development of quality of settlement infrastructure in a sustainable manner, optimizing the potential of resources in supporting the improvement of local community welfare, guidance and technical assistance to community empowerment in handling slums, as well as the provision and development of bar economic businesses u (oriented local wisdom).

#### Keywords

handling strategies; slums; development of lake toba KSPN



## **I. Introduction**

The State of Indonesia in 2014 has a slum area of 87,297 hectares, which is the total area of slums based on slum certificates of 365 kab / city. The achievement of handling slums until 2019 is an area of 32,222 hectares. The handling of slums is further contained in the National Medium Term Development Plan (RPJMN) in 2020-2024, where the Ministry of Public Works and Public Housing Director General of Cipta Karya targets the handling of

slums amounting to 10,855 hectares (Official Memorandum No. 242/ ND-CK / 2019 dated December 26, 2019).

North Sumatra Province also has a slum problem, based on the Memorandum of Office of the Ministry of Public Works and Public Housing Director General of Cipta Karya No. 242 dated December 26, 2019, the area of slums in North Sumatra Province amounted to 1,131.24 hectares spread across 19 cities. One of them is Samosir Regency. The area of slums in Samosir Regency amounted to 118.91 Ha, in detail the area of slums of Samosir Regency is contained in the Slum Decree of the Regent of Samosir Number 110 of 2020.

Lake Toba National Tourism Strategic Area consists of 7 (seven) districts namely: Samosir, Simalungun, Toba, Humbang Hasudutan, Karo, Dairi and North Tapanuli. The selection of locations that became the author's research was Samosirdi Regency Pangururan Market Village and Pardomuan Village 1. The selection of this location is inseparable from the Masterplan of KSPN Lake Toba which sets 4 (four) priority clusters for handling KSPN Lake Toba, namely; 1). Cluster Tongging Karo Regency, 2). Cluster Pangururan Samosir Regency, 3). Parapat Cluster simalungun regency, and 4). Balige Cluster of Toba Regency.

In 2020, the Pangururan Cluster of Samosir Regency, has been prepared the Preparation of Detail Engineering Design (DED) Waterfront City Pangururan which is the gate of The Toba Caldera Geopark from the west side. Water Front City location is concentrated in Pangururan Market Village and Pardomuan Village 1. Pangururan Waterfront City design is a premium quality design to prepare Samosir Regency as one of the world's tourist destinations. In order not to occur a gap between the residential area and the Water Front City area on the border of Lake Toba, there needs to be a strategy to handle slum areas in Pangururan Market Village and Pardomuan Village 1 which is a buffer area from the pangururan city waterfront location.

Based on secondary data from the master plan document of the Lake Toba National Tourism Strategic Area (KSPN Lake Toba), the location of tourist areas around Lake Toba is still identified slum problems, namely in the market area of Pangururan Village and Pardomuan Village 1, unmanageable pendestrian, facilities and infrastructure of residential environments do not exist and are inadequate, including traditional house settlement infrastructure facilities (village). Visually squalming conditions at the research site are the problem of littering, waste management that does not meet technical standards, maintenance of livestock (pigs) released at night, and standing rainwater due to improper drainage conditions. The above conditions and problems are grouped into 7 (seven) aspects of suffriety, among others: 1) aspects of the condition of the building, 2) aspects of drainage conditions, 5) aspects of sewage conditions, 6) waste aspects and 7) aspects of firefighting facilities and infrastructure.

Based on initial observations, quite a lot of problems in the research area, including poorly managed sewage conditions, environmental road conditions that require improved quality, improved drainage and connection with secondary / primary drainage channels, and also waste disposal conditions that rely only on soil catchment.

#### **II. Review of Literature**

#### **2.1. Regional Planning**

Regional Planning is a development planning process that is intended to make changes towards a better development direction for a community, government, and environment in a certain region, by utilizing or utilizing various existing resources, and must have a comprehensive, complete orientation, stick to the principle of priority (Riyadi and Bratakusumah, 2003).

Planning, in general, is a human effort to minimize uncertainty. The ideal planning are the steps taken by humans so that certainty could get closer in human life. Specifically, the meaning of planning is a derivative of foresight ability, namely the ability to measure (measuring). The essence of ideal planning is measuring. Samodra Wibawa (2014) stated that planning is the process of choosing a set of activities and deciding what to do, when, how, and by whom. According to Anggarini and Puranto (2016), planning, basically, is a process to determine appropriate future actions, through a sequence of choices, by considering available resources. (Nusan, Y. et al. 2021)

In the efforts to develop the region, the most important issues of concern to economists and regional planning are the process of economic growth and equitable development. The difference between the theory of regional economic growth and the theory of national economic growth lies in the nature of the book in the process of input-output of goods and services and people. In the system of the territory in and out of people or goods and services are relatively more open, while on a national scale is more closed (Sirojuzilam, 2007). According to Archibugi (2008) based on the application of regional planning theory can be divided into four components, namely Physical Planning, Macro-Economic Planning, Social Planning, and Development Planning.

#### **2.2. Space Pattern**

The space pattern contains a distribution plan of designation subzones that include protected zones, zones that provide protection against zones below them, local protection zones, and cultivation zones such as housing, trade and services zones, offices, industry, and green open spaces (RTH), into blocks. The concept of space pattern plan is formulated based on the carrying capacity and capacity of the environment and the estimate of space needs for the development of socio-economic activities and the preservation of environmental functions.

The concept of space pattern plan in districts / cities is generally formulated with criteria: Refers to the space pattern plan that has been set out in the RTRW; Pay attention to the spatial pattern plan of the bordering parts of the region; Paying attention to disaster mitigation and adaptation in urban areas (BWP), including the impacts of climate change; and provide RTH to accommodate the social, cultural, and economic activities of the community.

#### 2.3. Space Pattern

Based on Law No. 26 of 2007 on Spatial Arrangement, Strategic Areas are areas that are nationally determined to have strategic value whose spatial arrangement is prioritized based on the interests of security defense, economic growth, socio-cultural and environmental function and carrying capacity and utilization of natural resources and / or high technology. The National Strategic Area which is further abbreviated as KSN is an area whose spatial arrangement is prioritized because it has a very important influence nationally on state sovereignty, defense and security of the country, economy, social, culture, and / or environment, including areas that have been designated as world heritage.

Government Regulation No. 26 of 2008 concerning the National Regional Spatial Plan (RTRWN), there is a strategic area of North Sumatra Province that is established based on interests; 1) Economic growth, 2). Socio-cultural and, 3). Function and carrying capacity of the environment. The National Strategic Area designated in North Sumatra Province is as follows; 1). The Sea Border Area of the Republic of Indonesia includes 2 small outermost islands 1 (Pagan Island) with The State of India/Thailand/Malaysia (Nanggroe Aceh Darussalam Province and North Sumatra), 2). Medan-Binjai-Deli Serdang-Karo (MEBIDANGRO), and 3). Lake Toba and surrounding areas, as well as the Leuser Ecosystem Area.

In the Ministry of Tourism and Creative Economy Development Strategic Plan, KSPN Toba and surrounding areas have been designated as one of the 10 priority areas to develop. On the other hand, in the National Regional Spatial Plan, The Toba Area and surrounding areas have also been designated as one of the two Tourism-Based National Strategic Areas in North Sumatra. In the Master Plan document KSPN Lake Toba further sets 4 (four) clusters of priority handling, namely; 1). Cluster Tongging Karo Regency, 2). Cluster Pangururan Samosir Regency, 3). Parapat Cluster simalungun regency and 4). Balige Cluster of Toba Regency.

#### **2.4. Understanding Slums**

Slums are a general impression or picture of low attitudes and behaviors seen from the living standards and incomes of the middle class. In other words, slums can be interpreted as a sign given by the upper classes that are already established to the lower classes that are not yet established. Such a picture was expressed by Herbert J. Gans with the sentence: "Obsolescence per se is not harmful and designation of an area as a slum for the reason alone is merely a reflection of middle class standards and middle alass incomes".

According to Law No.1 of 2011, slums are settlements that are not habitable due to building irregularities, high levels of building density, and the quality of buildings and facilities and infrastructure that do not meet the requirements. Slums are areas where the homes and residential conditions of the people in the area are very bad. The house and existing facilities and infrastructure are not in accordance with applicable standards, both standards of needs, building density, healthy home requirements, needs of clean water facilities, sanitation and requirements for completeness of road infrastructure, open spaces, and completeness of other social facilities (Suparlan, 2008).

The Minister of Public Works and Public Housing (PUPR) stipulated pupr ministerial regulation No. 2 of 2016 which was later updated with Ministerial Regulations PUPR No. 14 of 2018 on prevention and improvement of quality of slum and slum housing. In the minister's regulation is regulated regarding 7 aspects and 16 criteria of Slum Housing and Slums (Article 18 – Article 26). To establish the location of slum housing and slums, the city / regency government conducts a data collection process involving the role of the community, namely location identification and location assessment includes conditions of suffoy, legality of land, and other considerations (Article 29).

#### **2.5. Factors Causing Slums**

According to Khomarudin, 1997 the main cause of the growth of slums is urbanization and high migration, especially for community groups. According to Bintarto (1983: 9-10) the definition can be seen from several sectors, for example in terms of demographics, urbanization is seen as a process shown through changes in population spread and changes in population in one region and in terms of economy, urbanization is seen from structural changes in the livelihood sector. Land Availability Factor. Facilities and infrastructure is a physical facility that is a potential factor to determine the success of the development of a region. Therefore, it takes the necessary facilities and infrastructure that lead to a development can run well. According to Grigg, (1988) and Jayadinata (1992).

Socio-economic factors. Socio-economic conditions of people who are generally very low incomes, causing low motivation of residents to have a decent and healthy home. This low income level that leads to a low level of purchasing power or limited ability to access basic facilities and infrastructure services.

Regional Spatial Factors. Slums are an integral part of the shape of the structure of space and the pattern of space. Therefore, district/city spatial planning should be based on the understanding that city development should be carried out in accordance with carrying capacity and capacity.

The characteristics of slums according to Budiharjo (2011), are caused by home factors and infrastructure factors. In addition, the criteria for improvement of slums can be seen from social symptoms and physical symptoms. Characteristics of Housing and Slums have been regulated based on Law Number 1 of 2011 on housing and residential areas and Regulation of The Minister of PUPR Number 14 of 2018, Characteristics and Criteria of squalor.

#### 2.6. Handling of Slums

Improving the quality of residential environments according to Law No. 4/1992 on Housing and Settlements, improving the quality of settlements can be in the form of activities: repair or restoration; rejuvenation and continuous management/maintenance. The purpose of housing and residential areas is: housing and residential areas are a unity system consisting of construction, housing implementation, maintenance and repair, prevention and improvement of quality of slum housing and slums, land provision, funding and financing system, and community role.

#### **2.7.** Community Participation in Development

According to Slamet (in Suryono 2001: 124) community participation in development is interpreted as participating in the community in development, participating in development activities and participating in utilizing and enjoying the results of development. Participation in assessing the results of development and assessing the results of community participation according to Isbandi (2007:27) is the participation of the community in the process of identifying problems and potentials that exist in the community, elections and decisionmaking about alternative solutions to deal with problems, implementation of efforts to overcome problems, and public order in the process of evaluating changes that occur.

While according to Tjokromidjoyo (1996) in Tora Daeng (2015), there are 4 (four) important aspects in the framework of development participation, namely:

- 1) The involvement and participation of the people in accordance with the mechanism of the political process in a country, also determines the direction, strategy and wisdom of development carried out by the government.
- 2) Increased articulation (ability) to formulate goals and especially ways of planning those goals that are best.
- 3) Public participation in concrete activities consistent with predetermined directions, strategies and plans in the political process.
- 4) The formulation and implementation of participatory programs in the planned development.

#### **III. Research Method**

This approach uses qualitative and quantitative approaches. According to Creswell & Plano Clark (2007) describing mixed method research is a research approach that combines or associates qualitative forms and quantitative forms. The research location is in Pangururan Market Village, and Pardomuan Village 1 is a slum deliniation area as large as in Pangururan District of Samosir Regency. The population in this study is the overall utilization of space in the slum delisting area in Pangururan Market Village and Pardomuan Village 1 with a total sample of 95 Family Heads. In quantitative research methods, data is collected by several collection techniques, namely; 1). Questionnaires and interviews, 2). Observation, 3).documentation, and 4). Focus group discussion. While qualitative data collection through interview techniques is carried out on key informants at the research site.

Data analysis method is a qualitative (descriptive) approach to analyzing slum handling strategies using SWOT qualitative analysis (Strenght, weakness, Opportunity and Threat). While the Quantitative Approach method used is the overlay technique analyzing the level of squalibility of the residential area of Pangururan Market Village and Pardomuan Village 1 based on the Regulation of the Minister of Public Works and Public Housing No. 14 of 2018. The strategy of handling slum areas uses a quantitative SWOT approach to obtain the position of the organization / policy indicated by the point (x,y) in quadrant I, quadrant II or quadrant IV.

#### **IV. Result and Dicussion**

#### 4.1. Pangururan Market Village and Pardomuan Village 1

a. Pangururan Market Village

#### 1. Environmental Pangururan Market 1

The village of Pasar Pangururan Lingkungan 1 based on the village profile has an area of 15.54 ha with a population of 803 people. Based on the matrix of the problem and the profile of squalor obtained by researchers, the level of slums of the neighborhood 1 village of Pangururan Market is 25 Points, with mild slum status, high slum scores are found in the management of squalid and drinking water where safe access to drinking water is not available is where the community cannot access drinking water that meets quality requirements in accordance with the provisions of the laws and regulations. Directives for handling the problem of squalor in environment 1 based on PUPR Candy No. 14 of 2018 with mild slum conditions and legal land is a pattern of handling restoration. Handling with Improved quality of existing drinking water management system, improved drainage quality, and Direction on waste problems.

#### 2. Environmental Pangururan Market 2

The village of Pasar Pangururan Lingkungan 2 based on the village profile has an area of 9.03 ha with a population of 1,026 people. Based on the matrix of the problem and the profile of squalification seen the level of slums of the neighborhood 2 Pangururan Market Village is 23 Points, with a mild slum status, a high slum score is found in the management of sewage and waste management where the condition of infrastructure and wastewater management facilities in housing or settlements where the outhouse / toilet is not connected to the septic tank or unavailability of local or centralized sewage treatment systems.

The directive on environmental road problems is road rehabilitation to restore the condition of road stability when it was originally built, such as improvement of road structures. The directive on drinking water problems is to improve the quality of existing

drinking water management systems that only use slow filtration systems (SPL), rehabilitation of drinking water supply units to restore conditions in accordance with technical requirements when initially built / provided, such as replacement of components in raw water units, production units and distribution unit networks and service units. The directive on waste problems is the rehabilitation of wastewater management units to restore conditions in accordance with technical requirements when initially built / provided, such as replacement of components in SPAL-T such as piping components, replacement of components. The directive on waste problems is the rehabilitation of the sewage management unit to restore conditions in accordance with technical requirements when it was initially built, such as the replacement of sorting facilities and infrastructure, collection, transportation, and processing.

#### 3. Environmental Pangururan Market 3

The Village of Pangururan Lingkungan Market 3 based on the village profile has an area of 6.47 ha with a population of 389 people. Based on the matrix of the problem and the profile of squalor seen the level of slums of the neighborhood 3 Villages Pangururan Market is 23 Points, with a mild slum status, a high slum score is found in the management of slings and drainage where tertiary and / or local channels are not available, or are not connected to the channels in the hierarchy above it causing water to be unable to flow and cause puddles.

Directive for handling problems, namely Directive on drinking water problems is improving the quality of existing drinking water management system that only uses slow filtration system (SPL), Rehabilitation of drinking water supply units to restore conditions in accordance with technical requirements when initially built / provided, such as replacement of components in raw water units, production units and distribution unit networks and service units. Improving the quality of drainage is the rehabilitation of drainage facilities and infrastructure to restore conditions in accordance with technical requirements when initially built / provided, such as replacement of culvert components, improvement of drainage structures. The direction for handling waste problems is the rehabilitation of the sewage management unit to restore conditions in accordance with technical requirements when it was initially built, such as the replacement of sorting facilities and infrastructure, collection, transportation, and processing.

#### 4. Environmental Pangururan Market 4

The village of Pasar Pangururan Lingkungan 4 based on the village profile has an area of 3.25 ha with a population of 389 people. Based on the matrix of the problem and the profile of squalor above, the level of slums of the neighborhood 4 Villages of Pangururan Market is 24 Points, with a mild slum status, high slum scores are found in the management of slings and drainage where tertiary and/or local channels are not available, or are not connected to the channels in the hierarchy above it causing water to be unable to flow and cause puddles.

Directive for handling problems, namely Directive on drinking water problems is improving the quality of existing drinking water management system that only uses slow filtration system (SPL), Rehabilitation of drinking water supply units to restore conditions in accordance with technical requirements when initially built / provided, such as replacement of components in raw water units, production units and distribution unit networks and service units. Improving the quality of drainage is the rehabilitation of drainage facilities and infrastructure to restore conditions in accordance with technical requirements when initially built / provided, such as replacement of culvert components, improvement of drainage structures. The direction for handling waste problems is the rehabilitation of the sewage management unit to restore conditions in accordance with technical requirements when it was initially built, such as the replacement of sorting facilities and infrastructure, collection, transportation, and processing.

#### b. Pardomuan Village 1

#### 1. Pardomuan 1 Hamlet 1

The next research location is Pardomuan Village 1 which consists of 3 hamlets. Hamlet 1 Pardomuan Village 1 based on the village profile has an area of 69.74 Ha. The data recorded on this study is in the deliniation area of Dusun 1 in 85 Family Heads. Based on the matrix of the problem and the profile of squalor above, the level of slums of hamlet 1 Pardomuan Village 1 is 16 Points, with a mild slum status, high slum scores found in the management of sposing and firefighting facilities.

The directive on environmental road problems is road rehabilitation to restore the condition of road stability when it was originally built, such as improvement of road structures. Improving the quality of drainage is the rehabilitation of drainage facilities and infrastructure to restore conditions in accordance with technical requirements when initially built / provided, such as replacement of culvert components, improvement of drainage structures. The direction for handling waste problems is the rehabilitation of the sewage management unit to restore conditions in accordance with technical requirements when it was initially built, such as the replacement of sorting facilities and infrastructure, collection, transportation, and processing.

The directive on drinking water problems is to improve the quality of existing drinking water management systems that only use slow filtration systems (SPL), rehabilitation of drinking water supply units to restore conditions in accordance with technical requirements when initially built / provided, such as replacement of components in raw water units, production units and distribution unit networks and service units. Rehabilitation of fire protection units to restore conditions in accordance with technical requirements when initially built, such as replacement of fire protection facilities and infrastructure.

#### 2. Pardomuan 1 Hamlet 2

Hamlet 2 Pardomuan Village 1 based on the village profile has an area of 46.19 Ha. The data recorded in this study is in the deliniation area of Hamlet 2 with 20 ha. The collection was conducted on 33 heads of families. Based on the matrix of the problem and the profile of squalor above seen the level of slum hamlet 2 Pardomuan Village 1 is 21 Point, with a mild slum status, high slum score is found in the management of the reservoir and firefighting facilities where there is a network of neighborhood roads that do not allow firefighting access.

Handling directives with mild slum conditions and legal land status, the handling pattern carried out is restoration. The directive on environmental road problems is road rehabilitation to restore the condition of road stability when it was originally built, such as improvement of road structures. The direction for handling waste problems is the rehabilitation of the sewage management unit to restore conditions in accordance with technical requirements when it was initially built, such as the replacement of sorting facilities and infrastructure, collection, transportation, and processing. The directive on fire protection issues is the rehabilitation of fire protection units to restore conditions in accordance with technical requirements when initially built, such as the replacement of fire protection fire protection units to restore conditions in accordance with technical requirements when initially built, such as the replacement of fire protection fire protection units to restore conditions in accordance with technical requirements when initially built, such as the replacement of fire protection fire protection units to restore conditions in accordance with technical requirements when initially built, such as the replacement of fire protection facilities and infrastructure.

#### 3. Pardomuan 1 Hamlet 3

Hamlet 3 Pardomuan Village 1 based on the village profile has an area of 55.69 Ha. The data recorded on this study is in the deliniation area of Hamlet 3 with 14.32 ha. The collection was conducted on 78 heads of families. Based on the matrix of the problem and the profile of the squalor above seen the level of slum hamlet 3 Pardomuan Village 1 is 18 Points, with a mild slum status, high slum score is found in the management of sposing and firefighting facilities where there is a network of neighborhood roads that do not allow access to firefighters.

Handling directives with mild slum conditions and legal land status, the handling pattern carried out is restoration. The direction for handling waste problems is the rehabilitation of the sewage management unit to restore conditions in accordance with technical requirements when it was initially built, such as the replacement of sorting facilities and infrastructure, collection, transportation, and processing. The directive on fire protection issues is the rehabilitation of fire protection units to restore conditions in accordance with technical requirements when initially built, such as the replacement of fire protection fire protection units to restore conditions in accordance with technical requirements when initially built, such as the replacement of fire protection facilities and infrastructure.

#### 4.2. Map Overlay Analysis

Overlay analysis conducted on this study is a pattern map of Sub-Zone Protected Space with Map of The Distribution of buildings in the deliniation area of Pangururan Market Village and Pardomuan Village 1. The results of the analysis that overlay between the pattern map of space and the map of the distribution of settlement areas that have been carried out in the total of 75 units of settlement buildings located in the river border area with the following details:

- 1) Pangururan Market Village environment 1 there are 14 units of buildings identified in the river border area.
- 2) Pangururan Market Village 4 there are 10 units of buildings identified in the river border area.
- 3) Pardomuan Village 1 Hamlet 1 there are 13 units of buildings identified in the river border area.
- 4) Pardomuan Village 1 Hamlet 2 there are 15 units of buildings identified in the river border area.
- 5) Pardomuan Village 1 Hamlet 3 there are 23 units of buildings identified in the river border area.

Based on the above conditions, the pattern of handling slums in The Pangururan Market Village in ward 1 and environment 4 and in Pardomuan Village 1 Hamlet 1, Hamlet 2 and hamlet 3 with mild slum status some areas on the river border area can be classified as mild squalor with illegal land status, the pattern of handling is resettlement. While the problem of slums that are not in protected areas and have a mild level of squalor, classified as mild squabbling with legal land status, the handling pattern is restoration. The results of the above analysis are in line with the opinion of Elpidia Agatha Crysta, Yanto Budisusanto (2018) in the analysis of the level of squalor with legal land status, handling patterns at the location of settlements that; Classification of mild squalor with legal land status, handling pattern is restoration and classification of mild squalor with illegal land status, handling pattern is resettlement.

#### 4.3. Community Participation Analysis of Slum Environments

### a. The Role of Society towards Norms, Maintaining and Maintaining Residential Environmental Infrastructure

Based on the above analysis can be known the role of the community to maintain and maintain road infrastructure, maintain and care for waste infrastructure the role of the community there are figures of 60% - 79.99% = Height. The role of the community to comply with norms, maintain and maintain residential environmental drainage infrastructure and comply with norms, maintain, maintain infrastructure, community role intervals there are numbers 20% - 39.99% = Low, while the role of the community to fire disaster alert, handling fire disasters that have occurred internationally the role of the community there are figures of 80% - 100% = Very High.

#### b. The Role of Community Leaders, Institutions and Complying with Values or Norms in Improving the Quality of Residential Environments

Based on the above analysis, it can be known that the role of community leaders in the management of the settlement environment is at intervals of 60% - 79.99% = Height, while for institutional or community organizations that exist in efforts to improve the quality of the settlement environment is at intervals of 80% - 100% = Very High.

# c. Relationships between Individuals and Mutual Trust in the Management of Environmental Quality of Settlements

Based on the above analysis, it can be known that the relationship between individuals in residential environments has intervals of 40% - 59.99% = Medium, and the level of trust in residential environments has intervals at 60% - 79.99% = High.

#### 4.4. Analysis of Slum Handling Strategies SWOT Matrix Qualitative Analysis

From the analysis of the data obtained, showing that the strategy of handling slums at the research site has a good value weight (positive) in its external environment that is in a progressive position that signifies a strong and opportunity organization, the strategy recommendation given is Progressive, meaning that the organization is in excellent and steady condition so that it is possible to continue to expand, Increase growth and achieve maximum progress. So it can be concluded that the position of the slum handling strategy according to the SWOT diagram is in quadrant 1 (one) that is SO, which shows it has opportunities and strengths so that it can take advantage of the opportunities that exist S-O Strategy.

Opportunities and strengths that can take advantage of the opportunities that exist S-O Strategy, consists of: 1). Structuring and developing the quality of settlement infrastructure in a sustainable manner taking into account local wisdom so as to support tourism development. 2) Optimizing the potential of resources in supporting the improvement of the welfare of local communities through tourism-conscious groups, 3) Guidance needs to be done in maintenance and improvement so that the community can know the steps in handling slums4). Technical assistance to the community can be done with supervision and control of the assistance provided so that it can be used according to community needs, 5) Community empowerment in handling slums, settlement development by utilizing local / regional potential in order to simultaneously support tourism development. And, 6) Provision and development of new economic enterprises (oriented to local wisdom) such as ulos weaving, or other handicrafts.

## V. Conclusion

Based on the results of research and discussion, the following conclusions are drawn:

- 1) The level of squalor of The Village of Pangururan Lingkungan Market and Pardomuan Village 1 has a mild slum status;
- 2) The results of overlaying the river border area and the distribution of settlements at the research site obtained a total of 75 units of buildings in line with the river border area;
- 3) The role of the community to maintain the environmental infrastructure of settlements, the role of community leaders, institutional influences and relationships and beliefs between individuals, is part that must be considered in strategizing the handling of slum areas in research locations;
- 4) The results of SWOT analysis with S-O strategy that uses Strength (strength) to utilize Opportunity (opportunity), obtained strategy that is to structur and develop the quality of settlement infrastructure in a sustainable manner, optimize the potential of resources in supporting the improvement of local community welfare, guidance and technical assistance to community empowerment in handling slums, as well as the provision and development of new economic businesses (Oriented to local wisdom).

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