# The Concept of Improving the Quality of Slum Areas in the Simarito Area in Simarito Village, West Siantar District, Pematang Siantar City

Umar Juni Dalimunthe<sup>1</sup>, Abdi Sugiarto<sup>2</sup>, Cut Nuraini<sup>3</sup>

University Of Pembangunan Panca Budi

#### **ABSTRACT**

This study aims to research the Concept of Improving the Quality of Slum Areas in the Simarito Area in Simarito Village, West Siantar District, Pematang Siantar City. The qualitative research method used is qualitative descriptive. The descriptive method includes collecting data to test hypotheses or answer questions regarding the latest status of the research subject. To obtain data that is in accordance with what is needed and on time for time and material efficiency. Research results on Infrastructure Improvement: The development and improvement of basic infrastructure, such as roads, drainage, and sanitation systems, has succeeded in improving the accessibility and quality of life of the community. Improved Health and Hygiene: Sanitation programs and the provision of clean water have reduced health problems caused by unclean environments. Community Participation: Community involvement in the planning and implementation of regional rejuvenation has shown positive results. Improving the Local Economy: Training and support programs for micro enterprises have had a positive impact on the local economy. Environmental Awareness: Environmental awareness and education campaigns have succeeded in instilling sustainability values among the community. Stakeholder Collaboration: Cooperation between the government, NGOs, and the private sector has strengthened the implementation of rejuvenation programs. This synergy allows for more effective and efficient use of resources, as well as accelerating the process of improving the quality of the region.

Keyword: The Concept of Improving the Quality of Slum Areas in the Simarito Area in Simarito Village, West Siantar District, Pematang Siantar City.

© 00 This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.	
Corresponding Author:	Article history:
Name, Abdi Sugiartio	Received Jan 21, 2025
Master of Urban and Regional Planning	Revised Jan 28, 2025
Universitas Pembangunan Panca Budi	Accepted Feb 05, 2025
Jl. Gatot Subroto No.km, 4,5 Sumatera Utara 20122	_
Email: abdi sugiarto@dosen.pancabudi.ac.id	

### 1. INTRODUCTION

Slums are areas that have poor physical and environmental conditions, which do not meet the minimum requirements for decent housing. Slums are often identified with problems such as uninhabitable buildings, inadequate roads, poor drainage, limited availability of clean water, and sanitation problems. This affects the quality of life of the residents living in the area. Pematang Siantar City, especially in Simarito Village, West Siantar District, is one of the areas that faces the problem of slums. Simarito, as a dense urban area, has various problems related to the quality of the residential environment. This area is experiencing environmental and social degradation due to high population density, lack of basic infrastructure, and limited green open space. Therefore, it is necessary to take measures to handle and rejuvenate to improve the quality of this area. The government, both central and regional, has initiated various programs to deal with the problem of slums. One of them is the pattern of handling the rejuvenation of slum areas. This pattern includes improving basic infrastructure, such as the provision of clean water, improvement of drainage, sanitation, and environmental roads, as well as sustainable environmental management.

The rejuvenation of the Simarito area is expected to have a positive impact, both physically, socially, and economically for the local population. With the improvement of the physical environment, people will get more decent and comfortable housing, so that they can improve their quality of life. In addition, the rejuvenation pattern is also expected to create a more organized and environmentally friendly area, and be able to reduce the negative impact of uncontrolled settlement growth. In Pematang Siantar City, especially in Simarito Village, West Siantar District, the condition of slums has become a significant problem. Slums are characterized by poor infrastructure, such as inadequate roads, lack of access to clean water, inadequate sanitation, and unsafe building conditions. This creates an unhealthy environment for the people who live there. This problem is further exacerbated by rapid population

growth and a lack of sustainable urban planning. Many people cannot afford to buy houses in livable areas, so they have to live in slums. In Simarito, this condition has a direct impact on the quality of life of the population, resulting in increased disease, social conflict, and poverty. Overcoming the problem of slum areas in Simarito requires a comprehensive and sustainable approach.

Settlements and housing are often equated, but housing indicates a house or building, while settlement focuses on people and their behavior (Nuraini, et al. 2021; Nuraini et al., 2023). Improving the quality of slum areas is not only related to improving infrastructure, but also involves community empowerment, improving social services, and environmental conservation efforts. Therefore, this study aims to understand the condition of slums in Simarito and formulate an effective quality improvement strategy. The pattern of handling the rejuvenation of slum areas in Simarito is expected to overcome existing problems, improve the quality of life of the population, and create a more sustainable environment. With effective rejuvenation, it is hoped that this area can develop into a more planned, safe, and livable area for the entire community. The government pays considerable attention to settlement problems. We can see that there are many policies and programs for handling slums through the construction of flats, implementing village improvement programs, as well as socialization and counseling related to the impact of living in slum environments as well as assistance in improving the quality of settlement infrastructure in slum areas. The City Government should equalize development and provide development programs that rejuvenate existing slums and empower the community so that a civilized society is realized. A well-organized residential area in accordance with its function affects the social, economic, cultural and psychological conditions of its community.

Simarito Village, located in West Siantar District, is one of the areas most affected by this phenomenon. Slums in Simarito are characterized by poor infrastructure conditions, such as inadequate roads, inadequate sanitation, and lack of access to clean water.



Figure 1.1 Simarito Village

The area of residential environments and slum areas stipulated in the Decree of the Mayor of Pematangsiantar No. 050.13/14/12/WK-Year 2021 reaches 154.94 hectares (Ha) and is spread across 22 villages out of 53 villages in eight sub-districts. The largest residential environment and slum settlement area is in Simarito District, West Siantar District covering an area of 17.69 Ha. In an effort to anticipate the increasing needs of the community, especially community facilities and infrastructure such as housing, social services, transportation, clean water and others. The Pematang Siantar City Government has taken the first step by implementing the arrangement of slum areas in several places in Pematang Siantar City. The Pematang Siantar City Government has decided and determined to carry out efforts to develop the city's physical space and improve the quality of Pematang Siantar City's physical infrastructure in stages Based on the City Spatial Plan and the Detailed Spatial Plan of Pematang Siantar City that has been prepared previously, it has directed that the physical development of the Pematang Siantar City space is directed at its vertical and horizontal physical expansion which has been carried out by the Pematang City Government Siantar is one of the rusunawa programs in the Simarito Village

area. In the Regulation of the Minister of Public Works and Public Housing (Permen PUPR) No. 02 of 2016 article 26 paragraph (2) concerning the pattern of handling slums which includes: resettlement, rejuvenation, and resettlement. The three handling patterns will be adjusted to the slum area.

The pattern of handling slums is carried out to repair or rebuild slum housing and slums into livable housing and settlements. Rejuvenation is carried out to create better conditions for houses, housing and settlements to protect the safety and security of residents and the surrounding community. Meanwhile, resettlement is carried out to create better conditions for houses, housing, and settlements to protect the safety and security of residents and the community. In the pattern of handling slums, the City Government is carried out in accordance with its authority by involving the role of the community. The city of Pematang Siantar has grown and developed rapidly so that it has an attraction for urbanists to live in it. This has an impact on the use of urban space, one of which causes irregularities in urban spatial planning which ultimately triggers the growth of slums. This slum problem is rampant in areas along the coast. In addition, the construction of settlements that are irregular and not equipped with public facilities and utilities, plus unhealthy community patterns, are also the cause of slum problems in urban settlements in Pematang Siantar City. One of the programs that has been carried out by the Pematang Siantar City Government last year for the handling of slums in the area is environmental rejuvenation. The environmental rejuvenation program that relocates them will not answer the problem, because if they are relocated, it will cause new problems again, such as losing access to jobs, causing various social vulnerabilities (Criminality), losing their jobs as fishermen and increasing unemployment. If their residence is repaired by the Government and used as a tourist attraction, it will improve the economy of the community in the Simarito Area in Simarito Village, West Siantar District, Pematang Siantar City.

To overcome slums in an area, it can be done through the direction of slum handling patterns by using the concept of slum handling based on the Regulation of the Minister of Public Housing and Public Works No. 14 of 2018 concerning Prevention and Quality Improvement of Slum Housing and Slum Settlements. To formulate a direction for the pattern of handling slums in Simarito Village, West Siantar District needs to pay attention to the condition of the carrying capacity of residential land and the condition of the carrying capacity of residents for residential land in slums. This is because one of the spatial planning policies of Pematang Siantar City, Simarito Village, West Siantar District is the development of cultivation areas proportionally in accordance with the carrying capacity and carrying capacity of the environment, therefore, in dealing with the problem of slums in Simarito Village, West Siantar District, must pay attention to and consider the condition of the carrying capacity and tamping capacity of existing residential land. Therefore, research on the direction of the pattern of handling slums in Simarito Village, West Siantar District by paying attention to the condition of the carrying capacity of land for settlements and the tamping capacity of residents for residential land is important, so that regional planning and spatial planning become more directed, especially in terms of dealing with slum problems.

#### 2. LETERATURE REVIEW

#### Slums

Slum housing is housing that has experienced a decline in the quality of its function as a place to live, slums are also uninhabitable settlements due to building irregularities, high building density, and the quality of buildings as well as facilities and infrastructure that do not meet the requirements. (Minister of Public Works and Public Housing No.02 of 2016). Prasad and Gupta (2016) explain the definition of slums, slums are parts of cities that may not be livable either because the existing structures are old and dilapidated, in addition to the overcrowded population and the lack of existing infrastructure facilities and unhealthy housing environments. According to Rindarjono (2012), slums are settlements with houses that have very poor residential conditions in the area. The non-conformity of the house and existing facilities and infrastructure with applicable standards, both the standard of needs, the density of buildings is high, health rules, house requirements that are not in accordance and ignored, the need for inadequate water facilities, the requirements for infrastructure completeness such as sanitation, environmental roads, very poor drainage, almost non-existent open spaces and the completeness of other social facilities that are not supportive.

#### Rejuvenation Handling Pattern

In an effort to Improve the Quality of Slum Housing and Slum Settlements, the Central Government and/or Regional Governments have established policies, strategies, and handling patterns that are humane, cultured, fair, and economical, (Ambarasakti, G. Y. (2013) Handling patterns include: 1. Restoration, which is activities carried out to repair and/or rebuild Housing and Settlements into livable Housing and Settlements; 2. Rejuvenation, which is a comprehensive overhaul and basic restructuring activities including houses and infrastructure, facilities, and public utilities of housing and settlements; or 3. Resettlement, which is the activity of moving affected communities from the location of slum housing or slum settlements that cannot be rebuilt because they are not in accordance with the spatial plan and/or prone to disasters, (Dinatha, H. 2015).

#### 3. METHOD APPROACH

The qualitative research method used is qualitative descriptive. The descriptive method includes collecting data to test hypotheses or answer questions regarding the latest status of the research subject. This analysis is used to interpret the existing data so that a comprehensive picture of the conditions that are currently occurring in the field is obtained. In this study, a qualitative descriptive analysis method is used in the analysis of Improving the Quality of Slum Areas with the Pattern of Handling Rejuvenation of Slum Areas, (Sugiono, 2019).

To obtain data that is in accordance with what is needed and on time for time and material efficiency. However, it is still according to what the researcher wants, so a technique is needed in collecting data, for more details as it depends: The advantage of the collection technique by direct observation to the field of the research location is that the data obtained is more accurate, and can adjust the data obtained from the agency to the actual situation. That is the method of data collection using documentary sources in the form of literature/references, similar research reports, seminar materials or jumal.

Data analysis is a process or effort to process data obtained from the results of interviews, field notes and documentation, into new information so that the characteristics of the data become easier to understand and useful for solving a problem, especially related to research. And make conclusions so that they are easily understood by yourself and others, (Sutrisno Hadi, 2018).

In this case, the researcher conducted several data analysis techniques, which are as follows:

- 1. Data reduction can be interpreted as the process of summarizing, focusing on simplification, abstraction, selecting the main things and discarding unnecessary data that arises from written records in the field.
- 2. The presentation of this data can be done in the form of tables, graphs, and the like. And in this writing, the researcher focuses more on presenting data using narrative text.
- 3. The initial conclusions presented at this stage are still provisional, and will change if no strong evidence is found to support them at the next stage of data collection.

#### RESULTS AND DISCUSSION

Analysis of Factors Causing Slums and Efforts to Improve the Quality of Slums in the Simarito Area in Simarito Village, West Siantar District, Pematang Siantar City, Siantar City

The Simarito area, which is located in Simarito Village, West Siantar District, Pematang Siantar City, is one of the areas with quite worrying slum conditions. The area is dominated by informally built houses, with inadequate infrastructure. Many residents living in this area face various problems, such as

lack of access to clean water, poor sanitation, and damaged road infrastructure. The population density in Simarito is very high, resulting in various social problems, such as conflicts between residents, high poverty levels, and health problems due to an unhealthy environment. Therefore, the rejuvenation of slums in Simarito is very important to improve the quality of life of the community.

Based on the results of the research, several factors causing the formation of slums in Simarito include:

- 1. Rapid Population Growth The rapid increase in the number of people in Pematang Siantar has resulted in an increase in demand for housing. Many people cannot afford to buy houses in livable areas so they have to live in slums.
- 2. Lack of Good Urban Planning The lack of planning in infrastructure development in the Simarito area causes many settlements to be built without paying attention to safety and health aspects. This results in many buildings that do not meet the standards.
- 3. Limited Access to Dasa Services Many residents living in slums do not have adequate access to basic services such as clean water, sanitation, education, and health. This worsens the social and economic conditions of the community.
- 4. Economic Factors High unemployment rates and low per capita income are the main factors causing slums. Many residents do not have a permanent job and a decent income to finance their living needs.

The physical condition in the Simarito area shows a lot of inadequate infrastructure. Existing roads are often in a dilapidated and narrow state, making accessibility limited. In addition, poor drainage channels cause waterlogging during rain, which can potentially cause health problems. From a social perspective, people in the Simarito area often live in poor conditions. Low levels of education, lack of employment, and lack of participation in social activities lead to isolation and instability in the community. Many children in the region do not get a proper education due to difficult access to schools.

Efforts to improve the quality of slum areas in Simarito can be carried out through the pattern of handling slum rejuvenation, which includes several steps as follows:

- 1. Infrastructure Improvement Build and improve basic infrastructure such as roads, drainage, and other public facilities to create a more decent and safe environment for the community.
- 2. Community Empowerment Involve the community in the planning and implementation process of the rejuvenation program. Empowerment activities such as skills training and counseling on health can increase community participation.
- 3. Improved Access to Basic Services Provides better access to clean water, sanitation, education, and health services. This can be done by building adequate public facilities and supporting public health programs.
- 4. Collaboration Between Government and Private Sector Encourage collaboration between the government, the private sector, and non-governmental organizations in efforts to rejuvenate slums. Funding from various sources can help accelerate the implementation of the program.

The implementation of the pattern of handling slum rejuvenation in Simarito is expected to have a positive impact on the community, including:

- 1. Improving the Quality of Life With the improvement of infrastructure and access to basic services, the quality of life of the people in Simarito can increase. The availability of clean water and proper sanitation will reduce the risk of disease.
- 2. Reduction of Social Conflicts Community empowerment and increased participation in decision-making can reduce social conflicts among citizens. Communities involved in planning are more likely to support each other and work together.

3. Improved Economy With improved infrastructure and increased access to services, people will have a better chance of getting jobs and increasing their incomes.

4. Healthier Environment The development of good infrastructure and good environmental management will create a healthier environment, which in turn will improve public health.

## The Concept of Improving the Quality of Slum Areas in the Simarito Area in Simarito Village, West Siantar District, Pematang Siantar City

The concept of Improving the Quality of Slum Areas in the Simarito Area is designed to create a more livable environment, by focusing on three main aspects: physical infrastructure, socio-economy, and community participation.

- 1. Physical Infrastructure Improvement One of the main focuses in the rejuvenation of slums is the improvement of basic infrastructure, which includes: Repair and construction of roads to improve accessibility and mobility of residents. Improvement of drainage systems to prevent floods and waterlogging which are often a source of disease. Providing access to clean water and proper sanitation through the construction of wells, clean water networks, and public sanitation facilities. Rehabilitation of uninhabitable houses with assistance from the government or private institutions through home renovation programs for low-income communities.
- 2. Community Social and Economic Empowerment To ensure the sustainability of regional rejuvenation, community socio-economic empowerment is also a priority. This is done through: Job skills training for residents to increase their income, such as technical skills training, entrepreneurship, and financial management. Women's empowerment program to increase women's involvement in economic activities through training and business capital assistance. Strengthening cooperatives and small businesses in the community to improve the welfare and economic capabilities of residents.
- 3. Community Participation and Involvement in Planning The success of slum rejuvenation cannot be separated from the active participation of the community. Local governments involve residents in the planning and implementation of slum management programs through: Citizen deliberations to formulate needs and priorities in environmental rejuvenation. The establishment of community working groups that are directly involved in the supervision of infrastructure development and maintenance. Socialization and education about the importance of maintaining the cleanliness of the environment and the infrastructure that has been built.

Although the rejuvenation program in Simarito has shown significant results, there are still several challenges that need to be overcome:

- 1. Budget Limitations and Resources Budget limitations from local governments are often the main obstacle in accelerating the rejuvenation process. Limited resources result in infrastructure improvements that can only be done gradually.
- 2. Slow Social Change Although infrastructure has been improved, social and behavioral changes are still slow. Some residents still lack discipline in maintaining the cleanliness of the environment and maintaining the facilities that have been built.
- 3. Lack of Participation from the Private Sector Collaboration between the government and the private sector in rejuvenation efforts is still not optimal. The involvement of the private sector in helping funding and economic empowerment programs is expected to be further improved.

# Prevention Activities Against the Growth and Development of Slum Housing and Slum Settlements in the Simarito Area in Simarito Village, West Siantar District, Pematang Siantar City

Law No. 1 of 2011 concerning Housing and Settlement Areas mandates that the State is responsible for protecting the entire Indonesian nation through the implementation of housing and

settlement areas so that people are able to live and inhabit decent, affordable houses in a healthy, safe, harmonious and sustainable environment throughout Indonesia. Therefore, the handling of slums, not only improves the slum conditions that occur in Pematang Siantar City, but the most important thing is to encourage programs and forms of action plans to prevent

increase and the emergence of new slums. As explained above, actions taken in prevention can be in the form of supervision and control as well as the formulation of forms of community participation in the location or slum area. In realizing the function of settlements, and the prevention of the growth and development of slums is carried out in order to improve the quality of life and livelihood of the resident community as well as maintain and improve the quality and function of housing and settlements based on the certainty of settlement and guarantee the right to reside in accordance with the provisions of regulations and laws. The benchmark for the development of scenarios, programs, and preventive action plans is based on the problems that occur in each slum area which provides an overview of the history of slums as an empirical basis for handling, which is then carried out a study of the concept and strategy of handling as well as the determination of treatment programs and action plans, which are expected to be on target and have a direct impact on the indications of prevention of slum increase and indications of handling indicators slums in every area.

The needs of handling on an area and/or environmental scale are formulated based on the profile and problems of slums that have been updated and verified in accordance with 7 (seven) slum indicators. Regional-scale programs and activities are needed in terms of handling slum conditions in accordance with the updated and verified profile and identified the needs of its handling. In general, the two existing areas have almost the same characteristics of problems and handling needs, namely drainage and waste, waste and fire protection. From these conditions, a handling program for prevention can be formulated focused on community empowerment efforts. Prevention programs are carried out through efforts to increase socialization, education, and training activities to the community. Programs and activities to improve the quality of slums in Pematang Siantar City that can be carried out, one of which is with the term/concept of regional rejuvenation or urban rejuvenation. Urban rejuvenation is the activity of dismantling and rebuilding an urban area in order to increase land benefits for the community and the city government. Regional rejuvenation aims to create a good area, which is a unified organizational system, both social, visual, and physical. Urban rejuvenation is an approach in the urban planning process that is applied to rearrange an area with the aim of increasing land capacity so that it can provide more positive benefits for the city. Thus, urban rejuvenation has an economic connotation from the use of resources in providing new vitality.

### 4. CONCLUSION

Improving the quality of slum areas in Simarito, West Siantar District, Pematang Siantar City, has shown significant results through the implementation of regional rejuvenation handling patterns. Based on the analysis and evaluation carried out, several conclusions can be drawn as follows:

Infrastructure Improvement: The construction and improvement of basic infrastructure, such as roads, drainage, and sanitation systems, has succeeded in improving the accessibility and quality of life of the community. The public now has better access to public facilities and basic services. Improved Health and Hygiene: Sanitation programs and the provision of clean water have reduced health problems caused by unclean environments. The community is more aware of the importance of maintaining environmental cleanliness, so that a healthier area is created. Community Participation: Community involvement in the planning and implementation of regional rejuvenation has shown positive results. Active community participation not only increases the sense of belonging, but also encourages the sustainability of the programs that have been implemented.

Improving the Local Economy: Training and support programs for micro enterprises have had a positive impact on the local economy. People now have new skills and better access to capital, which contributes to an increase in their income. Environmental Awareness: Environmental awareness and education campaigns have succeeded in instilling sustainability values among the community. This can be seen from the increasing participation of the community in reforestation and waste management activities. Stakeholder Collaboration: Cooperation between the government, NGOs, and the private sector has strengthened the implementation of rejuvenation programs. This synergy allows for more effective and efficient use of resources, as well as accelerating the process of improving the quality of the region.

#### REFERENCES

- Ambarasakti, G. Y. (2013). Analysis of Residential Environmental Quality Using Remote Sensing Imagery Application in 2006 and 2010 in Sewon District, Bantul Regency (Thesis, University of Muhammadiyah Surakarta).
- Dinatha, H. (2015). A Study on the Relationship between the Quality Level of Settlements and Public Health Conditions in Gondokusuman District, Yogyakarta City (Thesis, University of Muhammadiyah Surakarta).
- Rindarjono, M. G. (2012). Slum: A Study of Slums in Perspective. Spatial. Yogyakarta: Media Perkasa.
- Sugiyono (2019). Quantitative, Qualitative, and R&D Research Methods. Bandung: Alphabet.
- Sutrisno Hadi, M. (2015). Research Methodology. Yogyakarta: Student Library.
- Regulation of the Minister of Environment and Forestry of the Republic of Indonesia. (2016). Regulation of the Minister of Environment and Forestry (PerMenLHK) of the Republic of Indonesia No. P.68/Menlhk/Setjen/Kum.1/8/2016 concerning Domestic Wastewater Quality Standards.
- Prasad, S., Gupta, I. C., & Totala, N. K. (2016). Social media usage, electronic word of mouth and purchasedecision involvement. In Asia-Pacific Journal of Business Administration (Vol. 9, Number 2).
- Aris, M., & Nuraini, C. (2024). Optimizing City Spatial Plans: Development Strategy Urban Sustainability in Medan. International Journal of Society and Law, 2(1), 255-269.
- Aris, M., Nuraini, C., & Milanie, F. (2024). Direction for The Development of Coastal Area infrastructure in Natal Sub-District, Mandailing Natal Regency, Indonesia. International Journal on Livable Space, 9(1), 15-31.
- Hartini, M. I., Nuraini, C., Milanie, F., Abdiyanto, A., & Sugiarto, A. (2023). Characteristics and Management of Drainage Infrastructure in Medan Sunggal District, Medan City. International Journal Papier Advance and Scientific Review, 4(4), 62-90.
- Marwazi, A., Nuraini, C., Abdiyanto, A., Sugiarto, A., & Millanie, F. (2023). Preliminary Study of Medan City Regional Planning. ARMADA: Journal of Multidisciplinary Research, 1(12), 1402-1407.
- Nuraini, C., Suprayitno, Adaptive and Responsive Space Attachment-Based Residential Environment Character in Mandailing. Journal of Architecture NALARs, Vol. 20, No. 1 January 2021 : 61-72 p-ISSN 1412-3266/e-ISSN 2549-6832, 2021
- Nuraini, C. 2024. The Architectural Tectonics of Traditional Buildings in Mandailing, North Sumatra, Indonesia, Civil Engineering and Architecture, 2024. 12 (2), 892-916.
- Nuraini, C. (2019). Morphology of Residential Environment of Sigengu Village in Mandailing Julu, North Sumatra. Journal of Regional and City Planning (JRCP), 30(3), 241-260.
- Nuraini, C. (2016, October). Sustainable Landscape for Livable Village in Mandailing. In Fourth International Conference on Sustainable Built Environment (ICSBE): "Sustainable Building and Environment for Sophisticated Life (pp. 549-558).
- Nuraini, C., 2024. The Architectural Tectonics of Traditional Buildings in Mandailing, North Sumatra, Indonesia. Civil Engineering and Architecture 12(2): 892-916. http://www.hrpub.org., DOI: 10.13189/cea.2024.120217
- Nuraini, C., Alamsyah, B., Novalinda, P. S., & Sugiarto, A. (2023). Planning with 'Three-World Structures': A Comparative Study of Settlement in Mountain Villages. Journal of Regional and City Planning, 34(1), 55-82.
- Nuraini, C., Milanie, F., Novalinda, N., & Andiyan, A. (2024). Characteristics and Gender Interaction Patterns of the Mandailing Natal Community in the Housing Area of Sorik Marapi Sub-District: A Case Study of Sibanggor Julu Village. Journal of International Crisis and Risk Communication Research, 7(2), 186-195.
- Pohan, T., Milanie, F., Nuraini, C., & Sugiarto, A. (2024). The Suitability of Activities in the Trade Sub-Zone (The Corridor of Letda Sujono Road, Medan Tembung Sub-District, Medan City) International Journal on Livable Space, 9(2), 129-148.

Purba, B. M., & Nuraini, C. (2024). Integrated Area Development as A Sectoral and Regional Development Model (Kuala Tanjung Industrial and Port Area). East Asian Journal of Multidisciplinary Research, 3(7), 3159-3176.

- Purba, B. M., Sugiarto, A., Nuraini, C., Dian, R., & Kurniawan, H. (2024). A STUDY ON THE USE OF SPACE FOR THE TRANSPORTATION SYSTEM IN THE BATANG KUIS URBAN AREA. Journal of Darma Agung, 32(4), 188-199.
- Sugiarto, A., & Ramadania, R. K. (2023). Economic and Spatial Regional Integration and Its Impacts on Regional Development in North Tapanuli Regency. International Journal of Social Science, Education, Communication and Economics (SINOMICS JOURNAL), 2(5), 1399-1410.
- Sugiarto, A., & Ramadania, R. K. (2023). Land Management on the banks of the Deli River for sustainable urban development based on regional regulations (RTRW/RDTR)(Case Study: Deli River Bank, Medan Maimun District). Jesya (Journal of Sharia Economics and Economics), 7(1), 618-626.
- Sugiarto, A., Manalu, S. P. R., & Pakpahan, E. (2023). The Effect of the Number of Tourist Visits and Restaurant Tax on the Economic Growth of North Tapanuli Regency with PAD as an Intervening Variable. Jesya (Journal of Sharia Economics and Economics), 6(1), 221-232.