# An Analysis on the Influence of NUSP-2 Program on Infrastructure Development towards Societies' Social and Economics in Tanjungbalai City

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#### ABSTRACT

North Sumatera still has several Slum Cities: one of them is Tanjungbalai, which is located in the coastal area. Tanjungbalai is considered to be one of the slums because this area has a high population density and mostly inhabited by poor people. Another reason is that Tanjungbalai has an unhealthy environment and unsupported by city services such as clean water, sanitation, drainage, roads, emergency access roads, and landfills. Not only those, Tanjungbalai also lacks access to education, health, public facilities, and other social facilities. Based on this, the purpose of this study is to analyze the factors that influence the societies' economic and social conditions in terms of predictors: road conditions, drainage, sanitation, and clean water. The type of this research is quantitative and uses Path Analysis technique with SPSS. The results of this study are the condition of roads and drainage does not have a significant influence on the societies' social and economics, either directly or indirectly. On the other hand, sanitation and clean water infrastructure give a significant effect on the economy and social community both directly and indirectly.

*Keywords:* Road Infrastructure, Drainage, Sanitation, Clean Water, Economics and Social

#### **INTRODUCTION**

Slums are areas with high population density in a city that is generally inhabited by poor people. Slums can be found in various major cities in the world. Slums are generally associated with high levels of poverty and unemployment. Slum areas can also be a source of social problems such as crime, drugs and alcohol. In various poor countries, residents live in very close areas, or are densely populated, so vehicles are very difficult to pass such as ambulances and firefighters. Unhealthy environments and are not supported by city services, such clean water. sanitation. drainage. as: environmental networks road and emergency access roads as well as waste disposal sites that are not available resulting in a pile of garbage and finally became the center of health problems because of its unhygienic condition. Another feature of slums is the lack of access to education, health, shared spaces and public facilities and other social facilities (Wikipedia).

Problems with slums also occur in Indonesia. The significant economic growth in Indonesia in the last 10 years, followed by the development of new residential areas which emerged as rapid development. This was marked by an increase in the number of people living in urban areas. Increasing the number of people living in urban areas in 2012 amounted to 54 % compared to 49.7% in 2010 (Ministry of PUPR, 2015).

An increase or increase in the number of people living in urban settlements can be a positive potential as well as social capital for urban areas in driving the economy in the region. A large

population provides market potential as well as labor that is expected to be able to move the economy in the real sector, but must be accompanied by preparing enough jobs.

The increasing number of residents living in urban areas is followed by various problems that arise such as poverty due to lack of employment opportunities, the emergence of slums, low quality of housing infrastructure facilities and services, environmental problems and irregularity of residential buildings and public services that are not optimal. Urban areas that are not managed properly cause many problems that arise, causing the city government and its citizens to lose the opportunity to get better and more decent environmental conditions.

The high rate of urbanization in Indonesia has a major impact on the development of slums in urban areas. In 2015, it was noted that the percentage of slum households in urban areas reached 7.03%. Whereas in 2018, it decreased to 6.58% (Community Welfare Statistics, 2018). Although the development trend of slum areas has decreased, this is still a challenge for the government in realizing slum-free cities.

The development of housing and settlements in urban areas is the impact of an increase in population. Increasing the number of residents in urban areas is not only caused by population growth factors, but also due to high rates of urbanization. The imbalance that occurs between the high rate of urbanization and the fulfillment of infrastructure facilities / infrastructure that is affordable and livable becomes the main source of problems for the emergence of slums. (Directorate General of Human Settlements, 2019).

The government, in this case the Ministry of Public Works and Public Housing, cannot work alone in realizing slum-free cities. Management of slums is not just about physical improvement, but also how to improve the lives of people in the area. In the current era of decentralization, local governments are the spearhead of development. In addition, the private sector can also be included through the Corporate Social Responsibility (CSR) program. Currently, there have been many CSR programs that have taken steps to improve slum areas. Government, both central and regional directing the private sector to enter priority locations. (Cipta Karya Bulletin, 2014)

The City without Slums Program (Kotaku) is one of the programs of the Directorate General of Human Settlements of the Ministry of Public Works and Public Housing in dealing with slums in Indonesia. The Kotaku Program is a collaborative program between the roles of local government and community participation. The Kotaku program will improve the quality, management, prevention of the emergence of new slums, and social and economic assistance for the survival of a better and healthier community life in the slums. The program was implemented in 34 provinces, spread over 269 regencies / cities, in 11,067 villages / villages, and targeted a slum area of 23,656 hectares (Directorate General of Human Settlements, 2019).

City programs without slums up to 0% are the Indonesian government's priority programs targeted to be met in 2019. There are several challenges faced by the government in the process of implementing this program, namely: (i) the unavailability of accurate data related to slums that need to be addressed, (ii) limited local government capacity, and (iii) handling slum areas is still far from optimal limits (Directorate General of Human Settlements, 2015).

In its implementation, the Directorate General of Human Settlements of the Ministry of Public Works and Public Housing is based on Law Number 1 of 2011 concerning Housing and Settlement Areas and PUPR Rapermen. The law states the importance of improving the quality of settlements and preventing slums in urban areas.

The Neighborhood Upgrading and Shelter Project Phase 2 (NUSP-2) Program

is one of the Kotaku sub-programs, which aims to improve the quality of slum areas in cities which are implemented based on or driven by the community. Some of the targets are buildings, environmental roads, water drinking supply, environmental drainage, waste water management, waste management, fire safety, and public open space. This program is a continuation of the NUSSP Program (Neighborhood Upgrading and Shelter Sector Project) which ended in 2010 Because of the limitations of the National Budget, the NUSP-2 Program uses loan funds from the Asian Development Bank (Directorate General of Human Settlements, 2019).

Regency / city selection to get NUSP-2 program intervention is selected according to the criteria of population characteristics, size of slums, access to basic infrastructure and basic services, and commitment of the local government in implementing slum settlement management by issuing a Regent / Mayor Decree on Slum Areas (Directorate General of Human Settlements, 2016). In this regard, the Ministry of Public Works and Public Housing has targeted several regions in several districts / cities. One of the targets involved in the NUSP-2 Program for the 2015-2019 period is Tanjungbalai City.

According to the Secretary of the Department of Housing and Settlements of Tanjungbalai City, that Tanjungbalai City is one of the 20 cities that received the NUSP-2 program. This is because the city of Tanjungbalai is committed and has the readiness to carry out the program by preparing regional budgets to support NUSP-2 program activities in the form of APBD allocations in the activities of building infrastructure development that are integrated with the Regional Spatial Planning (RTRW) and the Urban Settlement and Infrastructure Development Strategy (SPPIP), in addition to from the extent of the slums that are a priority.

Tanjungbalai City is a priority for slum management through the City without Slum program because it has the largest slum area among other cities in North Sumatra Province, so it is a city priority handled by the Neighborhood Upgrading and Shleter Project Phase II (NUSP-2) program.

problems of The main slum settlements in Tanjungbalai City according to the Slum Improvement Action Plan (SIAP) document are infrastructure facilities and infrastructure that are not eligible and limited, irregularity in buildings and houses are not suitable for habitation, Areas prone to flooding and inundation, Most residents are classified as poor and low-income, most of the population's livelihoods are laborers and fishermen and the lack of concern for the environment and awareness of clean and healthy behavior.

Slum dwellers in Tanjungbalai City socially and economically not are homogeneous, their residents have diverse livelihoods and densities, as well as their origins. In slum communities known for coatings based social on economic capability. Most slum dwellers are those who work in informal sector or have additional livelihoods in the informal sector.

In 2015, as a form of effort in dealing with slums in the city of Tanjungbalai, the Government of the City of Tanjungbalai issued a Decree of the Mayor concerning the Determination of the Location of Slums in the City of Tanjungbalai Number: 600/352 / K / 2015. This is a prerequisite for implementing the City without Slums (KOTAKU) national program and the Neighborhood Upgrading and Shelter Project Phase 2 (NUSP-2) Program.

In the book on regional economic development (Sirojuzilam, 2016) there are two stages. The first stage, in essence, development aims to eradicate poverty. If this goal has begun to feel the results, then the second stage is to create opportunities for citizens to be able to live happily and meet all their needs.

Infrastructure plays an important role in economic growth. This is because, in the short term, such as creating employment

in the construction sector, whereas in the medium and long term it will support increased efficiency and productivity of the related sectors. Infrastructure is the answer to the needs of countries that want to encourage economic growth, by helping to reduce poverty, improve the quality of life of people, support the growth of the economic center and increase the mobility of goods and services (Ja'far M, 2007). In context of economic the growth, development is the basis for reducing or eliminating poverty, inequality, and unemployment (Sirojuzilam, 2016).

The development of the Neighborhood Upgrading and Shelter Project Phase 2 (NUSP-2) infrastructure program is able to provide employment for residents, so that it can be a source and increase income for the people in slum areas where the majority of people work nonpermanent.

The first infrastructure, namely the infrastructure of the Road Environment. Good and adequate road infrastructure has an important role in sustaining the economic growth of a region. This is because; road infrastructure affects various community activities through easy access between regions, and triggers equitable development that will have a positive impact on increasing employment (Ompusunggu, 2008).

The infrastructure next is Environmental Drainage. Drainage functions as flood control (Nandi, 2010). Drainage is one of the important infrastructures that must always be monitored in Tanjungbalai City. This is because the settlements of the coastal area of Tanjungbalai City are always exposed to flooding from sea water and land subsidence. Tidal water that stagnates, even reaching into people's homes, causes damage to building structures, which in turn has an impact on the quality of houses that look dirty (Tanjungbalai City Government, 2015).

The third infrastructure, which is Clean Water. Provision of access to clean water for the community becomes a reference in measuring the quality of life. This is because clean water is a substance that is very important for human life, and needs to be met (Katrini, 2014). The basic infrastructure of clean water is able to influence dominantly on direct saving, with low costs or access to clean water can have an impact on the quality of public health (Brenneman & Kerf, 2002).

The next infrastructure is public / communal MCK. Public toilets are very much needed for densely populated areas with low economic levels, which have smaller housing areas than standard residential areas per person. The construction of public toilets can control pollution environmental due to the centralized flow of wastewater, as well as facilitate the government in the provision of clean water. Public MCK infrastructure is indicator of solving community one sanitation problems in slums, aside from clean water supply problems.

of the community-based As one development programs aimed at supporting the realization of cities without slums, the NUSP-2 program in the framework of urban development planning and improvement of housing conditions in slum areas that favor the poor, can open jobs for the poor during process ongoing infrastructure the development.

# Hypothesis

Based on the concepts presented, the research hypothesis is formulated as follows:

- 1. Environmental Road Infrastructure (X1) Has Positive Impact on Community Economic Improvement (Y1).
- Environmental Drainage Infrastructure (X2) Has Positive Impact on Community Economic Improvement (Y1).
- 3. Infrastructure Provision of Clean Water Infrastructure (X3) Has a Positive Impact on Community Economic Improvement (Y1).

- 4. Public MCK Infrastructure (X4) Has a Positive Influence on Community Economic Improvement (Y1).
- 5. Environmental Road Infrastructure (X1) Has Positive Impact on Community Social Conditions (Y2).
- Environmental Drainage Infrastructure (X 2) Has a Positive Influence on Community Social Conditions (Y2).
- 7. Infrastructure Provision of Clean Water Infrastructure (X3) Has a Positive Impact on the Social Conditions of the Community (Y2).
- 8. Public MCK Infrastructure (X 4) Has Positive Impact on Community Social Conditions (Y2).
- 9. Environmental Road Infrastructure (X1) Has a Positive Influence on Community Social (Y2) Through Community Economic Improvement (Y1).
- 10. Environmental Drainage Infrastructure (X2) Has a Positive Influence on Community Social (Y2) Through Community Economic Improvement (Y1).
- 11. Infrastructure Provision of Clean Water Infrastructure (X3) Has a Positive Impact on the Social Community (Y2) Through Community Economic Improvement (Y1).
- 12. Public MCK Infrastructure (X4) Has a Positive Influence on Community Social (Y2) Through Community Economic Improvement (Y1).
- Community Economic Improvement (Y1) Has Positive Impact on Community Social (Y2).

#### MATERIAL AND METHODS

This research was conducted in 5 (five) sub-districts of 4 (four) sub-districts in Tanjungbalai City, who have carried out the Neighborhood Upgrading and Shelter Project Phase 2 (NUSP-2) program, which is a program to improve the quality of urban slums. The implementation of the program in the five villages took place for three years, starting in 2016 until 2018.

The five villages are 1) Village Beting Kuala Kapias in District Teluk Nibung, 2) Village Kuala Silo Bestari in District Tanjungbalai City II, 3) The Village Semula Jadi and 4) Village Selat Tanjung Medan in District Datuk Bandar Timur and 5) Village Sei Raja in District Sei Tualang Raso.

The research method is a scientific way to get data with a specific purpose. Based on this there are four things that need attention, namely: scientific method, data, purpose, and usability. The scientific way means that research activities are based on scientific characteristics, namely rational, empirical and systematic.

In this study a path analysis method is used. The path analysis technique was first developed by Sewell Wright in the 1930s. This technique is used to test the causal relationship that is suspected to be plausible between one variable and other variables in the experimental conditions (Muhidin, 2009). Pathanalysis method is a method that examines the direct and indirect effects of the hypothesized variables as a result of the effect of the treatment of these variables. This analysis is a development of multiple regression analysis with arrows showing the relationship between variables (Suyana Utama, 2012).

Influence of NUSP-2 program infrastructure (Symbol X) consists of four Environmental Road variables (X1), Environmental Drainage (X2), Clean Water (X3), and Public MCK (X4), as an independent variable (independent) of Community Economic Variables (Y1) and Social Variables (Y2).

#### **RESULTS AND DISCUSSION**

# The Effect of Environmental Paths On the Economy (Revenue) Partially

Infrastructure systems are often the most visible sign of development in an economy. However, this cannot be used as a benchmark in the City of Tanjungbalai, because transportation and roads have not affected the movement of people and goods efficiently.

In urban areas in North Sumatra, trade trends are more advanced while poorer

(rural) regions lack many economically meaningful dimensions of connectivity. Jones (2006) notes that development in Asia has led to a concentration of infrastructure in urban areas to support export-led activities.

Infrastructure development is the main pathway to poverty alleviation. Unfortunately in Asia today, "Infrastructure deficits hamper market-led growth and access to social services in many countries." (ADB, 2008a.) This happens in the Tanjungbalai region, where companies and agriculture do not grow because the city is an area poorly connected; and in these locations, people do not have access to goods and services, including those for education and health that can build human capital.

Infrastructure is synonymous with economic development such as roads, railroads, and other utility systems. The lack of infrastructure services signals that it will be hampered for economic growth.

Infrastructure development that is not accompanied by other treatments such as: regional market development, increasing local potential, and increasing regional superior products, will have an impact on:

- 1. Not optimal economic growth
- 2. The reduction in poverty will be slow

3. Not yet optimal absorption of additional labor

of Partial improvement road conditions will also create no connectivity, so that overall production capacity expansion does not occur: market connectivity and other economic facilities that may expand overseas; improved access to key facilities such as health, education, and other basic services (Jones, 2006).

According to Rama et al (2018) indeed the improvement in the economic field is also related to the management and maintenance of infrastructure built through the NUSP-2 program. In implementing infrastructure maintenance, the program forms a Utilization and Maintenance Group (KPP) whose duty is to manage and maintain the built infrastructure through the local workforce. However, due to the unavailability of funds for maintenance of existing infrastructure because the KPP does not have a source of income and the infrastructure built (roads) cannot generate money. This has resulted in the impact of local workers who had previously gotten jobs by becoming laborers on road construction, returned to unemployment when the road was finished. Local workers can no longer be used for maintenance workers because maintenance funds are provided through community self-help contributions.

From the aspect of economic improvement, the implementation of infrastructure development creates jobs but is temporary, as long as the construction takes place. Socially, a form of community awareness has increased to maintain the results of infrastructure development in the NUSP-2 program (Rama et al, 2018).

#### The Effect of Environmental Drainage on Economics (Income) Partially

Integrated water resources management (IWRM) defines drainage as a process for the development and management of coordinated water, land and related resources, to maximize the economic and social welfare that is produced equitably without compromising the sustainability of vital ecosystems (GWP 2000).

Good drainage will have an economic and social impact. This has a considerable positive effect on agricultural productivity, water control and flood mitigation.

But drainage is also often done poorly in protecting vital ecosystems, the environment, and other resources such as fisheries (Dayam et al, 2004). This is in line with the results of this study that drainage has no effect on the economy and social community of Tanjungbalai. Drainage does not have much impact: on the fisheries sector, public health, on the protection of buildings and urban infrastructure and on the environment because:

- Drainage does not have a large impact on fisheries production and productivity in Tanjungbalai. This is because drainage investment is not in the sector of improving the economy but only for preventing floods into residents' homes. Drainage planning is also not intended to make a major contribution to public health, drinking water supply, and sanitation.
- 2. Maintenance of the drainage system is also felt to be still lacking by the community because, there is still damage to buildings and other community infrastructure when the water level overflows when it rains.
- 3. The environmental function is often negatively affected by drainage. This is in line with what happened in Tanjungbalai, namely drainage as a channel for the distribution of wastewater and other pollutants.

According to the drainage study conducted by several previous researchers (Dayem et al, 2004) there are 6 diversification factors for drainage which this did not happen in Tanjungbalai, namely:

- 1. Drainage in Tanjung Bali has not served many different users such as for fisheries, new agriculture is only limited to preventing water from entering our homes in the rainy season.
- 2. The drainage system has not affected many functions of the resource system and various sectors in the community.
- 3. The scale of the drainage system has not varied.
- 4. Environmental factors are also the main thing that makes drainage benefits not optimal such as climate and season, slope and height, soil characteristics, groundwater characteristics, biodiversity, and ecological processes.
- 5. Diversity of social and economic conditions (prosperity and values, distribution of strengths and cultural backgrounds, social and political structures).

In general the level characterization of drainage systems should provide detailed and specific local descriptions of the drainage system. Characterization at this level serves the design of the field level and the implementation of drainage interventions, specifically land and water resource control systems, for a number of precisely defined functions.

The system level is the level of concrete drainage interventions, where technical and operational designs must be carried out within a framework established by government policy and planning at the landscape level. This small drainage system can be built independently and managed by the community. However, in Tanjungbalai there is no additional separate system for wastewater treatment and urban drainage, a main channel maintenance program for flood control, and so on.

## The Effect of Clean Water on the Community's Economy Partially

Water is an essential material in human life, this can be seen from the human need for water to meet their daily needs. The need for clean water in the City of Tanjungbalai is increasing as development continues to grow. The development has an impact on increasing population and diverse land uses.

If not properly anticipated, the need for water increases without the fulfillment of services to the community. Therefore, the provision of clean water infrastructure needs should require good planning. The problem issue faced is the large demand for clean water that is not balanced with the optimal supply of clean water from the PDAM.

Water distribution services from PDAM Tanjungbalai have not been able to reach several areas. From the facts that occur, it shows that there are limitations of PDAMs in efforts to supply clean water. This illustrates that Tanjungbalai still needs a clean water program in the form of a clean water distribution network supply that can meet the needs of the community. The desire for an adequate supply of clean water

distribution network can be started by knowing the extent of the socio-economic and cultural conditions of the people in Tanjungbalai in consuming clean water.

This research was conducted to determine the extent of the influence of the socio-economic conditions of the community on clean water consumption patterns in Tanjungbalai. The results obtained from this study are that clean water is a significant factor in the economic and social conditions of the Tanjungbalai community due to the following factors: Impacts related to municipal water include:

- Household drinking water treatment with various methods of using bottled water by households.
- 2. Piped water (a small portion of this use is associated with inadequate sanitation, and the rest is for factors such as comfort), and
- 3. Transport clean water from long distances outside the household because closer water sources may be contaminated due to poor sanitation.

Impacts of access time include:

- 1. Cost of the additional time needed to access shared toilets and open defecation compared to using private toilets in the household, and
- 2. The cost of absent school time due to inadequate toilet for girls and time absent from work due to inadequate toilet for working women.

Economic impacts of tourism include:

- 1. Potential loss of tourism revenue, and
- 2. The economic impact of digestive diseases among foreign tourists.

Based on the literature review, attribution factors are used to trace back proportions and figures that can be associated with poor water conditions. Economic assessments are carried out on the loss of tourism potential, the high cost of buying clean water, the human capital approach is used to assess human life which explains economic losses over the years due to one's lack of productivity due to deterioration in health conditions due to lack of clean water and sanitation. The results of this study are also in line with research from Isthara et al (2013) where economic limitations are a barrier to a program, people in slum areas claim that almost people who do not have latrines because they do not have funds and lack of health awareness. The community also objected if they had to spend money to buy clean water so they could not access drinking water because the purchase was hampered which was quite expensive.

## The Effect of Public MCK on Community Economy Partially

The Water and Sanitation Program has launched a Multi-Country Sanitation Economic Initiative (ESI) to assess the economic impact of poor sanitation. The overall goal of the ESI is to provide evidence to decision makers at the country and regional level to advocate for increased investment in improving sanitation and for efficient planning and implementation of sustainable sanitation and hygiene programs.

The sanitation study has the effect of producing evidence on the economic effects of current sanitation arrangements and hygiene practices in relation to human waste management (and associated hygiene), both in rural and urban areas in Tanjungbalai. The findings of this study are the impacts produced for collecting and analyzing data on the actual costs and benefits of various sanitation options or interventions in various contexts of sanitation programs. The impact of ESI is very relevant to the sanitation challenges facing the people of Tanjungbalai today in both rural and urban areas.

These challenges are substantial, with large populations defecating in the open or using untreated toilets and a very high proportion of human waste released without being treated both on land and in water bodies (especially from urban areas).

Inadequate sanitation and poor hygienic practices cause large public health costs, for example the costs of death and illness caused by inadequate sanitation, as

well as other environmental and welfare impacts. However, there has not yet been found accurate data on economic losses due to inadequate sanitation because there have been no detailed and serious studies.

This study seeks to estimate the economic impact. This study analyzes the impact of sanitation and hygiene practices separately, through conventional approaches that poor sanitation and lack of clean water will create "water-borne diseases."

Many infectious diseases are caused by poor sanitation and lack of clean water. This study analyzes the adverse economic impacts of inadequate sanitation at the city level, using available information about health (death and disease) and other impacts, including regarding availability and quantity of drinking water, for welfare and losses related to tourism (the number of tourists who reluctant to spend the night in Tanjungbalai).

Sanitation is broadly defined to cover the management of human waste, waste and drainage. and key solid dimensions that cause a substantial health burden on the Tanjungbalai Community, especially the poor. The UN-WHO Joint Monitoring Program for Water Supply and Sanitation (JMPDWSS, 2008, 2010) defines "improved" sanitation facilities as facilities that hygienically separate human waste from human contact. This includes facilities that flush or flush into the pipeline system, septic tank, or pit latrines, as well as better ventilated latrines and latrines with toilet slabs. The economic impact of inadequate sanitation is first estimated in the noneconomic unit and then converted to an unit using appropriate economic an valuation method. Health-related impacts include: Health care costs incurred to treat illnesses caused by poor sanitation, and lost productivity, i.e. loss of productive time due to sick people, and loss of productive time when caregivers need to care for the sick.

Support for the results of this study is in line with findings from Unicef (2016) that drinking water in slums in poor and developing countries tends to be unsafe from sewage contamination due to limited MCK and hygiene practices that reduce transmission of disease (including through food), so as to increase disease diarrhea. Changes in behavior and a sustainable economy are the key to improving health. The construction of standardized MCK will also create a clean environment, but it must be ensured that water access to community sanitation is available.

In line with the results of research from Nur Mutia (2018), that the level of satisfaction and interest of the community towards the development of MCK is quite high and has the opportunity to be developed because it is rooted in the community and is managed well through Community Self-help Groups.

## Partial Effect of Environmental Paths On Social Community

Research (Rama et al, 2018) which states that the failure of the drainage system in slums is an indication of inappropriate technology selection, where the NUSP program tends to handle through conventional drainage forms that attempt to drain water as quickly as possible to the main water body without regard to the of water catchment addition areas (environmentally sound drainage) or creating a better drainage system

According to (Hanifah, 2016) rob not only damages the environment and building houses but also causes damage to roads as environmental accessibility. This means the environment can become slum again and the infrastructure that is built will be damaged. In addition, the management of sewage and rubbish in this area has not yet been handled with the potential to pollute water bodies (Java Sea) and the environment more massively. The handling model that can be done in this case are the models: (Cahya and Juanda, 2012)

a) Land sharing model: the arrangement of roads with a high level of community awareness. In structuring the government takes into account the need for public infrastructure needs.

b) Land consolidation model: Land consolidation is a land policy regarding restructuring of land tenure, the ownership and use to suit the RTRW, as well as land acquisition efforts for development purposes aimed at improving the quality of the environment maintenance of / environmental roads, by involving direct community participation, both in urban and rural areas. The goal is to achieve optimal utilization of the Road, through increasing the efficiency and productivity of land use with the aim of realizing an orderly and orderly control and use of roads, in the sense of developing new areas and developing urban areas (urban renewal).

#### The Effect of Environmental Drainage on Society Socially Partially

The existing drainage network system in Tanjung Balai is still relatively inadequate, the inadequate drainage network system is vulnerable to the occurrence of river pollution by the community. According to Malau (2006)drainage becomes narrow and shallow because land is limited, consequently in the rainy season the potential for flooding is very large, layout and narrow roads cause circulation movements to become undirected, as well as environmental sanitation being unhygienic.

So there needs to be some development of a better drainage network including:

- 1. The drainage network system that is built should use the concept of pumping to a shelter that has been prepared and then processed before being discharged into the river.
- 2. Normalizing the drainage system and strengthening the dam / plaster around the Pulo Geulis.
- 3. The construction of new buildings must pay attention to the sustainability of the river.
- 4. Construction of new buildings directly or indirectly - is not allowed to build on rivers and / or eat river bodies, and must

pay attention to the provisions in the applicable regulations.

## The Influence of Clean Water on the Partial Social Society

The need for clean water in Tanjung Balai uses PAM water supplied by the PDAM, every year it is estimated that the need for clean water will increase due to higher population growth resulting in increased demand for clean water. That needs an alternative development of new raw material sources. The garbage processing system at Tanjung Balai also impacts on the condition of clean water in Balai. Tanjung The community is accustomed to throwing garbage directly into the river, the community's habit of causing river pollution is therefore there is a need for serious handling of this by conducting an integrated waste management system in Tanjung Balai by implementing several waste treatment system

The NUSP project is expected to have a series of positive impacts both inside and outside the Project area. With a large amount of investment related to the provision of clean water, waste management (solid and liquid), improvement of community infrastructure, strengthening of social institutions, it is expected that improvements will occur which include the quality of surface water, ground water and seawater and the end is a significant improvement environmental conditions for organisms and residents in the Project and surrounding areas. Likewise. socioeconomic benefits will arise throughout the life of the Project as a result of increased employment and business opportunities and income levels. There will also be other benefits such as improved health services, training education. and support for vulnerable people (ESC, 2018)

# The Effect of MCK on Community Social Partially

Population access to settlement wastewater infrastructure and facilities is basically closely related to aspects of health,

the environment, education, social culture, and poverty. The results of various observations and studies have proven that the easier access of residents to residential waste water infrastructure and facilities (as well as understanding of hygiene), the less likely the occurrence of cases of the spread of disease (epidemics) (Mutia et al, 2018).

The people of Tanjung Balai have used individual waste water systems or toilets, but not all of them have been managed properly, many of which have not been equipped with septic tanks so that the sludge is discharged directly into water bodies. Even if there is a septic tank that is rarely or totally not sucked, it becomes a successor to wastewater which then seeps into the ground and contaminates it.

For this reason, NUSP made the Community Based Sanitation (Sanimas) program in Tanjung Balai a solution in the provision of wastewater infrastructure and facilities by building MCK Plus. This activity has promoted the provision of community-based settlement wastewater infrastructure and facilities with a needsapproach. Community-based responsive sanitation activities focus on the consumption of household wastewater, especially human waste, but it is not closed also to deal with domestic industrial wastewater that can decompose naturally. In the implementation of the Sanimas program, the institutional, management and financing indispensable aspects are for the sustainability of services and preservation of assets that have been built by the community.

## The Influence of Environmental Roads, Drainage, Clean Water and MCK on Community Economy

Based on the NUSP Implementation Document and the results of interviews with the Consular Consultant (CA) that the program does not have activities or trainings that support the improvement of community skills in the economic field (Rama, et al. 2018) This Project only focuses on building physical infrastructure such as road construction, drainage, clean water sources and public toilets. But at the time of project implementation, NUSP was able to create jobs during implementation

The construction work took place by involving the community as day laborers, and becoming impromptu traders. The NUSP program prioritized the involvement of local workers during the construction activities. Based on the results of interviews conducted by the writer with the local RT and RW that there are quite a number of residents absorbed into the workforce.

Where the residents who become workers are people who are unemployed or do not have permanent jobs. Absorption of this workforce without any special requirements and prior training, so that the proposed community will immediately work when the work takes place. Because labor absorption depends on physical projects, when the project is finished there are not a few people who are unemployed again. But NUSP has sought to reduce unemployment and improve the economy with the management and maintenance of infrastructure built through the NUSP-2 program that uses local labor. The task of the community is to carry out maintenance and management of infrastructure that has been built by the NUSP-2.

#### The Influence of Environmental Roads, Drainage, Clean Water, MCK and Community Economy on Community Social

The NUSP program supports active community involvement both from supervision. implementation and from NUSP involves residents at the implementation stage through collaborative work and mutual assistance during construction. Whereas at the supervision stage the forms of citizen involvement are material checking through KSM (Community Self-help Group) elements and supervision of construction work carried out by the local RT / RW.

Not only men, women are also involved in this project. Women's

involvement is through the screening of proposals / input of activities on a special bloating agenda for women, involvement in village level deliberations and consumption preparation at the time of the program implementation. Citizens' concern for the built infrastructure in the form of community service in cleaning drainage channels and the availability of the community to improve the infrastructure built independently. In addition, the form of community concern for the environment can also be seen from the results of observations in the form of the provision of plant pots to beautify the region.

However, in some RWs there are still unclean lifestyles from the community, this is found in the lack of basic infrastructure, the program itself does not carry out other interventions besides roads and drainage and there are no non-physical activities to improve the community's clean lifestyle. Elravies (2016)sees that social sustainability can be achieved through social inclusion, participation, empowerment, and community mobilization; this was also added by Degert (2016) that social sustainability can be seen at a more advanced level, namely an increase in community capacity and community awareness of the region.

#### CONCLUSIONS AND RECOMMENDATIONS CONCLUSIONS

The conclusions in this study are:

- 1. The environmental road has a positive but not significant effect on the people's economy.
- 2. Environmental drainage has a positive but not significant effect on the people's economy.
- 3. Clean water has a positive and significant impact on the community's economy.
- 4. Public MCK has a positive and significant effect on the community's economy.

- 5. The community's economy has a significant effect on the social community.
- 6. The environmental road has a positive but not significant effect on the social community.
- 7. Environmental drainage has a positive but not significant effect on the social community.
- 8. Clean water has a positive and significant effect on the social community.
- 9. Public MCK has positive and significant effect on the social community.
- 10. The environmental road has no significant effect on the social community through the community economy.
- 11. Environmental drainage has no significant effect on the social community through the community economy.
- 12. Clean water has a significant effect on the social community through the community economy.
- 13. Public MCK has a significant effect on the social community through the community economy.

# RECOMMENDATIONS

The suggestions in this study are:

- 1. Suggestions for research need intensive direction to the community to implement clean and healthy lifestyle by community leaders and health cadres. In addition, routine physical facilities are monitored and operators need to shut down the manual pumping machines and do not depend on just one person so that the community has the same responsibility.
- 2. Based on observations and lessons learned about the level of community awareness in the implementation of slum settlement management activities in Tanjungbalai City, it is proposed to renew the performance of the program activities not limited to output but sustainable outcome and benefits, including:

- a. Planning, through socialization and citizen consultation which also involves various related parties, is expected to be able to form an integrated plan that is easy to understand and understand by the community and development actors with practical and easy to implement goals.
- b. Development, through participatory community empowerment in the implementation of sustainable construction can foster community independence, ability and empowerment in solving problems and carrying out the development process itself.
- c. The formation of self-help groups is an effort to optimize the role of the community in the community to manage habitable housing and settlements. The independence and ability of the community in carrying out development are not only funded by the government or the private sector, but their awareness gradually emerges to set aside their income through jointly-supported contributions to carry out and maintain the development activities in a sustainable manner.
- d. Monitoring and evaluation carried out through the government, caring groups, and non-governmental groups starting from the process of planning and implementing development, can foster an attitude of concern and a sense of belonging, maintain the implementation process properly and can maintain the results of self-help development.

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