

Comparison of Community Responses to Clean Water Facilities The KOTAKU Program in Bekasi Regency

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Received December 05, 2022 | Accepted March 23, 2023 | Published April 25, 2023

ABSTRACT

Efforts to successfully build a slum management program are related to spatial and non-spatial characteristics. The government helped address slums through the KOTAKU program. One of its activities is clean water facilities that involve community participation. Differences in characteristics in the city center and suburbs resulted in diverse implementations and community responses. This study aims to compare the community's response to the clean water facilities of the KOTAKU Program in Pasirsari and Mekarsari Villages, Bekasi Regency, as an evaluation of the KOTAKU program implemented by the government. The research method uses quantitative and descriptive qualitative methods, with a sample of 120 people. The results showed that the community response to the efficiency variable showed that the majority of the responses agreed, and there was no difference, as well as the responses to the effectiveness and sustainability criteria. The effectiveness variable suggests that most reactions agree, and there is no difference. The sustainability variable show that most responses agree, and there is no difference. The study concludes that the majority of the community's response to the clean water facilities of the KOTAKU program is no different, meaning that the program has the same reaction with good efficiency, effectiveness, and sustainability in city center and suburbs.

Keyword: comparison; community responses; clean water facilities; KOTAKU Program; Bekasi Regency.

INTRODUCTION

Development that needs attention is related to the welfare of the people, both the poor and those with limited means (Cobbinah et al., 2013; Liloyd-Sherlock, 2000). Development is a necessity for every society, nation, and state because development implies a change to become a better condition than before (Schuurman, 2000; Sunkel, 1969). The changes in question include changes in the economy, politics, socio-culture, and people's lives. One of the most critical development changes is the poverty rate reduction. Poverty is complex because it involves various problems such as the right to fulfill food, health, education, employment, clean water supply, sanitation, slums, and so on (Cremin & Nakabugo, 2012; Yao, 2000). Poverty in Indonesia can decrease if there is support and cooperation from the community, and the government is serious about dealing with this problem considering the condition of Indonesia, which still has a high poverty rate (Tunas & Paresthu, 2010).

The city center is an area with financial services that impact high mobility intensity; it affects the use of space (Camagni et al., 2002; Surya et al., 2020). Residents choose to live in the city center because it is close to the center of activity and has economic appeal. While the choice to live in the suburbs is because land prices are still affordable (Gordon & Richardson, 1997). In addition, limited space in the city center has caused settlement development to shift to the city's outskirts. The increase in the need for space and infrastructure differs from residential land, which has not experienced additions. Facilities include educational facilities, commerce, worship, health, public services, and others, while infrastructure includes electricity, clean water, drainage, garbage, roads, and telephones (Shatkin, 2008; Todes, 2012). Settlement development on limited land causes a transfer of functions so that it develops into a slum area in the area (Berner, 2001). Infrastructure provision as a tool for community life differs between life in the city center and on the city's outskirts.

A slum is an area with an unstructured, unpatterned form of housing (for example, the location of houses and roads is irregular, the absence of public facilities, clean water infrastructure and facilities,

and toilets), whose physical form is not feasible, for example, it experiences regular flooding every year (Lloyd, 1979; Santi et al., 2017). Slums are seen as settlements or housing for urban poor people who are densely populated, located on the sides of streets or alleys in dirty conditions, and are part of the city as a whole or are called sewage areas (Mcfarlane, 2008; Wohl, 2017). Slums are considered places where most urban community members have low incomes by forming settlements where they live in minimal conditions (Nasir, 2018; Satterthwaite, 2016).

The problem of slum settlements is not new but has become a classic problem at the global, regional, national, and local levels. At the global level, according to the United Nations (UN), although the proportion of the population living in urban slums decreased from 47 percent to 37 percent in developing countries between 1990 and 2005, because the population increased, the number of slum dwellers increased. One billion people worldwide live in slums, and this figure will reach 2 billion by 2030 (Conyers, 1991; Nisanth & Rajeev, 2015). Specifically in Indonesia, slum settlements are expanding, and it is evident that from 54,000 hectares in 2004, they increased to 57,800 hectares in 2009 (Erawan, 2012). Realizing this, he encouraged the government to implement several programs, especially the National Community Empowerment Program (PNPM) Mandiri Urban, from 2009 to 2014. However, the program was deemed ineffective, which further encouraged the government, especially the Directorate General of Cipta Karya, Ministry of Public Works, and Public Housing implements a strategic program called the City Without Slums Program, also known as the KOTAKU Program (Sari et al., 2018).

One of the City Without Slums Programs, or KOTAKU, provides clean water for communities around slum settlements. Referring to Presidential Regulation No. 18 of 2020 concerning the 2020-2024 National Medium-Term Development Plan (RPJMN) mandates inclusive urban rejuvenation, increased public access to decent and safe housing in urban areas and land consolidation in order to create cities without slum settlements. The City Without Slums Program (Kotaku) aims to accelerate the handling of slums in the "100-0-100" movement, namely 100% universal access to drinking water, 0% slums, and 100% access to proper sanitation by 2019. Clean water is an essential element for the survival of living things. One of them is that water is the most basic need, so its existence needs to be managed as best as possible (Sari et al., 2018). Human activities are inseparable from the need for clean water, such as cooking, bathing, washing, and the work processes of the human body. In addition, clean water is used for sanitation and consumption, transportation, recreation, and irrigation (Khilchevskiy & Karamushka, 2021). Therefore, it is essential to ensure water availability to maintain human survival.

Water availability includes surface water such as rivers, lakes, and reservoirs and groundwater such as natural springs and aquifers. One of the issues faced is the lack of availability of clean water sources and the uneven distribution of clean water that is healthy and free from disease. Until now, the level of drinking water services in urban areas has reached 51.54% (Messakh et al., 2015). Several diseases are caused by families with inadequate access to clean water and sanitation, which results in increased levels of *E. Coli*, from diarrhea to stunting. Thus, clean water facilities that meet the requirements are needed to reduce disease risk (Otsuka et al., 2019). In addition, water shortages lead to a clean water crisis. Moreover, as population growth increases, water needs also increase (Jiang, 2009).

The development of the water supply is the responsibility of the local government to guarantee everyone's right to drinking water for daily activities (Wadu et al., 2020). The government involves the community as the leading actor and person in charge of implementing activities. The community participates and cares about social activities in its environment (Zulyanti, 2017). Examples of forms of community participation include the participation of personnel, materials, and social activities. The factors that underlie concern are the willingness and ability to improve conditions for the better and acceptance of programs by the community for areas lacking clean water (Anggraini et al., 2020).

One of the areas in Indonesia where there are slum settlements is Bekasi Regency. According to the Decree of the Regent of Bekasi Regency No. 591/Kep. 169 of 2016, there are 21 slum areas, for example, Mekarsari Village in South Tambun District and Pasirsari Village in South Cikarang District (Disperkimtan, 2019). Pasirsari Village is close to the city center, while Mekarsari Village is close to the city's outskirts. The existence of this slum area hurts people's welfare from a

psychological and physical perspective. Slum settlements can be measured by indicators such as access to basic needs, building resilience, adequate living space, livable guarantees, sanitation, and availability of clean water (Setiawan et al., 2021).

Based on initial observations, the reason why the KOTAKU program was implemented in Pasirsari Village was that the residents were running dry, and it was difficult to get clean water sources of good quality, so other activities were carried out, such as garbage disposal, uninhabitable houses (RTLH), drainage, environmental roads, and sanitation. Meanwhile, the cause of the program being carried out in Mekarsari Village was due to the mountain of solid waste; therefore, clean water activities were also carried out, considering that several residents had difficulty getting clean water. The residential status also influences the program's success; some residents of Pasirsari Village are migrants, so they do not interpret activities, in contrast to residents of Mekarsari Village, who are natives, so they are more enthusiastic about supporting the success of the program. Even though community participation is one of the main things in supporting the level of success of the program, for example, community participation in making levy contributions, contributions of thoughts, and participation in social activities (Chaerunnissa, 2015). Therefore, community responses are needed with evaluation criteria to determine the success of implementing clean water facilities (SAB) to date in supporting the development of Bekasi Regency.

Evaluation in this study was carried out by looking at the community's response to the implementation of clean water facilities (SAB) in Mekarsari and Pasirsari Villages. In conducting the evaluation required, criteria to facilitate the assessment. The evaluation criteria used in this research are efficiency, effectiveness, and sustainability. The efficiency criterion relates to the effort required to provide the desired level of effectiveness. The effectiveness criterion relates to whether an alternative achieves the desired results (Dunn, 2017). The sustainability criterion is used to see to what extent the benefits of built facilities are still used after the complete development program (Bappenas, 2017).

Previous research that has been conducted regarding community responses to handling slum settlements such as research with the criteria of Stimulation, Organization, Interpretation, Memory and Recall with the aim of identifying community perceptions of the Kotaku program in Palangkaraya City (Kusnah et al., 2021). Other research on community response with the aim of influencing community responses to the Kotaku Program in Pekanbaru City, found a positive effect and significance of the response (Afdillah, 2021). Then, other research on people's perceptions of the Kotaku program in Bitung City, North Sulawesi, found results that the community had difficulties and were not used to running the program (Runtutahu et al., 2021). Research on the Kotaku program's Clean Water Facilities (SAB) in Mekarsari and Pasirsari Villages had never been done before, so in this study the researchers wanted to know the community's response to Clean Water Facilities activities, in two villages by using the criteria of efficiency, effectiveness and sustainability.

RESEARCH METHODS

Materials

In this study, the tools used for research were needed, such as cameras used for taking pictures, books for taking notes, observation sheets. In addition to that, questionnaire sheets were also needed for data collection, as well as tape recorders to record the results of interviews with respondents in Pasirsari and Mekarsari Villages. The survey technique uses a likert scale with 5 indicator items for each variable. The questionnaire used consisted of 3 variables with 15 indicators. The assessment is based on a likert scale of 5 ranging from strongly disagree to strongly agree. Interview data was conducted using purposive sampling technique. The selection of research locations was based on the Urban Slum Prevention and Quality Improvement Plan document (RP2KPKP) which was explained by research locations as follows:

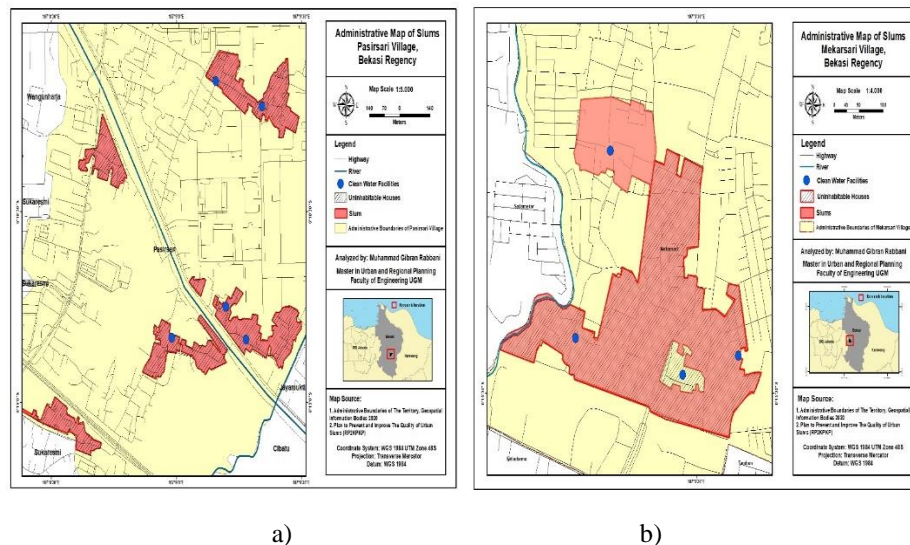


Figure 1. The research location in a) Pasirsari Village and b) Mekarsari Village

Methods

The research uses quantitative and qualitative descriptive methods based on residential area field data (field observation) (Creswell, 1999). Data collection techniques were carried out through observation, surveys, and in-depth interviews with beneficiaries and related parties. The research was conducted in Pasirsari Village and Mekarsari Village, Bekasi Regency, from August 2021 to January 2022. The determination of the research sample used a probability sampling technique, namely cluster area (random) sampling. The sample calculation uses the Slovin & Sevilla formula with an error rate of 10%. The research sample is the community affected by slum management activities and programs. The research sample comprises 120 respondents, consisting of 50 respondents in Pasirsari Village and 70 in Mekarsari Village.

The data collected in this study are in the form of primary data and secondary data. Primary data was conducted through field observations in the form of observations, surveys, and interviews, which aimed to compare community responses to the implementation of the slum settlement program that had been implemented. In contrast, secondary data was obtained from documents and agencies.

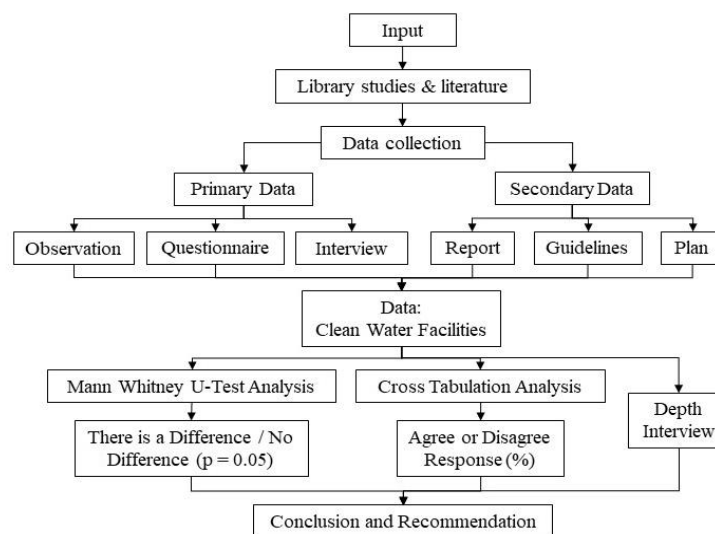


Figure 2. Flow chart

Data Analysis

Questionnaire data analysis used Mann Whitney U-Test non-parametric statistical analysis to see comparisons with Sig. (p) = < 0.05 means there is a difference and cross-tabulation analysis to determine the number of respondents based on percentage in Pasirsari and Mekarsari villages. Response assessment in cross tabulation using two scales with a range of agree and disagree. The results of the quantitative data are then described further in order to obtain an in-depth discussion. In addition, data from observations and interviews were analyzed descriptively and qualitatively to support the results of quantitative data.

RESULT AND DISCUSSION

Community Response to Efficiency

Efficiency is measured by how much knowledge about the funds and time is used to achieve the desired goals. There are five indicators analyzed from the response to efficiency, namely: 1) knowledge about implementation time, seeing to what extent residents know the activity time, 2) implementation time according to plan, seeing whether activity implementation is following planning, 3) knowledge about activity funds, seeing to what extent residents find out activity funds, 4) activity funds as needs, see whether the funds provided are following needs, 5) assistance outside the activity funds, to find out whether there are funds outside the budget such as self-help. The results of the response to efficiency are described as follows:

Table 1. Knowledge About Implementation Time

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
1	Knowledge about implementation time	Pasirsari Village	24%	76%	0.020
		Mekarsari Village	8.6%	91.4%	

Source: Field survey results, 2022

In Table 1, the results of the Mann Whitney U-Test show a value of (p) = 0.020 (p < 0.05), meaning that there is a significant difference. So there is a difference between knowledge about implementation time in the two villages. The majority of respondents in Pasirsari Village agreed, as much as 76%, this data is in line with the results of interviews in Pasirsari Village that clean water has been built and spread over several locations. Residents know that the implementation of the SAB construction will take about 1 month, from March to April 2020. Meanwhile, the majority of Mekarsari Village respondents agree, as much as 91.4%, knowing that some residents know the implementation time of the SAB construction until 2019 can be implemented. There are differences in the results of the community's response to the implementation of the program in the two villages, where residents in Pasirsari Village know the implementation time from months and years, while residents in Mekarsari Village only know the year of implementation.

Table 2. Implementation Time According to Plan

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
2	Implementation time according to the plan	Pasirsari Village	12%	88%	0.539
		Mekarsari Village	8.6%	91.4%	

Source: Field survey results, 2022

Based on the results of the Mann Whitney U-Test in Table 2, the value (p) = 0.539 (p > 0.05) means that there is no significant difference. Therefore, the time between the implementation of the SAB construction in the two villages was according to plan. The majority of Respondents in Pasirsari Village agreed, as much as 88%, this data was also supported by the results of interviews in Pasirsari Village, which explained that the implementation time was following government directives, note

that the processing time must follow what was planned, and following community deliberations. Meanwhile, the majority of respondents in Mekarsari Village agreed as much as 91.4%, which explained that, in general, the implementation of the SAB development had been as planned.

Table 3. Knowledge About Activity Funds

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
3	Knowledge about activity funds	Pasirsari Village	90%	10%	0.000
		Mekarsari Village	48.6%	51.4%	

Source: Field survey results, 2022

Looking at the results of the Mann Whitney U-Test in Table 3, it is known that the value (p) = 0.000 ($p < 0.05$) means that there is a significant difference. So it can be concluded that there are differences between knowledge about activity funds in the two villages. Most respondents from Pasirsari Village disagreed, as much as 90%, following observations that some residents did not know about activity funds. However, some residents knew about these activity funds with one development point of around Rp. 180 Million, the cost is just installation, does not include installation, and others. Meanwhile, most Mekarsari Village respondents agreed that as much as 51.4%, it was known that the residents knew that funds for the construction of clean water facilities used the state budget of around 40 million. / unit with a total of 4 SAB units. The activity fund in Pasirsari Village for 1 SAB is Rp. 180 million, while in Mekarsari it is Rp. 40 million. The difference in numbers is produced by differences in the level of knowledge of citizens regarding activity funds. Residents in Pasirsari Village know the funds are for development, while residents of Mekarsari Village only know the activity funds based on the amount budgeted by the government.

Table 4. Activity Fund as Needed

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
4	Activity funds as needed	Pasirsari Village	16%	84%	0.716
		Mekarsari Village	18.6%	81.4%	

Source: Field survey results, 2022

Based on the results of the Mann Whitney U-Test in Table 4, it is known that the value (p) = 0.716 ($p > 0.05$) means that there is no significant difference. Therefore, it was concluded that there was no difference between activity funds as needed in the two villages. The majority of Pasirsari Village agreed, as much as 84%; the data is supported by statements from residents that most residents agree with activity funds following activity needs. This aims to minimize unnecessary needs that use funds from the APBN where government programs benefit the community and do not seek profit. Meanwhile, most Mekarsari Village respondents agreed, as much as 81.4%, which explained that government policies already have regulations in implementation in the field, such as *Standard Operating Procedures* (SOP), to achieve specific goals and results.

Table 5. Assistance Outside The Activity Fund

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
5	Assistance outside the activity fund	Pasirsari Village	10 %	90%	0.141
		Mekarsari Village	20 %	80%	

Source: Field survey results, 2022

Based on the output of Table 5, the results of the Mann Whitney U-Test obtained a value of (p) = 0.141 ($p > 0.05$), meaning that there was no significant difference. Therefore, there is no difference

between the two villages assistance outside of activity funds. The majority of Pasirsari Village agreed, as much as 90%. Funding assistance is used for additional costs if budget funds are insufficient to carry out activities. However, some residents explained that there was no assistance during implementation because it was appropriate for the government to provide. Meanwhile, most Mekarsari Village respondents agreed as much as 80%, explaining that there were additional funds outside of activity funds, as stated by one of the beneficiaries, namely cross-subsidy assistance, because there were residents who could not afford it.

According to Tables 1 to 5, it is known that the response to the efficiency of clean water facilities shows indicators with differences and no differences in the two villages with the majority of indicators stating that there is no difference. It is stated that there is no difference in indicators for the timing of implementation according to plan with a difference of 3.4%, activity funds as needed with a difference of 2.6%, and there is assistance outside the activity fund with a difference of 10%. Meanwhile, there is a difference in the indicator of knowledge about the implementation time with a difference of 15.4%, and knowledge about activity funds with a difference of 141.4%.

Community Response to Effectiveness

Effectiveness measures whether a business carried out is following the desired results. There are five indicators analyzed from the response to effectiveness, namely: 1) ease of access to infrastructure, seeing whether residents have easy access to infrastructure, 2) adequacy of clean water supply, 3) community support, to determine community involvement in activities, 4) clean water quality, knowing the results of clean water quality, 5) knowledge about obstacles / constraints, seeing if there are any disturbances during implementation. The following data results are presented as follows:

Table 6. Ease of Access to Infrastructure

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
1	Ease of Access to Infrastructure	Pasirsari Village	14%	86%	0.219
		Mekarsari Village	7.1%	92.9%	

Source: Field survey results, 2022

Based on Table 6, the results of the Mann Whitney U-Test obtained a value of $(p) = 0.219$ ($p > 0.05$), meaning that there was no significant difference. So it can be seen that there is no difference between the ease of access to infrastructure in the two villages. The majority of Respondents in Pasirsari Village agreed, as much as 86%; the interviews' results support the data that it is currently accessible for residents to get clean water. The cause of the activities was that residents had difficulty getting clean water. Moreover, many rented houses were built, so the use of jet pumps was insufficient. Based on observations, there are 5 built units scattered in several locations, such as RT. 06 as many as 2 units, RT. 07 RW. 03 as many as 2 units, RT. 03 RW 01 as much as 1 unit. Meanwhile, most Mekarsari Village respondents agreed as much as 92.9%. The results of interviews support the data; it is known that the program has been appropriately implemented and makes it easier for residents to access clean water piped to their homes. Based on observations, there were 4 units built like in RW. 13, as many as 2 units RW. 17 as many as 2 units.

Table 7. Adequacy of Clean Water Supply

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
2	Adequacy of clean water supply	Pasirsari Village	10%	90%	0.632
		Mekarsari Village	12.9%	87.1%	

Source: Field survey results, 2022

According to the results of the Mann Whitney U-Test in Table 7, the value $(p) = 0.632$ ($p > 0.05$) means that there is no significant difference. Therefore, there is no difference between the adequacy of clean water supply in the two villages. Most respondents in Pasirsari Village agreed, as much as 90%, and interviews support the data that clean water has covered all beneficiaries of 30 heads of families. Most residents feel that their need for clean water is sufficient and suitable for consumption. Residents need around 9-10 cubic meters of water for one head of household. Water sources have been obtained through excavations around 50 to 90 meters below ground level. Meanwhile, most Mekarsari Village respondents agreed as much as 87.1%. The data is supported by interviews that residents feel that their clean water needs are fulfilled. Some residents use SAB as a backup, with the jet pump as the primary source. There is a resident who prefers SAB because it is more affordable than using PDAM. Moreover, Mekarsari Village is located in the Groundwater Basin (CAT) area, so the water flows more swiftly.



Figure 3. Piped water to the reservoir (Observation, 2021)

Table 8. Community Support

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
3	Community support	Pasirsari Village	12%	88%	0.718
		Mekarsari Village	14.3%	85.7%	

Source: Field survey results, 2022

According to the results of the Mann Whitney U-Test in Table 8, the value $(p) = 0.718$ ($p > 0.05$) means that there is no significant difference. So it can be concluded that there is no difference between community support in the two villages. The majority of respondents in Pasirsari Village agreed, as much as 88%. According to the interview, following ministry regulations, the KOTAKU program empowers residents, including excavation and installation. As is known, empowerment aims to improve the economic level of citizens. According to Kholqi & Alfirdaus (2020), residents help through labor and food, materials, or donations. Meanwhile, most Mekarsari Village respondents agreed, as much as 85.7%, and the remaining 14.3% did not agree. Some residents support data as beneficiaries that the presence of the community in development is quite decisive in supporting the success of activities so that they run more optimally. The involved people believe more in development because they know the ins and outs of activities and have a sense of belonging (Sigalingging & Warijo, 2014).

Table 9. Clean Water Quality

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
4	Clean water quality	Pasirsari Village	16%	84%	0.966

Mekarsari Village	15.7%	84.3%
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Source: Field survey results, 2022

The Mann Whitney U-Test results shown in Table 9 obtained a value of $(p) = 0.966$ ($p > 0.05$), meaning that there was no significant difference. Therefore, there is no difference between the clean water quality in the two villages. The majority of Pasirsari Village agrees with the excellent quality of clean water; as much as 84%, and the remaining 16% feel that the water quality still needs improvement. Clean water quality is one of the essential indicators in serving human needs. The lack of clean water quality maintenance, such as increased levels of *E. Coli*, diarrhea, and *stunting*, causes various diseases. The water source has clear quality but is slightly mixed with chlorine and lime, especially since the location is close to an industrial area. Meanwhile, most Mekarsari Village respondents agreed that as much as 84.3% felt the water quality was good, the price was low, and it did not contain chlorine. Clean water quality is one of the conditions for access to safe drinking water apart from quantity, continuity, and affordability (Purwanto, 2020). Before construction, a survey was carried out with a geoelectric device to find the source of water, water content, and geothermal energy below the surface. Before the water flows through pipes to residents' homes, it is carried out filtration and filtering of ingredients that can harm the body. Some beneficiary residents said drinking water treatment in Mekarsari Village has proven to be better than refilled water because it has been filtered to reach 1/100 compared to refilling only 1/10.

Table 10. Knowledge About Obstacles / Constraints

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
5	Obstacles / constraints	Pasirsari Village	80%	20%	0.000
		Mekarsari Village	38.6%	61.4%	

Source: Field survey results, 2022

According to the results of the Mann Whitney U-Test in Table 10, the value $(p) = 0.000$ ($p < 0.05$) means that there is a significant difference. So it can be concluded that there are differences between knowledge about obstacles or constraints in the two villages. Most respondents in Pasirsari Village disagreed as much as 80%, and some agreed as much as 20% that there were obstacles. The data states that most activities in Pasirsari Village do not encounter obstacles that could hinder the success of program implementation objectives. Moreover, the land being developed is privately owned and legally not owned by the government. Meanwhile, regarding the obstacles or constraints in Mekarsari Village, the majority of respondents said that as many as 61.4% agreed to deviate from the initial development goals that could benefit the community, such as external conflicts in seeking opportunities to request funding. According to Sitorus et al. (2020), limited funds are one of the biggest obstacles in the KOTAKU Program. To respond to this, the community as recipients and development actors must have a mentality in responding to these conditions. There were differences in the constraints on the two villages observed. In Pasirsari Village, there are no obstacles in implementing the KOTAKU program, while in Mekarsari Village there are obstacles, namely the existence of third parties such as funding problems and community organization conflicts.

Based on Table 6 to Table 10, it is explained that the response to the effectiveness of clean water facilities shows indicators with the majority having no difference and slight differences in the two villages. Indicators with no difference were found in the indicator of ease of access to infrastructure with a difference of 6.9%, adequacy of clean water supply with a difference of 2.9%, community support with a difference of 2.3%, and clean water quality with a difference of 0.3%. The four indicators are mostly agreed/good responses in both villages. Meanwhile, there is a difference in the indicators of obstacle/constraints with a difference of 141.4%.

Community Response to Sustainability

Sustainability explains the extent to which benefits are provided after the development is completed. There are five indicators, namely: 1) quality well maintained, are facilities still cared for and maintained, 2) community support in the treatment, explaining the extent to which residents are involved, 3) equitable distribution of clean water, water distribution is still used by beneficiaries, 4) maintenance retribution funds from residents, whether there is financial assistance for treatment, 5) health awareness and avoid disease, residents become self-aware of health. The results of the response data on sustainability are described as follows:

Table 11. Quality Well Maintained

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
1	Quality well maintained	Pasirsari Village	22%	78%	0.038
		Mekarsari Village	8.6%	91.4%	

Source: Field survey results, 2022

In Table 11, the results of the Mann Whitney U-Test show a value of $(p) = 0.038$ ($p < 0.05$), meaning that there is a significant difference. Therefore it can be concluded that there is a difference between the quality well maintained in the two villages. The majority of respondents in Pasirsari Village agreed as much as 78%, supported by the results of interviews in Pasirsari Village, that the current conditions are still well-maintained and good quality, although some look less clean. Previously, there was damage in terms of a small amount of electrical power, which was not proportional to the significant demand, so the engine exploded. Meanwhile, in Mekarsari Village, the majority of respondents agreed, as much as 91.4%, in line with interviews, that the condition is still well maintained and has decent quality because when there are problems such as electricity and broken pipes, they are immediately handled by the Beneficiary Group Utilizers or *Kelompok Penerima manfaat* (KPP). KPP is social, so the community has a sense of belonging to care for and maintain it. According to Kholqi & Alfirdaus (2020), community involvement is to create a sense of belonging so that it is hoped that the community will care for and maintain its infrastructure. In Pasirsari and Mekarsari Villages, there are differences in maintaining the quality of the SAB made. Both villages already have a party responsible for maintenance, namely KPP (Utilization Maintenance Group). The quality of SAB in Pasirsari Village is poorly maintained which can be seen from the dirty and peeled parts of the facilities, while in Mekarsari it looks better maintained.



Figure 4. Well maintained quality in a) Pasirsari Village and b) Mekarsari Village (Observation, 2021)

Table 12. Community Support in The Treatment

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
2	Community support in	Pasirsari Village	10%	90%	0.805

the treatment	Mekarsari Village	11.4%	88.6%
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Source: Field survey results, 2022

In Table 12, the results of the Mann Whitney U-Test show a value of $(p) = 0.805$ ($p > 0.05$), meaning that there is no significant difference. So it can be concluded that there is no difference between community support in treatment in the two villages. The majority of respondents in Pasirsari Village agree, as much as 90%. This data is supported by the results of interviews in Pasirsari Village that the clean water facilities are public property. At the same time, the pipes are privately owned, maintenance managed by RT officers or people who have been given responsibility, and maintenance money is regulated by the Beneficiary Group Utilizers (KPP) who help take good care of them. Meanwhile, treatment in Mekarsari Village has good community support, with the majority of respondents agreeing, as much as 88.6%, because residents look after and care for the facilities. The self-help group or *Kelompok Swadaya Masyarakat* (KSM) is responsible for implementing activities, and when it is finished, it is transferred to the KPP.

Table 13. Equitable Distribution of Clean Water

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
3	Equitable distribution of clean water	Pasirsari Village	-	100 %	1,000
		Mekarsari Village	-	100 %	

Source: Field survey results, 2022

The results of the Mann Whitney U-Test in Table 13 state that the value $(p) = 1.000$ ($p > 0.05$) means that there is no significant difference. Therefore, there is no difference between the equitable distribution of clean water in the two villages. Most respondents in Pasirsari Village and Mekarsari Village agreed as much as 100%. This data is supported by the results of interviews in Pasirsari Village that the distribution is even to all beneficiaries, as many as 47 heads of families (KK) who are still actively distributing clean water to this day through water pipes to the facilities. Meanwhile, interviews with some residents in Mekarsari Village indicated that the distribution was evenly distributed to all beneficiaries in around 16 houses with an average usage of up to 7 or 8 cubic meters at the cost of around 25 thousand to 30 thousand. In addition, there are infiltration wells that can collect rainwater and can be reused for daily needs. (V)



Figure 5. Clean water distribution meter (Observation, 2021)

Table 14. Maintenance Retribution Funds From Residents

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
4	Maintenance retribution funds from residents	Pasirsari Village	14%	86%	0.219
		Mekarsari Village	7.1%	92.9%	

Source: Field survey results, 2022

Based on the results of the Mann Whitney U-Test in Table 14, the value $(p) = 0.219$ ($p > 0.05$) means that there is no significant difference, so it can be concluded that there is no difference between the fees for treatment from residents in the two villages. The majority of Pasirsari Village agrees, as much as 86%, supported by the results of interviews in Pasirsari Village, that treatment is subject to a levy; according to the residents, the amount is adjusted to the amount of use. The funds are managed by KPP and are used for repairs and maintenance of damage, such as leaks. The number of funds collected differs according to the function of the building, such as building a private house of Rp. 5,000 while the rented occupancy is Rp. 4,000. According to Krisdhianto & Sembiring (2016), the collection of contributions can be made by deliberation between the community and the administrator. If the recipient is satisfied with the service, he will be happy to give dues.

Retribution funds are also applied in Mekarsari Village, with the majority of respondents agreeing, as much as 92.9%; it is known that the determination of fees depends on the amount of usage. So counseling and outreach are needed so that deliberations are held to determine the amount of the tariff agreed upon. Socialization provides understanding and invites the community to participate in activities (Kholqi & Alfirdaus, 2020). Each region has its policy, as in RW. 13, there are around 30 households, so each household is only charged a fee of around Rp. 30,000 to 40,000. Compare that to regular drinking water refills of around Rp. 6,000 a gallon of aqua water, around Rp. 15,000, whereas refilling drinking water from a self-help group (KSM) will only cost around Rp. 3,000.

Table 15. Health Awareness and Avoid Disease

No. Items	Indicator	Village	Disagree	Agree	Mann Whitney U-Test
5	Health conscious and avoid disease	Pasirsari Village	18%	82%	0.125
		Mekarsari Village	8.6%	91.4%	

Source: Field survey results, 2022

Based on the results of the Mann Whitney U-Test in Table 15, the value $(p) = 0.125$ ($p > 0.05$) means that there is no significant difference. Therefore it was concluded that there was no difference between being aware of health and avoiding disease in the two villages. The majority of respondents in Pasirsari Village agree, as much as 82%, this data is supported by the results of interviews in Pasirsari Village that after residents have experienced difficulties getting clean water, some residents who have received proper clean water are more aware that health is essential and needs to be maintained to avoid any various diseases and increase daily household needs. Meanwhile, most respondents in Mekarsari Village (91.4%) agreed that residents are more aware of maintaining their health, and drinking water treatment in clean water facilities is proven to be better so that they can adopt a clean and healthy lifestyle (PHBS). Any infrastructure development cannot provide benefits if there is no self-awareness to treat, maintain and change behavior toward a healthy and clean life (Nurkhasanah & Wahyunengseng, 2021).

Tables 11 to 15 explain that the response to the sustainability of clean water facilities shows indicators with the majority having no difference and a small number of differences in the two villages. It is explained that indicators with no difference in community support in treatment with a difference of 1.4%, equitable distribution of clean water with a difference of 0%, treatment retribution funds from residents with a difference of 6.9%, and are health awareness and avoid disease as much as 9.4%. The four indicators were mostly agreed/good responses in both villages. Meanwhile, there is a difference in the quality well maintained indicators, with a difference of 13.4%.

CONCLUSION

This study concluded that the construction of clean water facilities for the KOTAKU Program was carried out to reduce difficulties in accessing clean water and the availability of decent and healthy water sources. The response results showed that there was no difference in community responses in

the city center and suburbs so that even though there were differences in location characteristics and non-heterogeneous communities, they still showed the same response and were in accordance with the program goals. Some indicators have differences, but the majority of there is no difference in the construction of clean water facilities in Pasirsari Village and Mekarsari Village, showing quite good variables of efficiency, effectiveness, and sustainability.

The efficiency variable shows that there are differences in the indicators of knowledge of the timing of implementation and knowledge of activity funds. On the contrary, indicators without differences in the indicators of the implementation time as planned, activity funds as needed, and there is assistance beyond the activity funds. Effectiveness variables with indicators there are differences in the obstacles / obstacles indicators. At the same time, there is no difference in the indicators of ease of access to infrastructure, adequacy of clean water supply, community support, and clean water quality. Furthermore, in the sustainability variables with indicators there are differences in quality indicators that are well maintained. At the same time, there is no difference in the indicators of community support in medicine, equitable distribution of clean water, treatment levy funds from residents, and awareness of health and disease avoidance. Community participation and support largely determine the successful implementation of the slum management program. The existence of differences in the level of knowledge and understanding of the program results in differences in response so that it has an impact on the results received.

ACKNOWLEDGEMENT

The author would like to thank the Regional Government, the Head of BKM, the people of Pasirsari Village and Mekarsari Village in Bekasi Regency, who have agreed to cooperative and help during the research.

REFERENCES

- Afdillah, B. M. (2021). *Respon Masyarakat Terhadap Program KOTAKU Di RW. 08 Kelurahan Lembah Damai Kec. Rumbai Pesisir Kota Pekanbaru*. Thesis: not published. Universitas Islam Negeri Sultan Syarif Kasim Riau: Pekanbaru.
- Anggraini, C. N., Maratus, S., Varadilla, N. L., & Febrianto, A. T. (2020). Partisipasi Masyarakat Dalam Program Penyediaan Air Bersih Dan Sanitasi (Studi Di Kecamatan Pangkah Kabupaten Gresik). *Jurnal Pembangunan Berkelanjutan*, 3(2), 27–31. [https://doi.org/Doi: 10.22437/jpb.v3i2.8494](https://doi.org/Doi:10.22437/jpb.v3i2.8494)
- Bappenas. (2017). *Pedoman Evaluasi Pembangunan Nasional*. <https://jdih.bappenas.go.id/peraturan/detailperaturan/26>
- Berner, E. (2001). Learning From Informal Markets: Innovative Approaches to Land and Housing Provision. *Development in Practice*, 11(2–3), 292–307. <https://doi.org/10.1080/09614520120056423>
- Camagni, R., Gibelli, M. C., & Rigamonti, P. (2002). Urban Mobility and Urban Form: The Social and Environmental Costs of Different Patterns of Urban Expansion. *Ecological Economics*, 40(2), 199–216. [https://doi.org/10.1016/S0921-8009\(01\)00254-3](https://doi.org/10.1016/S0921-8009(01)00254-3)
- Chaerunnissa, C. C. C. (2015). Partisipasi Masyarakat Dalam Program Penyediaan Air Minum Dan Sanitasi Berbasis Masyarakat (PAMSIMAS) di Kabupaten Brebes (Studi Kasus Desa Legok dan Desa Tambakserang Kecamatan Bantarkawung). *Politika: Jurnal Ilmu Politik*, 5(2), 99–113. <https://doi.org/10.14710/politika.5.2.2014.99-113>
- Cobbinah, P. B., Black, R., & Thwaites, R. (2013). Dynamic of Poverty in Developing Countries: Review of Poverty Reduction Approaches. *Journal of Sustainable Development*, 6(9), 25–35. <http://dx.doi.org/10.5539/jsd.v6n9p25>
- Conyers, D. (1991). *Perencanaan Sosial di Dunia Ketiga*. Yogyakarta. Gadjah Mada University Press.
- Cremin, P., & Nakabugo, M. G. (2012). Education, Development And Poverty Reduction: A Literature Critique. *International Journal of Educational Development*, 32(4), 499–506.

<https://doi.org/10.1016/j.ijedudev.2012.02.015>

Creswell, J. W. (1999). Chapter 18 - Mixed-Method Research: Introduction and Application. In G. J. Cizek (Ed.), *Educational Psychology*. Academic Press. <https://doi.org/10.1016/B978-012174698-8/50045-X>

Disperkimtan. (2019). *Review Kegiatan Rencana Pencegahan dan Peningkatan Kualitas Permukiman Kumuh Perkotaan (RP2KPKP)*. Dinas Perumahan Rakyat Kawasan Permukiman dan Pertanahan: Kabupaten Bekasi

Dunn, W. N. (2017). *Pengantar Analisis Kebijakan Publik*. Yogyakarta. Gadjah Mada University Press.

Erawan, A. (2012). *Luas Permukiman Kumuh di Indonesia 57.800 Hektar*. <https://www.rumah.com/berita-properti/2012/10/20809/luas-permukiman-kumuh-di-indonesia-57-800-hektar>

Gordon, P., & Richardson, H. W. (1997). Are Compact Cities A Desirable Planning Goal? *Journal of the American Planning Association*, 63(1), 95–106. <https://doi.org/10.1080/01944369708975727>

Jiang, Y. (2009). China's Water Scarcity. *Journal of Environmental Management*, 90(11), 3185–3196. <https://doi.org/10.1016/j.jenvman.2009.04.016>

Khilchevskiy, V., & Karamushka, V. (2021). Global Water Resources: Distribution and Demand. In *Clean Water and Sanitation. Encyclopedia of The UN Sustainable Development Goals*. Springer, Cham. https://doi.org/10.1007/978-3-319-70061-8_101-1

Kholqi, A., & Alfirdaus, L. K. (2020). Program Kota Tanpa Kumuh (Kotaku) Dalam Perspektif Pemberdayaan Masyarakat (Studi Kasus Program Kota Tanpa Kumuh Di Kelurahan Karangwaru). *Journal of Politic and Government Studies*, 9(2), 141–150. <https://ejournal3.undip.ac.id/index.php/jpgs/article/viewFile/27268/23837>

Krisdhianto, A., & Sembiring, E. (2016). Evaluasi Keberlanjutan Sistem Penyediaan Air Bersih Perdesaan Di Kecamatan Ledokombo Kabupaten Jember Propinsi Jawa Timur. *Jurnal Teknik Lingkungan*, 22(1), 21–30. <http://download.garuda.kemdikbud.go.id/article.php?article=1302260&val=17538&title=>

Kusnah, A. M., Satia, M. R., & Putra, M. N. T. (2021). Persepsi Masyarakat Dalam Program Kota Tanpa Kumuh (KOTAKU) Di Kawasan Kelurahan Pahandut Kota Palangka Raya. *Jurnal Pencerah Publik*, 8(1), 38–49. <https://doi.org/10.33084/pencerah.v8i1.2265>

Lloyd-Sherlock, P. (2000). Old Age and Poverty In Developing Countries: New Policy Challenges. *World Development*, 28(12), 2157–2168. [https://doi.org/10.1016/S0305-750X\(00\)00077-2](https://doi.org/10.1016/S0305-750X(00)00077-2)

Lloyd, P. C. (1979). *Slums of Hope?: Shanty Towns of The Third World*. Manchester. Manchester University Press.

Mcfarlane, C. (2008). Sanitation In Mumbai's Informal Settlements: State, 'Slum', and Infrastructure. *Environment and Planning A*, 40(1), 88–107. <https://doi.org/10.1068/a39221>

Messakh, J. J., Sabar, A., Hadihardaja, I. K., & Chalik, A. A. (2015). Kajian Pemenuhan Kebutuhan Air Minum Untuk Masyarakat Di Kawasan Semi-arid Indonesia. *Jurnal Manusia Dan Lingkungan*, 22(3), 271–280. <https://doi.org/10.22146/jml.18751>

Nasir, U. (2018). Assessing Urban Sustainability of Slum Settlements In Bangladesh: Evidence From Chittagong City. *Journal of Urban Management*, 7(1), 32–42. <https://doi.org/10.1016/j.jum.2018.03.002>

Nisanth, M., & Rajeev, M. . (2015). Urban Governance and Slum issue in Kollam Corporation (Kerala State): A Case Study from an Indian State. *International Journal of Advanced Research*, 3(5), 801–811.

Nurkhasanah, N., & Wahyunengseng, R. D. (2021). Analisis Konteks: Perubahan Perilaku Masyarakat Pasca Program Kota Tanpa Kumuh (KOTAKU). *Jurnal Mahasiswa Wacana Publik*,

1(2), 416–430. <https://doi.org/10.20961/wp.v1i2.54607>

Otsuka, Y., Agestika, L., Widyanani, N. S., & Yamauchi, T. (2019). Risk Factors For Undernutrition And Diarrhea Prevalence In An Urban Slum In Indonesia: Focus On Water, sanitation, And Hygiene. *The American Journal Of Tropical Medicine And Hygiene*, 100(3), 727–732.

Purwanto, E. W. (2020). Pembangunan Akses Air Bersih Pasca Krisis Covid-19. *Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning*, 4(2), 207–214. <https://doi.org/10.36574/jpp.v4i2.111>

Runtukahu, A., Kerebunu, F., & Santie, Y. (2021). Persepsi Masyarakat Kelurahan Pinokalan Dalam Pelaksanaan Program Kota Tanpa Kumuh (KOTAKU) Di Kelurahan Pinokalan Kota Bitung Sulawesi Utara. *Jurnal Paradigma: Journal Of Sociology Research And Education*, 2(1), 96–101. <https://doi.org/10.53682/jppsre.v2i1.1320>

Santi, Bachrun, R., & Ornam, K. (2017). Typology of Slum Management in Coastal Settlement as a Reference of Neighborhood Planning in Konawe. *Journal of Physics: Conference Series*, 846(1), 012018. <https://doi.org/10.1088/1742-6596/846/1/012018>

Sari, A. C. P., Suman, A., & Kaluge, D. (2018). Implementation Analysis Of Participative Development In National Slum Upgrading Program (KOTAKU) Comparative Study: Bligo Village, Candi District and Jiken Village, Tulangan District Sidoarjo Residency, East Java. *IJEBD International Journal Of Entrepreneurship And Business Development*, 2(1), 17–35. <https://doi.org/10.29138/ijebd.v2i1.646>

Satterthwaite, D. (2016). Missing The Millennium Development Goal Targets For Water And Sanitation in Urban Areas. *Environment and Urbanization*, 28(1), 99–118. <https://doi.org/10.1177/0956247816628435>

Schuurman, F. J. (2000). Paradigms Lost, Paradigms Regained? Development Studies In The Twenty-First Century. *Third World Quarterly*, 21(1), 7–20. <https://doi.org/10.1080/01436590013198>

Setiawan, D., Argenti, G., & Rizki, M. F. (2021). Peningkatan Kemampuan Sosial Masyarakat Dan Komitmen Politik Kepala Daerah Dalam Pengentasan Permukiman Kumuh Di Kabupaten Cirebon. *Gorontalo Journal of Government and Political Studies*, 4(1), 52–68. <https://doi.org/10.32662/gjgops.v4i1.1221>

Shatkin, G. (2008). The City and The Bottom Line: Urban Megaprojects and The Privatization of Planning in Southeast Asia. *Environment and Planning A: Economy and Space*, 40(2), 383–401. <https://doi.org/10.1068/a38439>

Sigalingging, A. H., & Warijo, W. (2014). Partisipasi Masyarakat Dalam Perencanaan Pembangunan (Studi Kasus Pada Kecamatan Sidikalang Kabupaten Dairi). *Jurnal Administrasi Publik: Public Administration Journal*, 4(2), 116–145. <https://doi.org/10.31289/jap.v4i2.1383>

Sitorus, H., Astuti, R. S., & Purnaweni, H. (2020). Implementasi Program Kota Tanpa Kumuh (KOTAKU) Dalam Menanggulangi Kawasan Kumuh di Kelurahan Tanjung Mas Kota Semarang. *Sawala: Jurnal Administrasi Negara*, 8(1), 74–94. <https://doi.org/10.30656/sawala.v8i1.1617>

Sunkel, O. (1969). National Development Policy and External Dependence In Latin America. *The Journal of Development Studies*, 6(1), 23–48. <https://doi.org/10.1080/00220386908421311>

Surya, B., Ahmad, D. N. A., Sakti, H. H., & Sahban, H. (2020). Land Use Change, Spatial Interaction, and Sustainable Development in The Metropolitan Urban Areas, South Sulawesi Province, Indonesia. *Land*, 9(3), 95. <https://doi.org/10.3390/land9030095>

Todes, A. (2012). Urban Growth and Strategic Spatial Planning In Johannesburg, South Africa. *Cities*, 29(3), 158–165. <https://doi.org/10.1016/j.cities.2011.08.004>

Tunas, D., & Paresthu, A. (2010). The Self-Help Housing In Indonesia: The Only Option for The Poor? *Habitat International*, 34(3), 315–322. <https://doi.org/10.1016/j.habitatint.2009.11.007>

Wadu, L. B., Gultom, A. F., & Pantus, F. (2020). Penyediaan Air Bersih Dan Sanitasi: Bentuk Keterlibatan Masyarakat Dalam Pembangunan Berkelanjutan. *Jurnal Pendidikan Kewarganegaraan*, 10(2), 80–88. <http://dx.doi.org/10.20527/kewarganegaraan.v10i2.9318>

Wohl, A. (2017). *The Eternal Slum: Housing and Social Policy in Victorian London* (1st Editio). Routledge. <https://doi.org/10.4324/9781351304047>

Yao, S. (2000). Economic Development and Poverty Reduction In China Over 20 Years of Reforms. *Economic Development and Cultural Change*, 48(3), 447–474. <https://doi.org/10.1086/452606>

Zulyanti, D. (2017). *Implementasi Program Kotaku (Kota Tanpa Kumuh) Sebagai Model Pembangunan Infrastruktur Berbasis Masyarakat di Kelurahan Negeri Olok Gading Kecamatan Teluk Betung Barat Kota Bandar Lampung*. Thesis: not published. UIN Raden Intan Lampung: Bandar Lampung