

Community Resilience in Overcoming Untidiness Due to the Flood in Kemijen Village Semarang

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Abstract

Reduction targets slum area in Indonesia today, leaving 12% of urban areas or the equivalent of 7.2 million households alleviation of untidiness. Whereas national goal is 0% urban slums will be gone in 2019. When referring to the World Habitat Day (World Habitat Agenda, 2014), said that the organized settlement of, for and by the people themselves. Rob disasters often occur in the city, where from April to May of 2011, Rob has been flooded several coastal areas of Semarang and rob a height between 50 cm to 100 cm. This research aims to identify the role of the community in addressing slum housing. Using qualitative and quantitative analysis methods and conduct an in-dept interview through direct observation, questionnaires and interviews to the population in Kemijen Semarang City. This study found a form of structuring a slum by the ability of the community that is the power of social, economic and physical called '*Tri-Daya*' Concept, through the action plan stage of necessary community development stage.

Keywords: slums: community participation: rob disasters, resilience

Introduction

Poverty statistics in the monetary and economic crisis had hit Indonesia showed that the number of poor and "near poor" still relatively large. In 1996 about 11% of Indonesia's population or some approximately 22 million inhabitants are in a situation of "poor" or "near poor". Whereas in 1993 the population of "poor" and "near poor" is only about 10% of the total population at that time. At the height of the financial crisis and the economy at that point (1998), approximately 90 million people of Indonesia are in a situation of "near poor" and about 25.5 million people or about 13% of them are in a situation of "poor". In poor urban areas are often found in several places, namely, in the suburbs, downtown or the cities affected Rob. Based on data from Planning and Development Agency of Semarang City in 2003, approximately 1,200 hectares of land on the East coast of the city, located below sea level. As a result, the land is a flood always hits home to about 8,000 residents.

Based on the settlement phenomenon, this study will be done at Village Kemijen the city, which is the village that was affected most severely rob in the Eastern District of Semarang. As

a result of the tidal disaster, citizens must take action adaptation of them elevate their homes or make a small dam on the surrounding environment so as not to sink their homes. Additionally, facilities and infrastructure, settlements were also damaged by the disaster rob. There is a loss experienced by residents of affected communities due to flooding, either in the form of damage to infrastructure or facilities environment, building/home furnishings as well as residential uncomfortable. Other losses due to flooding because of rising water flooding, are rising household expenditure to increase infrastructure costs, home improvements and furnishings, and the cost of health care treatment. Under these circumstances how the people in the slums can survive and adapt to the affected residential neighborhood rob? How the power of local communities in the slums? So the goal of this research to achieve community resilience-based spatial planning in the slum areas of the disaster rob become comfortable housing habitable inhabited. Through a strategy of empowering local communities are expected slums can be found the strength to survive and adaptation.

Rob Disaster in Housing

Rob disaster occurred because of rising sea levels to the mainland due to the tide. Several factors influence the change of tide currents, namely the encouragement of water, wind and storms are a natural phenomenon that often occurs in the sea. In addition to these factors, changes in the flow of tides also occur due to changes in global climate are marked by an increase in Earth's average temperature from year to year. As a result, global sea levels will rise (Yualelawati 2008 in Chandra, 2013). Rob a natural phenomenon, which typically occurs when the full moon or the condition of the full moon. At that time in the Earth's gravitational force is so strong that movement of ocean water toward shore stronger than on a typical day. This happened throughout the season, both the rainy season and the dry season. The tidal flood occurred in areas where the land surface is lower than sea level. The floods inundated coastal areas are a low-lying swamp coast or on the beach. Village of Kemijen as study in this research robbed the affected slum areas.

The arrangement can translate as slum areas of learning for the community. In this phase the village community, especially poor people assisted to build and strengthen community organizations to institute collective leadership representative, and accountable can provide services to the urban poor and to enhance the voice of the poor in the process of local decision-making, especially in efforts to reduce poverty in the region. As a development of social capital in the community, every intervention is, in fact, a series of stages of the learning process. Given the problems of structural and multi-dimensional, then efforts to reduce poverty should be placed and entrusted the communities themselves, with facilitation support from the government or the private sector/business community and other civil society organizations. Untidiness so that countermeasures will be a social movement which guarantees the potential independence and sustainability efforts of poverty alleviation in the region independently and

sustainably. Community empowerment closely related to the process of social transformation in poor communities. The complexity of the squalor and poverty related to various dimensions of social, political, economic, and assets; treatment should be started from the social aspect of humanity fundamentally. Opening the access of the poor to participate in decision-making processes and benefit from urban development called Participatory Development. Improving the capacity of local actors to manage the development of the Pro-poor in the territory, including settlements (Partnership and Neighbourhood Development), and Government support to strengthen the policy and regulatory framework for urban development (Local Good Governance).

Methods

The research approach using mixed-method with a case study in the village Kemijen Semarang. This research mainly empirical in nature and to identify, describe and create coherence observations found in the field rather than the development of a complete discussion or theoretical model of slum development. Mixed methods, such as slum household questionnaire survey, in-depth interviews, participant observation and interviews walking, formed the basis of participatory methods used in this study. The questionnaire, which is the main instrument for research, consisting of questions about demographic characteristics of households, housing and livelihood activities. With the number of samples in this study was 99. Samples will be spread evenly in eleven Residential Institution called “*Rukun Warga*” (RW). Each RW needed nine respondents. Furthermore, the data resulting from the questionnaire will be analyzed by quantitative analysis techniques using Likert scale and factor analysis. The population in this study is all the people of the village settlements Kemijen. Criteria people in this study is the citizens who have lived for at least five years to rent a house or have a home in the Village Kemijen. The total population is 13 462 inhabitants Kemijen village in 2010. The village of Kemijen selected because they have features and primarily characterized as slums in the city of Semarang.

Results

Condition the Vulnerability of Rob

Based on questionnaire data obtained 48.72% rob the data that is happening in the neighborhoods do not get into the house. While the remaining 51.28% occurred Rob to get into the house. Most houses in Kemijen until 2015 is still not free from problems rob. When examined further to efforts such as home elevation, elevation of the road who do not yet fully completed action on the root causes desired. The efforts that have made are still on the cycle provide treatment for a temporary period. This condition is clearly visible from every 5-10 years Kemijen community certainly those who are able will do back home elevation of at least 1 meter and constantly happens like that until now.

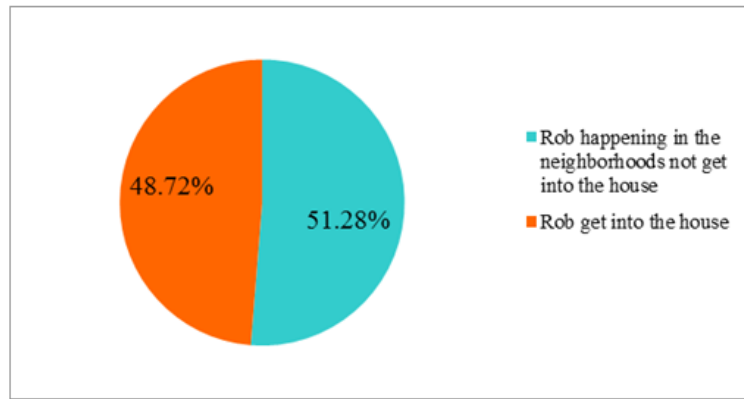


Fig. 1: Rob Pooled in the House Condition

Rob pooled in the house almost 72.50% height of less than 10 cm, 25% of which has a height of 10-30 cm, while the worst to between 30-50 cm to 2.50% occur in any settlement. Rob puddle that is in the house a majority of 50% happened more than ten years ago, and 42.50% just happened 5-10 years ago. When considering the condition of the house after flooding, 80.77% obtained information that the real building houses partially damaged. The majority of the damage to the walls and floors of the house. These percentages also indicate that the majority of the construction which has been used to build houses Kemijen people still do not consider disaster resilience rob. The majority of buildings constructed yet fully pay attention to disaster-resilient construction. It became apparent in 96.15% impact or damage to the environment caused by partial liquid damage also affected the infrastructure, such as roads perishables, channels, schools, neighborhood health center or healthcare and a place to worship.

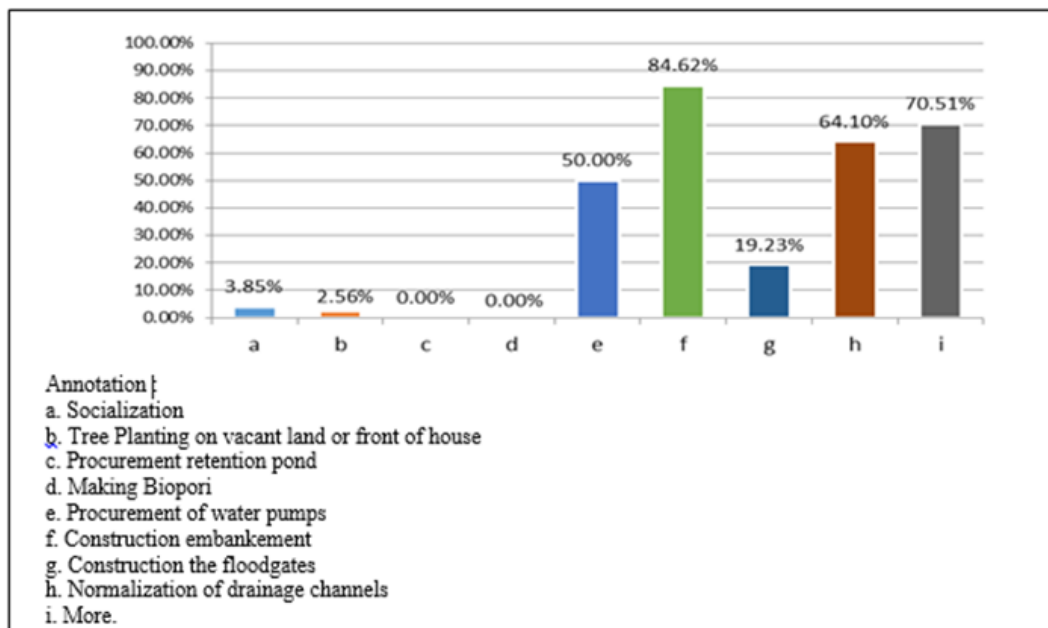


Fig. 2: Level of Community Adaptation Against Rob

Based on the level of adaptation to rob, some of the actions that have been carried out thoroughly in the region, namely the procurement of pumps, construction of embankments, construction of floodgates, normalization and elevation of the road. Although many efforts have undertaken by the community and the local communities that there was still some obstacles and still not adequately mitigate the impact, Rob. It was like a water pump management, channel maintenance, embankment support to the behavior of people who still throw garbage in drainage channels. Also, to the efforts of the community, there is also one big project of the government planned to deal with the floods not only in Kemijen alone but the flood in Semarang East and North.

Analysis of Physical Environmental

Generated from tidal inundation and flooding in the village of Kemijen is also associated with the location as a regional Kemijen Land Subsidence and its existence is close to two major rivers in Semarang (Banger and East Flood Canal). Runoff from rivers and tidal inundation that routinely occur each year further aggravated the environmental, social and economic. One of the community leaders who live in the area smaller neighborhood institutions called ‘*Rukun Tetangga*’ (RT) says that every time you log phase of the months by a great intensity rob or whenever the rainy season can be found the water in memory of the houses and the street environment. “*Rukun Tetangga*” (RT), which is a group of several neighboring households. Such conditions adversely affected the quality of homes and some Kemijen infrastructure. Physically homes residents Kemijen 62.82% is a ceramic floor and 37.18% were still the brick. The walls of the house showed 75.64% made of permanent walls, and the remaining 24.36% is semi-permanent. The fact that at the location of this study indicate that the impact of the physical Rob has damaged existing buildings, homes, and infrastructure. So it looks walls of buildings damaged eroded by Rob or condition of the house floor is lower than the road.




 *damaged road and canal*

Fig. 3: Road Condition in Kemijen Village

Facilities and infrastructure in Kemijen village almost every 1-2 years there is always improvement. Based on the explanation of the citizens, is an effort to repair their adaptation in addition to elevate the house to avoid the environment from tidal inundation. So the road conditions obtained 87.18% shows that the way in Kemijen already using paving with few bumps and 12.82% were already berpaving but a lot of holes. This means that almost the entire area in the Village Kemijen already in the condition of the road paving.

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Analysis Community Conditions

The residents totaled 13 402 inhabitants (2015). A total of 58.97% of the public Kemijen explained that one unit occupied by only one family house, 39.74% of the homes occupied by two families and 1:28 remaining 2% is more families living in one house unit. Meanwhile, if viewed from the dominance of the number of household members per home in a society dominated by the number of 5-6 people. Based on the results of the questionnaire processing is also known that the level of public education, the majority of the high school / vocational school. Percentage 48.72% at the secondary school it affects the public can not get a chance to a job and a decent income. The people working seen in the figure below 38.46% working in factories. So that the average monthly income earned by income majority (25.64%) to Rp. 3.000.000 (by 56.41%).

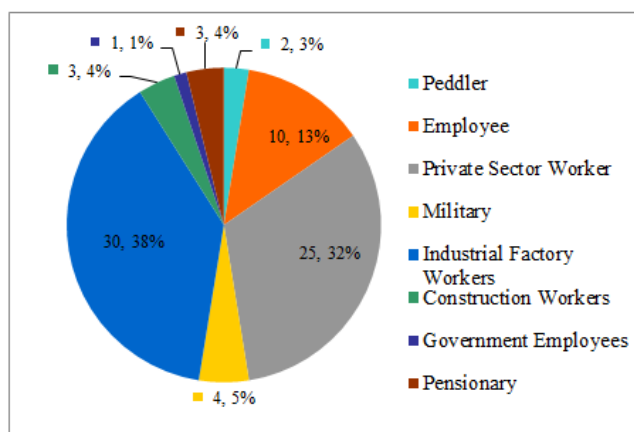


Fig. 4: Occupation of Kemijen Village

75.64% community have good relations with other neighbors to know each other and care. Various meetings and local organizations as a driver of social relationships or social capital established routine in every event held a week or once a month.

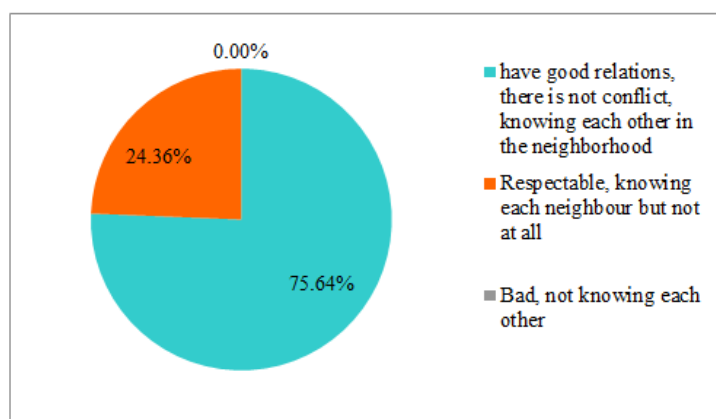


Fig. 5: Neighbourly Relations

A meeting on the activities of man's, women, recitals, nearly 100% is still active until now. The frequency often done is teaching activities. The evident from the public 54%; 2-3 times a month carrying out public meetings, even in certain environments there is 54%; with 2-3 times a week.

Table 1: Community and Frequency of Meetings in Kemijen Village

Specification	1 month 1x (%)	1 month 2-3x (%)	1 week 1x (%)	1 week 2x (%)	2-3x times a week (%)
a. Womens Meeting	100.00%				
b. Mans Meeting	100.00%				
c. Recitation	37.18%	11.54%	37.18%	2.56%	11.54%
d. Darwis	100.00%				

Spatial Problems

The problems that occurred in the village of Kemijen include Rob issues, problems condition of roads, drainage, water supply, sanitation and solid waste. All six the issue is a problem occurs in RW/Sub Kemijen. Through a weighted scoring (score of 1, 2, and 3) it can be seen that the problem of high value is the biggest problems in Kemijen. The results of scoring and weighting that show priorities problem in RW/Sub Kemijen as below:

Table 2: The Rating Issues in Kemijen Village

No.	Indicators	Score 3		Score 2		Score 1		Σ Skor	Ranking Score
		F	F x Weight	F	F x Weight	F	F x Weight		
1.	Problems Rob	14.20	42.60	38.00	76	26.00	26.00	144.60	1
2.	Problems in the neighborhood	0	0	10	20	68	68	88	4
3.	The problem of drainage	3	9	52	104	23	23	136	2
4.	The problem of clean water	0	0	1	2	77	77	79	5
5.	The problem of sanitation	0	0	0	0	78	78	78	6
6.	The problem of waste	5	15	25	50	48	48	113	3

Based on the above table are known sequence RW with a serious problem that must handle in the area of RW 5, RW 9, RW 1, RW 7, RW 8 and RW 10. The score based on the assessment carried out some of the most high-RW. All six Kemijen problems encountered in the most severe in the RW environment.

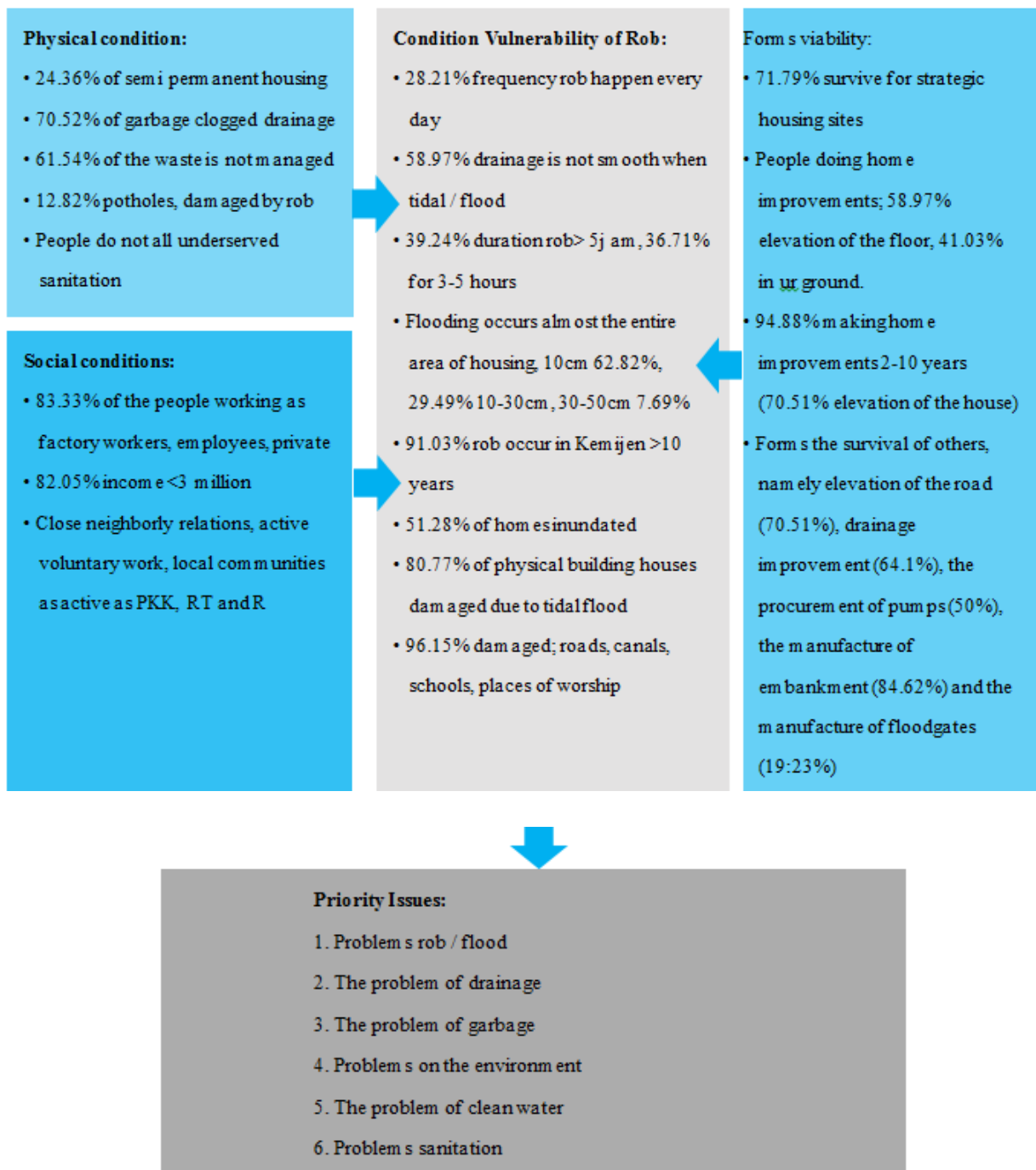


Fig. 6: Structuring Housing Slum and Rob Disaster Community Based

Based on the six priority issues that prepared in this study, application development model of community-based residential neighborhood through 'Tri-daya' concept. This concept explains the concept of development in the physical, social and economic dimensions. This concept uses a form of physical development to cope with flooding, road repair, repair of drainage channels, handle garbage problems, make public sanitation and a healthy lifestyle, create open space, and create a container at community meetings. Also, to the social and economic development is emphasized in the institutional sector, the clean water and sanitation, and disaster mitigation.

However, this concept remains to be offset by involving the public and local governments. The participatory community development with a focus on improving the capacity of local actors are citizens who tied in the institution RT/RW; Community Empowerment Institution called KSM; Ten Household Community called Dawis, Community Welfare Institution called BKM, Women Welfare Organization called PKK, Community Care Kemijen. Community involvement is expected to open access to the public in the decision-making process and strengthen community participation in managing the building. Besides, the government is projected to cooperate and provide support to enhance community involvement in decision-making.

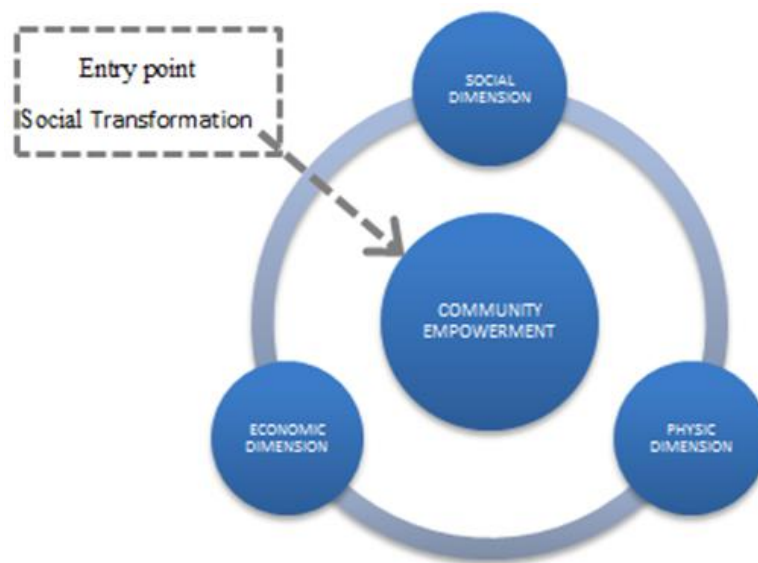


Fig. 7: 'Tri-daya' Concept

Conclusion

Forms of slum settlements, community-based sustainable and appropriate in the housing Kemijen by applying the concept of power focused on physical development, social and economic. The development form of in the visible area is to solve the problems rob, roadwork, drainage improvements, addressing waste management, the provision of public toilets to increase healthy lifestyles, the provision of open green spaces and providing opportunities to encounter. While the social and economic development focused on the institutional field, field clean water, and sanitation and disaster mitigation. Application of 'Tri-daya' concepts proposed as a development model residential neighborhood affected by the problem of flooding can be as good as the people or citizens have a role in decision making. Therefore, the involvement of the local community is necessary to open up the public access to manage development. Application of participatory development at community Kemijen is one form of increased capacity that is needed to offset the support and cooperation of local governments to strengthen community participation in Kemijen.

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