

Implementation Communal Settlement Policy For Lapindo Mud Victims Survival Communities In Pangreh Village, Jabon District, Sidoarjo Regency

Moch. Shofwan¹, Dwi Agung Adha Darma²

¹Doctoral Program of Administrative Science, Universitas 17 Agustus 1945 Surabaya

²Universitas PGRI Adi Buana Surabaya

shofwan.moch@unipasby.ac.id¹, dwiagung738@gmail.com²

Abstract

The Lapindo mud disaster in Sidoarjo Regency has occurred for almost 16 years starting on May 29, 2006 until now . The Lapindo mudflow has a significant impact on the distribution pattern of settlements in Pangreh Village, Porong District. The method used in this research is descriptive qualitative. The data collection of this research was conducted by primary survey, namely observation, Focus Group Discussion (FGD) and documentation. The purpose of this study is to determine the implementation of implementation of Lapindo mud disaster survivors in Besuki Village who live in Pangreh Village. The land use of Pangreh Village is dominated by the use of rice fields covering an area of 98.178 hectares or 76.01% and settlements covering an area of 30.988 hectares or 23.99%. The residents of Pangreh Village are currently dominated by residents affected by the Lapindo mud from Besuki Village . The road network settlement infrastructure in Pangreh Village is in good condition. The condition of the environmental road is paved and paved so that the people in Pangreh Village are easy to move in and out of settlements. Drainage in Pangreh Village is in good condition. The feasibility of MCK in Pangreh Village is quite good and permanent condition of MCK in the house. Pangreh Village uses the concept of a Waste Disposal Site (TPS).

Keywords: lapindo mudflow, implementation, settlement

A. Introduction

Sidoarjo Regency, East Java, has an important history because of the release of hot gas and mud from the ground with a temperature of 100°C which has inundated several villages in Sidoarjo Regency. The Lapindo Mud Tragedy in Sidoarjo Regency occurred almost 16 years from May 29, 2006 until now. May 29, 2006 was the beginning of a disaster that continues to this day. Hot mud with a volume of 100 thousand - 150 thousand cubic meters per day comes out of the bowels of the earth and drowns areas that were once densely populated agricultural and industrial areas (batubara, 2012) . The mud disaster in Sidoarjo Regency is a natural event that is classified as high risk (Shofwan & Nur Aini, 2017) . The hot mudflow that became a puddle of the lake ravaged the livelihoods of the people affected by the Lapindo mud (Mamik Sumarmi, 2010) . The Lapindo mud had a great impact on settlements affected by the Lapindo mudflow disaster in Sidoarjo district, including Porong District, Tanggulangin District, and

Jabon District (Shofwan¹ & Rukmana, 2017) . Lapindo mudflow was caused by pipe leaks or drilling wells owned by PT. Minarak Lapindo Brantas (Arifin et al., 2006) . puddle mud Keep going increase especially around _ center burst mud . So that embankment retainer mud already broken a few times consequence overflow mud that doesn't could again dammed . (Utilization et al., 2022) As a result, this mudflow had a tremendous impact on the surrounding community as well as for economic activities in East Java: inundation up to 6 meters high in settlements, a total of more than 8,200 people evacuated, 1,683 houses or residences damaged, agricultural areas and More than 200 hectares of plantations were damaged, More than 15 factories that were flooded stopped production activities and housed more than 1,873 people, Non-functioning educational facilities, Damage to the environment in flooded areas, Damage to infrastructure facilities and infrastructure such as electricity and telephone networks (ELIKA et al., 2017) . Several sub-districts affected by the Lapindo mudflow are Porong, Tanggulangin, and Jabon sub-districts with an area of 620 hectares. The impact caused by the disaster, namely environmental damage and losses in the economic, social, cultural, and even psychological sectors are still felt by the community until now. (Ekawati & Sulistyowati, 2021) The disaster that hit districts Sidoarjo give very impact _ big for community and environment until moment this burst mud hot still take place . mud that comes out from stomach earth no only drown rice fields and houses in villages like Renokenongo , Siring, Jatirejo , Kedungbendo , Mindi, Besuki , Ketapang , Gempolsari , Pejarakan , Kedungcangkring , and still many again threatened village _ sink like . The Lapindo mudflow has also shaped the changing social conditions of the community. Because every disaster that occurs can change the social structure of society (Amiruddin & Fitrianita, 2014)

B. Methods

Method data collection used In this study, primary survey was conducted, namely observation, Focus Group Discussion (FGD) and documentation.

C. Results and Discussion

1. General Description

Pangreh Village is an area located in Jabon District, Sidoarjo Regency, East Java, astronomically Pangreh Village is located at 7.3 ° -7.5 ° South Latitude and 112.5 ° -112.9 °

East Longitude, Pangreh Village Area of 171.78 Ha. The area of Pangreh Village is in the form of a table as follows:

Tabel 1.1. Pangreh Village Area 2021

| No. | Village | Area (Ha) |
|-----|---------|-----------|
| 1. | Pangreh | 171.78 |

Source: Jabon District in 2020 Figures

Geographically, Pangreh Village has regional boundaries with other areas, namely:

North side : Dukhsari Village
 East : Jemirahan Village
 South : Tromposari Village and Pasuruan Regency
 West side : Kedungcangkring Village



Figure 1. Pangreh Village Administration Map
 Source: 2021 Analysis Results

2. Pangreh Village Characteristics

a. Natural Condition

The land use of Pangreh Village is 171 Ha, dominated by 2 land uses, namely rice fields and settlements. Types of land use and land area of Pangreh Village are described in the following table:

Table 2. Pangreh Village Land Use

| Use Land | Area (Ha) | Average (%) |
|--------------|------------|---------------|
| SETTLEMENT | 41 . 04 | 23.99 |
| RICEFIELD | 129.96 | 76.01 |
| TOTAL | 171 | 100.00 |

Source: 2022 Analysis Results

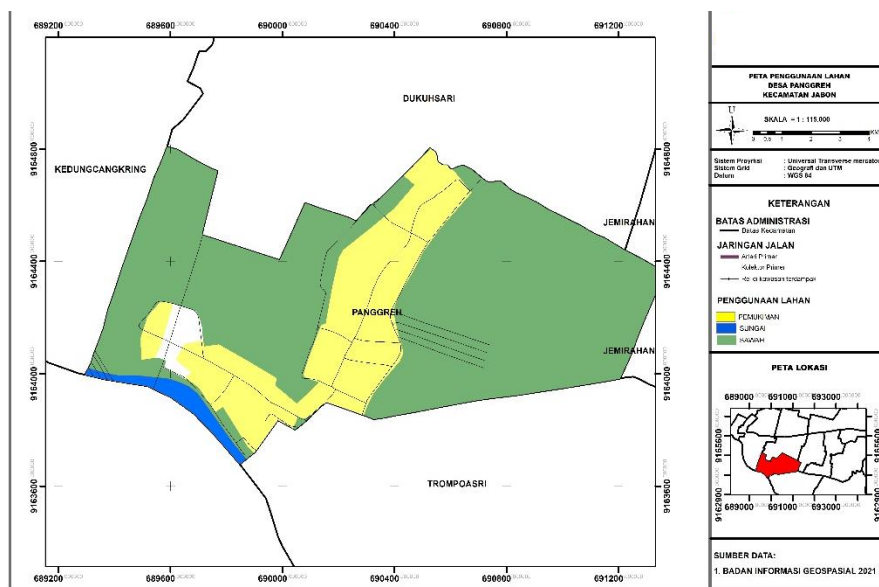


Figure 2 . Pangreh . Village Land Use Map

Based on Figure 2 . shows the largest type of land use in Pangreh Village, namely the type of use of paddy fields with an area of 129.96 (Ha) with a percentage of 76.01% while the use of residential land is an area of 41.04 (Ha) with a percentage of 23.99.

b. Community Social

This element will discuss the social conditions in the community in Pangreh Village, Jabon District including population, community organizations, education level, community economy.

a) Population

Based on the survey results obtained by residents of Pangreh Village, the majority of residents affected by the Lapindo mud from Besuki Village, it can be seen that in Pangreh Village the population density can be seen in the following table:

Table 3 . Pangreh Desa Village Population Density

| N | Village / Village | Area (Ha) | Total population | Population density |
|----|----------------------|------------------|---------------------|-------------------------------------|
| 1. | Pangreh | 171.78 | 4,861 Souls | 28.29 People/K m ² |

Source: 2022 Analysis Results

The population density in Pangreh Village and Kedungsolo Village has a low population density classification. Pangreh Village has a population density of 28.29 people/km², while Kedungsolo village has a population density of 43.05 people/km².

b) Community Organization

The community living in Pangreh Village based on the survey results it is known that Pangreh Village has an organization called "Creative Youth Association" which is engaged in village progress and activities in Pangreh Village. The organization was formed by Pangreh Village residents, especially teenagers in Pangreh Village. The activities of the Creative Youth Association are to overcome various social welfare problems, especially those faced by the younger generation and potential developers of the younger generation in the Pangreh Village environment. Activities that have been held by the Creative Youth Association are August routine activities and other social activities.

c) Level of education

Based on the Focus Group Discussion (FGD) with several communities, it is known that the education level of the community in Pangreh Village who previously lived in Besuki village affected by the Lapindo mud disaster showed that there were at least 4 elementary school graduates or the equivalent, 9 junior high school graduates or the equivalent and 7 high school graduates or equivalent. The following is a graph of the number of children dropping out of school who are victims of the Lapindo mudflow, especially in Pangreh Village:

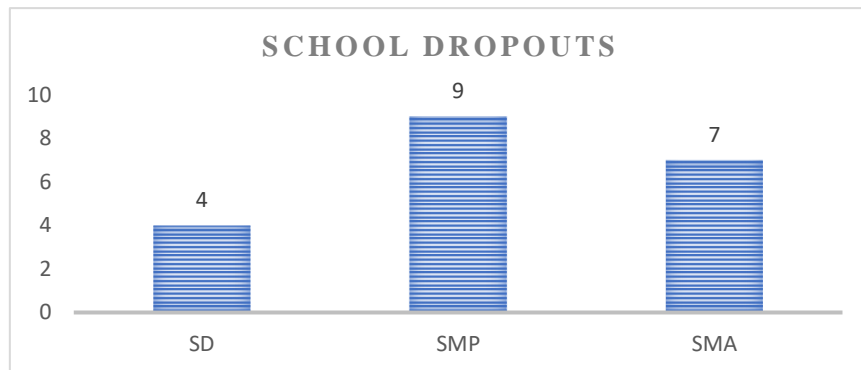


Figure 3. Graph of Dropouts, Source: Focus Group Discussion (FGD)

d) Economy

The economy of the Pangreh Village community (Lapindo Mud Victims) was greatly affected, especially in the informal and non-formal sectors where previously traders, entrepreneurs, and agriculture had to be relocated and reopened businesses. Based on the survey, now the livelihoods of the people in Pangreh Village are home businesses, vegetable sellers, farmers to factory workers and so on.



Figure 4. Livelihoods of the Pangreh Village Community
Source: Survey Results, 2022

The number of livelihoods for the people of Pangreh Village is because Pangreh Village is located in a strategic area, access is easy to reach and the land use conditions there are dominated by rice fields so that people are easy to do entrepreneurship and work. The income of a home-based business is estimated at Rp. 2,100,000 – Rp. 3,000,000. According to (Shofwan, 2020) Increased loss of opportunity to obtain economic benefits due to damage to assets belonging to the community, government, family and business entities as an indirect result of a disaster.

3. Shelter Room

Shelters in Pangreh Village can be seen from two aspects, namely, Building Conditions, and Residential Facilities. Based on the survey and analysis, it is known that the condition of the buildings in Pangreh Village is classified as a permanent building condition, so that the settlements in Pangreh Village have generally good quality. The condition of this building can explain that the economic capacity of the community and the characteristics of the occupants are quite good. This good condition of the building cannot be separated from the struggle and patience of the Lapindo mudflow victims to get compensation of up to one hundred percent.



Figure 5. Condition of Pangreh Village Buildings

Source: Survey Results, 2022

| Residential Facilities | Type Means | Information |
|------------------------|--|-------------------------|
| Education facility | Kindergarten, Elementary, Middle School, High School | Serve All circle Public |
| Facilities of Worship | Mosque | Serve All circle Public |
| Health facility | Public health center | Very Good Condition |

Source: 2022 Survey Results

Tab 1.4. Pangreh Village Residential Facilities

Pangreh Village has complete educational facilities from Kindergarten, Elementary School, Junior High School / MTs, and High School / Vocational School. So that it makes the Pangreh Village community easy to reach and get good educational services. In addition, Pangreh Village has good health and worship facilities so that people can get health services and can worship easily.

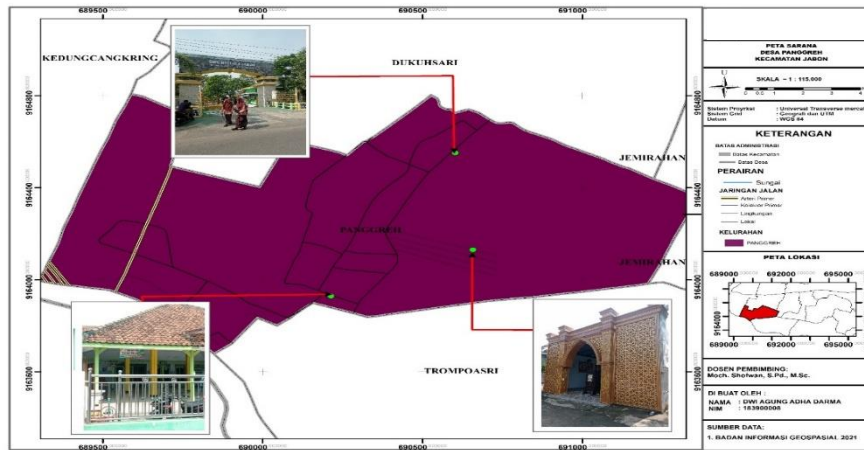


Figure 6. Map of Settlement Facilities in Pangreh Village

4. Connecting Network

Then for the condition of infrastructure in the communal settlement area in Pangreh Village, Jabon District using the standard Decree of the Minister of Settlement and Regional Infrastructure No. 543/KPTS/M2001 concerning Minimum Service Standards for Settlements.

Tab 1.5. Pangreh Desa Village Settlement Infrastructure

| No. | Residential Infrastructure | Pangreh Desa Village |
|-----|----------------------------|---|
| 1. | Street | Road conditions are good and are up to standard |
| | | Street Type: Primary Collector, Local and Environmental |
| 2. | Drainage | Pretty Good Condition |
| | | Utilization: Can Hold Rainwater |
| 3. | Water | Refill Water, Wells, PDAM |
| 4. | MCK condition | Permanent conditions in the house |
| 5. | Garbage | Using the TPST Concept |

Source: 2022 Analysis Results



Source: Survey Results, 2022

Figure 7. Pangreh Village Road Network

Road network infrastructure is based on Figure 7. Pangreh Village has good road network conditions. The condition of the environmental road has been paved and asphalted so that the people in Pangreh Village are easy to move in and out of settlements.



Source: Survey Results, 2022

Figure 8. Drainage of Pangreh Desa Village

Based on Figure 8. The drainage in Pangreh Village is classified as good so that it can accommodate rainwater and has never experienced flooding or puddles during heavy rains.

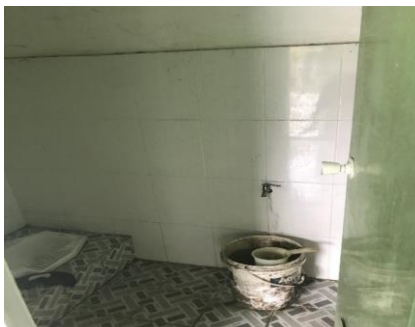


Figure 9. MCK in Pangreh Village

Source: Survey Results, 2022

Based on Figure 9 . The feasibility and completeness of MCK facilities can be identified through the presence or absence of MCK such as latrines, bathrooms, washing places, and hand washing facilities. In addition, the feasibility of MCK in Pangreh Village is also identified. The condition of MCK in Pangreh Village is quite good and permanent MCK conditions are located inside home. Garbage in Pangreh Village uses the concept of a Garbage Disposal Site (TPS) and every two weeks the garbage is picked up by the local garbage officer so that Pangreh Village residents do not need to burn garbage which was done by residents in the past. This is intended to prevent littering which will later cause flooding and puddles of water.



Figure 10. Solid Waste in Pangreh Village

Source: Survey Results, 2022

D. Conclusion

Residents of Pangreh Village Lapindo Mud Survivors Have characteristics including, the land use of Pangreh Village is 171 Ha, dominated by 2 land uses, namely rice fields and settlements. The type of land use in Pangreh Village is the largest type of rice field use with an area of 129.96 (Ha) with a percentage of 76.01% while residential land use is an area of 41.04 (Ha) with a percentage of 23.99%. The residents of Pangreh Village, the majority of the residents have a low population density classification due to the Lapindo mud from Besuki Village, the population density in Pangreh Village For Pangreh Village has a population density of 28.29 people/km². Pangreh Village has an organization called "Creative Youth Association" which is engaged in village progress and activities in Pangreh Village. The education level of the community in Pangreh Village affected by the Lapindo mudflow disaster shows that there are at least 4 elementary school graduates or the equivalent, 9 junior high school graduates or the equivalent and 7 senior high school graduates or the equivalent. The economy of the Pangreh Village community (Lapindo Mud Victims) was greatly affected, especially in the informal and non-formal sectors, so they had to be relocated and re-

opened their businesses. The income of a home-based business in Pangreh Village is estimated at IDR 2,100,000 – IDR 3,000,000 per month. the condition of the building in Pangreh Village is classified as a permanent building condition, so that the settlements in Pangreh Village have generally good quality. The condition of this building can explain that the economic capacity of the community and the characteristics of the occupants are quite good. Pangreh Village has complete educational facilities from Kindergarten, Elementary School, Junior High School / MTs, and High School / Vocational School. So that it makes the Pangreh Village community easy to reach and get good educational services. In addition, Pangreh Village has good health and worship facilities so that people can get health services and can worship easily. Pangreh Village has good road network conditions, environmental road conditions have been paved and asphalted so that people in Pangreh Village are easy to move in and out of settlements. Pangreh Village has good road network conditions, the environmental road conditions have been paved and asphalted so that people in Pangreh Village are easy to move in and out of settlements. The drainage in Pangreh Village is classified as good so that it can accommodate rainwater and has never experienced flooding or puddles during heavy rains. the feasibility of MCK in Pangreh Village The MCK conditions in Pangreh Village are quite good and the permanent MCK conditions are located inside the house. Garbage in Pangreh Village uses the concept of a Garbage Disposal Site (TPS) and the officers pick up trash twice a week. This is intended to prevent littering which will later cause flooding and puddles of water.

E. References

- Amiruddin, L., & Fitrianita, T. (2014). Threats After the Lapindo Mud Disaster. *Paper Presented at the 1st National Research Symposium, State University of Malang* , 8 (October 2014).
- Arifin, MZ, Nugroho, WB, & Kamajaya, G. (2006). *Lapindo Hot Mud: The Birth of Subjects and Social Change* . 1–5.
- Batubara, Bosman. (2012). *CHRONIC OF LUMPUR LAPINDO DISASTER SCANDAL OF OIL AND GAS DRILLING INDUSTRY IN SIDOARJO* (Heru Prasetia (Ed.)).
- Ekawati, J., & Sulistyowati, E. (2021). Economic Vulnerability In The Settlement Area Impacted By Lapindo Mudflow Disaster, Sidoarjo. *Journal of Settlements* , 16 (1), 41–53. [Http://Jurnalpermukiman.Pu.Go.Id/Index.Php/JP/Article/View/355/Pdf](http://Jurnalpermukiman.Pu.Go.Id/Index.Php/JP/Article/View/355/Pdf)
- ELIKA, EP, RESNAWATY, R., & GUTAMA, AS (2017). Social Disaster Case of Mud Pt. Lapindo Brantas Sidoarjo, East Java. *Proceedings of Research and Community Service* , 4 (2), 205–216. <https://doi.org/10.24198/jppm.V4i2.14272>

- Mamik, Sumarmi. (2010). Survival Mechanism Victim Household Of Mud Lapindo In Sidoarjo - East Java. *Journal of Organization And Management* , 6 (1), 1–2.
- Utilization, A., Sensing, C., To, J., Settlement, M., Di, P., Around, W., Lapindo, L., & Sidoarjo, K. (2022). *Darojatun Kholifah Atmanegara _ ANALYSIS OF THE UTILIZATION OF REMOTE SENSING IMAGES TO MONITOR RESIDENTIAL SETTLEMENT IN* . March .
- Shofwan, M. (2020). *POST DISASTER NEEDS ASSESSMENT (PDNA)* (F. Nurâ€™ Tm aini (Ed.)). Guest Desk Publisher.
- Shofwan, M., & Nur Tma Aini , F. (2017). Zoning of Water Pollution Distribution Based on Community Perception in the Mud Disaster Area of Sidoarjo Regency. *TIME: UNIPA Journal of Engineering* , 15 (2), 7–12. <https://doi.org/10.36456/Time.V15i2.719>
- Shofwan¹, M., & Rukmana, S. (2017). *Patterns of Communal Settlement After the Mudflow Disaster in Sidoarjo Regency* . September .
[Http://snasppm.unirow.ac.id/file-prosiding/prosiding_snasppm](http://snasppm.unirow.ac.id/file-prosiding/prosiding_snasppm) II_COMMUNAL SETTLEMENT PATTERNS POST-MUD OVERLOAD DISASTER IN SIDOARJO REGENCY.pdf