



Disaster Response Education for the Community in Watugaluh Village, Diwek Sub District, Jombang District

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ABSTRACT

Indonesia is a country that is vulnerable to disasters. According to the BNPB Disaster Risk Index 2021, most areas in Indonesia are at risk of natural disasters. UNESCO places Indonesia in the seventh position as the country most vulnerable to natural disasters based on geography, geology, climatology, and demography. In Watugaluh Village, Diwek Sub-district, the community faces substantial challenges due to a lack of understanding in dealing with flood disasters. To overcome this problem, our program offers assistance in the form of disaster response socialization by the Disaster Management Agency (BPBD). This research uses a qualitative method. The result of this assistance is a form of education to the community regarding mitigation and rescue when natural disasters such as floods occur, where the community can reduce the risk of flooding. Students of Group F KKM Darul 'Ulum University also made other efforts to overcome the flood problem in Jasem Hamlet, Watugaluh Village by helping to normalize the river and repairing the river embankment bridge. This is done with the aim that the river flow runs smoothly.

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A. INTRODUCTION

One of the major problems faced by many countries, including Indonesia, is natural disasters. Indonesia is very vulnerable to disasters. According to the 2021 BNPB Disaster Risk Index, most areas in Indonesia are at risk of natural disasters. UNESCO places Indonesia in seventh place as the country most vulnerable to natural disasters based on geography, geology, climatology, and demography. This is due to



the fact that Indonesia is located on the equator (tropical), crossed by the Alpide belt, and crossed by the Pacific Circum or Pacific Ring of Fire (Pertamina University, 2024). Therefore, Indonesia is vulnerable to natural disasters such as earthquakes, volcanoes, tsunamis, landslides, floods, and others. This shows how important public preparedness and education are to reduce the impact of disasters.

BPBD The Regional Disaster Management Agency (BPBD) must actively participate in handling disasters in Indonesia. BPBD is a non-departmental government agency that has the responsibility to handle disasters at the district or city level. BPBD carries out its work in accordance with the policies set by the National Disaster Management Coordinating Agency (BNPB). According to Article 18 No. 24 of the Republic of Indonesia Law Following the establishment of the Regional Disaster Management Agency (BPBD) in 2007 as a non-departmental government agency, the agency is responsible for handling disasters at the district or city level by following policies determined by the National Disaster Management Agency. (Erpani & Arlan, 2024). BPBD aims to increase public awareness and knowledge about disaster risks.

One of the main focuses of the Regional Disaster Management Agency (BPBD) in each province is disaster response education. BPBD is responsible for providing information and training to the community on how to deal with disasters through education and outreach programs. The disaster outreach program carried out by BPBD in various regions is a real example of disaster response education. According to BNPB 2021 data, Indonesia recorded 2,832 disasters in 2020 alone, including 105 earthquakes, 1,188 floods, and 1,015 landslides. One of the areas affected by the flood disaster was Jombang Regency. A report from the Jombang Regency Government showed that in early 2023, flooding in the area increased due to high rainfall. More than 2,000 houses were flooded, displacing thousands of people and losing their homes (JOMBANGKAB, 2024).

Watugaluh Village is located in Diwek District, Jombang Regency, and is one of the areas most at high risk of flooding. This village often experiences major flooding with water levels reaching 50 cm every year, especially during the rainy season. According to the results of interviews with the Watugaluh village government, it shows that around 250 families (KK) were affected by the flood, which was caused by the overflowing river. The most affected areas were from Jasem Hamlet with 150 KK, while Watugaluh Santren Hamlet had 90 KK, and 10 KK in Gendong Hamlet. Floods not only disrupt people's daily lives, but can also damage infrastructure and pose a threat to the health of the population. Therefore, education about flood disaster mitigation is very important to increase public awareness and preparedness. seeing this problem, where disaster response education is needed to prevent flood disasters that routinely occur every year, Therefore, researchers are interested in conducting research on Education. Disaster Response Flood Mitigation for the Community in Watugaluh Village, Diwek District, Jombang Regency.



B. LITERATURE REVIEW

Disaster is an event or series of events that can threaten and disrupt all aspects of community life and livelihoods caused by natural factors (floods, earthquakes, landslides, drought), non-natural factors (technological failure, modernization failure, and disease outbreaks), and human factors (deforestation, air pollution, littering) that cause environmental damage, property loss, and psychological impacts (Ummah, 2019).

A. The Importance of Disaster Education for Communities

Indonesia is a country that has a high risk of various types of natural disasters such as earthquakes, tsunamis, volcanic eruptions, floods, and landslides. This geographical condition requires careful preparedness from the community in facing the possibility of disasters. One of the strategic steps that can be taken to improve this readiness is through disaster education. Disaster education is not only important for individual safety, but also contributes to the social and economic sustainability of the community. The following are some of the reasons why disaster education is very important for the community (Lestari, 2024).

1. Raising Awareness and Knowledge

Disaster education helps communities understand the potential risks in their environment. With this knowledge, communities can recognize the early signs of a disaster and know what actions to take. For example, people living in earthquake-prone areas will be better prepared and know what to do when an earthquake occurs, such as finding a safe place, moving away from buildings, or taking shelter under a sturdy table.

2. Reducing the Impact of Disasters

Through disaster education, communities can be trained to take preventive and mitigation measures that can reduce the impact of disasters. For example, evacuation training and disaster simulations can help people prepare and act quickly when a disaster occurs. In addition, education on the importance of building houses with earthquake-resistant structures can reduce the risk of damage and casualties.

3. Preparing for an Effective Response

A well-educated community will be better prepared to respond effectively to a disaster, they will have knowledge of the emergency steps to take, such as providing first aid, contacting authorities, or seeking shelter. This quick and appropriate response can save lives and reduce material losses.

4. Building Community Resilience

Disaster education plays an important role in building community resilience. This includes the ability to bounce back and recover after a disaster. A resilient community will be better able to cope with trauma, better manage resources and



cooperate in recovery efforts. Ongoing education programs can also encourage solidarity and cooperation among citizens in the face of disasters.

5. Reducing Dependence on External Assistance

By having adequate knowledge and skills, communities can be more self-reliant and less dependent on external assistance when disasters occur. This is important because in emergency situations, external assistance often takes time to arrive. This independence allows the community to immediately take the necessary actions without having to wait for help.

6. Instilling a Culture of Disaster Preparedness

Consistent and structured disaster education can instill a culture of disaster preparedness in people's daily lives. This culture will make every individual always alert and ready to face the possibility of disaster. Thus, disaster preparedness becomes an integral part of community life, not just a temporary response when a disaster occurs.

C. METHODS

This research is one of the community service activities carried out through educational activities using qualitative methods, where this activity is through socialization and training of case studies of the Watugaluh Village community. According to Sugiyono (2007:14) qualitative methods are used to obtain in-depth data, namely data that contains meaning. This socialization and training were carried out on February 5, 2025. There are 2 data sources in this study, namely primary data sources and secondary data sources.

Primary data sources were obtained through interview observations obtained through informants from the Secretary of Watugaluh Village, Head of Jasem Hamlet, Watugaluh Village government officials, and Watugaluh Village residents. Secondary data is data collected to complement primary data obtained through news research data, journals relevant to this study. Data collection techniques used were by means of observation, interviews, and documentation to Watugaluh Village residents. Data analysis used in this study is qualitative analysis with ongoing or repeated efforts, data obtained in the field are intended to be discussed and analyzed.

D. RESULTS AND DISCUSSION

Watugaluh Village, Diwek District It is one of the villages located in Jombang Regency, East Java Province. Watugaluh Village is a village that used to be a kingdom and the community often finds relics from ancient times such as antiques, gold, and so on. Based on history, Watugaluh Village was formed as a result of the relocation of the capital of Ancient Mataram from Tamwlang to Watugaluh Village, Diwek District. This is reinforced by the presence of the Anjukladang 859 Saka inscription (937 AD)



which contains "Kita prasidha manraksang ranghyangta medang I bumi mataram I Watugaluh". The incident occurred on April 10, 937 AD. Therefore, April 10 is always the anniversary of Watugaluh Village.

Watugaluh Village is an area with a population of 4,820 people, 2,456 of whom are male and 2,36 of whom are female. Watugaluh Village is an area with a lowland area of 25 Ha, which is divided into two functions, namely land, rice fields and settlements. Watugaluh Village also has 4 hamlets, namely Watugaluh Krajan, Nanggalan, Gendong, and Jasem. While climatologically, Watugaluh Village is a tropical area because it has a fairly high rainfall rate. However, Watugaluh Village is a strategic area for both two-wheeled and four-wheeled vehicles to pass through.

1. Identification of problems

Watugaluh Village is located in Diwek District, Jombang Regency, an area that often experiences flooding, especially during the rainy season. This village is hit by floods every year during the rainy season with a water level of 50 cm. This is caused by shallow rivers and a lack of public awareness of waste management. According to the results of an interview with Mr. Ahmad Subari, Secretary of Watugaluh Village, around 150 heads of families in Jasem Hamlet are the most affected, followed by 90 heads of families in Watugaluh Krajan Hamlet, and 10 heads of families in Gendong Hamlet.

Interview documentation



This flood not only disrupts daily activities, but can also damage infrastructure and affect public health. The river embankment bridge in Jasem hamlet and the social facilities of the Family Social Skills Institute in Gendong hamlet were also affected by the flood, their buildings were damaged. The results of the interview with Mr. Ahmad Subari showed that the village community was accustomed to flooding, "The community is accustomed to flooding, although sometimes water enters the house." However, he added, "They tend to consider it as a phenomenon that is not too serious." This shows that there is a normalization of disasters that must be watched out for.

In addition, one of the main causes of the river becoming shallow, which worsens the situation during the rainy season. The lack of adequate waste disposal facilities in

the village worsens this condition. Flooding continues to increase because people continue to throw garbage carelessly into rivers and gutters. This shows that the community must be educated about the importance of managing waste and disaster response, especially the dangers of flooding.

The village government has so far made several efforts to address this issue, such as river dredging and community service. However, these steps do not solve the underlying problem and are only temporary. Mr. Ahmad added, "We need to involve the community in environmental management and provide education on disaster mitigation."

Therefore, with this background, this journal aims to provide a better understanding of disaster mitigation in Watugaluh Village and how the community can actively participate in reducing the risk of this disaster. It is hoped that through proper education, the community can be better prepared to face flood disasters in the future.

2. Repairing the river embankment bridge and normalizing the river

River embankment bridges are important infrastructure for the community. Good infrastructure will support the economic and social activities of the community, while poor infrastructure can hinder the surrounding community. Therefore, river normalization and repair of river embankment bridges are very important to maintain the sustainability, function of infrastructure and prevent flood disasters. The cause is that flood water passes the lowest peak of the embankment because garbage from the river hits the embankment. River embankment bridges are one of the important infrastructures for the community. This is because river embankment bridges function to control the flow of river water.

Documentation of activities to repair river embankment bridges and normalize rivers



Students of Group F KKM Darul 'Ulum University in addition to helping to normalize the river with the Watugaluh community also helped the Watugaluh community in increasing their insight into flood disaster response, which was obtained from the disaster response socialization activity on February 5, 2025. Mr.

Sa'roni as a speaker from BPBD Jombang also explained the causes of flooding, namely high rainfall, the ground surface is lower than the water, located in a basin, settlements built on riverbanks, and lack of land cover in the upstream area of the river. And the river repair methods carried out:

1. Conduct regular inspections to prevent damage to river embankment bridges.
2. Repairing parts of the river embankment bridge by adding materials.
3. Perform routine maintenance cleaning and minor repairs to prevent further damage.

3. Dissemination of Disaster Response, Flood Mitigation and Fire Hazards



Watugaluh Village, Diwek District is one of the areas prone to flooding in Jombang Regency. This flood disaster occurred more precisely in Jasem Hamlet, Watugaluh Village due to overflowing water from other villages entering Jasem Hamlet. The problem of flooding every year in Jasem Hamlet, made KKM Undar hold a socialization of flood disaster response and fire hazards. Community service activities in Watugaluh Village, Diwek District, Jombang Regency in handling flood disasters provide the community with extensive knowledge on how to prevent and handle flood disasters. The result is a disaster response socialization activity for the Watugaluh community. The target is Watugaluh figures and their community, consisting of 30 people. Time, preparation to implementation. The participants of the socialization were very enthusiastic in participating in the activities, the community actively paid attention to the delivery of the material and asked questions when they did not understand.

This flood disaster response socialization explains about the rescue methods or actions taken when facing a flood disaster, namely: 1) Turn off the electricity or contact PLN; 2) Evacuate to an area that is safer from the disaster; 3) Avoid walking near water channels; 4) Secure valuables to a higher and safer place from the disaster. During the discussion, the people of Watugaluh Village also said that when a flood disaster occurs, some people evacuate themselves by moving to the nearest relative's house to temporarily evacuate. In addition, during the flood disaster in Jasem Hamlet, the village government had never contacted the Regional Disaster Management Agency. This happened because the flood was caused by overflowing water, where the water

would recede by itself and did not claim lives, damaging social facilities such as the Family Social Skills Institute (LKSK) located in Gendong Hamlet.



Furthermore, in the socialization activity, BPBD provided an explanation of the dangers of fire and the factors causing it, namely nature, humans and fire. In a fire situation, the initial steps that can be taken are not to panic, turn off the electricity, keep flammable materials away from the fire point, use APAR, sound the danger signal. In addition, BPBD also provided information on the use of regulators on LPG (Liquefied Petroleum Gas) gas cylinders which are currently equipped with safety locks. However, even though the regulator is equipped with a safety lock, this can make it difficult to cut off the gas flow when a fire occurs due to an LPG gas leak. The steps that must be taken when an LPG gas leak occurs are:

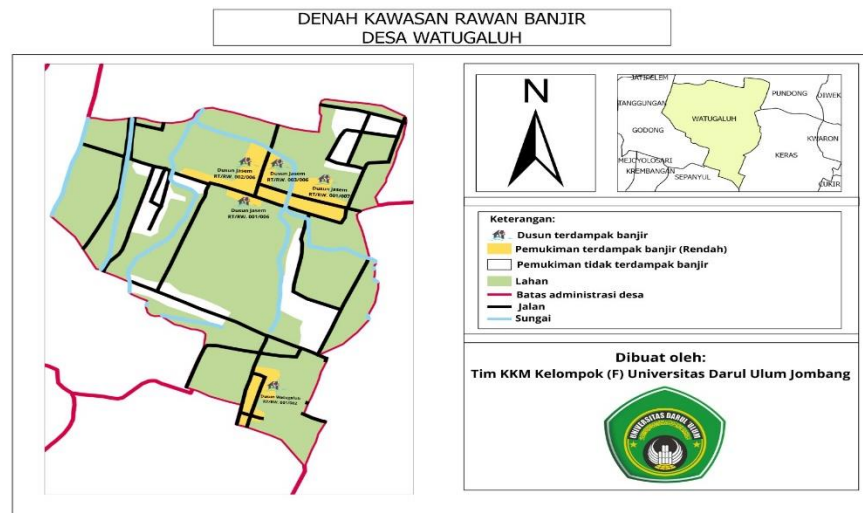
1. Take the LPG gas cylinder outside the room to ensure that the remaining gas in the cylinder comes out and is completely used up.
2. Do not turn on or turn off the lights.
3. Open air vents such as windows and doors to release leaking gas.
4. Not picking up the phone.
5. Do not light a fire.

BPBD also confirmed that the LPG cylinder did not explode when the gas leak occurred. This is because the LPG cylinder does not have air circulation when in a room that causes the gas to explode. BPDD Jombang Regency also provides information on the types of APAR that can be used when a fire occurs, namely: Water, Foam, Dry Powder, CO2.

4. Flood Impact Map of Watugaluh Village in 2025

Flooding in Watugaluh Village occurred due to overflowing floods originating from the river. The flood that occurred in Watugaluh Village hit Jasem Hamlet, Gendong Hamlet, Watugaluh Krajan Hamlet which are located to the west and east

of the river. The following are the results of the flood impact map made by KKM group F Darul 'ulum University 2025 which occurred in Watugaluh Village.



The 2025 flood hit Jasem Hamlet Rt 01.02 and Rw 006, the water level reached 50 cm and hit up to 50 families. Gendong Hamlet Rt 001 Rw 007, 10 families were affected by the flood. Watugaluh Santren Hamlet Rt 01 Rw 002, 90 families were affected by the flood. This map is the latest from the data that was last made in 2018 which was posted in the village hall. The flood that hit these 3 hamlets was due to the overflow of shallow rivers, river normalization that had not been carried out and the river being blocked by garbage. The river normalization was only carried out on February 5, 2023.

E.CONCLUSION

The importance of preparedness of the Watugaluh Village community, the community needs to be involved in the education process to increase their knowledge of flood disasters. Through the education, socialization and training programs carried out by the F KKM Group of Darul 'Ulum University, the Watugaluh Village community can understand and take steps to reduce the risk and impact of flood disasters. The Regional Disaster Management Agency (BPBD) helps with flood disaster prevention and mitigation. The overflow flood that occurred in Jasem Hamlet was an overflow from a river that was not dredged enough and the shallow river was blocked by bamboo and garbage. The expected success of the program carried out by the F KKM Group of Darul 'Ulum University is that the Watugaluh Village community can know the preparedness before or after a flood disaster occurs.

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G. AUTHOR CONTRIBUTIONS

Team Member Contributions

- Event Implementation:
- Article Preparation: Khudrotun Nafisah, Lailatus Syadiyah, Nur Ayu, Galuh Rachma, Finna Nur Novianti, Suparto, Wahyu Budiono.
- Impact Analysis: Impact on the Jasem hamlet community
Data Collection : Zamroni
Speakers: Suparto, Abdurrohman Addakhil

H. REFERENCES

- Erpani, MF, & Arlan, AS (2024). THE ROLE OF THE REGIONAL DISASTER MANAGEMENT AGENCY (BPBD) IN HANDLING FLOOD DISASTERS IN JUAI DISTRICT, BALANGAN REGENCY (CASE STUDY OF JUAI VILLAGE AND GALUMBANG VILLAGE).
- Fadri, M., & Zuhri, M. (2018). Effectiveness of the Function of the Regional Disaster Management Agency in Earthquake Management in Pidie Jaya Regency. Student Scientific Journal: State Law Field, 2(2), 336–346.
- JOMBANGKAB. (2024). Jombang Regency Government Moves Quickly to Handle Widening Floods. Jombangkab Website.
[https://www.google.com/search?q=Jombang+Kab.+\(2023\).+Jombang+Regency+Goes+Quickly+to+Handle+Widesping+Floods.+Accessed+from+https%3A%2F%2Fwww.jombangkab.go.id%2Fgeneral%2Fnews%2Fjombang-regency-goes-quickly-to-handle-widening-floods-11030&oq=Jombang+Kab.+\(2023\).+Jomban+Regency+Goes+Moving+Quickly+To+Handle+Floods+That+Are+Widespreading.+Accessed+from+https%3A%2F%2Fwww.jombangkab.go.id%2Fgeneral%2Fnewsjombang-district-moving-quickly-to-handle-floods-that-are-widening-11030&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIHCAEQIRiPAjIHCAIQIRiPAtiBCTIzMzFqMGoxNagCCLACAQ&sourceid=chrome&ie=UTF-8](https://www.google.com/search?q=Jombang+Kab.+(2023).+Jombang+Regency+Goes+Quickly+to+Handle+Widesping+Floods.+Accessed+from+https%3A%2F%2Fwww.jombangkab.go.id%2Fgeneral%2Fnews%2Fjombang-regency-goes-quickly-to-handle-widening-floods-11030&oq=Jombang+Kab.+(2023).+Jomban+Regency+Goes+Moving+Quickly+To+Handle+Floods+That+Are+Widespreading.+Accessed+from+https%3A%2F%2Fwww.jombangkab.go.id%2Fgeneral%2Fnewsjombang-district-moving-quickly-to-handle-floods-that-are-widening-11030&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIHCAEQIRiPAjIHCAIQIRiPAtiBCTIzMzFqMGoxNagCCLACAQ&sourceid=chrome&ie=UTF-8)
- Qurrotaini, L., Amanda Putri, A., Susanto, A., & Sholehuddin, S. (2022). DISASTER RESPONSE EDUCATION THROUGH DISASTER SOCIALIZATION AS CHILDREN'S KNOWLEDGE OF FLOOD DISASTER MITIGATION. AN-NAS: Community Service Journal, 2(1), 35. <https://doi.org/10.24853/an-nas.2.1.35-42>
- Pertamina University. (2024). Indonesia is Prone to Disasters, UPER Geological Engineering Takes a Role by Providing Education on Disaster Mitigation and Adaptation. Pertamina University. <https://universitaspertamina.ac.id/berita/detail/indonesia-rawan-bencana-teknik-geologi-uper-ambil-peran-dengan-berikan-edukasi-tentang-mitigasi->

