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Effectiveness of Communication Strategy in Disaster Management in Indonesia

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ABSTRACT

This research explores the effectiveness of communication strategies in disaster management in Indonesia, focusing on the utilization of modern technology, social media, and community engagement. The study used a qualitative-descriptive approach, analyzing case studies of the Lombok earthquake and Palu tsunami to evaluate the successes and challenges of disaster communication. The research findings show that social media and community training play an important role in improving community preparedness and response to disasters. However, challenges such as limited communication infrastructure in remote areas still hamper the effectiveness of these strategies. Recommendations include developing communication technology, establishing a dedicated communication team, and improving education and coordination between stakeholders to optimize disaster communication in the future

INTRODUCTION

Indonesia, as a country located in the Pacific Ring of Fire, is prone to various natural disasters such as earthquakes, tsunamis, volcanic eruptions, and floods. This area is often referred to as the "Ring of Fire" due to its high seismic and volcanic activity. Data from the National Disaster Management Agency (in Aziz, 2023), shows that in 2020 there were 4,917 disasters, with floods dominating 1,004 incidents. The high frequency of these disasters requires an effective disaster management system, including in terms of disaster communication.

Effective communication is essential to ensure that timely and accurate information can be conveyed to the public before, during, and after a disaster occurs. This involves the use of various communication channels, such as social media, mobile applications, television, radio, and also face-to-face communication. Reliable communication infrastructure is essential, especially in remote areas that often have difficulty getting timely information. Investment in modern technology and regular training are very helpful in reducing the risk and impact of disasters. Thus, effective disaster communication can be one of the main pillars of Indonesia's disaster management strategy.

Disaster communication plays a crucial role in delivering accurate and timely information to the public before, during, and after a disaster occurs. This information includes the dissemination of early warnings, evacuation guides, and education on disaster risk mitigation. According to Rudianto (2015), communication in disaster management is not only needed in emergency conditions, but is also important during pre-disaster to prepare the community with the necessary knowledge and skills.

However, challenges such as often suboptimal coordination between institutions, limited communication infrastructure that hinders access to information, especially in remote areas, and low disaster literacy among the community are still obstacles to the implementation of effective disaster communication. Therefore, ongoing efforts are

needed to improve coordination between institutions, strengthen communication infrastructure, and improve education and public awareness of the importance of disaster preparedness, so that disaster communication strategies can run more effectively and efficiently in reducing the negative impacts of disasters.

Along with the development of technology, social media has become a potential tool in disaster communication. Platforms such as Twitter and Instagram allow for the rapid and widespread dissemination of information, which is essential in emergency situations. Research by Kurniawan (2018) shows that the use of social media Twitter is effective in disseminating disaster information to increase public awareness of natural disasters, especially because of its ability to reach a large audience in a short time. In addition, social media can be used to provide real-time updates, evacuation guides, and information on available assistance.

However, the use of social media also faces challenges such as the dissemination of inaccurate information, which can cause panic or confusion among the public. Limited access in remote areas is also a significant obstacle, considering that not all regions in Indonesia have adequate internet infrastructure. Therefore, a comprehensive disaster communication strategy is needed that is adaptive to technological developments and Indonesia's demographic characteristics. This strategy must include verifying information before it is disseminated, educating the public about digital literacy, and improving communication infrastructure in remote areas to ensure that every individual can access timely and reliable information.

Communication in the context of disaster mitigation is essential to reduce uncertainty in the community, so that they can act appropriately. Accurate information from stakeholders, especially the government, is needed by the community and private institutions that care about disasters. This effort aims to minimize loss of life and material losses. Success in disaster management is highly dependent on community support and the role of the

main agency, namely BPBD, as the main driving sector (Setyawan in Rohman, 2024). Therefore, an effective and collaborative communication strategy must continue to be developed and adapted to local conditions to ensure optimal preparedness. In the journal Kurniawati (2019), it is explained that disaster mitigation is a series of actions to reduce disaster risks, both through physical development and increasing awareness and ability in dealing with disaster threats (Article 1 paragraph 6 of PP No. 21 of 2008 concerning the Implementation of Disaster Management).

The objectives of disaster mitigation include:

1. Reducing the impact of disasters, especially for the population.
2. Becoming a guideline in development planning.
3. Increasing public knowledge in dealing with and reducing disaster risks, so that they can live and work safely.

Research Objectives

This study aims to explore and identify the most efficient communication strategies in disaster management in Indonesia. By analyzing various communication methods applied by the government, non-governmental organizations, and the media during disaster events, this study will provide in-depth insights into best practices and aspects that need improvement. In addition, this study will also compile practical recommendations that can be implemented by stakeholders to improve disaster communication.

In addition, this study aims to examine how modern technology, such as social media and digital communication applications, can be used to support communication in disaster situations. As the use of technology in everyday life increases, this study seeks to understand how to integrate these tools into existing disaster communication strategies. This study will evaluate the extent to which this technology is effective in conveying information, supporting coordination, and overcoming various challenges that arise during emergency situations.

The ultimate goal of this study is to assess the impact of disaster communication on community

preparedness and response. By studying how communication influences community behavior before, during, and after a disaster, this study is expected to contribute to increasing community awareness, preparedness, and responsiveness to disasters. The conclusions of this study are expected to help in designing more effective communication policies and programs in the future.

METHODS

Research Design

The research approach used in this study is a qualitative-descriptive approach. This approach was chosen because it allows researchers to explore and understand the disaster communication strategies used by various parties. The research design that will be used includes two main approaches: case studies and phenomenology. Case studies will focus on specific disaster events, such as earthquakes, tsunamis, or floods, to identify how communication is carried out by the various parties involved. This study will examine the roles of government, media, and society in conveying, receiving, and interpreting information during the disaster. By analyzing various cases, this study can reveal best practices and weaknesses that need to be improved in disaster communication.

The second approach is phenomenology, which will investigate the subjective experiences of individuals experiencing a disaster. This study will explore how these individuals receive and interpret information during a disaster. By using in-depth interviews and narrative analysis, this phenomenological study will provide deeper insights into the perceptions, emotions, and responses of individuals to the communication received. These two approaches will provide a comprehensive picture of the effectiveness of disaster communication strategies in Indonesia.

Data Sources

Primary data for this study will be obtained through in-depth interviews with various sources directly involved in disaster management. These sources include police officers involved in disaster management, BPBD officers, volunteers, and communities affected by the disaster. Interviews will be designed to explore their experiences, views, and evaluations of the communication strategies used during the disaster. In addition, direct

observations in the field will also be conducted to obtain more contextual and in-depth data. Through this observation, researchers can see directly how communication occurs and what challenges are faced in emergency situations.

Secondary data will include various official documents, such as government reports, disaster mitigation plans, and disaster management guidelines. In addition, previous research reports, scientific journal articles, and other relevant sources will also be collected and analyzed. This secondary data serves to complement and strengthen the findings of the primary data, as well as provide a broader perspective on the effectiveness of disaster communication strategies. The use of secondary data allows researchers to understand the historical context and development of disaster communication practices in Indonesia over time.

RESULTS AND DISCUSSION

Findings

This study found that communication strategies in disaster management in Indonesia vary depending on the type of disaster and the area affected. In general, communication efforts carried out by the Regional Disaster Management Agency (BPBD), local governments, and non-governmental organizations have shown some success in increasing public awareness and preparedness. The use of social media and conventional media such as television and radio has proven effective in disseminating rapid information about disaster situations and evacuation steps that must be taken by the community. This is very important considering the number of natural disasters that occur in Indonesia every year.

The findings also show that education and socialization carried out before a disaster occurs play a major role in increasing public preparedness. Educational programs such as public campaigns, training, and workshops carried out by various parties help communities understand the risks they face and what actions to take in an emergency. In addition, the involvement of local communities in these socialization activities also strengthens the knowledge and skills needed to deal with disasters.

This allows communities to be more prepared and responsive when a disaster occurs.

Emergency response training and disaster simulations routinely conducted by various parties have made a positive contribution to community preparedness in facing disasters. These exercises not only help communities understand evacuation procedures and other emergency actions, but also strengthen coordination between various stakeholders involved in disaster management. However, this study also found several challenges, such as limited access to information in remote areas that hinder the rapid and accurate dissemination of information.

In addition, the lack of coordination between parties involved in disaster communication is also a significant challenge. Several cases show that the information conveyed is inconsistent or late in reaching the community, which can reduce the effectiveness of disaster management efforts. Therefore, it is important to strengthen coordination and cooperation between the government, non-governmental organizations, media, and local communities to ensure that the information conveyed is always timely, accurate, and reliable. This effort will help improve community preparedness and response to disasters, as well as reduce the negative impacts caused.

Analysis of Findings

The analysis of the findings shows that the effectiveness of communication strategies in disaster management is greatly influenced by coordination between the government, media, and community. Good coordination enables fast, accurate, and reliable information dissemination, which in turn helps mitigate the negative impacts of disasters. For example, when the government and media work together to convey disaster-related information through various communication channels, communities can quickly take necessary actions to save themselves and their property. The use of modern technologies such as mobile applications and social media also play a significant role in expanding the reach of communication and

ensuring that information is accessible to the wider community.

However, the analysis also shows that there is still room for improvement in disaster communication in Indonesia. Key challenges that need to be addressed include ensuring access to information in remote areas, where communication infrastructure may not be as good as in urban areas. This requires a more inclusive and innovative approach to reaching communities living in such areas. In addition, increasing public trust in information provided by authorities is an important aspect that needs to be addressed. This trust can be enhanced through transparency, consistency in information delivery, and active community involvement in the communication process.

Recommendations resulting from this study include improving disaster training and simulations, which aim to improve community preparedness and rapid response to emergency situations. More optimal use of technology is also proposed, including the development of mobile applications that can provide early warnings and real-time information to the public. In addition, the formation of a special communication team that focuses on disaster mitigation can help ensure that the information delivered is always accurate, relevant, and timely. This team can work together with various stakeholders to develop effective communication strategies and overcome existing challenges. With these steps, it is hoped that disaster communication in Indonesia can be significantly improved, thereby reducing the negative impacts of future disasters.

Case Studies

A. Earthquake in Lombok (2018)

This case study shows that disaster communication during the Lombok earthquake saved lives. The use of social media and mobile applications to disseminate evacuation and emergency information proved to be very effective. Through these platforms, information on evacuation locations, safety status, and emergency response measures were quickly disseminated to the wider community. However, behind this success, the

study also found significant challenges in coordination between government and volunteers in the field. The imbalance in information delivery resulted in some messages not being conveyed properly to the community, especially in remote areas that are difficult to reach.

This challenge was largely due to logistical and infrastructure limitations in remote areas. Despite significant efforts in using technology for disaster communication, limited access to technology and inadequate communication infrastructure meant that some communities did not receive critical information in a timely manner. Therefore, to increase overall effectiveness, there is a need to improve communication infrastructure in remote areas as well as additional training for volunteers and government officials to ensure better coordination. These steps will help ensure that every individual, wherever they are, can receive the information they need to stay safe during a disaster (BNPb, 2018).

B. Tsunami in Palu (2018)

This case study highlights the importance of community preparedness and education in dealing with disasters. Communication conducted by BPBD and local governments prior to the tsunami, through training and simulations, has been shown to help reduce the number of fatalities. These trainings provide the knowledge and skills needed for communities to act quickly and appropriately when a disaster occurs. The education provided also strengthens the community's ability to understand early signs of a disaster and the evacuation steps that must be taken, which in turn significantly improves their preparedness.

However, this study also revealed obstacles in the dissemination of real-time information during disasters, especially in severely affected areas. Inadequate communication infrastructure hinders the delivery of fast and accurate information to the community. This situation shows the need to improve communication infrastructure and coordination between parties involved in disaster management. Although pre-disaster training and simulations are very effective in preparing

communities, without the support of good communication infrastructure during an emergency, the effectiveness of these efforts can be reduced. Therefore, investment in reliable communication infrastructure and ongoing efforts to improve coordination between agencies are essential to ensure rapid and effective information dissemination during a disaster (BNPB, 2019). By understanding the findings and analysis of this case study, this study provides several practical recommendations to improve the effectiveness of communication strategies in disaster management in Indonesia. Improving coordination between parties such as the government, non-governmental organizations, volunteers, and the mass media is essential to ensure rapid, accurate, and reliable information delivery. In addition, the use of modern technology such as mobile applications and social media can expand the reach of communication and enable two-way interactions, where communities can provide feedback and report conditions on the ground.

Continuous education for the community about disaster risks and mitigation measures is also very important. Education programs conducted through public campaigns, training, and disaster simulations can improve community preparedness. Continuous evaluation and adaptation of disaster communication strategies, based on the results of routine evaluations after each disaster event, will help identify strengths and weaknesses in the approach used, so that communication strategies can be continuously improved to reduce the risks and negative impacts of disasters on the community.

CONCLUSION

A. Effectiveness of Communication Strategies

Disaster communication strategies in Indonesia have shown success in increasing community awareness and preparedness through the use of social media and training. The use of social media allows important information to be disseminated quickly and reach a wider audience. In addition, training programs run by BPBD and non-governmental organizations help communities

understand disaster risks and the steps to take in emergency situations. However, the effectiveness of these communication strategies is greatly influenced by coordination between the government, media, and local communities. The use of modern technology, such as mobile applications, also makes a significant contribution in delivering real-time information to the community, ensuring that they always have the latest information needed for their safety.

B. Challenges and Obstacles

The main challenges in disaster communication include limited access to information in remote areas due to inadequate communication infrastructure. Hard-to-reach areas often experience delays in receiving critical information, which can negatively impact disaster response. In addition, lack of coordination between stakeholders often leads to inconsistencies in information delivery, which can reduce the effectiveness of disaster response. This issue highlights the need for increased cooperation and communication between agencies and the development of better infrastructure to ensure that information can be disseminated quickly and accurately.

C. Practical Recommendations

This study recommends the formation of a special communication team focused on disaster mitigation, tasked with managing and delivering critical information to the community. Improving communication infrastructure in remote areas is also essential to ensure that every citizen has access to the information they need during a disaster. In addition, the development of technologies such as mobile applications and sophisticated early warning systems can expand the reach of information and ensure that the community receives information in real time. In addition, regular training and simulations for the community and related parties are proposed to ensure disaster preparedness. Better coordination between agencies is also needed to ensure accurate, consistent, and reliable information

delivery, and to build public trust in the information provided.

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