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# COMMUNITY-BASED DISASTER COMMUNICATION IN THE EMERGENCY RESPONSE PHASE OF THE ERUPTION OF MOUNT LEWOTOBI MEN, EAST FLORES

# Muhamad Hidayat<sup>1\*</sup>, Ananto Akbar<sup>2</sup>

LSPR Institute of Communication and Business, Indonesia

Email: m.hidayat@lspr.edu

#### Kata kunci:

Komunikasi bencana, komunitas, tanggap darurat, gunung berapi

#### **ABSTRAK**

ABSTRACT

Lewotobi Laki in East Flores.

Flores Timur merupakan daerah di Indonesia yang rawan terhadap berbagai jenis bencana alam, salah satunya adalah bencana letusan gunung berapi. Pusat Vulkanologi dan Mitigasi Bencana Geologi (PVMBG) merilis data status G. Lewotobi Male di Kecamatan Wulanggitang, Kabupaten Flores Timur, Nusa Tenggara Timur (NTT) ditingkatkan dari Level III atau Siaga ke Level IV atau Siaga sejak 9 Januari 2024 pukul 23.00 WITA. Penanggulangan bencana dalam fase darurat membutuhkan peran aktif masyarakat atau community dalam upaya komunikasi bencana. Muhammadiyah Disaster Management Center (MDMC) Kabupaten Sikka merupakan salah satu organisasi masyarakat yang berperan aktif dalam membantu penanganan bencana erupsi Gunung Api Lewotobi Laki. Penelitian ini bertujuan untuk menganalisis dan mendeskripsikan manajemen komunikasi pada saat tanggap darurat yang dilakukan oleh MDMC Kabupaten Sikka. Pengumpulan data dilakukan dengan metode kualitatif seperti: wawancara, observasi, dokumentasi dan Focus Group Discussion (FGD). Hasil penelitian menemukan bahwa pada fase darurat bencana, pentingnya peran masyarakat dalam membantu proses penanggulangan bencana seperti yang dilakukan oleh MDMC Kabupaten Sikka pada saat bencana darurat erupsi Gunung Lewotobi Laki di Flores Timur.

#### Keywords:

Disaster communication, community, emergency response, volcanoes East Flores is an area in Indonesia that is prone to various types of natural disasters, one of which is the volcanic eruption disaster. The Center for Volcanology and Geological Disaster Mitigation (PVMBG) released data on the status of the Male Lewotobi Volcano in Wulanggitang District, East Flores Regency, East Nusa Tenggara (NTT) upgraded from Level III or Alert to Level IV or Alert since January 9, 2024 at 23.00 WITA. Disaster management in the emergency phase requires the active role of the community or community in disaster communication efforts. Muhammadiyah Disaster Management Center (MDMC) Sikka Regency is one of the community organizations that plays an active role in helping to handle the disaster of the eruption of Lewotobi Laki Volcano. This study aims to analyze and describe the communicationmanagement during emergency response carried out by MDMC Sikka Regency. Data collection is carried out by qualitative methods such as: interviews, observations, documentation and Focus Group Discussion (FGD). The results of the study found that in the disaster emergency phase, the importance of the role of the community in assisting the disaster management process as carried out by MDMC Sikka

Regency during the emergency disaster of the eruption of Mount

# **INTRODUCTION**

East Flores is an area prone to various types of disasters such as floods, landslides, storms, tsunamis and volcanoes. East Flores has more than one volcano, namely Lewotobi which is a twin volcano located in the southeastern part of Flores Island. Mount Lewotobi consists of two peaks, namely Mount Lewotobi Male and Mount Lewotobi Female (PVMBG 2024). January 9, 2024 The Status of Mount Lewotobi Male Rises to Level IV (AWAS) which means that the Community is Prohibited from Activities within a Radius of 4 KM.

Research by Mare et al (2021) explained that the declaration of the East Flores Regency Government program in early 2020 has implemented a Disaster Preparedness Village, one of the goals of which is to strengthen community capacity when the Lewotobi eruption disaster or the disaster emergency response phase occurs. In this phase, the first thing to do is to establish an Emergency Command Post which aims for communication and coordination between various stakeholders (Saputra et al. 2023).

Community- or community-based Disaster Communication is not new. Before the formation of a state, people have actually traditionally implemented collective actions to survive the threat of disasters. The impact of disasters becomes greater when the information conveyed to the public is confusing and incomplete (Hidayat 2024; Sari et al. 2021).

One of the community organizations that assisted in the emergency response of the Lewotobi Laki eruption disaster was the Muhammadiyah Organization, which is called the Muhammadiyah Disaster Management Center or abbreviated as MDMC in Sikka Regency. Based on the explanation above, this study aims to analyze the community-based disaster emergency communication management carried out by MDMC Sikka Regency during the Lewotobi Laki Eruption disaster emergency.

#### LITERATURE REVIEW

# **Disaster Management**

A disaster is an event that threatens and disrupts human life and ecosystems. The causes of disasters are natural and non-natural factors or human factors that cause casualties, environmental damage, property losses, and other serious psychological impacts on education, social conditions, behavior, and emotional development over a relatively long period of time (Khusna et al. 2023).

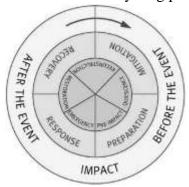


Figure 1. Modern Disaster Communication

The modern disaster management cycle has four phases, namely *mitigation*, *preparedness*, response, and recovery. These four stages consist of pre-disaster, emergency response, and post-disaster (Alexander, 2002; in Copolla, 2021).

#### **Disaster Communication**

Disaster communication plays an important role in the disaster management cycle starting from pre-disaster, emergency response, and post-disaster. In the emergency phase, communication plays an important role in saving the community and other handling such as logistics, evacuation, and information related to the number of survivors and also the current condition (Hidayat et al. 2022). Disaster communication is not only limited to digital-based communication in dealing with disasters. Disaster communication can be understood more broadly from a cultural and religious point of view because disasters are natural events that have an impact on humans (Boyd et al. 2009; Sette & Dorizzi 2013; Khumairoh et al. 2021; Fakhriati et al 2023).

# **Crisis Communication**

Crisis communication can be defined as the use of words and strategic actions to manage information and meaning during the crisis process (Coombs 2018). During a period of crisis, the communication aspect must be done quickly and all relevant stakeholder groups need to receive frequent, clear communication (O'Hair & O'Hair 2023; Brennan & Stern 2017). Crisis communication focuses on the process of constructing messages and meanings in all forms of human interaction and coordination that surrounds threatening and highly uncertain events (Sellnow & Seeger 2021).

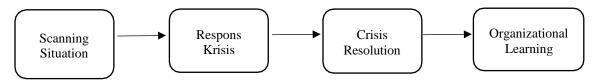


Figure 2. Stages of Crisis Communication (Sellnow & Seeger 2021)

#### **Disaster Resilience**

It is well understood that it is the community that suffers the most when disasters occur. Because it is the community that first feels the impact of the disaster (Phong et al. 2009; Shaw 2001). So, the community must have resilience so that they can better prepare, respond to, and recover from disasters. This means that community-centered DRR (Disaster Risk Reduction) program design is needed, and understanding community exposure can help strengthen community resilience to disasters (Mutiarni et al. 2022: Oktari et al. 2018; Ariyaningsih & Shaw 2023). The concept of disaster resilience is generally recognized as an important element to describe an organization's ability to recover from the impact of disasters and unexpected events. Furthermore, disaster resilience is a logical and significant concept and is useful for individuals, organizations, industries, and governments (Meydani et al. 2023; Khan et al. 2022).

#### **RESEARCH METHODS**

In this study, qualitative descriptive methods are used to research natural things. This method uses researchers as the main tool, uses combined data collection techniques, analyzes data inductively, and emphasizes meaning rather than generalization (Sugiyono 2007). The main data were obtained through direct interviews. The main data of this research will come from government agencies and MDMC organizations in Sikka Regency. This study uses data reduction methods, data presentation, and conclusion drawing (Miles et al. 2018).

# ANALYSIS AND DISCUSSION

According to the Geological Agency of the Ministry of Energy and Mineral Resources (EMR), the Lewotobi Laki Volcano has been designated as Level IV (AWAS) on January 9, 2024 at 23.00 WITA. This was carried out based on the monitoring findings carried out by the Volcano Observer team of the Center for Volcanology and Geological Disaster Mitigation (PVMBG). The Lewotobi *Male* volcano has experienced increased volcanic activity from January 1 to January 9, 2024. In the emergency response stage of the Mount Lewotobi eruption disaster in East Flores, MDMC, with MDMC representatives in Sikka Regency, helped handle the disaster.

Emergency Response Activities MDMC	Target Sasaran
Evacuation Post	472 Inhabitants
Logistics & Non-Logistics Distribution	1,635 Inhabitants
Service	477 Inhabitants
Psychosocial	194 Souls
Disaster Impact Cleanup	25 Souls

Effective communication and coordination are essential in disaster management. This is done by MDMC in the process of emergency handling of the Mount Lewotobi eruption disaster the process of communicating during the crisis to stakeholders who also responded to disaster emergencies.

Tim Response MDMC Cable. Sikka	<b>Target Sasaran</b>
Personnel Assess Quickly	8 People
Assistance Team Personnel	4 People
Personel Driver	12 People
General Volunteer Personnel	68 People
Post Management Personnel	15 People
Personal Data & Information	5 People
Psychosocial Personnel	27 People
Healthcare Personnel	18 People

Some stages of crisis communication carried out by MDMC Sikka Regency are described as follows:

# 1. Quick Reading of the Situation (Scanning).

MDMC Sikka Regency sent a rapid assessment and *assessment team* to bring the team on January 1, 2024 during the Lewotobi Eruption Volcano disaster. Consolidation to the Volcano Monitoring Post and to the Sub-district Office. MDMC Sikka Regency also conducted *assessments* to affected communities in Klatanlo, Hokeng Jaya, Nawokote, and Waiula Villages.

# 2. Respons Krisis.

After conducting an *assessment*, MDMC Sikka Regency coordinated with the Central MDMC and MDMC East Flores. MDMC Sikka Regency builds communication to various *internal* elements and involves all *leading* sectors in Muhammadiyah based on the slogan *One Muhammadiyah One Response*. The coordination carried out involvesMuhammadiyah youth, Tapak Suci, Campus, etc. The use of media such as WA, Telephoneand *Zoom* for crisis response in conducting communication and coordination between *Muhammadiyah internals* in various regions.

#### 3. Crisis Resolution.

MDMC Sikka Regency built an MDMC Volunteer Coordination post in responding to the Mount Lewotobi Eruption Disaster crisis. Health service team, psychosocial team, logistics distribution team, disaster impact cleanup team, refugee post team.

# 4. Organizational Learning.

The disaster relicensing institution that has been present since 2013 in Sikka Regency is a religious-based institution that has a hierarchy to MDMC East Flores and MDMC Central. The crisis learning carried out in responding to disasters is to maintain the flow of communication and coordination both *internally* and also with various volunteers or disaster *stakeholders* in East Flores.

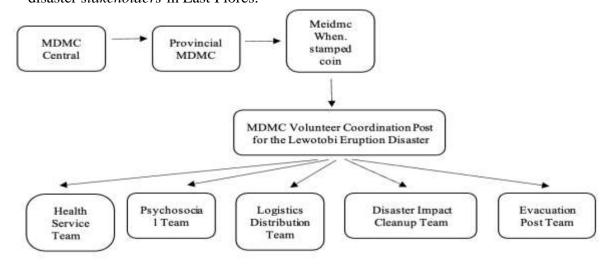


Figure 3. MDMC Crisis Communication Model in the Emergency Phase of the Lewotobi Jurnal Cahaya Mandalika (JCM) | 717

# **Eruption Disaster**

#### **CONCLUSION**

Community-based crisis communication has a very important role in managing emergency or crisis situations. Communities in crisis can help the government during disaster emergencies such as providing important information, providing resources, and conducting emergency responses in disaster management efforts. MDMC in the emergency response to the Mount Lewotobi eruption disaster represented by MDMC Sikka Regency has a wide network and faith-based resources to play an active role in helping the government and communities in the affected locations. The crisis communication model carried out by MDMC Sikka Regency during the disaster emergency also leads to five programs such as the health service team, psychosocial team, logistics distribution team, disaster impact cleanup team, and evacuation post team. Furthermore, in the disaster emergency phase, the development of the current situation is not only needed for the surrounding community, but access to this information is needed for the wider community.

# **REFERENCE**

- Ariyaningsih, & Shaw, R. (2023). Community-Based Approach for Climate Resilience and COVID-19: Case Study of a Climate Village (Kampung Iklim) in Balikpapan, Indonesia. *Land*, 12(3), 650.
- Boyd E, Wolshon B, van Heerden I. Risk comunication and public response during evacuations: the New Orleans experience of Hurricane Katrina. Public Perform Manag Rev 2009. https://doi.org/10.2753/pmr1530-9576320304.
- Brennan, J. A., & Stern, E. K. (2017). Leading a campus through crisis: The role of college and university presidents. *Journal of Education Advancement & Marketing*, 2(2), 120-134.
- Calman, K.C. 2002. Communication of Risk: Choice, Consent, and Trust. *The Lancet*, 360 (9327), 166–168. Doi:10.1016/s0140-6736(02)09421-7.
- Coombs, T. W. (2018). Crisis communication. Encyclopedia of public relations, 2.
- Copolla. 2021. Introduction to International Disaster Management. Fourth Edition. Butterworth-Heinemann
- Fakhriati, F., Nasri, D., Supriatin, Y. M., Supriadi, A., Musfeptial, M., & Kustini, K. (2023). Making peace with disaster: A study of earthquake disaster communication through manuscripts and oral traditions. *Progress in disaster science*, *18*, 100287. https://doi.org/10.1016/j.pdisas.2023.100287
- Hidayat, M., Muljono, P., Maarif, S., & Saleh, A. (2022). Indigenous Village-Based Disaster Communication in COVID-19 Management. *Open Access Macedonian Journal of Medical Sciences*, 10(E), 1045-1049.
- Hidayat, M. 2024. Disaster Communication from a Sustainable Development Perspective, Rajawali Press.
- Khumairoh Z, et al. The role of communication as the disaster risk reduction in Indonesia capital city transference policy. IOP Conf Ser Earth Environ Sci 2021; 708:012101. https://doi.org/10.1088/1755-1315/708/1/012101.
- Mare, Y. G., Angin, I. S., & Rahmawati, A. (2021). Male Lewotobi Volcano Disaster Mitigation Based on Local Wisdom of the Nawokote Village Community in Wulunggitang District, East Flores Regency. *Journal of Geography*, 17(2), 55-60.
- Miles, M. B., Huberman, A. M. and Saldana, J. (2018). Qualitative Data Analysis. (Fourth Edi).

Jurnal Cahaya Mandalika (JCM) | 718

- Community-Based Disaster Communication In The Emergency Response Phase Of The Eruption Of Mount Lewotobi Men, East Flores
  - SAGE Publication. Ltd.
- M.T.I. Khan, S. Anwar, S.A. Sarkodie, M.R. Yaseen, A.M. Nadeem, Q. Ali, Comprehensive disaster resilience index: pathway towards risk-informed sustainable development, J. Clean. Prod. 366 (Sep. 2022), 132937, <a href="https://doi.org/10.1016/j.jclepro.2022.132937">https://doi.org/10.1016/j.jclepro.2022.132937</a>.
- Mutiarni, Y.S.; Nakamura, H.; Bhattacharya, Y. The Resilient Community: Strengthening People-Centered Disaster Risk Reduction in the Merapi Volcano Community, Java, Indonesia. *Sustainability* **2022**, *14*, 2215.
- N. Salmanzadeh-Meydani, S.M.T.F. Ghomi, S.S. Haghighi, K. Govindan, Sudden-onset disaster resilience considering functionality improvement planning: an upstream oil and gas company, J. Loss Prev. Process. Ind. 81 (Feb. 2023), 104956, https://doi.org/10.1016/j.jlp.2022.104956.
- O'Hair HD & O' Hair MJ. 2023. Communication and Catastrophic Events: Strategic Risk and Crisis Management. John Wiley & Sons; USA
- Oktari, R.S.; Shiwaku, K.; Munadi, K.; Syamsidik; Shaw, R. Enhancing Community Resilience towards Disaster: The Contributing Factors of School-Community Collaborative Network in the Tsunami Affected Area in Aceh. *Int. J. Disaster Risk Reduct.* **2018**, *29*, 3–12.
- Phong, T.V.G.; Shaw, R. Enhancing Community Resilience Through Information Management: Flood Risk. In *Geoinformatics for Natural Resource Management*; Nova Science Publishers, Inc.: Hauppauge, NY, USA, 2009; p. 165.
- Saputra, D., Wibowo, A., Marnani, C. S., Widodo, P., & Saragih, H. J. R. (2023). Lessons Learned in the Efforts of the Regional Government of North Lombok Regency in the Emergency Response Phase of the 2018 Lombok Earthquake Disaster. *Journal of Citizenship*, 7(1), 363-371.
- Sari, M. M., Kusumasari, B., & Hadi, M. P. (2021). Social Media (Twitter) for Emergency Response Communication of the 2017 Great Volcano Eruption. *Journal of Communication Sciences*, 18(2), 201-218.
- Sellnow, T. L., & Seeger, M. W. (2021). Theorizing crisis communication. John Wiley & Sons.
- Sette P, Dorizzi RM. The communication lacked that day in tenerife, Rio de Janeiro, Hawaii; has it ever happened in our laboratories and in our operating rooms? A Tenerife, Rio de Janeiro, Hawaii Quel Giorno Manc`o La Comunicazione; `e Mai Successo Nei Nostri Laboratorie e Nelle Nostre Sale Operatorie?9; 2013. p. 115–22. https://doi.org/10.1007/s13631-013-0022-2.
- Shaw, R. Chapter 1 Overview of Community-Based Disaster Risk Reduction; Emerald Group Publishing Ltd.: Bingley, UK, 2001; Volume 10.
- Sugiyono. 2007. Qualitative Quantitative Research Methods and R&D. Bandung: Alfabeta.



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