



Communication of Community Organizations (Ormas) in Mitigating Earthquake Victims in Cianjur

Teddy Khumaedi¹, Mira Septi Irawan², Taufik Ismail³

Institut Ummul Quro Al-Islami Bogor

Fakultas Dakwah dan Komunikasi Islam (FDKI)

teddy.khumaedi@iuqibogor.ac.id

Abstract

The location of the epicenter of the earthquake is located on land in the Cianjur Regency, West Java Province. According to geographical data, Cianjur Regency is located at coordinates 1060 42' - 1070 25' East Longitude and 60 21' - 7 0 25' South Latitude, with an area of 361,434.98 hectares. The existence of the Cugenang Fault fault triggered this earthquake because it is an active fault, so it is prone to shifts. This causes the area traversed by the Cugenang Fault to become a dangerous zone for the establishment of permanent buildings. This study shows that the damage in the Cianjur Regency area was caused by the quality of the buildings, asymmetrical construction structures and the selection of poor quality construction materials.

Keywords: *Earthquake; Constuction; Asymmetrical.*

INTRODUCTION

Indonesia is an archipelagic country with a vast expanse of ocean greater than its landmass, situated along the equator. Indonesia lies within the Ring of Fire, a Pacific Ring stretching approximately 40,000 kilometers. This is a significant factor contributing to the frequent occurrence of seismic potential in Indonesia. Earthquakes are a disaster that can instill fear among the Indonesian population due to their consequential impacts, such as triggering tsunamis and causing extensive damage and numerous casualties. Earthquakes occur due to shifts and faults, leading to the presence of fractures both on the surface and beneath, propagating from the fault's shifting source in multiple waves. Thus, precise and rapid measurements are critically needed. The magnitude of energy and wave acceleration received can result in infrastructural damage.

Disasters strike Indonesia in succession. Each year, disasters result in casualties and damages. Various studies have indicated that Indonesia is situated in a disaster-prone zone. It lies at the convergence of three major tectonic plates: the Indo-Australian, Eurasian, and Pacific plates. Activities among these plates can trigger earthquakes and even tsunami waves. With 127

active volcanoes scattered across Indonesia, there's a constant threat of eruption, posing danger to communities. Other threatening disasters include floods, landslides, tornadoes, and many more.

Fundamentally, it is the people who bear the brunt of disasters. Their risk increases significantly if they live in or near disaster-prone areas. Every effort made to minimize disaster-related risks is a crucial step in facing various calamities. These efforts also encourage people to be more mindful of their environment. Disaster knowledge is crucial for those residing in vulnerable areas. People's knowledge, attitudes, and behaviors play a dominant role when a disaster strikes. Awareness of potential disasters fosters an attitude and behavior that prepares them for such eventualities.

The resilience of communities in facing disasters is an integral part of societal and national life. This resilience is built from the smallest level, individuals and families, then extends into communities. Resilient communities have the ability to bounce back stronger and better after being affected by disasters. Disasters, whether experienced locally or in other regions, serve as lessons for all. Handling disasters in different areas may not be identical, yet successful disaster management stories serve as a guide and record for handling disasters elsewhere. Communities possessing knowledge capable of altering attitudes and behaviors in facing disasters will create disaster-resilient societies.

Other factors contributing to the damage are the period and frequency of surface rock movements. The residents of Cianjur were shocked by an earthquake measuring 5.6 on the Richter scale on November 21, 2022, at 13:21:10 WIB (Western Indonesian Time): 6.84 S latitude, 107.05 E longitude, depth of 10 kilometers. The quake's epicenter was inland and did not pose a tsunami threat. The earthquake in Cianjur with a magnitude of 5.6 on November 21, 2022, was triggered by a fault or fracture in Cugenang. This was identified through surveys conducted by the Meteorology, Climatology, and Geophysics Agency (BMKG). The fault line lies in the Cugenang area, hence it's named the Cugenang Fault. BMKG then analyzed the distribution of aftershock points, landslide points, surface crack distribution, patterns of building damage distribution, satellite imagery, and aerial photographs, concluding that the Cianjur earthquake was caused by the newly identified Cugenang fault.

At least 9 villages spanned along a 9-kilometer stretch were crossed by the Cugenang Fault: Sarampad, Cibulakan, Ciherang, Ciputri, Cibereum, Nyalindung, Mangunkerta, Benjot, and Nagrak. Preliminary data reported 268 fatalities, with 122 bodies already identified. Search

And Rescue (SAR), the National Disaster Mitigation Agency (BNPB), Regional Disaster Management Agencies (BPBD), and combined volunteers are still attempting to locate the remaining 151 missing individuals following the earthquake. 1,083 people are reported injured, and 58,362 individuals have been displaced due to building damage. According to initial BNPB data, a total of 21,282 houses were affected by this magnitude 5.6 earthquake. Among the total damage, 6,570 buildings suffered severe damage or were completely destroyed, while 2,071 experienced moderate damage.

During disasters, when situations are unfavorable and communication is disrupted, panic spreads everywhere. The focus of the community becomes self-preservation and the safety of their families. Post the initial earthquake tremors in Cianjur, local government authorities faced communication breakdowns. As the earthquake vibrations subsided, mass media simultaneously reported the incident. The occurrence of the earthquake in Cianjur shocked and saddened the Indonesian populace because it was an area not previously predicted or monitored by BMKG. This event underscored the critical importance of rapid coordination and communication for government agencies and volunteer organizations to promptly respond to earthquake sites.

Various community and volunteer organizations arrived at the location post-Day 1 of the earthquake to establish logistics support posts and aid in managing the remaining disaster victims trapped in the rubble. Researchers emphasize the importance of extra-rapid coordination and communication among government agencies, disaster management organizations, and community-based organizations caring for Cianjur earthquake victims. The victims still trapped in the rubble were swiftly evacuated to disaster relief posts through this coordinated effort. Organizational communication serves as a crucial medium and tool for coordination in any situation, particularly in disaster victim management at disaster sites.

RESEARCH METHODS

The method used in this research employs a qualitative approach (field research). Through field observation, data sources were directly collected by researchers in the field through various elements of volunteer earthquake relief posts representing organizations involved at the disaster site. To obtain supplementary sources, commonly referred to as secondary sources, a literature analysis related to disasters in various regions in Indonesia was conducted. These archives are extensively published by the National Disaster Management Agency (BNPB) and Regional Disaster Management Agencies (BPBD), encompassing books,

journals, and internet sources covering news and coordination related to national and regional disaster management. The steps and stages carried out by the researchers and volunteer team included.

1. After the team meeting and several disaster relief volunteers, we then created a timeline for surveying locations and simultaneously carried out the logistics delivery activities for the disaster victims still residing in refugee tents.
2. The next step involved measuring and identifying the issues or needs of the earthquake victims at the destination location, which is the Al-Kautsar Islamic boarding school in Cilaku, serving as the starting point and background for our community service research activities. Subsequently, after obtaining primary data, we held our second meeting to screen the field data and facts that could support this research. This was accomplished by fostering communication among organizations and fellow earthquake relief volunteers at different locations to acquire accountable data.
3. The next strategic steps were to actualize the distribution of logistic assistance at the Al-Kautsar Islamic boarding school location, coordinating with various Community Organizations (Ormas) that had established posts around the boarding school. The aim was to achieve positive impacts for the program partners, even though the implementation was gradual and slow.
4. Regarding the scheme to measure the success level and evaluate activities during the implementation at that location, we devised a 3-step scheme:
 - a. *Intense and targeted communication with various community organizations (Ormas) already present at the disaster site.*
 - b. *Conducting a survey of logistical needs and other requirements for each earthquake victim at specific location points.*
 - c. *Selecting a specialized volunteer team from the Fananie Center and Atap Indonesia organizations to be dispatched to the designated evacuation location determined by the team.*

RESULTS AND DISCUSSION

Organizational communication is a communication channel type conducted by the organizational structure towards every member involved within it. Organizational communication can also be referred to as institutional communication carried out by leaders within the institution to their subordinates. For instance, communication from the head of an institution to specific members within that organization. Organizational communication is incredibly crucial, particularly when conducted in decisive situations and conditions, one of which is inter-organizational communication during an earthquake disaster in a certain region. Without effective communication in disaster victim management during such an event, it is nearly impossible to handle disaster victims swiftly and accurately. Many cases have occurred in several regions where, during a disaster, what the government needs is communication and coordination among institutions, primarily through organizational communication.

One instance is the earthquake disaster in Cianjur, West Java, where organizational coordination and communication among institutions proved highly effective, greatly aiding numerous humanitarian organization volunteers in easily fulfilling their roles in disaster relief and victim management at the disaster site. The following is a discussion of the chronology of the earthquake disaster that occurred in the Cianjur region in November 2022. It includes the stages of the earthquake becoming public information, the geological conditions and causes of the earthquake, and certainly, the risk impacts caused by the earthquake.

Earthquake Information

An earthquake occurred on Monday, November 21, 2022, at 13:21:10 WIB (Western Indonesian Time). According to information from the Meteorology, Climatology, and Geophysics Agency (BMKG), this earthquake had a magnitude of M5.6 at a depth of 10 km. The earthquake's epicenter was on land at coordinates 107.05 E longitude and 6.84 S latitude, approximately 9.65 km southwest of Cianjur City or 16.8 km northeast of Sukabumi City. Based on data from the Geo Forschungs Zentrum (GFZ) in Germany, the earthquake's epicenter was at coordinates 107.05 E longitude and 6.89 S latitude, with a magnitude of M5.5 at a depth of 10 km. According to information from The United States Geological Survey (USGS) in the United States, the earthquake's epicenter was located at coordinates 107.095 E longitude and 6.853 S latitude, with a magnitude of M5.6 at a depth of 10 km. The population in the Cianjur District is

approximately 214,609 people. The Cianjur District is the most densely populated, where 214,609 residents inhabit an area covering only 23.44 hectares.

Geological conditions and causes of the earthquake:

The earthquake's epicenter was on land in the Cianjur Regency, West Java Province. The area's morphology generally consists of flat to undulating plains, undulating to steep hills located southeast of the Gede Pangrango volcano. The region is primarily composed of Quaternary deposits, comprising young volcanic rock debris (volcanic breccias, lava, tuff), and river alluvium. Some of this young volcanic rock debris has undergone weathering. These Quaternary deposits are generally soft, loose, unconsolidated, enhancing the impact of tremors, thus making it earthquake-prone. Additionally, in the morphology of undulating to steep hills composed of weathered rocks, there is potential for ground movement triggered by strong earthquakes and high rainfall.

This earthquake falls under the category of shallow crustal earthquake or shallow tectonic crustal earthquake caused by active fault displacement activity on the plains, including mainshock-aftershock sequences, where the main earthquake is followed by several aftershocks.

Based on the earthquake's epicenter position, depth, and source mechanism data from BMKG and GFZ Germany, this earthquake event was caused by active fault activity. The characteristics and exact location of this active fault are not yet well-known but are situated in the northeastern part of the Cimandiri Fault Zone.

Impact of the earthquake

The occurrence of this earthquake resulted in a disaster involving loss of life, injuries, building damage, and ground movements in the Cianjur Regency. According to BMKG data, the earthquake tremors were felt in areas around the earthquake's epicenter in the Cianjur Regency at a scale of V-VI MMI (Modified Mercalli Intensity). According to the Geological Agency, the distribution of affected residential areas due to the earthquake tremors lies in the High Earthquake Disaster Prone Zone (KRB). This earthquake event did not cause a tsunami as the epicenter was on land.

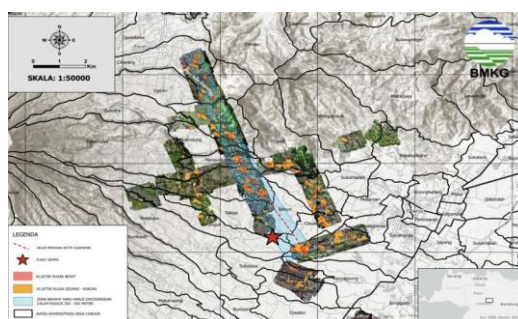
Upon receiving information from BMKG, the Atap Indonesia team contacted one of the students majoring in Islamic Broadcasting Communication at Ummul Quro Al-Islami Institute to join them in the field. Hastily, the team headed to the meeting point at Ummul Quro Al-Islami Institute and rushed to Cianjur at 16:40 WIB using a rescue vehicle. The team arrived in Cianjur

at 20:50, encountering numerous road closures due to landslides caused by the earthquake. Additionally, the narrow roadways posed obstacles, compounded by power outages in the earthquake-affected areas and some emergency zones, disrupting communication.

The first location reached by the team was Cirumput Village, where a teacher was trapped under debris, resulting in the loss of one of their fingers. They were immediately rushed to a hospital in the Bandung area because the patients at RS Sayang and RS Cimacan were overwhelming. The team also found many children with broken bones due to collapsing school structures. After providing logistics and healthcare in Cirumput Village, the team proceeded to the second location, Kp. Padaruum in Benjot Village, one of the earthquake epicenters and severely affected areas.

Seventeen fatalities were recorded due to collapsing structures, and unfortunately, one toddler suffered severe injuries with a head laceration requiring 28 stitches. A heart-wrenching story emerged from a neighborhood leader who was cooking a pot of vegetable soup to share with her neighbors. Tragically, the earthquake struck, causing the soup to spill on her stomach. She also recounted the loss of her 4-year-old child due to the collapsed debris. Despite the tragedy, she managed to smile and laugh, acknowledging the help from numerous volunteers.

For two months, the team has been alongside survivors in Cianjur for post-earthquake recovery. Many programs have been implemented by the volunteer team in this disaster, including healthcare services, psychosocial support, logistical support, construction of Emergency Response Shelters, establishment of prayer rooms, and comfortable sanitation facilities for the survivors.



Source: Meteorology, Climatology, and Geophysics Agency.

Figure 1. Sketch of the Cugenang Fault Line Location.



Source: Atap Indonesia Volunteer, Mira Septi Irawan.

Figure 5. Initial Treatment for Victims Injured by Debris Collapse.



Source: Atap Indonesia Volunteers.

Figure 6. Distribution of Logistics for the Survivors.

CONCLUSIONS AND RECOMMENDATIONS

The efforts in disaster management will continue to evolve with the advancement of knowledge and human civilization. One aspect of knowledge is organizational communication, which represents a form of communication conducted through well-structured and organized institutional entities. In the context of disaster management, inter-agency coordination is a crucial dimension that can determine the certainty of swift responses in mitigating disaster casualties, depending on the effectiveness of communication methods. During a disaster, calmness in coordination among policy stakeholders is required in handling and mitigating the disaster's effects to minimize the number of victims. Learning from the Cianjur earthquake disaster, many aspects need to be comprehensively understood by stakeholders, institutions, and organizations involved in disaster management at disaster sites. Organizational communication plays a significant and essential role in inter-agency coordination during disasters, regardless of where they occur.

REFERENCES

- Agung Harijoko, dkk. *Manajemen Penanggulangan Bencana dan Pengurangan Risiko Bencana di Indonesia*. Gadjah Mada University Press, juni 2021
- Alatas, Salim. *Evolusi Kajian Komunikasi* (Studi Terhadap Perkembangan Kajian Komunikasi). Surya University. Baudrillard. 1983. *'The Implosion of Meaning in the Media' dalam In the Shadow of the Silent Majorities*. Terj. P. Foss, J. Johnston dan Patton. New York: Semiotext(e). Juni 1983.
- Anies,. *Manajemen Bencana "Solusi Untuk Mencegah dan Mengelola Bencana"*, Grafika Publishing. 2018.
- Ario, Akbar Lomban, Dkk. *Cerita dari Desa Tangguh*. Penerbit: Pusdiklat BNPB, Pusat Data Informasi dan Humas Badan Nasional Penanggulangan Bencana. BNPB, 2015
- "Atlas Bencana Indonesia", Penerbit: Pusat Data Informasi dan Humas Badan Nasional Penanggulangan Bencana. BNPB. 2017.
- Badan Nasional Penanggulangan Bencana (BNPB, 2017). Atlas Bencana Indonesia. ISBN: 978-602-5693-06-9.
- "Cerita Di Balik Lensa", Pusat Data Informasi dan Humas. Badan Nasional Penanggulangan Bencana (BNBP). Penerbit : Pusdatinmas BNPB, Jakarta, 2015
- Didi Supriadie & Deni Darmawan, *Komunikasi Pembelajaran*. Penerbit. PT. Remaja Rosdakarya Bandung. 2018.
- Khambali. *Manajemen Penanggulangan Bencana*, Penerbit: Kompas Gramedia , Yogyakarta. 2017.
- Lativa Qurrotaini, Anggie Amanda Putri, Ahmad Susasnto. "*Edukasi Tanggap Bencana Melalui Sosialisasi Kebencanaan Sebagai Pengetahuan Anak Terhadap Mitigasi Bencana Banjir*". Jurnal An-Nas, Jurnal Pengabdian Masyarakat. Universitas Muhammadiyah Jakarta. Volume 2 No. 1. Maret 2022.
- Littlejohn, Stephen W. 2005. *Theories of Human Communication*. Canada: Wadsworth.
- Nunung Nurwati, dan Nandang Mulyana. (2017). "*Profil Penduduk Kabupten Cianjur*". Vol. 7. No.2, <https://jurnal.unpad.ac.id/share/article/view/15721/7404>, diakses: 25 Maret 2023.
- Nur Arief Mustofa. (2010). "*Gempa Bumi, Tsunami Dan Mitigasinya*". Balai Informasi dan Konservasi Kebumian Karangsembung – LIPI, Kebumen. Vol 7. No 1, <https://journal.unnes.ac.id/nju/index.php/JG/article/view/92/93>, diakses: 25 Maret 2023.
- Ostwald, Michael J. 1997. *'Virtual Urban Futures'*, dalam Holmes (ed), *Virtual Politics: Identity and Community in Cyberspace*. London: Sage. Poster, Mark. 1997. *Cyberdemocracy: Internet and Public Sphere*, dalam Holmes, *Virtual Politics: Identity and Community in Cyberspace*, London: Sage Publication.

S. Arifiantoo & Christiany Juditha (ed). *Media Digital dan Perubahan Budaya Komunikasi*. Penerbit. CV. Aswaja Pressindo, Yogyakarta. 2019

Superaadmin Humas. *Buku saku Tanggap Tangkas Tangguh Menghadapi Bencana*. Rencana Nasional Penanggulangan Bencana 2020 – 2024. Penerbit: Pusat Data Informasi dan Komunikasi. BNPB. Februari 2021

Supartoyo, Cecep Sulaiman. “*Gempa Bumi Sorong Tanggal 25 September 2015 dan Upaya mitigasi*”. *Jurnal Dialog Penanggulangan Bencana*. (2017): terbitan berkala Badan Nasional Penanggulangan Bencana:vol.8 No. 2, hal.164 – 174. Jakarta. Desember 2017. ISSN 2087-6636X

Salahuddin Husein. (2016). “*Bencana Gempabumi*”. Universitas Gadjah Mada, <https://www.researchgate.net/profile/Salahuddin-Husein/>, diakses: 25 Maret 2023.