

Innovation in Disaster Mitigation Communication Model, Coordination, and Digital Literacy after the Cianjur Earthquake Disaster

<http://dx.doi.org/10.25008/jkiski.v9i1.979>

Edy Prihantoro^{1*}, Ainun Rahma Yusufina², Noviawan Rasyid Ohorella³

¹Master of Communication Science – Universitas Gunadarma
Jl. Margonda Raya No. 100, Depok 16424, Jawa Barat - Indonesia

*Corresponding author: (noviawanrasyid@gmail.com)

Submitted: March 17, 2024, **Revised:** May 5, 2024, **Accepted:** June 4, 2024

Accredited by Kemdikbudristek No. 152/E/KPT/2023

Abstract - Indonesia is vulnerable to natural disasters, including earthquake. Earthquake has an impact on the community including environmental, property, and psychological damage as well as loss of life. Such an impact also happened to earthquake-stricken Cianjur in West Java, which required disaster mitigation and digital literacy to deal with it. The aim of this research is to determine innovations in disaster mitigation communication models, coordination and digital literacy after the Cianjur earthquake. This is a form of handling the impact of a natural disaster before and after it occurs. The theory used in this research is Haddow Disaster Communication focusing on customer focus, leadership commitment, situational awareness, and media partnership. The method used in this research is descriptive qualitative conducted by collecting data through field observations, in-depth interviews and focus group discussions. The results of this research are innovations in disaster mitigation communication models to become disaster mitigation models in Cianjur in the future, know the coordination paths between the parties and the community in case of a disaster, and provide digital literacy for the people of Cianjur through emergency response call centers and WA groups to disseminate information to the public. The efforts of the parties involved in disaster mitigation aim to help the community reduce the risk of disaster affecting physical development, increase the ability of the community in disaster risk mitigation and get an understanding of the community's access to disaster information.

Keywords: Innovation; Communication Models; Disaster Mitigation; Digital Literacy; Earthquake Cianjur.

Introduction

Communication means participating or informing, conveying messages, information, ideas and opinions that are carried out by one person to another with the expectation of feedback (Gori & Simamora, 2020). Communication cannot be avoided from all aspects of life. As social beings who always interact with other people, we always communicate with the aim of conveying messages and receiving messages from other people (Ngurah, 2023).

Apart from aiming to convey messages, communication also has a very important role in various aspects of human life, as communication technology can be used to provide more effective information, education, and coordination in emergency situations (Kartika et al., 2017). An emergency situation is an uncertain situation such as a disaster. Disaster communication is a necessity to reduce uncertainty, in order to act effectively in interacting individually and in groups. In disaster management, the public and private institutions need accurate information in disaster emergency and pre-disaster conditions (Tamitiadini et al., 2019).

Accurate information or message in communication can be seen in terms of its shape. The first is informative, namely providing information or messages based on facts and data. Facts and data can contain information on the Richter scale of the earthquake in Cianjur. The second is persuasive, namely raising human understanding and awareness that the information or messages conveyed will change attitudes, such as the Regional Disaster Management Agency/government persuading people to evacuate. The third is coercive, namely conveying information or messages forcefully by imposing sanctions or issuing orders or instructions to target people, such as the Regional Disaster Management Agency/government banning affected people in Cianjur from returning to their respective homes for fear of aftershocks (Lestari, 2018).

In disaster communication, there are a variety of information or messages regarding disasters to the public that will reduce disaster risk and loss of life through disaster mitigation. Disaster mitigation is a reference for risk assessment and analysis in dealing with disasters and evacuation. Mitigation is the initial stage of disaster management to reduce the impact of a disaster. Disaster mitigation efforts are made by building physics, raising awareness and increasing the ability to face disaster threats. These efforts need to be carried out in a comprehensive manner, namely by involving structures and non-structures in handling earthquakes (Niode et al., 2016).

Earthquake is the shaking of the Earth's surface caused by collisions between the Earth's plates, fault activity (faults), volcanic activity (Nonmae, 2020). A magnitude 5.6 earthquake occurred in Cianjur on November 21, 2022. The epicenter of the earthquake was located 6.84 degrees southern latitude and 107.05 degrees eastern longitude at a depth of 11 km. A total of 297 aftershocks were recorded until November 28, with magnitudes ranging from M1.0 to M4.2. (Noname, 2022). The earthquake left 602 people dead, 8 missing, and 7,810 injured, while 56,278 houses and 1,021 public facilities were damaged (<https://gis.bnpb.go.id/> Accessed on Monday, 6 February 2023 at 11.37 WIB).

Disaster management in Indonesia, especially in districts, is handed over to the Regional Disaster Mitigation Agency (BPBD). One of its missions is protecting the nation from the threat of disaster by building a culture, disaster risk reduction and disaster preparedness as an integral part of national development. In carrying out disaster management, the Cianjur Regional Disaster Management Agency (BPBD Cianjur) is divided into structural and nonstructural divisions.

The BPBD is tasked with dealing with the impact of earthquakes effectively by educating the community so that their capacity continues to increase. The capacity can be enhanced through coaching regarding pre-disaster, during disaster and post-disaster mitigation. In dealing with the impact of earthquakes, there are two plans, namely the Disaster Risk Assessment Plan and the Regional Disaster Management Plan which have received a seal of approval from the Regent.

The BPBD Cianjur knows that not all Cianjur people are technologically literate. Therefore, the Agency set up Disaster-Resilient Village or DESTANA and Disaster-Resilient Volunteers or RETANA to enhance villagers' technology literacy. There are 5 RETANA in each village tasked with communicating and socializing the program to the community so that it will be beneficial for disaster-prone areas. RETANA is socialized by communicating with BPBD if a disaster occurs through the Call center and social media such as Whatapps.

In addition to preparedness communication, health communication is carried out through an effective non-structural response in public health communication based on Communication, Information, Coordination and Cooperation, an understanding of disaster risk, to strengthen the capacity to manage disaster risk and invest in disaster risk reduction as well as promote "Build Back Better recovery, rehabilitation, and reconstruction in accordance with the Sendai Framework for Disaster Risk Reduction (SFDDR) in the final stage (Arisandi & Umam, 2019). The BPBD Cianjur hopes that when the disaster recur the public will know how and what to do to deal with it by means of digital literacy.

Digital literacy is needed to make people understand what they need to prepare and do before and when natural disasters occur. Through disaster response literacy, the community will hopefully be more alert and responsive to natural disasters. Where disaster management literacy for the community is concerned, local communities and volunteers must provide knowledge to be learned in disaster management and mitigation. Disaster management literacy must have the skills needed in effective disaster response and basic skills and attitudes in dealing with disasters (Kimura et al., 2017).

The basis for this research is supported by several previous research journals, namely research from Tjut Afrieda Syahara with the title Disaster Communication Through Opinion Leaders which reveals that the community itself does not understand the characteristics of disaster threats, so that

disasters often occur and the community is not ready to face them. Mitigation is a variety of actions and efforts to reduce vulnerability and risk by increasing self-capacity and dealing with disasters (Afrieda et al., 2021).

Meanwhile, this research focuses not only on opinion leaders but also various aspects such as focus audiences, leadership commitments, situational awareness and the media. This research looks at various aspects in understanding disaster mitigation so that people know the characteristics or signs of disaster mitigation.

The next research is Disaster Mitigation Communication (Case Study of Disaster Mitigation of the West Java Provincial Disaster Mitigation Agency (West Java BPBD) in Dealing with Earthquake Natural Disasters Due to the Lembang Fault) by Mochamad (Iqbal et al., 2021), which reveals about four components in disaster communication according to Haddow. Customer focus aims to understand the information they need. Leader Commitment: Informants acknowledged that disaster mitigation efforts related to the Lembang Fault were still lacking due to many limitations that the West Java BPBD had. Situational Awareness: making policies that are formed and disseminated to the community related to disaster management. Media Partnership: @bpbd_jabar and website at www.bpbd.jabarprov.go.id. Whereas this study uses DESTANA and RETANA media to inform the public.

This research aims to find out how the BPBD Cianjur carries out disaster mitigation and digital literacy. Therefore, the researcher knows it through 4 components of disaster mitigation. Communication is the best way to succeed in disaster mitigation, preparation, response, recovery during a disaster (Suherman, 2018).

According to Haddow, there are four main foundations in building disaster communication and providing effective information, namely Audience Focus: understanding what information is needed by the audience, in this case the community and volunteer, and building a communication mechanism that ensures the information is conveyed correctly and accurately. The information provided can be in the form of handling the threat of dangers, the level of possibility of a disaster occurring and how big the scale is, as well as the impact of the disaster.

The second component of disaster communication by Haddow is Leadership Commitment. Leaders who play a role in emergency response must have a commitment to carry out effective communication and be actively involved in the communication process. The third component of disaster communication by Haddow is Situational Awareness: Effective communication is based on data collection, analysis and dissemination process (Iqbal et al., 2021) This phase is the stage of finding out how to obtain and disseminate data in a transparent and accountable manner (Rizali, 2021).

In addition to these three components, with the development of technology, disaster communication uses the media to disseminate information or messages to the public in a fast and accurate way. The other component is the media. Media: The media, mass media and online media are important to convey accurate information to the wider community (Prihantoro et al., 2021). Collaboration with the media involves understanding the needs of collaboration between the media and a trained team to obtain information and disseminate it to the public (Eka & Erland, 2021).

Theoretical Framework

Communication is the best way to make disaster mitigation, preparation, response and situation recovery successful during a disaster (Suherman, 2018). Disaster communication functions as a producer of information, providing various information about an event that can have a negative and destructive impact on society (Sari et al., 2017). According to Haddow, there are four main foundations for building disaster communication and providing effective information, namely: (1) Audience Focus: understanding what information is needed by the audience, in this case the community and volunteers. Building a communication mechanism that ensures information is conveyed appropriately and accurately. The information provided can be in the form of handling the threat of danger arising, the level of possibility of a disaster occurring and how large the scale of the disaster is, as well as the impact of the disaster.

There are several audiences that must be reached in order to successfully communicate in the four phases of mitigation, namely emergency management preparedness, response and recovery. Emergency management audiences include the general public, disaster victims, the business community, the media, public officials, community officials, first responders and community members or volunteers; (2) Leadership Commitment: leaders who play a role in emergency response must have a commitment to

carry out effective communication and be actively involved in the communication process (Martini M, Suwaryo W, 2021); (3) Situational Awareness: Effective communication is based on data collection, analysis and dissemination processes (Iqbal et al., 2021). This phase is the stage of finding out how to obtain and disseminate data in a transparent and accountable manner (Rakhman & Prihantoro, 2021); (4) Media: Among the media that have an important role in conveying information to the wider community are mass media and online media

Communication for disaster preparedness is communication to prevent disasters. Through communication, authorities can inform the public about preparations and offer solutions for disasters (Hilmy Aziz, 2023).

Material and Methodology

The subjects of this study were disaster volunteers and BPBD Cianjur officials who carried out the communication process. As is the case of qualitative research, the subject is an element that must be observed, because it provides information related to ongoing research (Sugiyono & Lestari, 2021). The object of research is the process and how effective the communication is carried out by disaster volunteers and BPBDs in realizing the disaster mitigation process. As explained, objects are attributes or properties in the research process (Sugiyono, 2017).

This research employs descriptive qualitative approach where a research must be conducted in an in-depth manner to be able to answer problems and produce an in-depth and detailed research (Sugiyono, 2019). The paradigm of this study is constructivist, where problems are constructed through direct observation and also in-depth interviews. This research was conducted through observation, in-depth interviews and literature review, by using source triangulation to balance answers from informants.

Result and Discussion

One of the areas in Indonesia that experienced an earthquake was Cianjur, West Java. The earthquake in Cianjur was triggered by the Cimandiri fault. The Cimandiri fault is an active fault located in West Java with an East and Southwest elongation -Full details Accessed on July 29, 2023. At 10.57 WIB).

Cianjur Regency is known as one of the most disaster-prone districts in West Java and even in Indonesia. In 2018, the BPBD Cianjur released data showing that Cianjur was ranked 20th in Indonesia's disaster risk index. The earthquake in Cianjur affected 16 out of 32 sub-districts. The affected-sub-districts are Cianjur, Karang Tengah, Warung Kondang, Cilaku, Gekbong, Cugenang, Cibeber, Sukaluyu, Sukaesmi, Pacet, Bojong Picung, Cikalong Kulon, Mande, Cipanas, Haurwangi and Ciranjang. The earthquake left 602 people dead and caused damage to 56,548 house. A total of 27 public kitchen points were set up to provide food to earthquake evacuees (Bpbd_cianjur, 2022).

Under the Minister of Home Affairs' Regulation No. 46 of 2008 regarding guidelines for the organization and work procedures of the National Disaster Mitigation Agency (BNPB), disaster management in Indonesia is left to the agency. One of the agency's missions is protecting the nation from the threat of disaster through culture building, disaster risk reduction and disaster preparedness which are an integral part of national development (Badan Nasional Penanggulangan Bencana, 2020).

Therefore, the BNPB has a disaster risk assessment which has implications on the BPBD Cianjur. Disaster risk assessment is an approach to show the potential negative impact of potential disaster. The potential negative impact is also calculated by considering the level of vulnerability and capacity of the area. This potential negative impact illustrates the potential number of lives, property losses, and environmental damage exposed to potential disasters (<https://bnpb.go.id/kajian-bencana/default>). Accessed on 29 July 2023. At 20.10 WIB).

The BPBD Cianjur is socializing disaster mitigation to the community to increase their capacity in managing disaster risks through DESTANA (Disaster-Resilient Village) and RETANA (Disaster Resilient Volunteers). This program is one of the solutions in managing time constraints and controlling it in providing a sense of security to the people of Cianjur and encouraging community participation in disaster risk management. RETANA was stipulated in the Cianjur Regent's Decree no/360/kep.175/BPBD/2020/.

Disaster mitigation is necessary to make people understand what they need to prepare and do before and when natural disasters occur. Hopefully, through disaster response literacy the community will be

more alert and responsive to natural disasters (Anam, 2020). The BPBD Cianjur conducts a digital literacy program by informing the public through the social media of the BPBD Cianjur. All activities and information regarding the BPBD Cianjur are available on the media so that the public can easily access them.

Disaster Mitigation Communication Model

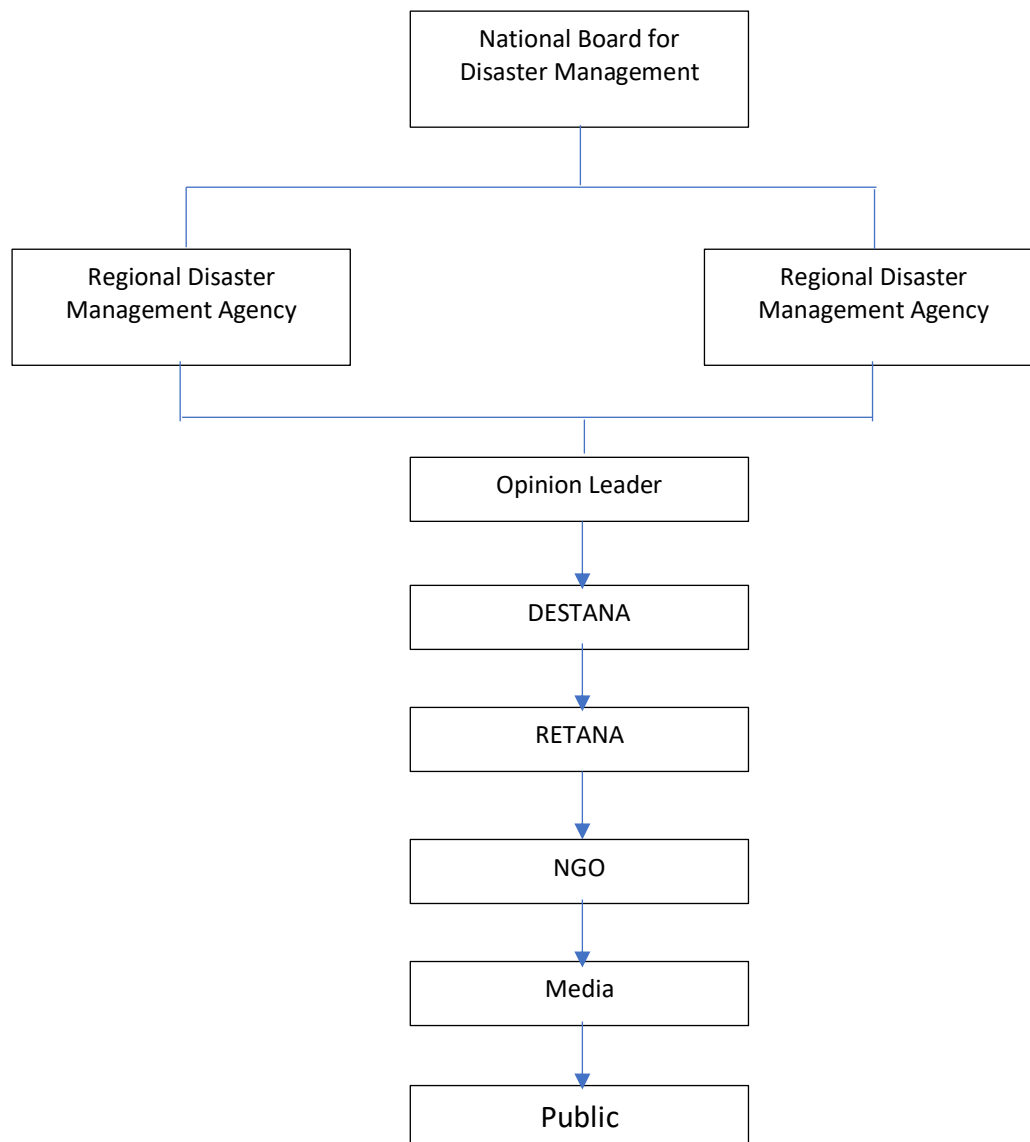


Figure 1. Disaster Mitigation Communication Model
Source: Personal Documents

In essence, the innovation of the disaster mitigation communication model involving parties including BNPB, BPBD, Cianjur regional government, opinion leaders, disaster-resilient villages (DESTANA), disaster-resilient volunteers (RETANA), several NGOs, media (call centers) and WAG can help mitigate disasters in Cianjur.

Mitigation Dimensions

Disaster mitigation is carried out not only when but also before a disaster occurs. Apart from information on potential disasters in an area, training and internalization of habits for dealing with disaster situations must also be undertaken on an ongoing basis in the pre-disaster stage. Disaster risk

assessment and analysis serves as a reference for formulating priority actions for disaster risk reduction or mitigation (Effendi, 2022) as explained in the interview as follows:

"At that time, when the incident occurred, there were instructions from the district, so that all BPBD employees went to the field to evacuate victims, when a disaster occurred. Once at the location, we set up command posts."

Mr. Wawan revealed that when the disaster occurred the BPBD Cianjur received instructions from the district and all BPBD Cianjur employees went straight to the field to evacuate the victims.

"Yes, BPBD's main task is to evacuate victims when a disaster occurs, but there are many tasks, namely outreach to the community during pre-disaster and post-disaster stages. BPBD carries out reconstruction of affected buildings."

Mr. Nur Jamil also revealed that when a disaster occurs the main task of BPBD Cianjur is evacuating victims.

"Apart from reporting to BPBD, there are actually many activities that fellow volunteers do. Apart from disaster mitigation and socialization, of course, there are a lot of things you can do. Activities that we can do, some friends exercise together in the morning with mothers or with children, we make a nutritional kitchen which is also important because in-between the busy lives of the people in the tents, of course, they also need adequate nutrition and we make some kind of juice or some kind of soup and so on. "Then apart from that, we also create psychosocial activities whose contents may be more about educating children and raising their enthusiasm, providing affirmations and a kind of ice breaking and so on."

Apart from socialization, volunteers' activities during disaster mitigation include carrying out morning exercise activities, creating a nutrition kitchen because the community must also receive adequate nutrition. Volunteers also carry out psychosocial activities that educate children and raise their enthusiasm, such as providing affirmations, ice breaking and so on.

"When an earthquake occurs, of course, the first thing that RETANA does is making a report, an initial report to BPBD that a disaster has occurred. That is a preliminary report, we call it neither an interim report, final report, nor fixed report but a preliminary report. So, if there is an assignment from BPBD via the BPBD call center, it will immediately be checked by the RETANA team. So the RETANA team checked and then we called it a location assessment. Field assessment, then there RETANA handles and assesses what the field conditions are like, then what the needs are, and recently yesterday there was a landslide disaster in Pagelaran, requiring heavy equipment. BPBD does not have heavy equipment, so BPBD coordinates with other agencies, for example the PUPR agency. "That's what we did, at least there was a quick response from the government through RETANA."

The first thing that RETANA did was to report to BPBD Cianjur that a disaster had occurred. This is an initial report, not an interim or final report, then RETANA assesses the location, records field conditions and needs and coordinates with other agencies. So, when a disaster occurs, RETANA reports it to BPBD and carries out an assessment, while the BPBD Cianjur's team goes to the scene and evacuates the victims. The model implemented by BPBD Cianjur is applied in percentage and RETANA was explained in the interview as follows:

"Yes, if there are only two mitigation concepts in the law, there are also structural and non-structural mitigation. The request for capacity transfer has not yet been fully implemented, only a few percent because it clashes with many things, DESTANA is an innovation but it has not yet been formed, its capacity is not yet there. For elementary school, middle school, and kindergarten, there is no SPAB program yet, it hasn't reached a development stage yet, it's not finished yet, it's still at the beginning of the simulation. "So everything hasn't been implemented yet and it's still a long way off. "If the implementation only becomes mitigation if the percentage is 25% of the Cianjur population, it doesn't seem like that much. So, it's 15% in capacity to face the earthquake disaster in Cianjur"

Mr. Wawan, The BPBD Cianjur's disaster mitigation model has two concepts in the law, namely structural and non-structural. However, the transfer of capacity has not yet been fully implemented,

only a few percent and is in conflict with many things. DESTANA is an innovation but its capacity has not yet been established for elementary schools, middle schools and kindergartens, there is no SPAB program yet and it has not yet been developed so it is still early in the simulation. If it is increased, it will only reach up to 15% to face earthquakes.

Dimensions of Disaster Communication

A communication is considered effective if the message conveyed by the communicator can have an impact or bring about a change as desired by the communicator, such as knowledge, attitudes and behavior. The change can be known through the responses given as feedback, either directly or indirectly. Disaster communication was explained in the interview as follows:

"Effective communication must be strengthened by the knowledge and capacity of the community, including EWS (early warning system), and socialization, coaching and education must be further improved. So far, we have communicated using a call center, but not all people are familiar with the BPBD call center, so we intervene in it by forming disaster-resilient people or volunteers or RETANA in each village. "We have made these efforts, one of which is communicating about disasters with RETANA members."

Mr. Wawan, to make disaster communication effective, the knowledge and capacity of the community must be strengthened, such as early warning system (EWS). EWS, socialization and education of the community must be further improved. BPBD disaster communication uses a call center, but the public has not yet been familiar with it, so BPBD intervenes in it by forming RETANA whose job is to communicate about disasters.

"Communication to the community must include a planning document, which is issued by the Regent. There is a second KRB (Disaster Risk Study) document, namely the RPBD (Regional Disaster Management Plan). While RPBN (National Disaster Management Plan). Contingency Plan is about how to deal with earthquakes, floods and 10 other disasters. If there is such a document, it will be communicated or delivered to the public So, when facing a disaster you can know what to do. The second is communicating to the community so that community capacity increases. "The third is communication which is conducted via EWS (Early Warning System) or an early warning tool but BPBD Cianjur is still weak in these three things."

So, according to Mr. Nur Jamil, effective disaster communication must have planning documents decreed by the Regent. There are Disaster Risk Assessment and RPBD (Regional Disaster Management Plan) documents. All of these documents were communicated to the community in response to disasters unlike this. Second, communication with the community to increase capacity can actually use EWS or early warning tools.

"When it comes to post-disaster matters, of course there needs to be communication or perhaps outreach to the community. From this socialization, we create a kind of disaster mitigation, which in turn can be beneficial for the community, indeed the area becomes an area that is prone to disasters. "Then we create a kind of disaster mitigation, such as a safe disaster preparedness bag where this bag has been prepared by residents, in case a disaster occurs."

Disaster communication is conducted by disseminating information to the community. Through socialization, disaster mitigation can be created for the benefit of the region or vulnerable areas, for example, making disaster preparedness bags. These bags are prepared for residents when a disaster occurs.

"For communication, because RETANA was formed based on the interests of the community in disaster management, it is not very difficult because RETANA, which comprises five people, represents the RWAN, represents those areas. So, even some of the RETANA are also community leaders, some are also from the RT, RETANA. So it is not very difficult to coordinate, to communicate with residents and the community."

It is not difficult for RETANA to conduct disaster communication based on the interests of the community and RETANA is a community figure in the area. So, disaster communication in disaster mitigation must increase community capacity which has been implemented by the KRB and RPBD.

RETANA itself does not have difficulty disseminating information to the community because RETANA is a community figure and was formed for the benefit of the community.

Disaster communication carried out by BPBD Cianjur was effective using planning documents. This planning document serves as a guide for conducting outreach regarding disasters to increase the capacity of the community by, among others, socializing the use of EWS or providing disaster mitigation bags.

Coordination Dimensions

Coordination is synchronizing the regular skills of individuals in relation to their number, time and goals, so that simultaneous action can be taken to achieve pre-determined targets. One of the coordination functions is to unite movements and steps in a directed manner to achieve organizational goals. The goals of disaster management cannot be achieved on one's own, so coordination is very important in emergency conditions, mitigation and preparedness. So, there needs to be cooperation between various parties in disaster response and disaster management. The following interview explains how BPBD Cianjur coordinates and what the mechanism is

"At that time we coordinated with the village head, the affected communities, RETANA, volunteers from NGOs, PMI and the Sector Police Chief. However, at that time the BPBD Cianjur which had just had an S.O.P., had technical problems, so at that time assistance and coordination were hampered.

Mr. Wawan, when mitigating disasters, coordinates with the village head, the affected community, RETANA and NGO volunteers, PMI, and the Sector Police Chief. For mechanism there are technical problems so assistance and coordination are difficult. Mr. Nur Jamil revealed that there is no S.O.P which is difficult as explained in the following interview:

"BPBD is coordinating upwards, to the province, all BPBDs and apparatuses or 6 regional apparatuses, especially in Cianjur. So, for the 10 types of disasters, we don't have a contingency plan, including an earthquake contingency planner. Inside is one of the SOPs. When there was an earthquake, we didn't have a contingency plan. So when a disaster occurs we become stumped in dealing with it."

BPBD Cianjur coordinates not only downwards but also with provincial and regional officials. As for the mechanism, because they don't have a contingency plan or S.O.P, they are stumped when facing an earthquake disaster.

"Of course, coordination during a disaster, for example after a disaster, we usually coordinate with the field team there and BPBD usually looks for data, assessment data, data on our needs. Estimating what is needed from local residents means that if we talk about our needs, we need coordination. "There is usually a lot of coordination, there are several institutions and then there are several field coordinations that we meet to get complete and detailed information." "Disaster mitigation carried out during the post-disaster stage in Cianjur includes various aspects in its application, starting from the physical form, awareness to increasing ability to face threats of disasters in the future"

Coordination during a disaster or after a disaster includes coordinating with the field team and BPBD, looking for data and assessing our needs. Usually there is a lot of coordination to get complete and detailed information. The mechanism for various aspects is physical form and increasing ability to face the threat of disaster.

"The coordination goes directly to the leadership, so RETANA at the village level, before going to the BPBD it reports to the sub-district level, RETANA at the sub-district level to RETANA at the district level, then it is coordinated to the BPBD. "So the hierarchy is RETANA at village, sub-district and district levels. Our mechanism is through the call center, we have 32 groups, so 1 group, 1 sub-district, 1 WhatsApp group because now the most effective one is via WhatsApp. "We use a call center so we monitor 32 WhatsApp groups in 32 sub-districts and all of these coordinate with BPBD."

The coordination goes directly to the RETANA leadership, namely at the village level, before that, it goes to the BPBD to report to the sub-district level. So the hierarchy is RETANA at village, sub-

district, district and BPBD levels. The mechanism is through a call center and has 32 groups, one group is 1 subdistrict. So the Cianjur BPBD coordination is vertical and horizontal, namely to the province, related institutions and village and RETANA heads. RETANA reports to the village, sub-district and BPBD via the call center or WhatsApp group to become digital literacy.

So the conclusion is that BPBD Cianjur faces obstacles in dealing with disasters due to the lack of contingency plans or S.O.Ps which causes difficulties in assistance and coordination. Coordination was carried out with various parties, including village heads, affected communities, RETANA, and volunteers from NGOs, PMI, and the Sector Police Chief. BPBD Cianjur coordinates upwards, namely to the province and other regional apparatus. In post-disaster mitigation, BPBD Cianjur involves various aspects, ranging from physical form, awareness to increasing capacity to face future disaster threats.

Dimensions of Digital Literacy

Literacy related to disaster mitigation is needed to make people understand what they need to prepare and do before and when a natural disaster occurs. Hopefully, through disaster response literacy, the community will become more prepared and responsive to natural disasters. So how BPBD Cianjur disseminates information regarding disaster mitigation is explained by Mr. Wawan in an interview as follows:

"Apart from the BPBD and RETANA Call Centers, NGOs also play an important role, for example the Save Children NGO also holds literacy plans or outreach and simulations for communities in affected areas. The NGO determines the community while BPBD Cianjur is asked to be the instructor. These things are strongly supported by BPBD with the aim of socializing them to the community."

Digital literacy in BPBD Cianjur is conducted by RETANA and NGOs which play an important role. The NGOs determine the community and the BPBD is the instructor. Mr Nur Jamil agrees with Mr Wawan that NGOs also play an important role in socializing disaster mitigation as explained in the following interview:

"In socializing and simulating BPBD disaster mitigation in non-structural areas, there is still a small number of simulations. It is difficult to gather the wider community for socialization and simulation, unless NGOs take the initiative. "But when it comes to socialization in elementary and middle schools, it's easy for us to visit, to hold socialization and that has been done."

The task of holding socialization and simulation is non-structural, but it is difficult to gather the community for the activity, unless NGOs take the initiative. The NGOs now have a program in the Cianjur area which is still going on. RETANA is one of those who play an important role in digital literacy, as explained in the following interview:

"When a disaster occurs, information must be provided quickly by the central and regional governments in a timely manner so as to minimize the circulation of fake news or hoaxes. Statements from the government must be made continuously and always updated quickly, because speed in conveying information will be important in handling disasters. There are many things, such as two-way communication, coordination with local stakeholders, or using social media to reach a wider community."

When a disaster occurs, information must be quickly received from the central or regional government in a timely manner so as to minimize hoaxes. The speed of delivering information is important in disaster management. Disseminating information can also use social media to reach a wider community. Apart from being quick and using social media, RETANA disseminates information directly as explained in the following interview:

"This information is disseminated by RETANA who came. If you gather, there will be more costs and budget. So, of course, we will assign RETANA to visit 10 residents in at least 1 month. Visiting several houses, like there were groups at the patrol post, there were groups at neighbors while socializing. "It does not take long time to socialize it, only half an hour to 1 hour."

RETANA disseminates information by visiting the community so it doesn't cost much budgets. RETANA visited 10 residents, houses and a group of patrol posts and did not take a long time to spread the information. So BPBD and RETANA, NGOs use it directly or social media.

Conclusions

The objective of this research on disaster communication is to figure out the implementation of disaster mitigation by BPBD Cianjur and the role of Digital Literacy in socializing disaster mitigation to the public. As a result, the people have adequate capacity to save themselves when a natural disaster occurs. There are several aspects achieved in this research, including:

Disaster mitigation aspect, where researchers found that disaster mitigation is not only conducted when a disaster occurs but also is socialized before, during and after a disaster occurs. so that the community can increase their capacity to face disasters. The second aspect is ABCGM, (Academics, Business or Administration, Community or Volunteers, Government and Media) that play an important role in providing digital literacy to the public through any media.

References

- Afrieda, T., Ngizzuddin, M., Alkhoroni, P., & Rosyidi, I. (2021). Komunikasi Bencana melalui Opinion Leader. *Jurnal Komuniti*, 13(2), 102–111. <https://doi.org/10.23917/komuniti.v13i2.15652>
- Arisandi, F., & Umam, C. (2019). Komunikasi Bencana sebagai Sebuah Sistem Penanganan Bencana di Indonesia. *Jurnal Mediakom*, 3(1), 25–37. <https://doi.org/10.35760/mkm.2019.v3i1.198>
- Badan Nasional Penanggulangan Bencana. (2020). *Visi dan Misi BNPB*. Bnpb.Go.Id. <https://www.bnpb.go.id/visi-dan-misi-bnpb>
- Bpbd_cianjur. (2022). *Infografis Gempa Bumi Cianjur*. Instagram. <https://www.instagram.com/p/CmMFlmpBva8/>
- Eka, C., & Erland, R. (2021). Aplikasi Pedulilindungi Mitigasi Bencana Covid-19 di Indonesia. *Jurnal Pustaka Komunikasi*, 4(1), 66–78. <https://doi.org/10.32509/pustakom.v4i1.1321>
- Gori, F., & Simamora, P. (2020). Pola Organisasi dalam Meningkatkan Kinerja Kepala Desa Marao Kecamatan Ulunoyo Kabupaten Nias Selatan. *Jurnal Social Opinion: Jurnal Ilmiah Ilmu Komunikasi*, 5(2), 115–122.
- Iqbal, M., Abdullah, V., & Asri, C. (2021). Komunikasi Mitigasi Bencana (Studi Kasus Mitigasi Bencana Badan Penanggulangan Bencana Daerah Provinsi Jabar dalam Menghadapi Bencana Alam Gempa Bumi Akibat Sesar Lembang). *Linimasa: Jurnal Ilmu Komunikasi*, 4(2), 186–194.
- Kartika, G., Lestari, P., & Hendariningrum, R. (2017). Model Komunikasi untuk Penanggulangan Bencana Gunung Merapi melalui Aplikasi Plewengan. *Journal Communication Spectrum*, 7(2), 131–145.
- Kimura, R., Hayashi, H., Kobayashi, K., Nishino, T., & Urabe, K. (2017). Development of a “Disaster Management Literacy Hub” for Collecting, Creating, and Transmitting Disaster Management Content to Increase Disaster Management Literacy. *Journal of Disaster Research*, 12(1), 1–19.
- Lestari, P. (2018). *Komunikasi Bencana: Aspek Penting Pengurangan Risiko Bencana*. Yogyakarta: PT Kanisius.
- Ngurah, W. E. (2023). Pola Komunikasi Interpersonal Antar Pustakawan dan Pemustaka dalam Meningkatkan Kualitas Pelayanan pada Perpustakaan Universitas Hindu Negeri I Gusti Bagus Sugriwa Denpasar. *Praman: Jurnal Hasil Penelitian*, 3(1), 1–11.
- Niode, D., Rindengan, Y., & Karouw, S. (2016). Geographical Information System (GIS) untuk Mitigasi Bencana Alam Banjir di Kota Manado. *Jurnal Teknik Elektro dan Komputer*, 5(2), 14–20. <https://doi.org/10.35793/jtek.v5i2.11646>
- Noname. (2022). *kejadian gempabumi tsunami*. Vsi.Esdm.Go.Id. <https://vsi.esdm.go.id/index.php/gempabumi-a-tsunami/kejadian-gempabumi-atsunami/4023-geologi-gempa-cianjur-21-november-2022>
- Nonmae. (2020). *Spesifikasi PHP Version 7.4.33*. Bpbd.Palikab.Go.Id. <https://bpbd.palikab.go.id/>
- Prihantoro, E., Asih, D., Rasyid, N., & Dyah, S. (2021). Akun Instagram Sekolah Relawan dan Pengaruhnya terhadap Pembentukan Kepedulian Sosial di Kalangan Generasi Z. *Metacommunication: Journal of Communication Studies*, 6(2), 177–185. <https://doi.org/10.20527/mc.v6i2.10097>
- Rakhman, F., & Prihantoro, E. (2021). Komunikasi Bencana Palang Merah Indonesia melalui Siaga

- Bencana Berbasis Masyarakat dalam Menanggulangi COVID-19. *Jurnal Ilmu Komunikasi*, 19(2), 235–252. <https://doi.org/10.31315/jik.v19i2.4718>
- Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif, R&D*. Bandung: CV Alfabeta.
- Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung : Alfabet.
- Sugiyono, & Lestari, P. (2021). *Metode Penelitian Komunikasi (Kuantitatif, Kualitatif, dan Cara Mudah Menulis Artikel pada Jurnal Internasional)*. Bandung: Alfabeta CV.
- Suherman, A. (2018). Strategi Komunikasi Bencana pada Masyarakat Kabupaten Buton Selatan. *Medialog: Jurnal Ilmu Komunikasi*, 1(2), 1–9. <https://doi.org/10.35326/medialog.v1i2.272>
- Tamitiadini, D., Weda, W., & Adila, I. (2019). Inovasi Model Mitigasi Bencana Non Struktural Berbasis Komunikasi, Informasi, Koordinasi dan Kerjasama (Innovation of Non Structural Disaster Mitigation Model based on Communication, Information, Coordination and Cooperation). *Jurnal Komunikasi*, 13(1), 41 – 52. <https://doi.org/https://doi.org/10.21107/ilkom.v13i1.5216>