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Disaster Communication Uses Field Training Exercise Simulation as an Important Aspect of Disaster Risk Reduction

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ABSTRACT

Karo Regency, North Sumatra is an area prone to the eruption of Mount Sinabung that does not yet have a Contingency Planning policy. This research aims to find the communication model of the Mount Sinabung eruption disaster through a field training exercise simulation to test the Contingency Plan document before becoming policy. The method used is descriptive qualitative, with the object of research is the communication of Mount Sinabung eruption disaster. The research subjects were the Head of Sinabung Observation Post, the Head of BPBD, the Assistant Regent, the head of the Office of Communication and Information, journalists, victims, and volunteers. Data collection techniques carried out by in-depth interviews, observation, documentation, Focus Group Discussion, and field training exercise simulation. The data analysis technique was carried out qualitatively before simulation, during simulation, and after simulation. The results of the study were to find a communication model of the Mount Sinabung eruption disaster through a field training exercise simulation. This research contributes in the form of: (1) a new communication model in the process of reducing the risk of the eruption of Mount Sinabung through a field training exercise simulation which is considered effective in improving disaster-resilient communities; (2) new methods in disaster communication research, namely using data collection techniques through field training exercise simulation; and (3) The new Karo Regent Regulation Number 08/2020. This finding can be adopted for reducing the risk of other volcanic disasters.

Keywords: *Disaster communication, field training exercise simulation, contingency plan, communication model, Mount Sinabung.*

INTRODUCTION

Mount Sinabung is an active mountain from 2010 to 2019 (Kusumayudha, Lestari, & Paripurno, 2018; Lestari, Paripurno, & Nugroho, 2018). Mount Sinabung again experienced an eruption in June 2019 and caused no fatalities. The eruption of Mount Sinabung has an impact on the people who live around Mount Sinabung, such as damage to roads, destroyed homes, bridges, and a paralyzed economic system (Lestari, Paripurno, Rianto, & Nugroho, 2019; Wallenstein, Duncan, & Marques, 2007). The law governing disaster management is written in Law Number 24/2007. The regulation becomes the basis for disaster management,

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with a mandated Contingency Planning policy. (Wandasari, 2013). The Karo Regency is a center prone to the eruption of Mount Sinabung, but does not yet have a Contingency Plan.

Research related to Contingency Plans was also carried out by Yahya (Yahya, 2016) regarding partnerships in disaster preparedness schools at SMP Negeri 2 Cangkringan. The results of the study stated that the partnership on disaster preparedness schools went well between the Yogyakarta Regional Disaster Management Agency (BPBD) and the Circle of Non-Governmental Organizations (NGOs), Collaboration undertaken to increase knowledge about disaster was a field rehearsal and simulation, preparation of Contingency Plan, and socialization Disaster Risk Reduction (PRB).

Other policy related research was conducted by Afrinia Lisditya Permatasari (Permatasari, 2018) concerning the socio-economic atlas of the Merapi Volcano prone area. The study states that the importance of government policy-making, one of which is by making a socioeconomic atlas that can be used as a rule-maker in the Merapi Volcano disaster risk management.

The importance of the role of disaster risk reduction through formal education was investigated by Aldila Rahma (Rahma, 2018). The results of the study stated that the most important effort to shape and improve children's resilience to disasters is to provide basic knowledge of formal education. Children will become the next generation who will teach the community, prevent, and reduce the risk of disasters.

Some of these studies have not reviewed the risk reduction of eruption disasters through field training exercise (FTX) simulation. According to field rehearsal researchers, it became a means of communication that can increase knowledge for the community about disaster risk reduction. Another impact of the field training exercise simulation can improve the attitude of people who are resilient to disasters. This research provides new findings regarding the communication of Mount Sinabung eruption disaster through field training exercise simulation involving all Local Government Organizations (OPD) related to disaster and disaster-affected communities. Field training exercise simulation is an important element in the implementation of Government policies regarding Contingency Plans. Contingency planning documents must be tested using a field training exercise simulation before being implemented in the event of a disaster.

Research as a reference is research on simulation by Jacqueline Dohaney, Erik Brogt, Ben Kennedy, Thomas M Wilson, and Jan M Lindsay (Dohaney, Brogt, Kennedy, Wilson, & Lindsay, 2015) about training in crisis communication and volcanic eruption forecasting: design and evaluation of an authentic role-play simulation. The results of the study indicate that rehearsal simulation have been applied to students in New Zealand to improve communication, add experience in designing and reducing volcanic communication crises. Other research is about Community Resilience and Volcano Hazard: The Eruption of Tungurahua and Evacuation of the Faldas in Ecuador sudah dilakukan oleh Tobin dan Linda Whiteford (Tobin & Whiteford, 2002). The results of the study explain that assistance is difficult to obtain assistance if only a small eruption, but the small eruption has an impact on the loss of livelihoods of the surrounding population, and the trauma caused by the disaster. The research also uses the FTX method to provide knowledge about disasters and the role of each field in dealing with the Tungurahua Volcano disaster.

The author considers some of the results of these studies to provide a rationale for disaster communication to reduce the risk of the eruption of Mount Sinabung in Karo District, North Sumatra. This study aims to find the communication model of the Mount Sinabung eruption disaster through a field training exercise simulation.

LITERATURE REVIEW

This study is based on research on the model of disaster communication, namely research on "table top exercise" in reducing disaster risk (Lestari et al., 2019). The results of this study indicate that communication in the eruption of Mount Sinabung needs to be improved by conducting a table rehearsal to reduce the risk of disaster. The research was a trial of Mount Sinabung eruption contingency planning documents.

Research on disaster communication through simulations was also conducted by Renatama and Suryono (Renatama & Suryono, 2015) concerning the evaluation of the implementation of the compulsory training and field rehearsal program for people in the Merapi-prone area. The results of the study stated that the program was a good thing and gave a positive response to applying knowledge of preparedness in the Merapi disaster-prone environment. The program is the result of discussions from the BPBD and the needs of the community around the Merapi disaster. This research indicates the importance of disaster communication through field training exercise simulation for disaster risk reduction.

Further research on the preparedness of nurses at the health center in the Bantul Yogyakarta disaster was conducted by Huriah and Farida (Huriah & Farida, 2010). The results of the study mentioned that the level of preparedness of nurses at the puskesmas was still low, due to the lack of preparation from nurses in facing disasters so that many actions had not been taken by the role of each nurse at the puskesmas. The role of each nurse can be done if there is preparedness through simulation. Disaster communication is very effective when there are simulations to increase knowledge and attitude resilient to disasters.

Another area that has an important role in a disaster is human resources in disaster management. The Military District Command (Kodim) is one of the strongest resources in disaster management. This is evident from the research of Irawan, Afifudin, and Pudjiatmoko (Irawan, Afifuddin, & Pudjiatmoko, 2018) about the importance of Kodim in helping to cope with natural disasters in the Nganjuk region. The research stated that the role of the Kodim was very important in disaster, namely becoming a pillar of disaster management, increasing community resilience, embracing and protecting communities around the Nganjuk area. Kodim preparedness in disasters is carried out by means of socialization on how to cope with disasters that occur, actions taken when disasters occur, and rehearsals of post / field. The phenomenon in Karo District during disaster management, the role of Kodim is very important. Coordination and communication are controlled by Kodim commanders as coordinators of disaster risk reduction according to the Mount Sinabung eruption contingency planning document. The role of the Kodim is related to the implementation of the TNI's main tasks in accordance with Law Number 34 of 2004, including providing assistance to the Karo District government in overcoming and reducing the risk of the eruption of Mount Sinabung disaster. In connection with this responsibility, Kodim 0205 / Tanah Karo synergized with the combined SAR Team to conduct a field training exercise simulation exercise. This was said by Dandim 0205 / Tanah Karo Letkol Inf. Taufik Rizal as the Dansatgas emergency response (Tniad.mil.id, 2019).

Research related to the field rehearsal was also carried out by Sunarto and Marfai (Sunarto & Marfai, 2012) regarding tsunami potential and disaster preparedness in Sumberagung Village. The results of the study found that the community already had knowledge about the threat of tsunami hazards through socialization activities and field training exercise simulation conducted in Sumberagung village. The equation of this research with this research is that they both take the field training exercise simulation object. The difference lies in the location of the disaster, namely the study in the tsunami of Sumberagung Village. While this research focuses on the eruption of the Mount Sinabung Karo District, North Sumatra.

Research on field rehearsals as an implementation of contingency plans was also carried out by Probosiwi (Probosiwi, 2013) regarding tsunami disaster risk management, especially for spatial planning on the urban coast of Pacitan, East Java. The research stated that the government of Pacitan City has not yet paid attention to the policy regarding the arrangement of disaster relief. The community and the government lack knowledge of their respective responsibilities and duties, so community empowerment is carried out through field rehearsals and space rehearsals, contingency plans, outreach, disaster awareness communities, and preparation of disaster-resilient villages. This research is a reference for this research because it provides information on the importance of field rehearsals and space rehearsals as an implementation of contingency planning documents. The difference is that this study views the simulation and the field rehearsal as an aspect of disaster communication that contains inter-stakeholder coordination related to the risk reduction of the eruption of Mount Sinabung, especially in Karo District.

Disaster communication becomes an important element in disaster risk reduction both in knowing disaster threats, the needs of victims, and various disaster risk evaluations. This is related to research on the effectiveness of BPBD's performance in disaster risk reduction in Baubau City by Sadat (Sadat, 2016). The research suggests that the effectiveness of BPBD is already good in services to reduce the threat of disasters and to know the needs of victims affected by disasters, but the need for BPBDs to attend field rehearsal training to increase knowledge about disasters and be able to analyze and evaluate disaster risks.

Research on disaster communication is researched by Matthew Collins, Karen Neville, William Hynes & Martina Madden (Collins, Neville, Hynes, & Madden, 2016) which provides recommendations that in the face of disasters, crisis communication must be informative, honest, and not cause panic. The role of institutions and the media is expected to provide information for the best decision making for communities affected by disasters. The role of communication in times of crisis will determine the effort to save and reduce disaster risk.

This study refers to the theory of crisis communication from Sellnow Timothy L dan Matthew W. Seeger (Sellnow & Seeger, 2013) which says that crisis communication is an ongoing process to create shared meaning among groups, communities, individuals and institutions, in the ecological context of the crisis, for the purpose of preparing, reducing, limiting, responding to threats, and endangering. This crisis communication is relevant to the phenomenon that occurred in Karo District, North Sumatra in tackling the eruption of Mount Sinabung. The impact of the eruption since 2010 until now has not been effectively overcome.

This is indicated by the existence of various crisis communication problems between refugees and government institutions. One example of crisis communication is a refugee lawsuit regarding information services provided by the government (Siregar, 2018). The lawsuit will not occur if a disaster crisis is quickly resolved through effective crisis

communication. This is reinforced by the Regulation of the Minister of State for Administrative Reform and Bureaucratic Reform of the Republic of Indonesia Number 29 of 2011 concerning General Guidelines for Crisis Communication Management in Government Agencies, crisis communication is the delivery of messages between government agencies and the public to equalize perceptions in handling crises (before, during and after the crisis) (Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi Republik Indonesia, 2011). The Karo Regency Government should refer to the crisis communication in handling crisis communication due to the eruption of Mount Sinabung.

RESEARCH METHODS

This study used a descriptive qualitative method. The object of research is the communication of the eruption of Mount Sinabung disaster. The subjects of this study were all those involved in handling the eruption of the Mount Sinabung eruption crisis, both local government officials in Karo Regency, affected communities, and volunteers. Data collection methods using in-depth interviews, Focus Group Discussion (FGD) and FTX. FGD and FTX participants, namely: TNI (Erlaba Perangin-angin), Head of Prevention and Preparedness), Karo Regional Disaster Management Agency (BPBD), Armen PVMBG, Halasan Manalu from Head of Karo BPBD Prevention Section, Jepta from Payung District Head, Village Head Tiganderket, Agriculture Agency, Medan Basarnas, Tagana, Social Service, Communication and Information Agency, Public Works Agency, Health Service, Agriculture, Education Office, Indonesian Red Cross (PMI), Resort Police (Polres), and Bank Rakyat Indonesia (BRI). In-depth interviews were conducted with the Head of the Sinabung Observation Post, the Head of the BPBD, the Assistant Regent, the head of the Office of Communication and Information, journalists, victims, and volunteers. The study was conducted on May 2019 in Karo District, North Sumatra.

Qualitative data analysis techniques refer to Ali (Ali, 2015) conducted by: (1) data collection at the time of the pre-research, during-research, and post-research. Data collected related to disaster communication before field training exercise simulation, during field training exercise simulation, and after field training exercise simulation on the handling of Mount Sinabung eruption disaster; (2) data presentation is done by selecting the data needed and relevant to the research, then presenting it in the form of tables or figures. FTX tables and simulation images during field rehearsals are presented to explain and analyze qualitative data; (3) drawing conclusions from the data that has been presented to be interpretation or the results of research. Withdrawal of conclusions related to new findings handling the communication of Mount Sinabung eruption crisis that can be used as a model of disaster communication in the Mount eruption disaster in other areas.

RESULTS AND DISCUSSION

This study found various information that can formulate the Mount Sinabung eruption disaster communication model through a field training exercise simulation. The field rehearsal process was carried out through a meeting between the Karo Regency BPBD leader and the research team. The results of the meeting found information that BPBD considered the need for coordination and communication for field training exercise simulation as a form of public testing of the Mount Sinabung Eruption Contingency Planning document. The communication and coordination process is carried out by the BPBD to the Regent and his staff as the responsible party for the Mount Sinabung eruption disaster in Karo District. Communication

and coordination went smoothly, as evidenced by the Regent agreeing to conduct a field rehearsal activity as a public test of the Mount Sinabung Eruption Contingency Planning Policy before becoming the Regent's regulation. The communication and coordination process begins with the distribution of invitations to OPD leaders regarding disaster management in Karo District to conduct FGDs. The FGD was conducted in the Karo District Regent Office Hall followed by the TNI (Erlaba Warin-angin), Head of Prevention and Preparedness), Karo BPBD, Armen PVMBG, Halasan Manalu from the Karo BPBD Prevention Section Head, Jepta from the Payung Sub-District Head, Tiganderket Village Head, Dinas Karo Agriculture, Medan Basarnas, Tagana, Social Service, Communication and Information Office, Public Works Office, Health Office, Agriculture, Education Office, Indonesian Red Cross (PMI), Resort Police (Polres), and Bank Rakyat Indonesia (BRI). The following are FGD participant documents.

Figure 1: Participants of the Public Test FGD on the Mount Sinabung Eruption Contingency Planning Document
Source: Research Document, 2019

The discussion went smoothly, led by the assistant district head and the head of the BPBD. Participants responded to the discussion material provided by competent speakers in the disaster management communication process, namely the team from the Center for Disaster Management Studies at the "Veteran" National Development University of Yogyakarta. At the beginning of the discussion, there were still many participants who felt they did not understand the process of field training exercise simulation in handling the eruption of Mount Sinabung. Communication and coordination are carried out continuously between the resource person and all participants. The results of the discussion contained a misperception of the participants who did not respond according to the expectations of the speakers. Participants respond in an unsystematic manner and ineffective communication for disaster risk reduction decisions. The problem was immediately resolved by the TNI (Kodim Commander, Erlaba Warin-angin) who took over the leadership of the discussion. Erlaba Perangin-angin explains the concept of a field training exercise simulation. The Kodim commander's communication competency looks effective and systematic and can be accepted by the discussion participants. The Kodim Commander already has a lot of experience in crisis communication, including the Mount Sinabung crisis. The results of the discussion are presented in table 1.

Table 1: FGD Results of a Public Test of Mount Sinabung Eruption Contingency Planning Documents

Participant	Suggestions, Questions And Feedback
UPN 1	- We hope that this Renkon activity will become a regent regulation in the Karo District Government. - Draft Contingency Plans become a database for testing. - Command Post Exercise (CPX) and field rehearsals do not have to be extraordinary. - CPX and FTX, here we are as actors, controllers etc. - If there is a new system we can test it. Each OPD in this activity carries its own SOP. - Field rehearsal is the process of controlling in carrying out. - Often we do rehearsals often not followed by people who have no experience. - It is hoped that tomorrow we do FTX, in whatever gap is needed. - Train personal clearly, it is hoped that the targets in CPX can be realized and can divide the roles in these functions. - Activities are carried out indoors, and need concentration so as not to disturb people. - Here we both learn to make Move 1 through 5, then evaluate. - Move 1, we are given information. - Move 2, we respond. If there is information from the PVMBG Post. Must make the situation is in an emergency response status, - Move 3, plan the operation and activate the Contingency Plan. When you need the effort of this movement do not let us do nothing. - Move 4, how to mobilize when there is a disaster. - Move 5, the community reports field conditions regarding evacuation, rescue, any evacuation locations regarding emergency conditions. - Regarding the organizational structure, people who work must really understand what they are doing to become supervisors and controllers. - In the process of rehearsal more on the ability of management is to know the rules of the game to manage, so that the controller has an important role. The burden is very influential on the controller. - RIG (Plan of Rehearsal Information) rules of the game so that all listen to the direction of the controller and supervisor. - We also discuss RIG what needs to be done in the RIG mechanism. - If there is an Eruption disaster, when there is ashes the community immediately knows what will be done without any direction, not waiting for instructions. - How TRC moves quickly, what is done from the contingency Plan activities. The Office should have clear information about clear information when the Sinabung Eruption disaster occurred. - When there is a rehearsal, there must be a controller and participants. The controller consists of above (BNPB, Basarnas, BPBD), side (Related OPD) and bottom (community). - There are several fields in the rehearsal; resources, operations, plans and rapid assessments, information and media, observers. And whoever is in the activity can respond.
UPN 2	- Rehearsal process - First the division of participants into several groups of fields according to contingency plans consisting of agencies, consisting of groups of main posts, sanitation, evacuation, evacuation, transportation, transportation, communication, SAR and security, etc.
UPN 1	- The post rehearsal will be commanded by the TNI. - In the field there are agencies involved, so what do you do in the group in that field when an eruption occurs? Now when the information has spread, other field groups will also do their part. Example when the eruption of each field perform according to its role. - Must know the potential that exists in each village when an eruption arrives, able to respond quickly and responsively. - Rehearsal activities will be guided to each group.
TNI	- In areas affected by the eruption of Mt. Sinabung there must be a plank in reminding every citizen to know information through writing. - Here the tasks will be shared by each organization.

Participant	Suggestions, Questions And Feedback
UPN 1	- What should be questioned when the PVMBG Command Post provides information about the eruption? - What does the PVMBG post provide information through? Through whom? - In this rehearsal activity will be given approximately 5 minutes to make any questions that will be done when there is a disaster? And what answers arise after these questions?
TNI	- When there is an eruption of Mt. Sinabung, no siren sounds, anyone must respond to take action.
UPN 1	- Move 1, in giving information all those affected by the eruption know what to do. - TNI, POLRI Volunteers must respond not have to wait for emergency response status.
Head of Prevention and Preparedness	- In this rehearsal we start practicing directly on the first move stage.
Chief executor BPBD Karo	- How to synchronize to a synergic eruption? - Before making information in stage 1, the community already knew there was an eruption disaster. - Sirens are not too princio when there is a disaster, because in Karo have natural sirens that make people respond faster. - Previously we will immediately respond quickly to who will do what, without knowing what the tasks of each organization. Usually we will gather after an eruption to coordinate what to do after the eruption.
UPN 1	- The rehearsal process is not regularly sued, the learning process is interesting when there is reflection. - Rehearsals are done on an emergency basis, we know the situation is in an emergency.
TNI	- When erupting, secure the red zone when it does not lower the hot clouds and look for people. Is there anyone in the red zone?
UPN 1	- After finishing move 1, the team can send it to my WA. - Move 2, when receiving information (for example the health contact the Hospital so they know what steps can be taken?
Chief executor BPBD Karo	- Usually events on the ground, the community can spontaneously take action. - Some people are afraid of giving wrong information because it is not the main function of the community.
UPN 1	- In a disaster, related organizations and DPOs must have a SOP on disaster because they have their own duties and functions. - Mother / Father convey today. About tomorrow what mobilization can be done? - For example, if there is information about death, then we will help for those who died. If there is a process from a location to a remote hospital, what resources can be mobilized?
TNI	- Hoping BPBD people make a Letter of Submission to the relevant OPD to bring in mobilization tomorrow when there is a field rehearsal activity. - All participants are expected to arrive on time before the field rehearsal starts at 09.00 WIB.
UPN 2	- For the rehearsal tomorrow, we will carry out at 9.15 expected to come on time. And mobilization tools will be prepared so that we can carry out field rehearsals well
UPN 1	- Tomorrow we will hold a rehearsal, we hope that all the actors who have been selected and participants who come today can attend tomorrow. And we explain all the information and mechanism of the rehearsal tomorrow morning before starting the rehearsal.

Source: Research Document, 2019

Based on table 1, the communication and coordination of the preparation of the field training exercise simulation was well planned. Participants who attended the FGD were expected to come to the field training exercise simulation. This is related to information that has been given for field practice.

Simulation Process

The communication and coordination process for the field training exercise simulation begins with the explanation of the resource person (Eko Teguh Paripurno) who explains how the field rehearsal will be carried out starting from move 1 to move 5. The process is continued by Arif Rianto Budi Nugroho by explaining move 1 in this stage having actions and responses can be added. Next the simulation starts from move 1 to move 5.

Table 2: Move 1

NO	THE PLACE & GLADI TIME	MOVE	ACTION	RESPONSE	ACTOR
1	2	3	4	4	5
1	Posko 10/5/2019 10.00-10.30	**1 Information**	PVMBG: Inform BPBD that Mount Sinabung shows increased activity, from NORMAL to ALERT to BPBD. Recommends that the community does not have service in a disaster area 3	BPBD: Will inform the relevant parties and be ready to always coordinate	
			BPBD: Inform status changes to the Related OPD and other parties via radio communication	Related OPD: Will inform OPD internally and be ready to always coordinate	
			CAMAT: Contacting the village head around G. Sinabung, that the status of the gununapi has increased to BE ALERT	HEAD OF VILLAGE: Will inform residents and be ready to always coordinate	
			EDUCATION DEPARTMENT: Informs about the increased status of volcanoes and the potential for eruptions to mosques, churches and school principals	CHURCH / MOSQUE / SCHOOL: Give thanks for the information provided	
			KOMINFO: Inform the promotion of status to BE AWARE to the public and public organizations	PUBLIC ORGANIZATION (LARSI): Will inform community members and be ready to always coordinate	
			AGRICULTURAL DEPARTMENT: Informs about upgrading to ALERT status to agricultural extension workers	VOCATIONAL SCHOOL: Expressing thanks for the information provided	

NO	THE PLACE & GLADI TIME	MOVE	ACTION	RESPONSE	ACTOR
1	2	3	4	4	5
			TRC / BASARNAS: Finding out areas potentially affected	BPBD: Inform villages of potential affected Sibintun and surrounding areas.	
			TAGANA: Ensuring information to PVMBG and coordinating with SOCIAL DINAS about early warning	PVMBG: Specifies the truth SOCIAL DEVELOPMENT: Speak the truth	

Source: Research Document, 2019

Table 2 describes the actions taken by the relevant OPD in move 1 state, namely information. Information about Mount Sinabung will first be known from the Center for Volcanology and Geological Disaster Mitigation (PVMBG). PVMBG provides information on the status of Mount Sinabung increasing from normal to alert to BPBD. The BPBD then provides information on status changes and keeps communicating with each other to the relevant OPD, namely: Camat, Village Head, Education Office, House of Worship, School, Communication and Informatics, Larsi, Agriculture Office, TRC / Basarnas. The TRC / Basarnas function is to inform the areas that are potentially affected by the eruption of Mount Sinabung.

Table 3: Move 2

NO	THE PLACE & GLADI TIME	MOVE	ACTION	RESPONSE	ACTOR
1	2	3	4	4	5
	Posko 10/5/2019 10.30-11.00	**2 Standby**	PVMBG: Inform BPBD that Mount Sinabung shows intensive activity increasing, from ALERT to STANDBY. It is recommended that the community not be creative in the KRB II area and evacuate to a safe place	BPBD: Receive information. Waiting for further information. Disseminating information to related parties and citizens through radio communication.	
			BPBD: Disseminating information to relevant stakeholders and citizens through radio communication.	CITIZENS ORGANIZATIONS: Receive information. Waiting for further information.	

NO	THE PLACE & GLADI TIME	MOVE	ACTION	RESPONSE	ACTOR
1	2	3	4	4	5
			CAMAT: Contacting the village head around G. Sinabung, that the status of the volcano has increased to STANDBY	HEAD OF THE VILLAGE: Give thanks for the information provided, and will inform the citizens	
			KOMINFO: Disseminating information on increasing the status of volcanoes into STANDBY to the public	COMMUNITY: Thanking you for the information provided.	
			AGRICULTURAL DEPARTMENT: Informs on upgrading status to STANDBY to agricultural extension officers and sub-district heads, and coordinates the search for livestock care centers to be evacuated	CAMAT / EXTENSION: Provides a number of livestock and a safe place for refugee livestock	
			SOCIAL DEPARTMENT: order Tagana to prepare a public kitchen and install tents	TAGANA: Ready to carry out. Delivering the number of public kitchens and tents prepared	
			BASARNAS: briefing, division of tasks, preparation of evacuation equipment		
			FIELD OF LOGISTICS (URC / TAGANA): disseminate information to members and prepare personnel, prepare logistics	TAGANA: Ready to convey information to members and carry out tasks	
			FIELD OF EVACUATION (URC / SAR): disseminating information to members and preparing personnel,	URC: Ready to convey information to members and carry out tasks	
			HOSPITAL: Preparing needed health workers according to potential survivors		
			DAMKAR: Preparing infrastructure facilities		

Source: Research Document, 2019

In table 3 is move 2, which is standby. PVMBG provides information on improving the status of Mount Sinabung from alert to standby to BPBD. BPBD provides information to OPD (Kominfo, village heads, agriculture services, social services, logistics, evacuation, DAMKAR, hospitals and communities via radio communication. Each OPD carries out tasks according to their respective roles. The agriculture office immediately provides information and coordinating for residents' livestock areas, Social Services prepares public kitchens and tents in refugee camps, residents are moved to refugee camps that have been coordinated by the Damkar Unit, while hospitals prepare medical personnel for victims.

Table 4: Move 3

NO	THE PLACE & GLADI TIME	MOVE	ACTION	RESPONSE	ACTOR
1	2	3	4	4	5
	Posko 10/5/2019 11.00-11.15	**3** **Emergency response**	PVMBG: Inform BPBD that G. Sinabung shows increased activity, from STANDBY to CAUTION. It is recommended that the community not do activities in KRB II and I	BPBD: Receive information and will follow up to coordinate with the Regent.	
			BPBD: Informs that the Bupati declares "Emergency Response Status", establishes Dansatgas	TNI & POLRI: ready to carry out Dansatgas duties and will hold a coordination meeting.	
			TNI (POLRI & BPBD): Inviting to carry out the Dansatgas Coordination Meeting: determining the duration of the Emergency Response status, determining the parties involved, determining the location of the post, determining the post / shelter, shelter to the relevant parties and OPD, ensuring the condition of residents and victims, (400 refugees, 3 injuries, 2 died)	Related OPD: Come to the coordination meeting place, and be ready to carry out the mandate according to the results of the coordination	
				FIELD OF EVACUATION (BASARNAS & URC): Coordination of evacuation of residents and victims, as well as coordination with posts to place residents in refugee camps	

NO	THE PLACE & GLADI TIME	MOVE	ACTION	RESPONSE	ACTOR
1	2	3	4	4	5
				KOMINFO: establish Media Center, disseminate the latest information to all parties, a bridge of information for all parties AGRICULTURAL DEPARTMENT: Evacuating livestock to safe areas and conducting maintenance CAMAT: Instruct village heads to evacuate residents, bringing important needs. Coordinate vertically upward about refugee barracks. EDUCATION DEPARTMENT: Assists the evacuation process, accompanies refugees, records refugee needs Other parties	

Source: Research Document, 2019

Table 4 shows that move 3 is an emergency response. PVMBG provides information on the latest status of Mount Sinabung from alert to alert, so that the community does not carry out activities in KRB I and II. The BPBD immediately provides information to the TNI / POLRI to immediately coordinate the determination of the location of the post, the situation of residents, and the relevant OPD. TNI / POLRI reported that there were 400 refugees, 3 people were injured, and 2 died. Basarnas then evacuated residents and victims and brought residents to the evacuation site. The Ministry of Communication and Information provides information to all parties. The agriculture service evacuated residents' livestock to safe areas and cared for them. The Camat evacuated and provided information to residents to bring important needs. The education office accompanies refugees and records the needs of refugees in refugee camps.

Table 5: Move 4

NO	THE PLACE & GLADI TIME	MOVE	ACTION	RESPONSE	ACTOR
1	2	3	4	4	5
	Lapang 10/5/2019 11.15-12.00	**4 Mobilization**	PVMB: Monitor continuously and coordinate with parties		
			TNI & BPBD: Inform exposed areas, record the number of residents, and place them in shelters, instruct the URC Team to evacuate residents, lower the fleet as needed.	FIELD OF EVACUATION (BASARNAS & URC): Conducting evacuation of residents and victims, (400 refugees, 3 injured, 2 died) as well as coordinating with the command post to place residents into refugee locations	
				FIELD OF LOGISTICS (URC / TAGANA): distributing logistics to refugee camps and coordinating with security forces for the sake of smooth traffic	
				POLRI: ready to arrange refugee routes and logistics	
			SOCIAL DEPARTMENT: order Tagana to make public kitchens and set tents		
			CAMAT: refugee data collection, mobilization of refugees and accompanying the evacuation process, coordination of the refugee post committee.		
			HOSPITAL: Preparing needed health workers according to potential survivors		
			AGRICULTURE: Carrying out livestock care		

NO	THE PLACE & GLADI TIME	MOVE	ACTION	RESPONSE	ACTOR
1	2	3	4	4	5
			KOMINFO: Disseminating information to the public. Monitor, record and inform logistics flow		
			TAGANA / LDP: Coordination with DINKES, DINSOS and RSU in terms of psychosocial support services		

Source: Research Document, 2019

Table 5 is move 4, which is mobilization. PVMBG monitors all parties concerned to coordinate with the parties. Each related party carries out its duties, such as the TNI / POLRI which provides information about the affected area, records the number of residents, and guides residents to evacuation. BASARNAS has to evacuate residents and victims affected by Mount Sinabung.

Table 6: Move 5

NO	THE PLACE & GLADI TIME	MOVE	ACTION	RESPONSE	ACTOR
1	2	3	4	4	5
	Posko 10/5/2019 12.00-12.15	**5 Demobilisasi**	PVMBG: Informing G. Sinabung shows decreased activity, from CAUTION to STANDBY		
			BPBD: Inform parties that the Emergency Response Status is over.	CAMAT: Inform the village head and residents that the Emergency Response Status is over. Vertical coordination of returning and meeting needs	
				FIELD SHELTER: stop the public kitchen	
				DAMKAR: Cleans access road to settlements	
				Other Parties	

Source: Research Document, 2019

Move 5, which is demobilization, can be seen in table 6. Move 5, which provides information that Mount Sinabung has shown declining activity. PVMBG as the provider of information informs the BPBD. BPBD provides information to the relevant DPOs to get ready for the return of residents to their area of origin as well as the needs needed, stop the public kitchen, and clean the access road to the residents' settlements.

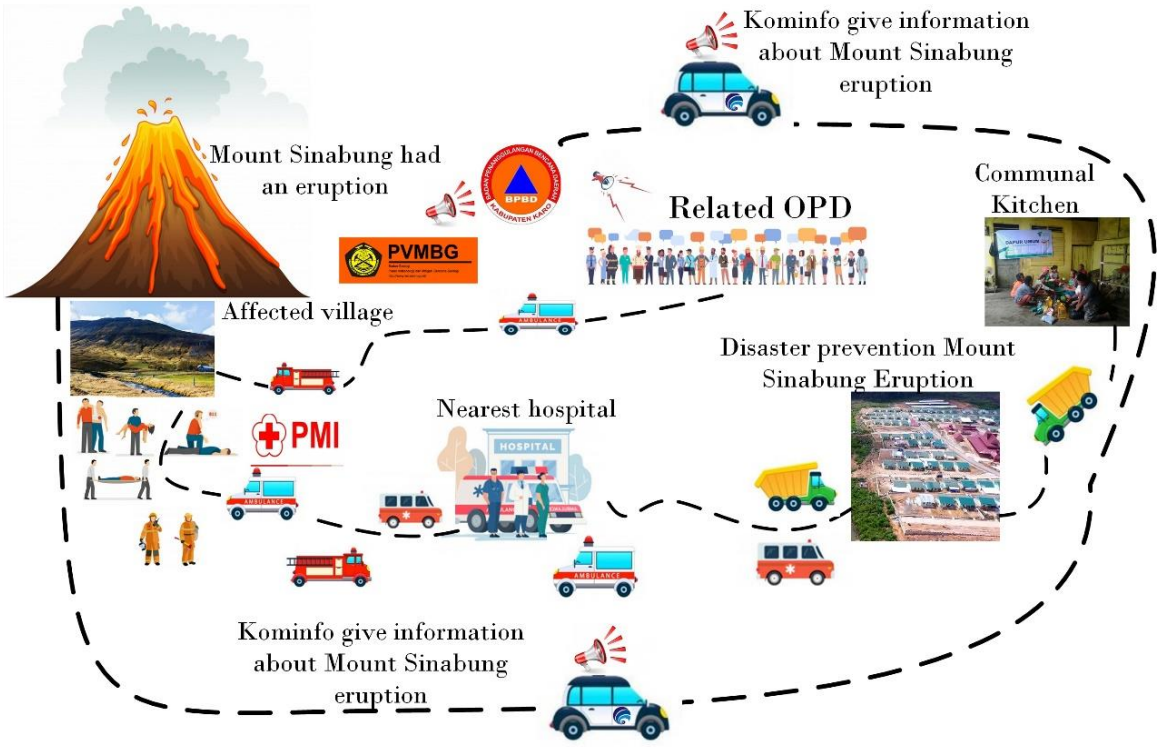

Figure 2: Mount Sinabung Eruption Disaster Communication Model Through Field Simulation Rehearsals
Source: Research Document, 2019

Mount Sinabung eruption disaster communication model through field training exercise simulation shows the communication process in disaster risk reduction according to the theory of Source-Message-Channel-Receiver (SMCR) (Haryadi, 2018). The communication process begins with the communicator delivering the message of the danger of the eruption of Mount Sinabung, which is equipped with communication skills, attitude, knowledge, social systems, and culture. Communicators, in this case, are security post officers under PVMBG coordination. The observation post forwards the message to the Head of BPBD, the Regent, the relevant OPD, as well as journalists and affected communities.

The message given is in accordance with move 1 to move 5 (Tables 2 - 6), which is essentially an effort to rescue and reduce disaster risk during an emergency response with a clear and acceptable message form. For example, messages received about victim information, information on how to rescue, disaster risk reduction information, information on where to evacuate, logistical assistance information, and health information. The media used are handy talky (HT), cell phones, community radio, online media, and other mass media. Responses in the form of fast, precise, accurate, integrated and effective movements from the Regional Head, relevant OPD, and the community were led by BPBD and TNI / POLRI.

The process of disaster communication can be analyzed through a crisis communication theory. Crisis communication is very important in a mountain eruption disaster. Effective crisis communication becomes a fundamental component of the concepts of mitigation, disaster management, and disaster risk reduction. Crisis communication in a Mountain eruption disaster is a term used to cover all forms of communication during a mountain eruption crisis, ranging from communication between monitoring equipment and authorities, interpretation and decision making, and communication between related parties regarding the actions to be taken and the choice of time required a place to do (Fearnley, Winson, Pallister, & Tilling, 2015).

This research provides new findings in dealing with Mount Sinabung disaster crisis communication, which is a new method with data collection techniques through FTX simulation. Field rehearsals were carried out during pre-disaster as one of the improvements in communication competence of the parties involved in disaster risk reduction. Competence will increase if the simulation is carried out continuously even if there is no disaster. This will form a resilient community culture. Disaster resilient communities greatly contribute to disaster risk reduction. This is related to the readiness of the community in facing danger. Hazards occur if the community cannot overcome threats and risks, otherwise, hazards will not occur if the community can overcome threats and risks (disaster-resilient) (Satria & Sari, 2017).

> This is supported by the statement of the Head of BPBD:
> ... The results of the field training exercise simulation, on 9-10 May 2019 had a positive impact on the community and related OPD. They increasingly understand each other's duties when disaster strikes. Incidentally before and after conducting a field rehearsal a real eruption of Mount Sinabung occurred. At the time before the simulation, the public and related OPD were surprised and were not fully prepared to anticipate the danger. Luckily the eruption did not spread. In contrast to the disaster after the simulation, the government and the community still remember the communication process in handling emergency response that is fast, precise, accurate, integrated and effective...
>
> The Ministry of Communication and Information (DP) also states:
> ... Luckily it has been simulated, at least not too panicked, supported by the Regent, who is blusukan even though he is still filled with dust. The process of coordination is smooth, almost close to moves when the simulation is given by UPN. Greetings are tough and we are ready to be saved ...
>
> Researchers also obtained data from communities affected by the post-simulation Sinabung eruption (NN):
> ... We feel we have the courage to carry out a communication process to overcome the impact of the eruption of Mount Sinabung. This happened because we had participated in a field training exercise simulation in reducing the risk of the eruption of the Mount Sinabung eruption held by the Karo Regional Government in collaboration with UPN "Veteran" Yogyakarta. We hope that simulation as a form of communication can often be done ...

From several interviews, observations and discussions in the field, this research supports the 2016-2020 Research Strategic Plan in the field of disaster mitigation and the environment (field 6) in the disaster information system improvement program for early warning and effective early detection of the Universitas Pembangunan Nasional "Veteran" Yogyakarta. This policy is also an implementation of the Mount Sinabung eruption contingency planning policy document, which is in the process of being a regulation by the Karo Regent. Disaster communication through simulation is an implementation of the Ministry of Home Affairs Number 101/2018 concerning Minimum Technical Standards for Disaster Services District/City Regional Technical Fulfillment of Basic Service for Disaster Sub-Article 3 covers: (a) Disaster-prone information services through disaster communication; (b) disaster prevention and preparedness services through field training exercise simulation; (c) rescue and evacuation of disaster victims during the emergency response.

This research also supports the implementation of Permendagri Article 8, BPDD or regional apparatuses in compiling budget planning must prioritize programs and activities, including making contingency plans for all types of disasters based on priorities and KRB. Karo Regency prioritizes the making of Mount Sinabung eruption contingency planning documents because it is mandated by law and the status is still an emergency response. Post-research the Mount Sinabung Eruption Contingency Planning document has become the new Policy of the Karo Regent Regulation No. 08/2020 since February 18, 2020. In addition, this research also supports training programs on disaster management activities for apparatuses and the community, which is mandated by the Minister of Home Affairs Regulation No. 101. The contribution of this study is to support government policies and policies Strategic Plan for the Universitas Pembangunan Nasional "Veteran" Yogyakarta's Research in disaster risk reduction through disaster communication to create a resilient community that is ready to survive in the face of disaster threats.

CONCLUSION

This study found: (1) the Mount Sinabung eruption communication model through field training exercise simulation; (2) a new method in disaster communication research is to use data collection techniques through field training exercise simulation. Field training exercise simulation has been assessed as effective for reducing the risk of Mount Sinabung eruption in Karo District. This research contributes in the form of disaster risk reduction policy through the Mount Sinabung Eruption Contingency Plan of Karo District as stipulated in the Karo District Head Regulation No. 08/2020 which was ratified on February 18, 2020. This policy is particularly useful during emergency response. The communication model found illustrates the ideal communication process of reducing volcanic eruption risk and can be adopted for simulating disaster risk reduction on other volcanic eruption hazards. The author recommends the government as the person in charge of disaster risk reduction to carry out disaster communication through continuous simulation in the event of a disaster not occurring. This can form a disaster-resilient community. Community culture must be created through the slogan "we are ready to survive". This slogan needs to be socialized in various places indicated by disaster risk. This socialization activity is an important form of disaster communication to realize disaster-resilient communities in various disaster-prone areas.

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