International Journal of Sustainable Development and Planning
Vol. 17, No. 5, August, 2022, pp. 1561-1569
Journal homepage: http://iieta.org/journals/ijsdp

Cooperation in Disaster Communication Model in Bali, Indonesia

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https://doi.org/10.18280/ijsdp.170520

Received: 24 March 2022
Accepted: 8 June 2022

Keywords:
synergised, communication, model, government, public relations, disaster

ABSTRACT

This study aims to analyse the model of disaster communication carried out by the government, especially the Karangasem Regency Public Relations, toward the communities impacted by the eruption of Mount Agung to lessen the risk of disaster. This research applied qualitative descriptive research with a case study method. The case study method specifically looked at the context of disaster communication in the Mount Agung eruption disaster in Bali in 2017. To obtain in-depth data, a focus group discussion and in-depth interviews were carried out as data collection techniques and the data analysis technique used the Miles and Huberman model. The results revealed that the government's communication model of Mount Agung disaster management worked together with the community through PASEBAYA. The synergy communication model had effectively handled the Mount Agung eruption disaster, considering that disaster management should involve communication, information, coordination, and cooperation. The communication synergy model was carried out by delivering messages in disaster communication from the government to the community to quickly and accurately reach disaster victims and information related to the appeal to use traditional and technology media to evacuate in safe areas, with evacuation locations and order to bring only essential items when evacuated.

1. INTRODUCTION

On November 27, 2017, the eruption of Mount Agung brought about 43,358 refugees dispersing more than 229 points of refugees [1]. Mount Agung is a volcano that is active in Bali, Indonesia. In this case, the communication of disaster during and post-catastrophe is fundamental, particularly from the public authority to impacted societies.

Law No. 24 of 2007 regarding Disaster Management has brought a paradigm shift in disaster management from responding to disaster situations to disaster risk reduction and prevention. With this change, disaster management is an activity that begins since the disaster has not occurred until the reconstruction phase after the disaster. According to the article of the Law on Disaster Management, the responsibilities of the government concerning the conduction of disaster management comprise:

Reduction of disaster risk and its integration with programs of development, protection of the community from the disasters' impacts, fairly guaranteeing the public and refugees' rights fulfilment impacted by disasters and following minimum standards of service, disaster impact recovery, and the disaster management budget allocation.

Pre-amid, and post-major disasters, the emergency response coordination has been a gigantic issue because of the number of people as well as associations related to the response, problems with the technology interoperability, disaster effects on the technology utilised for correspondences, issues with satisfactory information sharing, as well as the absence of social networks that are pre-existing to reinforce the response of the community.

Therefore, it is necessary to have adequate disaster management to treat disaster risk as a priority. When natural disasters occur, effective communication of disaster, including information technology and communication, should be conducted, specifically from the public authority to the impacted societies.

Communication itself arises because of the need to reduce uncertainty to act effectively to protect or strengthen the ego concerned in interacting individually or in groups. In disaster management, accurate information is needed by the community and private institutions concerned for disaster victims. Disaster communication pre, during, and post-disaster is needed in interacting individually and in groups [2].

In a crisis, the biggest issues are regularly derived from "problem-solving that is collaborative" and other coordination issues [3]. Studies have repeatedly exhibited coordination troubles among respondents, inhabitants, government offices, organisations, volunteers, and help associations in a crisis [4, 5]. In terms of communication, information sharing, and collaborative action, coordination presents huge social and conduct issues for responding to an emergency [6].

Moreover, major disasters are defined as "events in which authoritative and aggregate conduct limits are obscured" [7]. Consequently, coordination and correspondence among occupants and respondents are major emergency problems [8]. In terms of concept, preparing emergency response could be understood as a cycle, with communication and data sharing being absolutely vital all through the cycle [9]. In major disasters, "data sharing, ability to cooperate, and shared values" are imperative for effective data sharing and correspondence [5]. Thus, the community response

frameworks encompass effective management of emergencies, social networks, and e-government [6].

The risk communication prevailing model is basically one transmission of information to educate recipients to show up a rational comprehension of the plausible risks. The primary concern is the way to convey quantitative data about the occasions' probabilities as well as consequences from one data carrier (the transmitter) to another (the recipient) through a medium (the channel) with the minimum distortion [10]. Principally, data transmission is just one piece of correspondence, which also includes creating shared meaning among people, foundations, and networks and setting up trust connections [11].

In the Indonesian case, the North Lombok Government Public Relations has utilised E-government using interaction, publication, and transaction activities to manage disaster communication of earthquakes [12]. The Sleman Regency in Yogyakarta, Indonesia, has also implemented E-government in managing the Mount Merapi eruption in 2010. Those internet-based communication channels are combined with face-to-face communication to achieve high effectiveness [12, 13].

In the conventional risk conceptualisation, the implicit management concept is directive and reactive. It is directive because it tries to accomplish explicit objectives of counteraction or restriction through explicit strategies actively. In this framework, improvement of resilience, piecemeal adapting, and implicit avoidance behaviours are not viewed as management strategies. On the other hand, it is responsive because it is the last stage in the process. Its job is to take care of issues apparent and make the communication subject, both a management response and precursor, instead of searching for consideration issues [11].

In this regard, the prioritising problems that should be done are associated with Communication, Information, Coordination, and Cooperation, later condensed as KIKK. It is vital because it needs a quick, exact, and precise data update [14]. The KIKK problem is also vital in giving exact data about disasters, developing public sympathy, and empowering impacted societies.

Further, accurate information is highly required by communities and private institutions concerned for disaster victims during the occurrence and post-disaster. Disaster communication is required in conditions of disaster emergency and is likewise fundamental during and pre-disaster. Concerning this, communication is the most effective way to prevail in the mitigation, readiness, reaction, and recovery of a circumstance amid a disaster. The capacity to impart messages concerning disasters to the public, media, government and leaders' opinions could diminish hazards, influence disasters, and save lives [8].

According to Breakwell in Rod and Holen [15], the fundamental justification behind communicating risks pre-, during, and post-natural disasters are to start and do protective measures directly. In this case, the Government Public Relations can offer types of assistance to the general society regarding data and activate the participation of the community in the accomplishment of government policies by maintaining the openness principles. When disclosing information, society has the right to acquire non-unfair and current information, comprising communication and information about disasters in their region. Accordingly, the job of Government Public Relations in doing the communication and information functions to general society at the hour of the disaster becomes fundamental.

Based on previous research, many have mentioned what elements must be considered in implementing the disaster communication model. However, the researcher found a gap in how synergistic elements of society represented by the community were to cooperate with the government in handling and reducing disaster risk. In this study, the researcher investigated how the Karangasem Regency Government's Public Relations applied the disaster communication model in collaboration with the PASEBAYA community in Karangasem Bali, Indonesia.

In the eruption of Mount Agung Karangasem Bali, Indonesia, disaster communication was needed. Disaster communication was carried out during the pre-disaster, during, and post-disaster. Then, it needs to be reviewed further on how the disaster communication model of the Karangasem Regency Government's Public Relations in the Mount Agung eruption on November 27, 2017. Therefore, the results of this study will provide benefits related to the importance of disaster communication carried out by the Karangasem Regency Government's Public Relations and stakeholders to reduce disaster risk.

2. LITERATURE REVIEW

In the initial decades, disaster research typically rests on a partial or implicit disaster phenomenon analysis. Thywissen [16] and Marre [17] attempted to assemble key terms related to the disaster, discovering many disaster definitions. Besides, Al-Madhari and Keller [18] and Quarantelli [19] argued that studies on disasters have become problematic without an accurate and consensual definition. This problem emerged out of the term usage in diverse backgrounds of the profession.

Researchers like Carr [20] perceived 'a disaster due to its consequences. Carr contended, "if the walls withstand the earthquake and the dam retains the water, there is no disaster." Despite that, Carr saw the disaster as the 'breakdown of the social insurances' [20]. The inferred portrayal recommends that disaster is any occurrence with considerable negative and bothersome results. It might result from occurrences in the indigenous habitat (like floods, earthquakes, and serious climate occasions), incidents connected with innovation, and incidents connected with brutality and war [21, 22].

On the other side, the Government Public Relations can offer types of assistance to general society concerning data and activate the participation of the community in the accomplishment of government policies by maintaining the openness principles. When disclosing information, society has the right to acquire non-unfair and current information, comprising communication and information about disasters in their region. Accordingly, Government Public Relations should do their jobs to give adequate service [23].

Communication is also one vital challenge in response to natural disasters. During and after the disaster, communication is a crucial response and recovery initiatives aspect. Through communication, the disaster victims could be connected with first responders, other family members, and support systems. Thus, they have accessible and dependable communication, and information systems are also important to the community's resilience (The Associated Press-NORC Centre for Public Affairs Research, 2013). This significance has been emphasised in the 9/11 terrorist attacks and disasters like Hurricane Katrina [24, 25].

Also, numerous catastrophe researchers have perceived a generous ascent in the interest for data on both impacted and unimpacted societies in disasters [26, 27].

Therefore, information trustworthiness in disasters is fundamental for effective disaster response activities. Impacted individuals depend on data that they see as reliable. It is improbable that they will give a lot of consideration and follow up on specific data given by somebody they need to trust in a circumstance that will turn away the change of the given data into usable information [6, 26].

Other studies inspired this research from Arisandi and Umam [2], which discussed disaster communication as a disaster management system in Indonesia. Their research indicates that the communication system that needs to be done in disaster management is before, during, and after a disaster or recovery stage. The process is carried out by involving various parties, such as the government as the centre of coordination and information, the private sector, NGOs, or similar organisations to be used as government supporters, the media as parties assisting the government in regulating the flow of information, and the community as the party implementing the system created [2].

Then, further research from Spialek and Houston [28] on *the Development and Initial Validation of the Citizen Disaster Communication Assessment.* The study results explained that citizen disaster communication measures are derived empirically and inform the current understanding of how citizen communication can participate in community disaster management.

The next research is entitled *Disaster Communication of the Merapi Slope Community*, with the results showing that people living in Turgo utilised many sources of information in accessing disaster information, including surveillance and reconnaissance posts, social media, interpersonal communication, and group communication. Information was conveyed through WhatsApp Group, YouTube, Twitter, Instagram, direct/face-to-face communication, traditional gongs, motorcycle horns, and speakers [29].

In the end, this research provides novelty that effective disaster communication government cannot handle disasters alone. The government needs community involvement in disaster management to handle disaster communication effectively. In a case study in Karangasem, Bali, it is known that there was a disaster communication collaboration between the Government Public Relations, the Disaster Management Agency, and the community represented by the village head called *Perbekel,* forming a community that cares about disasters, PASEBAYA. This model collaboration is considered effective because there were no victims of the natural disaster of Mount Agung's eruption.

3. METHODOLOGY

This research was conducted in Bali with the subject of research discussion related to the eruption of Mount Agung in Bali. The area with a significant impact was Karangasem Regency, Bali, as the area in direct contact with and closest to Mount Agung, Bali. Therefore, the informants in this study were both government and community elements in the Karangasem area, Bali. The use of the case study method specifically looked at the context of disaster communication in the Mount Agung eruption disaster in Bali in 2017 as being the massive eruption of Mount Agung, where the Australian Government Bureau of Meteorology reported that the top of the eruption column reached a height of 9,144 m (5.7 km) [30]. Ash continued to spread southeast, and estimates from the Pacific Disaster Centre estimated that exposure to atmospheric ash would affect up to 5.6 million people in a densely populated area around the volcano.

This type of qualitative descriptive research applied a case study method. To obtain in-depth data, data collection techniques were carried out with a focus group discussion and in-depth interview with the Head of Karangasem Regency Government's Public Relations to get data from the perspective of government public relations as a liaison between each institution in disaster management, Karangasem Regional Disaster Management Agency (BPBD) to obtain data from specialised government organisations, Pasemetonan Jagabaya (PASEBAYA), as well as the Village Community of Kubu, providing an overview of data on how the community perceived government policies and knew the handling of disaster communications in the community. These three informant subjects were selected to obtain various perspectives to generate data. It was important because it impacted knowing the overall disaster communication model and government and community. Meanwhile, the secondary data collection techniques were through document and literature studies. The data analysis technique then employed Miles and Huberman's model, stating that activities in qualitative data analysis were carried out interactively and continued until they were completed so that the data were saturated. Activities in data analysis comprised data reduction, data display, and conclusion drawing/verification data. The data validity was then tested by triangulation of sources, namely reviewing various sources from in-depth interviews and related documents.

3.1 In-depth interview

A process of acquiring data for research aims via eye-to-eye Q & A between the inquirer and the answerer utilising a guide is called an interview. Further, a gathering of two individuals to trade thoughts and data via Q & A to develop importance in a specific theme is an in-depth interview [31]. The research informants in this study consisted of the Head of Karangasem Government's Public Relations, the Karangasem Regional Disaster Management Agency (BPBD) staff, Pasemetonan Jagabaya (PASEBAYA) Community, and the Community of Kubu Village in Karangasem, the closest area to Mount Agung in Karangasem in Bali, Indonesia. This study employed two interview techniques: Structured and unstructured. There were four informants from the Government Public Relations and BPBD and two from Kubu Village.

3.2 Focus group discussion (FGD)

It was applied by selecting people representing different publics or populations. The FGD implementation is by selecting key informants and inviting them to discuss research issues. FGD participants have an equal position, meaning there is no authority holder, allowing the discussion to run freely and openly. In this study, the FGD participants were the PASEBAYA and the Kubu Village Communities in Karangasem Regency in Bali, Indonesia, the closest area to Mount Agung. The FGD with Kubu Village was held twice with ten participants.

In this study, the data were then analysed qualitatively.

Qualitative research results in descriptive data in observed behaviour, written words, or oral people [32]. In addition, researchers need to simultaneously collect, interpret, and write research reports in qualitative data analysis [32]. The data obtained were analysed using an interactive analysis model [32]. Hence, the data analysis was not conducted separately from the data collection but was done together. Interactively, the researcher moved into three components of analysis during data collection: the reduction of data, the presentation of data, and verification/conclusions [33]. According to Miles, Huberman, and Saldana [34], the interactive analysis model encompasses three components: data reduction, data presentation, and drawing a conclusion. The components of the interactive analysis model can be explained as follows:

3.2.1 Data reduction

It was a process of selecting, focusing, simplifying, and abstracting the raw data in the field notes relating to the synergised communication model of the Government Public Relations and PASEBAYA community for disaster communication on Mount Agung Bali, Indonesia. These data came from interviews or summaries of secondary data transcribed in reports, which had been reduced and selected the important matters. At this stage, the data obtained were coded, summarised, and categorised according to essential aspects of the theme under study—document review (content analysis). Then, documentation was the activity of collecting data by the Government Public Relations, PASEBAYA community, and Regional Disaster Management Agency (BPBD) policy of the Karangasem Regency regarding the mitigation of the Mount Agung eruption. Meanwhile, the secondary data used in this research came from the Government Public Relations from socialisation activity report, PASEBAYA activity report on Mount Agung eruption disaster mitigation, and news on online media related to the eruption of Mount Agung.

3.2.2 Data display

It is an assemblage of information organisations, allowing research conclusions. In this case, the display included various types of matrices, images, tables, and schemes related to the synergised communication model of the Government Public Relations and PASEBAYA community for disaster communication during the Mount Agung eruption in Karangasem, Bali, Indonesia.

3.2.3 Conclusion drawing

It was an organisation of data collected to conclude the synergised communication model of the Government Public Relations and PASEBAYA community for disaster communication on the Mount Agung eruption in Karangasem, Bali, Indonesia.

In Figure 1, the mapping of this research method can be seen. The researcher compiled field notes on various matters relating to the synergised communication model of the Government Public Relations and PASEBAYA for disaster communication on the Mount Agung eruption in Karangasem, Bali, Indonesia. After that, the researcher began to make temporary conclusions because the data collection process was still ongoing. Data collection and analysis went hand in hand so that the analysis process occurred interactively and tests between components which, as a whole, were cyclical in nature and lasted for quite a long time. Using this analysis technique, the conclusions regarding the synergised communication model of the Government Public Relations and PASEBAYA for disaster communication on the Mount Agung eruption could be tested accurately.

The researcher performed the process of data reduction by selecting, focusing, and simplifying the field notes obtained from data collection. The data reduction results were then presented in notes/narratives, allowing the study's conclusions to be carried out. The existing conclusions were reinforced continuously until the end of the study. Consolidation was conducted by repeating the activities of reducing data, presenting data, and revising lacking conclusions.

Based on this method, the relationship between the government's disaster communication model was known, which coordinated and cooperated with disaster communication by the community.

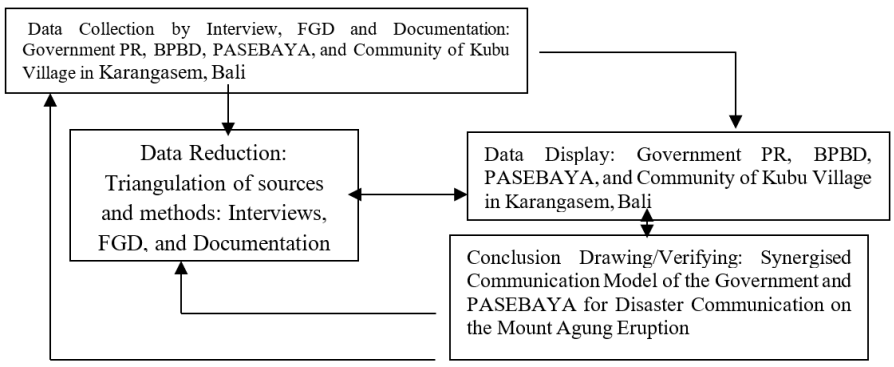

Figure 1. Interactive analysis research method of synergised communication model of the government public relations and PASEBAYA for disaster communication on the mount agung Eruption

4. RESULTS AND DISCUSSION

4.1 Disaster communication of the government public relations of Karangasem, Bali, Indonesia

Disaster communication conducted by the government, particularly the Karangasem Government's Public Relations in Bali, Indonesia, synergised with the public, namely the PASEBAYA.

"In communicating the eruption of Mount Agung, the Karangasem Regency Government Public Relations was in synergy with the PASEBAYA. Communication with the

PASEBAYA community is needed to listen to the community's needs and coordinate with disaster-affected communities directly" (Mr. Edi Setiadi, Head of Public Relations of Karangasem Regency, an In-depth Interview on June 26, 2019).

Based on an in-depth interview with the Head of Karangasem Regency Government's Public Relations, the form of synergy included (1) providing information to the public about the updated condition of Mount Agung, conveyed through *Perbekel* and then forwarded to 28 buffer villages around Mount Agung, (2) conducting persuasion to change attitudes and actions of the community to obey the Karangasem Regency Government advice always to be vigilant and get ready when having to evacuate to a safer place by bringing the crucial items only and prioritise life safety, and (3) attempting to integrate an institution and agency's attitudes and actions following the public attitudes and actions, or vice versa. Hence, after the eruption of Mount Agung, the number of casualties and property loss could be minimised.

4.2 The role of Pasemetonan Jagabaya (PASEBAYA) community

Pasemetonan Jagabaya (PASEBAYA) was formed and declared on Friday, November 17, 2017. The history of the formation of PASEBAYA was over the call of conscience of 28 *Perbekel* (village heads) in the disaster-prone area. The idea emerged from the *Perbekel* in the area, who had been busy taking care of their residents, to flee. The idea was facilitated by the Regional Disaster Management Agency (BPBD) Chief of Karangasem Regency, Ida Bagus Ketut Arimbawa, by holding several meetings at the Disaster Response Post at the Tanah Ampo Banjar Land Pier Building, Ulakan Village, Manggis District. Therefore, the producers agreed to form the PASEBAYA.

"The aim was to reduce the impact of the Mount Agung eruption, anticipate the threat of disasters in 28 villages, and prevent the occurrence of casualties by optimising communication between Perbekel in the field. Each of these 28 village heads will serve as communicators for exchanging information with the government and conveying messages to the community" (Mr. Made, Karangasem Community. Focus Group Discussion on June 26, 2019).

The Head of BNPB (National Agency for Disaster Management) confirmed the PASEBAYA Declaration, Rear Admiral Willem Rapangilei, accompanied by the Director of Community Empowerment of BNPB, Raditya Jati, Secretary Local Government public relations of the Karangasem Regency, I Gede Adnya Muliadi, and Dandim Lt. Col. Inf, Benny Rahadian, in the hall of the Karangasem Regent Office. Before the declaration, a short-term program had been arranged regarding the importance of communication in 28 affected villages internally.

PASEBAYA is a community that actively provides information to inhabitants in the eruption disaster-exposed area. In 28 affected villages, it installed three units of radio communication repeater based on the community. It also prepared a particular number to receive reports and directly conveyed information transmitted via 146800 MHz so that the radio listeners could listen to it. The Chairman of the PASEBAYA was entrusted to I Gede Pawana (East Duda *Perbekel*, Selat District), Deputy Chairman to I Wayan Potag (Ban *Perbekel*, Kubu Subdistrict), Secretary I to Wayan Suara (Amerta Bhuana *Perbekel*, Selat District) and Treasurer I to Wayan Waskita (Perbekel *Jungutan*, Bebandem District). Besides having group members, PASEBAYA also had community radio volunteers in 28 villages.

"PASEBAYA is also a communicator in giving information to inhabitants in areas exposed to the Mount Agung eruption disaster utilising HT Frequency and to our volunteers in the Mount Agung circle" (Mr. Pupuh, member of PASEBAYA Community. Focus Group Discussion June 26, 2019).

Furthermore, PASEBAYA encompassed village leaders (*Perbekel*) within a 6 to 12 km radius of Mount Agung. In this case, PASEBAYA acted to provide information and education to the Karangasem community, children, and women.

"We, as local disaster management government, collaborate with PASEBAYA to educate children and women because they are the number of victims of the disaster very much. Therefore, we need to educate and provide training for children and women, hoping that they can be independent and reduce the number of victims" (Ketut Arimbawa, Head of Regional disaster Management Government. Focus Group Discussion on June 26, 2019).

Based on the explanation above, it can be seen that there was a very large role of the PASEBAYA community and the government in collaborating. Both played a role in coordinating, exchanging information and communication, and collaborating in educating the local community to reduce the risk of eruption survivors.

4.3 Collaboration communication model on Bali

Concerning disaster communication, the collaboration of the PASEBAYA with the Karangasem Government's Public Relations, Bali, disseminated information concerning the Mount Agung eruption. The disaster communication synergy conducted by the Karangasem Government Public Relations, the PASEBAYA, was considered effective because historical records showed that in 2017, there were no fatalities. Unlike the previous eruption of Mount Agung in 1963, 1,549 people died [5]. Based on the results of a report from BBC.com, the decrease in the number of victims was partly due to the increasingly advanced disaster communication system in the community and government, shown by the existence of a disaster communication collaboration system between the Public Relations of the Karangasem Regency Government and 28 *Perbekel* leaders or village, which formed the PASEBAYA community.

When the Mount Agung eruption stroke, the community was evacuated in 28 buffer villages; these buffer villages were safe from the eruption, and the evacuation was carried out within a 12 km radius. Each buffer village had a shelter for evacuees, logistics, wellbeing, kitchen, and correspondence. Hence, the public authority did disaster communication in the impacted village in cooperative energy with the PASEBAYA through a predetermined disaster hazard decrease of the schooling framework, trusting that it would lessen the casualties of the Mount Agung eruption. Subsequently, the communication model based on society as a subject was more responsive in taking care of disasters. When the Mount Agung disaster happened, the model embraced by the Karangasem Government's Public Relations was coordinated with the PASEBAYA. The government was involved in coordination with the PASEBAYA, divided into five shelters, including Refugee Shelter (Regional Disaster Management Agency/BPBD Volunteers, Police), Logistics Shelter (Social Department, Main Post, Donator), Health Shelter (Health

Service), Public Kitchen Shelter (Social Department), and Communication Shelter (ORARI, RAPI, and Volunteer Radio).

This form of coordination was carried out with the help of the media, which facilitated access to exchange information and the development of disasters in the field between the Government Public Relations and the PASEBAYA, which oversaw 28 buffer villages. The 28 buffer villages are depicted in Table 1.

Regarding the eruption of Mount Agung, PASEBAYA mapped the number of residents, complete with names and determined the place of refuge. Then, it coordinated with the destination villages to establish cooperation between the affected villages and buffer villages. Hence, when refugees arrived, the buffer villages were ready. The positive response of the Karangasem Regency Government and the Regional Disaster Management Agency (BPBD) to the PASEBAYA facilitated training to have high preparedness and resilience in facing Mount Agung eruption, especially for 28 affected villages such as in Table 1. PASEBAYA has been expected to be the front guard in providing information to convince the public if residents must evacuate.

"The model for establishing 28 disaster-prone villages is also a solution in facilitating access to the exchange of information and communication between the government and the community. The reason is that in these 28 villages, each village head is appointed to coordinate and communicate directly with the government, then the village heads convey their message with orderly and appropriate information to the public" (Mr. Edi Setiadi, Head of Public Relations of Karangasem Regency, an In-depth Interview on June 26, 2019).

Based on the presentation by the Public Relations of the Karangasem Regency Government, the establishment of 28 villages as disaster buffer villages made the disaster communication process easier because there were community leaders who oversaw the village. The creation of this scheme also facilitated coordination. The advice of community leaders could minimise victims because of mutual coordination between government public relations, regional disaster management, and the PASEBAYA community, which oversaw 28 disaster-prone villages.

Moreover, the Government Public Relations of Karangasem and PASEBAYA carried out disaster mitigation by providing accurate information through the Centre for Volcanology and Geological Disaster Mitigation (PVMBG), informing Mount Agung activities at the alert and levels as a coordination form and cooperation aspects, specifically for people vulnerable to disaster occurrences. The activities that could be done were risk reduction and prevention activities, such as preparedness to face likely disasters and dissemination of early warnings. At the point when catastrophe strikes, information, communication, coordination, and collaboration are the keys to achievement in the management of disaster.

"So far, many activities that can be done are a fast response of Public Relations of Karangasem Regency Government, In this case, provide information, education, and persuasion to mitigate the disaster of Mount Agung eruption toward the Karangasem community" (Mr. Wayan Pradana, Karangasem Community. Focus Group Discussion on June 26, 2019).

It is related to the theory of the functions of the Government Public Relations, which, according to Bernays in Nilasari (2012), encompasses:

1) Providing information to the community,

2) Conducting persuasion to change the community's attitudes and actions directly, and

3) Attempting to integrate an institution or agency's attitudes and actions following the community's attitudes and actions, or vice versa.

In Mount Agung disaster communication, PASEBAYA used the media to communicate and coordinate. PASEBAYA employed both new and traditional media to inform the current condition of the disaster in the community, consisting of 28 buffer villages in Karangasem, Bali, Indonesia.

"We use a variety of media. Types of new media communication involved WhatsApp, Instagram, and Facebook, while traditional media covered Handy Talk (HT) and the radio community, previously still hitched on the Radio Republic of Indonesia Organisation (ORARI) frequency, and now has a special frequency of 146,800 Mz," (Mr. Pupuh, member of PASEBAYA Community. Focus Group Discussion June 26, 2019).

However, media use had problems because natural disasters would result in losing signal and internet access. Thus, the only media that could be used was the community radio, such as ORARI. However, to overcome the limitations of radio media, the suppliers shared information to residents through having the habit of gathering every evening in the Banjar (hall meeting) to listen to information from other regions" [14]. The community of Karangasem could also share information and make complaints with the government with supporting facilities from available media as a form of synergy in disaster management between the government and the community.

In disaster management situations, the Public Relations of the Karangasem Regency Government also provided a recommendation to the community to evacuate from the danger zone of the Centre for Volcanology and Geological Disaster Mitigation (PVMBG). This information was quickly provided to the community radio of PASEBAYA. The information was conveyed to the public through the radio channel through their *Perbekel*, namely community leaders or village heads in 28 disaster-supporting villages.

Table 1. Buffer villages

No.	Village	No.	Village	No.	Village
1	Rubaya Village	10	Menanga Village	19	Pembatan Village
2	Kubu Village	11	Kesimpar Village	20	Kelurahan Subagan
3	Dukuh Village	12	Upper Datah Village	21	Upper Bebandem Village
4	Batu Ringgit Village	13	Upper and Western Ababi Village	22	Jungutan Village
5	Sukadana Village	14	Padangkerta Village	23	Northern DudaVillage
6	Ban Village	15	Karangasem Tukad Janga Village	24	Amerta Buana Village
7	Tianyar Village	16	Upper Buana Giri Village	25	Sebudi Village
8	Pidpid bagian Village	17	Budakeling Village	26	Peringsari Village
9	Nawakerti Village	18	Kesimpar Village	27	Upper Muncan Villade
				28	Besakih Village

"PASEBAYA Community regularly monitored the condition of Mount Agung and conveyed the information through radio communication or Handy Talky (HT) to each village because the signal could reach the corners of the villages, even to the hills" (Mr. Pupuh, member of PASEBAYA Community. Focus Group Discussion June 26, 2019).

"Through the PASEBAYA, information about the conditions of the eruption of Mount Agung became actual. Information could be trusted to be accurate and updated due to mutual coordination with the Public Relations of the Regency Government and the government department that focuses on tackling disasters" (Mr. Made, Karangasem Community. Focus Group Discussion on June 26, 2019).

Based on this, it is known that the situation in the location was checked first before being broadcast. The PASEBAYA could educate the Karangasem Bali community about the potential danger of eruption, exchange information, and assist the community by providing information through this unlimited forum regarding the condition of Mount Agung and other disasters.

The communities outside Karangasem Regency could also access information through the channel owned by PASEBAYA. The attempts carried out by the community of Karangasem Regency, including the support of local government and other organisations, have become one of the innovations initiated by the community by forming PASEBAYA. In this regard, Haddow and Haddow [8] mentioned that innovation in governance "can be an initiative to improve governance mechanisms that bring together government authority and the influence of society in one arena of public decision making." Innovation initiated by the community has a purpose as a medium of information to the community formed in a complete institution complete with organisational structure. PASEBAYA has followed the institutional theory by Rod and Holen [15], mentioning that an "institution represents a social pattern or order that has achieved a specific state or property; an institution is then a social pattern that uncovers a specific reproductions process." In this case, PASEBAYA is a social organisation that is not profit-oriented. It only produces clear, precise, up-to-date, and accurate information to the public.

In addition, information innovation initiatives formed by PASEBAYA were mediators of information trusted by the public and obtained legality by the government. Rose and Davies, in Nurjanah and Nurnisya [23], stated that "some public offices have a greater number of impacts than others. They additionally utilise inexactly coupled methodology, which might go against or contradict. The public area is organised around unbalanced power connections". As a public institution that must always maintain public trust, members should maintain an attitude like the opinion of Nilasari [35] that "public agencies provide cognitive and moral frameworks, allowing themselves to be as good as third parties in making sense of occurrences and acting in particular circumstances. They provide information and shape the identity, the image of self-preference and administrative behaviour".

The information conveyed by PASEBAYA to the community of Karangasem Bali was beneficial and trusted. Unfortunately, many social media often convey false or hoax information. However, in this case, although it has been proven that eruptions have occurred several times, and there have been forest fires on the slopes of Mount Agung, the news that it erupted with fire and lava did not make the people panic. Concerning this, the efforts made by PASEBAYA required cooperation between stakeholders' institutions, including the local Karangasem Regency Government, such as the Government Public Relations, the Centre for Volcanology and Geological Disaster Mitigation (PVMBG), the Regional Disaster Management Agency (BPBD), the Social Department, the Public Health Department, Security such as Indonesian National Police and Indonesian National Armed Forces (Police and TNI), and community leaders (*Perbekel*).

Communication, information, coordination, and cooperation (KIKK) between these institutions are crucial to keeping track of information. Collaboration between institutions is necessary because of the limitation of authority, and the existence of one piece of information does not overtake the information received by the community. It follows Bevir's statement [36]. The traditional policy process also entails a solitary sovereign actor with a legitimate locale over a meaningful policy field as a characterised power assignment. Notwithstanding, the command-and-control management strategies of the hierarchy have fizzled in dealing with issues that could not be addressed effectively by one entity acting alone.

Additionally, hierarchy fizzled to deal with worldwide and value-based issues, those that cross the jurisdictional limits of the country state. These advancements have brought about the idea of governance rather than government, and administration involves numerous actors with conceivable jurisdictions. Therefore, the synergised communication model of the Government Public Relations and PASEBAYA for disaster communication on the Mount Agung eruption in Karangasem, Bali, Indonesia, is as follows.

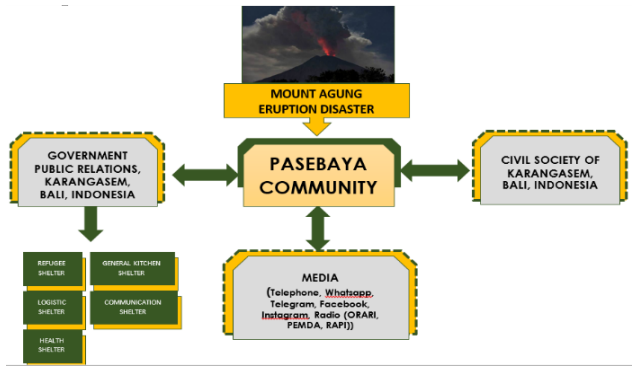

Figure 2. Synergised communication model

Based on Figure 2, the coordination model between the government, PASEBAYA, and the people of Karangasem can be seen. It shows that the PASEBAYA element is a liaison for conveying wider disaster information to the local community. The information submitted by PASEBAYA was supported by various media such as telephone, WhatsApp, Telegram, Facebook, Instagram and Radio. These media could deliver quickly and facilitate coordination. However, new media such as WhatsApp, Telegram, Facebook, and Instagram could only be used in normal and pre-disaster situations to convey disaster mitigation. However, during a disaster, there were obstacles in the form of signal and network access, so the only media that could be used were community radio such as ORARI, PEMDA, and RAPI. It made it aware that new media for disaster communication could not be chosen to be the only and leave traditional media. It is because, in a crisis, the condition of the absence of electricity and signals does not allow only using new media, but there is a need for traditional media to

keep communicating, informing, and communicating coordination and cooperation.

5. CONCLUSIONS

In this research, it can be seen that the government could not handle disasters alone. The government needs community involvement in disaster management to handle disaster communication effectively. In the case study in Karangasem, Bali, there was a collaboration in disaster communication between the Government Public Relations, the Disaster Management Agency, and the community represented by the village head or called the *Perbekel,* forming a community that cares about the disaster, PASEBAYA. Uniquely, this study found an initiative to establish 28 disaster buffer villages that aimed to facilitate coordination because it became a solution in facilitating access to the exchange of information and communication between the government and the community. The reason is that in these 28 villages, each village head was appointed to coordinate and communicate directly with the government, and then the village heads conveyed their message with orderly and appropriate information to the public. This effectiveness is evidenced by the absence of victims in the Mount Agung eruption disaster in 2017, although classified as a major natural disaster.

In the future, the results of this study will give birth to a future disaster communication model that can be used as a reference and tested on volcanic disaster communities with similar geographical conditions and community characteristics. However, the limitation of this research is that it still discussed how the coordination model between the government and the community and the use of the media. In addition, it still used qualitative methods that cannot measure effectiveness accurately in the form of numbers. Therefore, future research can conduct research by discussing in greater depth the effectiveness of coordination, information, communication, and cooperation between the government and disaster care communities to obtain measurement results that contribute to regional policies. Then, further research can also test the use of this disaster communication model by linking the use of an automatic disaster communication system as an early warning system method that can be reported directly by the community.

ACKNOWLEDGMENT

The author acknowledges the support from the Government Public Relations of Karangasem Regency, Bali, the PASEBAYA community, and the Regional Disaster Management Agency of Karangasem, who provided useful insights and partners to this research.

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