Collaborative Leadership in Disaster Communication Management at Yogyakarta International Airport

Intan Agisti Nila Sari, Universitas Gadjah Mada, Indonesia

The Asian Conference on Media, Communication & Film 2025
Official Conference Proceedings

Abstract

Disaster communication management requires cross-stakeholder collaboration to ensure effective mitigation processes that can save many lives. However, cases of mitigation failures in Indonesia highlight insufficient collaboration and communication, resulting in a lack of essential information among communities during evacuation scenarios. This situation underscores that effective communication is a crucial prerequisite for any managerial activity, as disaster mitigation decisions only become meaningful when clearly communicated to all relevant stakeholders. This research aims to explore collaborative leadership practices in disaster communication management at Yogyakarta International Airport (YIA). YIA was chosen due to its position as a national strategic infrastructure vulnerable to natural disasters such as earthquakes and tsunamis, thus necessitating reliable and collaborative communication management. Employing a qualitative approach and data triangulation through documentation studies, in-depth interviews, and direct observations of stakeholder agencies at YIA, this study reveals effective collaboration among leaders throughout all stages of disaster communication management, from pre-disaster to recovery. These findings contribute as a reference model to strengthen collaborative disaster mitigation communication management and enhance preparedness among other airports in Indonesia.

Keywords: communication management, leadership, collaborative, disaster mitigation, Yogyakarta International Airport

iafor
The International Academic Forum
www.iafor.org

Introduction

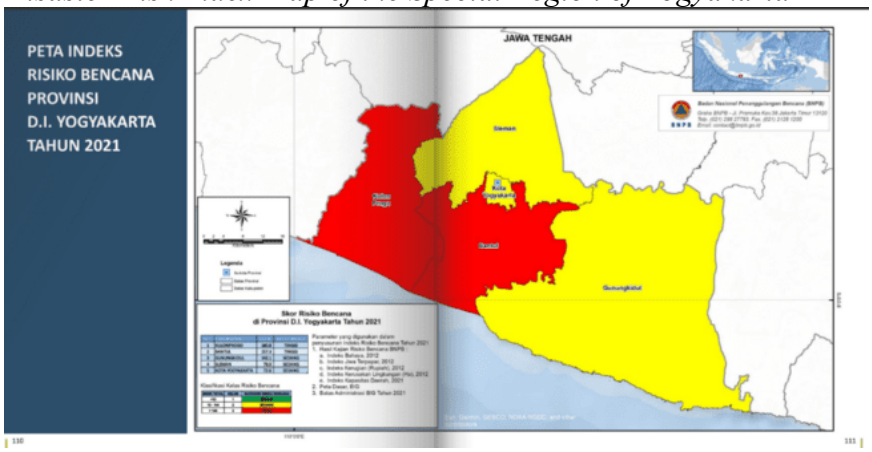
Communication management is the process of exchanging signals reciprocally to share information, persuade, or give instructions based on a shared understanding of meaning relevant to the relationship between the communicator and their social environment (Cutlip et al., 2000). Meanwhile, disaster communication management is a series of processes involving preparation or planning, formulation, implementation, and evaluation of various messages related to disasters, both during the message creation, delivery, reception, and response or feedback stages, carried out in the pre-disaster, during disaster, and post-disaster phases, to develop resilient individuals against disasters (Lestari et al., 2014). Emergency conditions amidst disaster situations require effective communication management to ensure all parties understand mitigation, evacuation, and recovery messages quickly and accurately as part of efforts to enhance safety.

In disaster communication management, ensuring safety is not the responsibility of a single party, but involves multiple actors. The collaborative aspect of cooperation is essential in disaster management because it enables various organisations with multidisciplinary expertise to carry out their functions and roles effectively during crises. At every stage of disaster management, well-coordinated collaborative communication among stakeholders is crucial to ensure that the processes from mitigation to recovery can run effectively. Collaborative communication management can address the information gaps that often occur in emergencies and ensure that all parties play a role in rescue efforts.

One of the basic principles in understanding disaster risk is the recognition by everyone that they have a responsibility to ensure their own safety through preventive actions against potential hazards (Donahue et al., 2014). Several previous scholars, such as Coombs (1998), Ryan (2017), and Sommerfeldt (2015), have contributed to research on the role of public relations in conveying information about emergency contexts, responsibilities, the nature of crises, and actions that are crucial to how a community prepares for, understands, anticipates, and responds to natural hazards. The communities that need to understand disaster risk and evacuation procedures are those located in disaster-prone areas, one of which is the airport community situated in the Special Region of Yogyakarta (Daerah Istimewa Yogyakarta, DIY). DIY is a region in Indonesia with diverse natural disaster potential, particularly earthquakes and tsunamis.

Based on data from the National Earthquake Study Center, the DIY area is traversed by the Opak fault, which is suspected to be the source of the major earthquake that struck Yogyakarta in 2006 (Pusat Studi Gempa Nasional, 2017). In addition, according to data from the Center for Volcanology and Geological Hazard Mitigation of the Geological Agency of Indonesia, Yogyakarta is also at high risk of volcanic eruptions due to the presence of Mount Merapi, which remains active (Sayudi et al., 2010). According to the Indonesian Disaster Risk Index, the DIY Province has a risk index score of 126.34, which falls into the “moderate” category (Badan Nasional Penanggulangan Bencana, 2023).

Figure 1
Disaster Risk Index Map of the Special Region of Yogyakarta



Source: Badan Nasional Penanggulangan Bencana, 2023

The mismanagement of natural disasters inevitably leads to cascading failures beyond initial physical damage. Without precise management strategies, natural disasters evolve into social disasters and more severe secondary disasters, significantly prolonging the recovery process. This discrepancy between bureaucratic procedures and on-the-ground reality was clearly demonstrated during the earthquake that struck the Special Region of Yogyakarta on May 27, 2006. The catastrophe resulted in 6,234 fatalities, approximately 38,568 to 137,883 injuries, and the destruction of over 12,000 houses, alongside damage to historical sites like Prambanan and Borobudur. Although the government, led by President Susilo Bambang Yudhoyono, allocated significant funds—IDR 100 billion for emergency response and IDR 1.1 trillion for reconstruction (Tempo.co, 2024)—fundamental issues in disaster communication management persisted. Kusumasari and Alam (2012) found that the local government's response was slow and insufficiently integrated with community efforts, failing to match the rapid speed of the disaster. To address such systemic delays and minimize future losses, Haddow and Haddow (2014) assert that a robust disaster communication strategy is essential to bridge the gap between government agencies and the affected community.

Given this history of vulnerability, readiness to face emergencies is critical for all sectors in Yogyakarta, particularly for high-stakes infrastructure like the Yogyakarta International Airport (YIA). Operating in Temon, Kulon Progo, YIA serves as a vital economic node operated by PT Angkasa Pura Indonesia. With a passenger capacity of up to 20 million people per year, it functions not only as a gateway for travelers but also as a hub for domestic trade and export–import cargo. As noted by Edwards and Goodrich (2014), the complexity of modern airport operations requires a highly coordinated emergency response strategy.

Despite the high stakes, mitigation efforts in Indonesia frequently fail due to a lack of collaborative communication. This results in unclear evacuation protocols and communication conflicts that span from the grassroots level to the central government. As noted by Lestari et al. (2014), these conflicts stem from issues regarding aid distribution, reconstruction processes, and interpersonal or intergroup tensions. Furthermore, academic research on collaborative communication management for disaster mitigation remains limited. While Rejeki and Negoro (2022) analyzed communication strategies for building partnerships between private institutions and the government through local culture, their work reveals a gap: there is little understanding of how collaborative communication management operates specifically within airport disaster mitigation.

To address this gap, this study examines how collaborative communication is organized during pre-disaster preparedness at Yogyakarta International Airport (YIA). This research is significant for improving preparedness in disaster-prone Yogyakarta and enriching communication studies in Indonesia. Ultimately, the findings are expected to guide stakeholders at YIA in designing disaster communication policies that are more collaborative, responsive, and effective.

Conceptual Framework

Collaborative Disaster Communication Management

A disaster refers to an event or a series of events that can threaten and disrupt the lives and livelihoods of communities, caused by natural, non-natural, or human factors. These events may result in loss of life, environmental damage, material losses, as well as psychological impacts. Meanwhile, a disaster threat is an occurrence or event that has the potential to cause a disaster (Government of the Republic of Indonesia, 2007). Kjell Brataas (2018) conceives disaster communication as a process involving the exchange of information among various parties, including government, organizations, and communities, throughout the entire disaster cycle, from prevention, preparedness, and response to recovery. Disaster communication must take place through dialogue between decision-makers and the public, and not merely as one-way information dissemination.

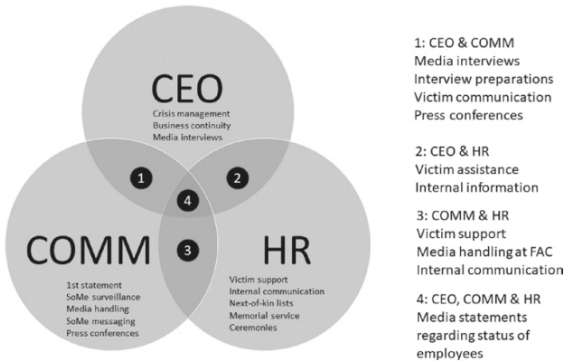
Brataas (2018) emphasizes that effective disaster communication management can improve preparedness and accelerate post-disaster recovery, and therefore proposes the four phases of emergency management: mitigation, preparedness, response, and recovery. Mitigation focuses on preventing future emergencies or minimizing their impact by identifying and reducing risks and implementing preventive measures. Preparedness involves planning and organizing resources, as well as training communities and relevant personnel through emergency plans, drills, and public education so they are ready to face disasters and save lives. Response refers to the immediate actions taken once a disaster occurs—such as rescue, evacuation, and the delivery of aid—as the concrete implementation of preparedness plans. Finally, recovery centers on post-disaster rehabilitation, including restoring communities to normal conditions, repairing infrastructure, and mobilizing financial assistance to support long-term recovery.

This model provides a structured framework for emergency and disaster management, and helps various actors plan and implement effective actions. Lestari et al. (2014) adds that the pre-disaster or non-disaster phase in the process preceding the implementation of mitigation is also very important to be properly managed. This phase focuses on strengthening the knowledge base of communities regarding the potential occurrence of disasters in each area, including communication and education with community groups. These aspects of disaster communication management become systemic and integrated components of YIA's Standard Operating Procedures (SOPs), involving various stakeholders and supported by both national and international regulations.

In collaborative communication management, Brataas (2018) explains the concept of the Circles of Crisis Communication Collaboration, commonly referred to as the 4C Model, which describes how organizational leaders, the communication or public relations team, and the human resources team need to cooperate in crises. In the first stage, leaders and the communication team need to prepare strategies for interviews and for delivering information to the public and to the families of victims. Next, leaders and the human resources team need

to provide support to the families of victims and inform internal members of the organization that a crisis is underway. The following stage is collaboration between the communication team and the human resources team in the form of providing support to victims and their families, as well as handling mass media. The final stage is collaboration among all three parties to convey messages through media statements related to the employment status of personnel in the organization.

Figure 2
The Circles of Crisis Communication Collaboration (4C) Model



Source: Kjell Brataas, 2018

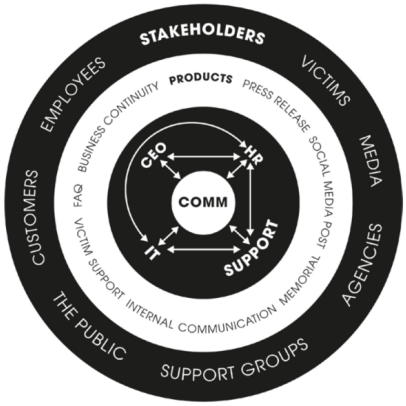
The 4C Model highlights the critical importance of an organization's initial message during a crisis, especially to victims' families. The first communication must clearly acknowledge the incident with genuine empathy and outline the concrete steps being taken to manage the situation. Organizations should also offer clear channels—such as hotlines or web links—for people seeking further details. At the same time, they must be ready to actively collaborate with the news media by supplying timely updates on the disaster's status, responding to calls, issuing press releases, organizing press conferences when necessary, giving interviews, and preparing a library of photos and videos for media use. In addition, social media requires strategic attention. The speed at which information spreads must be matched by the organization's visible presence on official platforms, including the use of live updates or live streaming to share verified, up-to-date information that the public can easily access.

Stakeholder Collaboration in Disaster Mitigation at YIA

Airport operations, including those at YIA, involve a multitude of stakeholders, each possessing distinct expertise, duties, and responsibilities. The earthquake and tsunami mitigation system at YIA can function effectively only if each stakeholder involved fulfils their responsibilities in accordance with their respective Standard Operating Procedures (SOPs). Therefore, disaster communication management at YIA necessitates effective collaboration, as well as a clear understanding of and accountability for respective roles and functions.

Contextually, YIA stakeholders refer to the individuals, groups, and institutions involved, either directly or indirectly, in the airport's operations. In the context of collaborative communication management for YIA's disaster mitigation, these stakeholders comprise government bodies, humanitarian organizations, the community, the private sector, and the media. All these entities play roles in planning, response, and post-disaster recovery. Their involvement is crucial, as the decisions and actions taken within disaster management will impact multiple aspects of life, including safety, health, and economic recovery.

Figure 3
The Communication Product Loop Can Be Adjusted Based on the Type of Organization, the Kind of Disaster, and So On



Source: Kjell Brataas, 2018

This research will focus on three main parties (leading sectors) in the collaborative natural disaster communication management at YIA. The first party is the Meteorology, Climatology, and Geophysics Agency (BMKG), which holds the primary duty of conducting earthquake monitoring and detection, as well as issuing tsunami early warnings following an earthquake. The second party is PT Angkasa Pura Indonesia (API), which serves as the airport operator and manager at YIA. The third party is the Indonesian Air Navigation Service Provider (Perum LPPNI), or AirNav Indonesia, which communicates directly with pilots, both in-flight and on the airport's airside, to assist in monitoring the emergency and to coordinate evacuation decisions.

Research Methods

The approach used in this research is descriptive qualitative, utilizing a case study method. The case study method will be supported by primary data obtained through a documentation study. This research utilizes data sources in the form of official Standard Operating Procedure (SOP) documents for earthquake and tsunami mitigation at YIA, which have been agreed upon by Angkasa Pura Indonesia, AirNav Indonesia, and BMKG. Furthermore, the data will be supplemented with other official documents related to YIA's disaster mitigation from these three institutions. As secondary data, direct observation will be conducted to observe collaborative communication efforts at YIA, along with interviews with officers from relevant units working at YIA. These official documents are used to enhance the credibility of the qualitative research findings.

Interviews will be conducted with a Junior Meteorology and Geophysics Observer from the BMKG Yogyakarta Meteorological Station assigned to YIA. The focus of the questions will relate to communication strategies and processes during a disaster, using an open-ended question structure where subsequent questions are adapted based on the responses given. Observation will be carried out by visiting the YIA location directly and observing facilities related to disaster mitigation. The research process is conducted by formulating the problem, followed by collecting qualitative data. Afterwards, the data will be analysed and validated using theory triangulation, which involves comparing existing theories with the collected data.

Results and Discussion

The findings utilized in this research include the "YIA Emergency Response and Evacuation Routes" document, the "Application of Modern Construction Methods in the Development of the Yogyakarta International Airport Strategic Project," and the "Compilation of Standard Operating Procedures (SOP) for the YIA Earthquake and Tsunami." These documents are the result of joint planning and have been agreed upon by PT API, BMKG, and AirNav. In the implementation of natural disaster mitigation, the involvement and cooperation of other agencies—such as local government, the National Search and Rescue Agency (Basarnas), the National Disaster Management Agency (BNPB), and various other institutions—are possible, adapting to the conditions and needs on the ground. Secondary data findings from observation include: the presence of disaster evacuation signs at various points within YIA; the existence of a Crisis Center and an airport call center; the presence of official social media accounts belonging to the leading sectors; and an infrastructure design prepared to withstand potential earthquakes, tsunamis, liquefaction, and floods. The next data finding is an interview with the public relations and airport operation staff of Angkasa Pura Indonesia assigned to YIA and the BMKG officer.

The collected findings are discussed and analyzed below, based on a comparison with the theory of collaborative communication management in disaster mitigation at YIA.

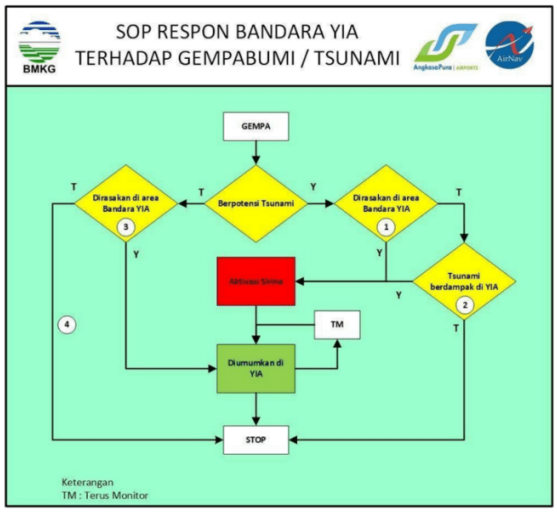
Mitigation

Angkasa Pura Indonesia (API) has conducted studies on mitigation measures for earthquakes, liquefaction, tsunamis, floods, and volcanic ash. Subsequently, they planned the basic design and construction design of YIA to ensure that the airport's buildings and facilities possess disaster resilience. Before commencing the development design process, API organized a Focus Group Discussion (FGD) with earthquake and tsunami experts from four Indonesian universities, also involving seismology experts from Japan, to map the necessary disaster mitigation strategies for YIA. Furthermore, API's expert team conducted a comparative study (benchmarking) at Sendai Airport and Kochi Airport in Japan, which are renowned for their excellent earthquake and tsunami mitigation systems.

In the "YIA Emergency Response and Evacuation Routes" document, mitigation steps within the development planning and disaster evacuation at YIA have been executed collaboratively among the leading sectors, namely API, BMKG, and AirNav. API designed YIA to withstand tsunamis and resist earthquakes up to 8.8 Magnitude, with a maximum elevation of 12.8 meters above mean sea level. If an earthquake occurs with an epicentre 400 meters from the shoreline, it would take 35 minutes for a tsunami to reach the terminal building. This 35-minute duration constitutes the available time window for the evacuation process. API is responsible for determining evacuation routes and implementing evacuation scenarios for passengers, landside operations, and airside operations.

Furthermore, in the context of earthquake and tsunami mitigation at YIA, BMKG holds the primary duty as the party conducting earthquake monitoring and detection, as well as issuing tsunami early warnings after an earthquake occurs. The BMKG response SOP for earthquakes and tsunamis at YIA can be seen in Figure 4. Meanwhile, AirNav is responsible for managing aircraft traffic movements in the air, including communicating critical information to pilots regarding the evacuation process. AirNav possesses an Emergency Response Team (ERT), a specialized team activated only during emergencies.

Figure 4
BMKG's Response SOP for the Earthquake and Tsunami at YIA, Approved by PT API and AirNav



Source: BMKG

Preparedness

The preparedness phase at YIA includes the Emergency Response Exercise (PKD), which aims to enhance the skills and capabilities of airport personnel in addressing various risks, threats, and disruptions to aviation safety and security. Airport personnel are expected to aid and evacuate victims during emergencies. The YIA PKD exercise featured three collaborative response simulations: an aircraft accident exercise, a simulation for bomb handling and aviation security threats (security exercise), and a natural disaster emergency response simulation (airport disaster exercise) (Antara News, 2023). This PKD involved the collaboration of all leading sectors, along with support from other relevant agencies, including security forces (police and military), the fire department, and the mass media, which were invited to provide direct coverage. The collaboration with the media during the PKD also served to disseminate information regarding reporting procedures for when an actual disaster occurs, and to communicate safety and security regulations pertinent to emergencies.

Figure 5
Documentation of Media Monitoring of the YIA PKD News Coverage

Source: iNews.id and Detik Jogja

Response

Emergency response is a matter that has been prepared by the leading sectors, even though a disaster event has not yet occurred. API, BMKG, AirNav, and the entire YIA community possess Emergency Situation SOPs tailored to the duties, responsibilities, and expertise of each respective institution. YIA has a Crisis Center building designed to be operated as an emergency airport operational control center (Airport Operation Control Center/AOCC) when the primary AOCC, located in the terminal building, becomes unusable or paralyzed due to the disaster's impact.

This Crisis Center building also functions as a Temporary Evacuation Site (TES) for the community residing around YIA. If an evacuation order is announced, the API team will open perimeter fence access and direct surrounding residents to immediately enter the Crisis Center building. The building is also equipped with access ramps usable by persons with special needs. To respond to victim needs, API has prepared ambulances, medical teams from the Ministry of Health's Port Health Office (KKP), and other emergency aid equipment in the arrivals area, all capable of rapid deployment in an emergency.

The leadership of API, BMKG, AirNav, and other institutions operating at YIA have received leadership training, which includes leadership in emergency and crisis situations. Leadership collaboration during emergencies is crucial in the YIA disaster communication management process, as these leaders will face the public and mass media when a disaster strikes. The way a leader or institutional spokesperson responds to a disaster event and communicates during an emergency must be carefully considered and delivered optimally. This is to ensure the leader's statements do not become a blunder, thereby creating a worse derivative disaster or secondary crisis.

In addition to the leadership factor, social media and instant messaging applications—which enable real-time communication via text, voice, and video—also play a critical role in the emergency response phase of disaster communication management. API has an official contact center division known as Angkasa Pura 172, often abbreviated as CC172. The CC172 service is available 24 hours a day via telephone (172), email (cc172@ap1.co.id), Facebook (Contact Center Angkasa Pura 172), Twitter (@angkasapura172), and Instagram (@angkasapura_172). During an emergency, CC172, together with airline contact centers, serves as the frontline for responding to all inquiries and information needs from airport service users and the general public.

Recovery

The recovery phase after an emergency at YIA is a collaborative undertaking that encompasses the restoration of airport operations, the repair of infrastructure and facilities impacted by the disaster, as well as financial planning and distribution, including compensation for victims or affected airport employees. A critical aspect of this phase is the communication challenge that institutions or organizations will face when dealing with the mass media and victims' families, especially in cases involving fatalities. According to Brataas (2018), organizational leadership must prioritize the victim's dimension or perspective in both communication and management policymaking.

Figure 6
Media Monitoring of PT API Statements in Responding Disasters or Crises

Source: WartaEkonomiID and iNews social media

In the figure above, an example is provided of how API leadership handles the recovery phase. API President Director Faik Fahmi explains the efforts undertaken by API to restore public confidence, ensuring the public does not fear air travel. The subsequent image shows the General Manager of API's Adisutjipto Airport making a statement at a press conference, affirming that passengers of the Garuda airline flight that skidded at Adisutjipto Airport will receive compensation. This message certainly has the same objective as Faik Fahmi's statement: to restore public trust while simultaneously demonstrating corporate empathy and responsibility.

In this phase, the mass media plays a crucial role in supporting recovery efforts. Nazaruddin (2007) states that the essential principles of disaster journalism include accuracy, humanism, a commitment to rehabilitation, and control and advocacy. In disaster communication management at YIA, all institutions possess public relations (PR) teams that understand their respective institutional authorities. These PR teams will serve inquiries and requests for information clarification from mass media journalists to ensure that the news subsequently disseminated is thoroughly accurate. In addition, the press conference was attended by leaders from other organizations, ensuring that information transparency could be delivered in an integrated manner.

The public relations teams, together with institutional leaders from BMKG, API, and AirNav, will use journalists as key channels to convey their commitment to restoring airport facilities and services. Media and airport-related institutions are also expected to jointly monitor the distribution of disaster assistance. In this context, journalists must apply humanistic principles in disaster coverage, ensuring fair representation for all parties and adhering to access regulations set by authorized agencies. After the disaster, the airport operations team will quickly prepare an Incident/Accident Report, based on flight schedule monitoring and inspections of affected airside and landside facilities. This report becomes the basis for management to prioritize recovery actions and coordinate with API Head Office, AirNav, and BMKG on short-, medium-, and long-term decisions, including financial allocations that exceed the branch's authority.

These processes underline that effective disaster mitigation relies on strong stakeholder collaboration. The initial requirement is to build trust and shared understanding among government bodies, humanitarian organizations, the private sector, and local communities, supported by clear role definitions and joint planning across all phases from mitigation to recovery. Post-event evaluation, feedback, and regular joint drills or simulations are also

essential to refine strategies and ensure stakeholders are increasingly prepared for future emergencies.

Conclusion

This study examines collaborative communication management in natural disaster mitigation from a communication studies perspective, addressing a gap in previous work that has largely focused on public administration, engineering, or the natural sciences. Drawing on Kjell Brataas's disaster communication management model, it offers a structured framework for reducing disaster impacts through the coordinated involvement of multi-sector stakeholders.

At Yogyakarta International Airport (YIA), effective disaster communication requires rapid, accurate responses to public information needs, supported by strong inter-stakeholder coordination, clear leadership, and strategic use of communication technologies. Preparedness and response therefore depend not only on physical infrastructure, but also on an integrated communication system and active community engagement. The study is limited by its single-case, qualitative design, which restricts the generalizability of its findings beyond YIA. Future research could include comparative case studies in other regions, assess the influence of digital tools on collaborative communication, or further explore stakeholder dynamics in disaster contexts.

Acknowledgements

The author gratefully acknowledges the Ministry of Communication and Digital Affairs of the Republic of Indonesia (Kementerian Komdigi RI) for their financial support via the Partnership Scholarship Program (Beasiswa Komdigi). The author further extends sincere appreciation to Department of Communication Science Universitas Gadjah Mada for its academic guidance, as well as to BMKG and Angkasa Pura Indonesia for their invaluable research support and institutional cooperation.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

The author declares that ChatGPT and Gemini AI were used in the preparation of this manuscript solely for minor linguistic refinement, including grammar correction, small sentence-level adjustments to improve clarity, and translation. The software was not used to conduct analysis, create substantive content or draw conclusions. The intellectual content, interpretations and conclusions presented in this manuscript are entirely the author's own.

References

Antara News. (2023, August 24). *Bandara YIA Kulon Progo gelar simulasi penanggulangan keadaan darurat* [YIA Kulon Progo Airport holds emergency response simulation]. https://jogja.antaranews.com/berita/647073/bandara-yia-kulon-progo-gelar-simulasi-penanggulangan-keadaan-darurat

Badan Nasional Penanggulangan Bencana. (2023). *Indeks risiko bencana Indonesia (IRBI) tahun 2023* [Indonesia disaster risk index 2023]. BNPB. (Lihat bagian Provinsi DIY yang menyebutkan jalur Sesar Opak dan rangkaian ancaman gempa, tsunami, dan letusan gunung api).

Brataas, K. (2018). *Crisis communication: Case studies and lessons learned from international disasters*. Routledge.

Coombs, W. T. (1998). An analytic framework for crisis situations: Better responses from a better understanding of the situation. *Journal of Public Relations Research, 10*(3), 177–191. https://doi.org/10.1207/s1532754xjprr1003_02

Cutlip, S. M., Center, A. H., & Broom, G. M. (2000). *Effective public relations* (9th ed.). Pearson Prentice Hall.

Donahue, A. K., Eckel, C. C., & Wilson, R. K. (2014). Ready or not? How citizens and public officials perceive risk and preparedness. *The American Review of Public Administration, 44*(Suppl. 4), 89S–111S. https://doi.org/10.1177/0275074013506517

Edwards, F. L., & Goodrich, D. C. (2014). *Emergency management at airports* (MNTRC Report 12–53). Mineta Transportation Institute. https://transweb.sjsu.edu/research/Emergency-Management-Airports

Government of the Republic of Indonesia. (2007). *Law of the Republic of Indonesia Number 24 of 2007 concerning disaster management*. State Secretariat of the Republic of Indonesia.

Haddow, G. D., & Haddow, K. S. (2014). *Disaster communication in a changing media world* (2nd ed.). Butterworth-Heinemann.

Kusumasari, B., & Alam, Q. (2012). Bridging the gaps: The role of local government capability and the management of a natural disaster in Bantul, Indonesia. *Natural Hazards, 60*(2), 761–779. https://doi.org/10.1007/s11069-011-0016-1

Lestari, P., Prabowo, A., & Wibawa, A. (2014). Manajemen komunikasi bencana Merapi 2010 pada saat tanggap darurat [Merapi disaster communication management 2010 during emergency response]. *Jurnal Ilmu Komunikasi, 10*(2), 173–197.

Nazaruddin, M. (2007). Jurnalisme bencana: Sebuah tinjauan etis [Disaster journalism: An ethical review]. *Jurnal Komunikasi, 1*(2), 163–177.

Pusat Studi Gempa Nasional. (2017). *Peta sumber dan bahaya gempa Indonesia tahun 2017* [Map of Indonesian earthquake sources and hazards 2017]. Pusat Penelitian dan Pengembangan Perumahan dan Permukiman, Badan Penelitian dan Pengembangan, Kementerian Pekerjaan Umum dan Perumahan Rakyat.

Rejeki, M. C. N. S., & Negoro, S. H. (2022). Collaborative governance dan strategi komunikasi nilai-nilai organisasi dalam membangun landasan kemitraan [Collaborative governance and organizational value communication strategies in building partnership foundations]. *Jurnal Ilmu Komunikasi, 19*(1). https://doi.org/10.24002/jik.v19i1.4616

Ryan, B. (2017). Information seeking in a flood. *Disaster Prevention and Management: An International Journal, 22*(3), 229–242. https://doi.org/10.1108/DPM-05-2012-0059

Sayudi, D. S., Nurnaning, A., Juliani, D. J., & Muzani, M. (2010). *Peta kawasan rawan bencana Gunungapi Merapi, Jawa Tengah dan Daerah Istimewa Yogyakarta* [Hazard map of Merapi volcano disaster-prone areas, Central Java and the Special Region of Yogyakarta]. Pusat Vulkanologi dan Mitigasi Bencana Geologi, Badan Geologi, Kementerian Energi dan Sumber Daya Mineral.

Sommerfeldt, E. J. (2015). Disasters and information source repertoires: Information seeking and information sufficiency in postearthquake Haiti. *Journal of Applied Communication Research, 43*(1), 1–22. https://doi.org/10.1080/00909882.2014.982682

Tempo.co. (2024, May 27). *Mengenang 18 tahun gempa Yogyakarta, lindu yang menewaskan 6.000 orang* [Commemorating 18 years of the Yogyakarta earthquake, the tremor that killed 6,000 people]. https://nasional.tempo.co/read/1872456/mengenang-18-tahun-gempa-yogyakarta-lindu-yang-menewaskan-6-000-orang

Contact email: intanagisti@gmail.com