



Disaster Communication: A New Approach on Disaster Mitigation

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Abstract. Disaster mitigation is not only about the efforts to prevent and reduce the occurrence of disasters in a regional area. More than that, disaster mitigation is a change that simultaneously follows the development of the times and cannot stop at one paradigm as a reference for efforts. This study identifies how people view themselves and their environment, which will influence their thinking, behavior, and actions by looking at the historical development of disaster mitigation. This study aims to provide a new perspective on disaster mitigation that is not only based on government efforts to master efforts in disaster mitigation but more on how to develop disaster mitigation based on a new approach. The research method used in this study is qualitative, which tries to elaborate and develop paradigms that have existed in the past. The results of this study First, the disaster mitigation approach must be carried out based on communication and coordination that is aligned with the SOP for implementing disaster mitigation efforts. Second, the disaster mitigation approach is not only carried out using the direction of realism, which emphasizes the centralization of the government's main role in disaster mitigation efforts.

Keywords: Disaster Communication, Disaster Mitigation Approach, Social Change

1 Introduction

Quoting the thinking initiated by Max Weber about social action or social action cannot be separated from the rational thought process and the goal to be achieved by the perpetrator [1] [2] [3]. Based on Max Weber's thoughts, Peter L Berger and Thomas Luckmann embody the existence of social conformity by providing a common point that social change is also rooted in the aspect where social change is greatly influenced by the environment that makes the existence of habituation. Berger views social change as a dialectical process between individuals and society. Society is formed through individual actions, but the culture that has been formed also influences individuals through social structures. Social change can occur when there is tension between an agent (individual or group) and a structure (social institution or norm). Social change can happen when individuals or groups question, challenge, or change existing structures [4] [5] [6]. Social action when the social condition of society is indeed driven by changes, at least it can be observed through the aspect of motives where there are

four actions, namely, (1) actions to achieve a certain goal, (2) actions based on the existence of a certain value, (3) emotional actions, (4) actions based on certain customs (traditions) [7].

Berger's thinking at least provides a new idea in the social world about the importance of making a change based on needs, especially those urgent needs. In the Theory of the hierarchy of Needs introduced by Abraham Maslow, if you look further, you will find factors that support social change that motivate individuals to be able to improvise themselves [8] [9]. At least Maslow identified five needs that are considered the ideology of human needs when he is alive [10] [11] [12]. It is undeniable that living humans tend to fulfill both primary, secondary, and tertiary needs. Humans will meet their physiological needs to continue their lives, develop, and grow [13] [14]. However, it should be remembered that without security and safety, humans can never maintain and live their lives calmly and peacefully [15] [16]. Maslow's theory also explains that all human life groups must possess the need for security and safety without exception. This is closely related to the hierarchy of human needs, which, if you want to reach the peak of human needs, namely the need for self-actualization, must be based on a strong foundation in meeting needs, both physiological and security [17] [18] [44]. Furthermore, in shaping and embodying the fulfillment of security and physiological needs, the main role of the government as a regulator and controller of the community cannot be separated [19] [20].

The development of the times has changed all thinking, theoretically and technically, without exception in disaster mitigation. Regarding social change, disaster mitigation has changed all disaster management efforts. History records that there are four changes in the disaster mitigation paradigm where this paradigm is a manifestation of disaster mitigation efforts, which certainly have an impact on how disaster mitigation is carried out [21] [22] [23]. In the context of social change, this reality is a concrete manifestation of social conformation that accelerates disaster mitigation efforts. Initially, disaster mitigation only focused on assisting (relief) and emergencies [24] [25].

Along with the development of the times and improving human safety, especially those in disaster-prone areas, changes in disaster mitigation continue to experience a revolution. So, in the end, the disaster mitigation paradigm must reach the point where efforts must be made rooted and holistically. This paradigm is then known as risk reduction, where disaster mitigation efforts no longer focus on providing assistance or emergency assistance but rather on optimizing aspects of supporting instruments that can reduce the fatality rate of disaster events. Disaster risk reduction is an integrated cross-sectoral, cross-regional plan that includes social, economic, and environmental aspects. In its implementation, national disaster risk reduction activities will be adjusted to disaster risk reduction plans at the regional and international levels where the community is the subject, object as well as the main target of disaster risk reduction efforts and seeks to adopt and pay attention to local wisdom and traditional knowledge) that exist and develop in society. As a subject, the community is expected to be able to actively access formal and non-formal information channels so that disaster risk reduction efforts can directly involve the community. The government is tasked with preparing facilities, infrastructure, and resources for implementing disaster risk

reduction activities [26] [27] [28].

The National Disaster Management Agency (BNPB) noted 749 natural disaster events in Indonesia from January 1 to March 31, 2023. Of these, the most catastrophic floods occurred, with 331 events. This number is equivalent to 44.19% of the total national disaster events in 2023. In addition, BNPB also recorded 226 extreme weather events, 130 landslides, 41 forest and land fires (karhutla), ten tidal waves/abrasion, nine earthquakes, and two volcanic eruptions [31].

Table 1. Total of Disasters in Indonesia in 2012-2022 [32]

Year	Total of Disasters	Year	Total of Disasters
2012	1.780	2018	3.397
2013	1.666	2019	3.814
2014	1.961	2020	4.650
2015	1.694	2021	5.402
2016	2.306	2022	3.544
2017	2.866		

Source: Geoportal of the National Disaster Management Agency (BNPB) (Infographic on Annual Disasters in Indonesia)

Disaster events in Indonesia increased significantly over the last decade. The summary introduced in the table signals that a disaster event has excellent potential to occur and cannot be predicted in advance even though, technically, many changes and efforts have been made to reduce the occurrence of disaster events. Firman Wahyudi provided important notes through the results of his research related to the communication pattern of BPBD Riau, namely in preventing the Riau BPBD smoke disaster, namely the wheel pattern. The wheel pattern is used by BPBD Riau when coordinating with related parties such as BMKG and BLH. The wheel pattern is also used during emergency response, where leaders give clear orders and directions while delivering their messages [33] [34] [35]

2 Methodology

In general, social research will discuss the two dimensions of the method used by considering the final goal of achieving the research itself [29] [30]. Through these various considerations, a researcher can study and choose which method is suitable for the main basis for making decisions. At least social research has two characteristics as a mother of methodology, namely research with a quantitative approach and study with a qualitative approach. This research is using qualitative research uses information as the main key to revealing the truth. It can be understood that the dimensions built in examining research on this qualitative approach have a deep meaning. In contrast to the quantitative approach that assesses a truth based on a broad agreement or consensus, it is more correct [36]. Qualitative research wants information to exist as a form of verification that can be accounted for. The thought that is built is that the deeper the information obtained, the greater the possibility that truth can be accepted [37] [38] [39]. Social research using a qualitative approach teaches researchers the importance of

the meaning of a problem not to be seen as finding truth but rather to reveal a reality that will never appear on the surface of a problem [40] [41]. This is a qualitative researcher's hope to find something new inside in photographing a problem. Of course, in obtaining or collecting information, it is known as saturated data when the variation of data reaches a peak, and there is no longer a choice of information.

This research adopts a qualitative approach, employing in-depth interviews and field observations. The study focuses on understanding the communication challenges faced by local communities and evaluating the effectiveness of institutionalized communication strategies. Data were collected from interviews with disaster mitigation officials, local government representatives, and community members in disaster-prone areas. Thematic analysis was used to identify recurring patterns and derive actionable insights. This research is very suitable and relevant to the qualitative approach because it focuses more on solving problems by finding new insides in disaster mitigation problems.

3 Results and Discussion

3.1 Disaster Mitigation Approach

Disaster mitigation requires urgent handling and immediate implementation. In disaster mitigation, the disaster management paradigm has a very large and widespread impact on how disaster mitigation is carried out theoretically and practically. Research conducted by Titiek Herawati and Rachmat Setiawibawa [2023] highlights the root of the main problems classified as fundamental problems in optimizing disaster mitigation efforts. There are at least three important points: the issue of the lack of SOPs, the second is weak coordination, and the third is the development of natural disaster mitigation that has not been carried out [27]. Talking about disaster mitigation will be closely related to how the government prepares and enforces SOPs strategically and systematically for the sustainability of disaster mitigation efforts. Indonesia, a country that gets the nickname Ring of Fire because it is surrounded by mountains and active mountains that can erupt or spew lava at any time, should pay more attention to disaster mitigation efforts. Herawati and Setiawibawa's findings explain that Indonesia still has been dwelling on administrative matters related to disaster mitigation response. This is evidenced by the absence of proactive actions that provide usefulness and benefits from the development of disaster mitigation. This helplessness is caused by the lack of follow-up, which is then institutionalized to reduce the occurrence of disaster events and the number of victims of natural disasters. Not only that, communication, which should be the main point for the success of coordination between the central and regional governments, and also other efforts that can be carried out using communication, have also not touched on the aspect of urgency. This means that disaster mitigation efforts through communication have yet to be the main focus on how disaster mitigation efforts can be carried out as a paradigm.

Arsi Widiandari [2021] found new findings that have been applied in countries that incidentally have a window of potential for earthquakes, namely Japan [42]. In this country, the value of disaster mitigation has been instilled with disaster mitigation

education that focuses on three basic things. The first finding is that Japan pays great attention to how literacy is collected academically through schools or educational institutions that can serve at the forefront of providing acceleration in disaster mitigation education programs. This finding focuses on the role of educator facilitators who can give confidence to carry out disaster management internally and externally. The second finding is in the government's role, both central and local. This is associated with the Indonesian state, where disasters are very large. The government is the main actor in accelerating efforts in disaster mitigation. Of course, it will be tough when the biggest challenge is the government, which still considers ignoring the occurrence of disasters. Through the findings recorded by Herwati and Setiawibawa [2023], it has been sufficiently explained that there are problems with the coordination pattern carried out by the central government to local governments that cause wrong conceptions in disaster mitigation efforts. Wrong thinking causes the number of survivors of disasters to continue to increase. Of course, it will be very difficult to think about reducing the occurrence of natural disasters. However, what can be reduced is to create good coordination between the central and local governments, which will urge disaster mitigation efforts in the community. In other words, disaster mitigation is a complex thing based on normalization or natural law. Still, disaster mitigation is more about creating fundamental efforts adapted to the times' development. The third finding is that disaster response organizations in Japan have a fairly strong characterization. This self-existence then motivates the community to participate in proactively implementing disaster mitigation. When talking about the context of community elements, all components of society start from the scope of individuals, groups, families, and even a wide scope in a village area. Undeniably, the family also plays an important role in intervening in the success of disaster mitigation efforts. This is the basis for developing disaster response organizations in Japan to succeed in disaster management activities.

3.2 Implementation of Disaster Mitigation

Disaster mitigation is a form of effort related parties make to reduce the potential for disaster events. Disaster mitigation must be equipped with a paradigm instrument that guides the implementer in formulating a solution until implementation. Research conducted by Fitri Adi Setyorini [2023] stated that there needed to be more disaster mitigation efforts [43]. There are at least three components that form disaster mitigation launched by the Indonesian government related to the issue of domestic disaster management, which has been regulated in Law No. 24 of 2007 concerning Disaster Management. First, namely the policy direction of realism, this policy direction has been reflected in the use of words dominated by state actors and government institutions which are carried out through the governance of countermeasures, implementation, warning, supervision, determination, and other actions. Governance, which is realism, is wrapped through a series of regulations and laws that are adjusted to the law and uphold Human Rights (HAM). In addition, the output produced emphasizes the creation of humanity, harmony, and preparedness.

Second, liberalism is the main reference in carrying out the state process and is also related to political policy. This disaster mitigation certainly greatly influences the approach that will be carried out as a basic method in carrying out disaster prevention

and reduction efforts. Suppose it is associated with policies and political directions in Indonesia. In that case, the direction and goals will likely be on how to implement the value of Pancasila, which can be implemented through disaster mitigation efforts. Logically, we are directed to believe that disaster mitigation will be successful if it is fully controlled with practical political policies that cause the localization of efforts that must be made by the community and marginalize the efforts that the community should make with local methods. So, when you want to create a new paradigm in disaster mitigation, it is a problem in itself to realize new efforts. However, it is undeniable that community involvement in a consensus manner can make disaster mitigation successful. Third, policy directions that focus on constructivism, which is the policy direction, can be developed beyond the stigma that disaster mitigation is only played by a few groups by adopting the value of liberalism. The policy of constructivism provides a broader view by considering various factors and conditions in the region. The analogy that can be built is that the treatment of fever in the Java island area will be different when fever is cured in the Kalimantan or Sulawesi region. So, there is a thought that disaster mitigation is not only centrally carried out using sophisticated equipment but must also be alleviated by applying moral values that have been a vacuum in the disaster mitigation paradigm. One of the efforts that can be made to create a new paradigm for disaster mitigation is through institutionalized communication. Through institutionalized communication, the community can build disaster mitigation independently based on the values adhered to. As in communication-based on religious beliefs, communities can convey messages that make each other aware and remind each other of the importance of disaster mitigation, which is not only explained scientifically but has also been explained in the context of religion.

3.3 A New Approach for Disaster Mitigation In Indonesia

The current disaster mitigation paradigms in Indonesia can be categorized into three main approaches: realism, liberalism, and constructivism. Each of these paradigms has its own strengths and limitations, however this research argues that they are insufficient to completely addressing disaster management challenges. The first paradigm, realism, emphasizes centralized government control with minimal community involvement. While this approach ensures quick response to disaster, it often neglects local perspectives and knowledge, resulting in poorly made actions. Lack of community involvement hampers the flow of vital information, reducing the effectiveness of disaster mitigation efforts.

In contrast, the liberalism paradigm promotes decentralized approaches and encourages the involvement of private sector as well as communities. However, this paradigm faces challenges in establishing coherent communication channels among different stakeholders. Fragmentation of efforts and overlapping responsibilities are common issues, often followed by budget constraints and conflicting interests. On the other hand, the constructivism paradigm advocates for adaptive strategies by incorporating local wisdom and community engagement. While this approach is more inclusive, it is frequently hampered by the lack of systematic documentation and institutional support. Additionally, there is often confusion between the concepts of constructivism, which focuses on building understanding through social interaction, and constructionism,

which emphasizes tangible outputs.

Given these limitations, there is a clear need for a new disaster mitigation paradigm that integrates communication strategies with participatory and moral frameworks. This paradigm emphasizes institutionalized communication, community participation, and the incorporation of moral and religious values. Institutionalized communication involves establishing structured communication channels that enable communities to access timely and accurate information during disaster events. Building a centralized communication platform that integrates inputs from government and community stakeholders can significantly enhance disaster preparedness and response. Community participation is another critical component of the proposed paradigm. Empowering local stakeholders to co-design mitigation strategies fosters a sense of ownership and responsibility, which in turn enhances public awareness and readiness. Conducting community-driven drills and simulations can further strengthen this engagement.

The incorporation of moral and religious values provides an ethical foundation for disaster mitigation efforts. Religious teachings that emphasize social solidarity and environmental stewardship can play an important role in encouraging cooperative behavior during crises. Religious institutions can also function as communication hubs, disseminating information and providing support to affected communities. The proposed paradigm offers a holistic approach that addresses gaps in current practices. By integrating communication strategies with participatory and moral frameworks, it ensures that disaster mitigation efforts are not only reactive but also proactive and socially inclusive. This paradigm emphasizes enhanced communication channels, cross-sector collaboration, continuous capacity building, and ethical engagement, ultimately fostering community resilience and effective disaster management.

4 Conclusion

Based on the explanation described in the results and discussion, this study provides new insight into a new disaster mitigation paradigm that can be the answer to social change. This study highlights the limitations of current disaster mitigation paradigms in Indonesia, particularly the lack of effective communication, fragmented coordination, and inadequate engagement of local communities. The proposed paradigm underscores the importance of a communication-based, participatory approach that incorporates moral and religious values to create a more resilient and inclusive disaster management system. By shifting from a reactive to a proactive strategy, the paradigm promotes continuous collaboration between government institutions, private sectors, and local communities. Future research should explore the scalability and long-term impacts of this approach to ensure that disaster mitigation strategies remain adaptive and contextually relevant for diverse regions.

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