

## COMMUNITY PARTICIPATION IN DISASTER MITIGATION IN KUTAI BARAT REGENCY, EAST KALIMANTAN PROVINCE, INDONESIA

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<https://doi.org/10.37602/IJREHC.2026.7302>

### ABSTRACT

The purpose of this study is to examine empirical data on the type, degree, and dynamics of community involvement in disaster mitigation initiatives as well as the factors that encourage and hinder community involvement. This study was carried out in Indonesia's East Kalimantan Province's Kutai Barat Regency. A qualitative research design was employed in this study. The findings demonstrate that community involvement in disaster mitigation has taken many different forms in Kutai Barat Regency. The dynamics of community engagement are significantly impacted by disaster experience, even while this level of participation stays at the consultative and functional level. Communities that are directly affected typically have greater awareness and readiness. Local knowledge, social capital, and a cooperative culture are important elements that encourage community involvement; on the other hand, information access, disaster literacy, and fatalistic views of disasters are obstacles. Based on these results, the study suggests that the Regional Disaster Management Agency and local governments expand training and outreach related to disaster mitigation, include communities in planning, and create efficient risk communication systems. Additionally, it is imperative that village administrations set aside funds for preparedness initiatives and promote community involvement through village discussions. It is anticipated that this will boost regional catastrophe resilience by increasing community involvement in disaster mitigation.

**Keywords:** Disaster mitigation, Community participation, Disaster vulnerability, social capital

### 1.0 INTRODUCTION

According to data from the National Disaster Management Agency (BNPB), Indonesia is one of the nations most vulnerable to natural disasters, with over 1,000 disasters recorded annually. Kutai Barat Regency, located in East Kalimantan Province, Indonesia, is extremely vulnerable to a variety of disasters, including floods, landslides, and forest fires (Haris et al., 2023) . Disaster mitigation is essential in this situation to lessen the adverse effects. Therefore, boosting regional resilience to catastrophe risks requires community involvement in disaster mitigation initiatives.

Communities are frequently affected by calamities, as evidenced by the Kutai Barat Regency phenomena. For instance, Kutai Barat experienced severe flooding in 2022 that resulted in thousands of people being displaced and substantial material losses. In addition to causing damage to infrastructure, the floods interfered with people's everyday life, including their

access to healthcare and education. Crop failure jeopardised agricultural land, a source of income, and many homes were flooded. This suggests that there is still room for improvement in the current catastrophe mitigation system. The absence of active community involvement in the catastrophe mitigation process is one factor causing this ineffectiveness. For instance, communities can lack a sense of ownership over the policies put in place because they are not involved in the formulation and execution of mitigation measures. Participation from the community is essential because they are the ones who are most familiar with the requirements and conditions of the area. The government can find more suitable and pertinent answers by incorporating the people.

The lack of understanding regarding the forms of community participation and their effectiveness in disaster mitigation in this area presents a gap in further research. Further research is needed to explore how communities can actively contribute to mitigation efforts and to evaluate the methods implemented. Studies of communities that have successfully implemented community-based mitigation programmes can provide valuable insights. To address disaster challenges in Kutai Barat Regency, a more inclusive approach is needed that involves the community in every stage of mitigation.

It is envisaged that better approaches to disaster mitigation in West Kutai Regency might be found through an understanding of community participation. The effectiveness of community involvement in disaster mitigation is demonstrated by numerous examples from various parts of Indonesia. For instance, Yogyakarta has seen success with the Difagana (Empowerment of Disabled People in Disaster Preparedness) program, which incorporates individuals with impairments in disaster management (Albizzia, 2022). This shows that catastrophe mitigation may be carried out more inclusively and successfully by incorporating all facets of society, including vulnerable groups. This study will focus on gathering data and conducting a thorough analysis of community involvement in disaster mitigation in Kutai Barat Regency. It is intended that this research would significantly aid in the creation of improved policies that better suit the needs of the community. This study aims to examine empirical data on the kind, extent, and dynamics of community involvement in disaster mitigation initiatives in Kutai Barat Regency as well as the factors that encourage and hinder community involvement in disaster mitigation.

## **2.0 LITERATURE REVIEW**

### **2.1 Social Role Theory**

In order to mitigate disasters, community involvement is essential. Every person has a social function that directs their behaviour so they can contribute in accordance with community expectations, according to (Soekanto, 2002). In this sense, a social position represents a person's identity within the community in addition to being a duty. Communities in Kutai Barat Regency participate in preparedness training, volunteer organisations, and disaster-resilient villages. In addition to their time and effort, they also provide their ideas, abilities, and other resources. Knowing each person's social role makes it possible to apply mitigation techniques more successfully since everyone is aware of their obligations while dealing with disaster risks. Communities are involved in both post-disaster recovery activities and catastrophe mitigation (Gunawan, 2023).

## 2.2 Community Participation Theory

According to (Khairuddin, 1992), participation means engaging in one or more phases of a process. The terms "participation", "role", "participation", "inclusion", and "following" all refer to taking part. Keith Davis defines participation as an individual's mental and emotional commitment to reaching objectives and sharing accountability for them (Agusta et al., 2020). The importance of active community involvement in the planning, decision-making, and execution of development or disaster mitigation programmes is emphasised by community participation theory. In this sense, community participation encompasses deep emotional and intellectual engagement in addition to physical presence in a variety of activities. One way to think about community involvement is as a ladder that goes from manipulation to complete empowerment. The degree to which communities have influence over decisions that impact their lives is reflected at each step of this ladder. Participation from the community is a dependable force, particularly during trying times like calamities (Trisnawati, 2023). Additionally, community involvement in flood disaster mitigation is essential for raising awareness and readiness, according to research done in Pasaman Regency by (Auliya et al., 2024).

Community participation in disaster mitigation in Kutai Barat Regency entails that they are not only information consumers but also important players in the development, execution, and assessment of mitigation plans. Given the geographical and sociological features of Kutai Barat Regency, which is susceptible to a number of natural calamities, including landslides and floods, this is essential. By involving the community, it is hoped that they can provide valuable insights based on their local experience and knowledge. Community involvement can take many different forms, such as taking part in preparedness training, evacuation drills, and disaster awareness campaigns. For instance, disaster awareness initiatives help to promote dialogue between the public and authorities in addition to disseminating information. The public is able to voice their concerns, offer suggestions, and ask questions during these outreach initiatives. This improves communication and fortifies the bond between the people and the administration. Additionally, community-based evacuation simulations can improve people's comprehension of what to do in the event of a crisis. The community will be more equipped and self-assured in handling emergency circumstances if they receive direct instruction.

## 2.3 Social Capital Theory

In order to facilitate collective activity, social networks, relationships, norms, and trust within a community are crucial, according to social capital theory. According to Putnam, social capital is essential for fostering coordination, cooperation, and communication among community members. This improves community resilience to a variety of difficulties, including catastrophe mitigation, and boosts the efficacy of collective action. According to Fukuyama, social capital is a collection of unofficial rules and values that are shared and institutionalised among community members, giving them the chance to work together (Usman, 2018). Communities can share vital information during catastrophes thanks to social capital. Information accuracy and speed are critical in emergency situations. For instance, people with robust social networks can swiftly disseminate information on assembly points, safe havens, and evacuation routes during an earthquake. Additionally, communities can be more cooperative in implementing evacuation procedures because of the trust that is developed within these networks. Residents

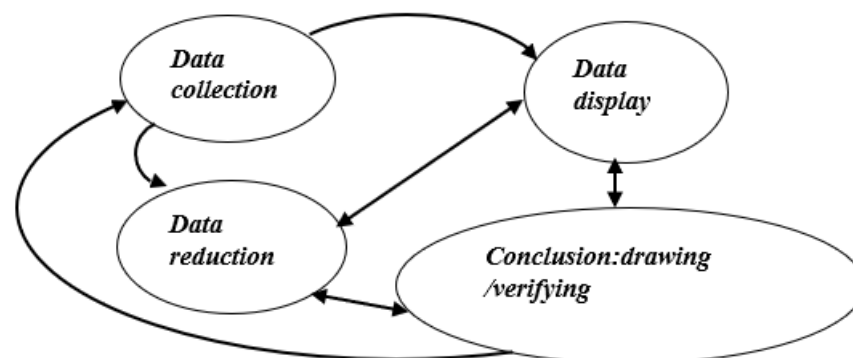
are more inclined to obey instructions from volunteers or community leaders when they have mutual trust, which eventually increases group safety.

Additionally, social capital plays a role in the process of helping one another during emergencies. People who get along well with their neighbours or other community members are more likely to offer and accept help in times of need. Due to low participation, social capital is still low. According to research (Kurnia & Pandjaitan, 2021) on The Role of Social Capital in Tsunami-Prone Communities' Resilience (Case: Suka Dame, Sumberjaya, Sumur, Pandeglang, Banten), social capital is still low because community members are too busy to participate.

### 3.0 METHOD

The goal of this descriptive qualitative research design using a case study methodology is to better understand community involvement in disaster mitigation in Kutai Barat Regency. This study will pinpoint a number of factors that affect community involvement, such as attitudes, knowledge, and awareness of catastrophe risk. (Moleong, 2008) states that the goal of qualitative research is to gain a comprehensive understanding of the phenomena that research participants encounter through the use of scientific methodologies and verbal descriptions in a natural setting. This way of thinking is in line with the goal of the study, which is to thoroughly investigate the dynamics of community involvement in catastrophe mitigation. This study was carried out in Indonesia's East Kalimantan Province's Kutai Barat Regency. Fifteen key informants participated in this study, including academics, village chiefs, community leaders, and directors of pertinent agencies.

The qualitative data analysis method used in this study makes reference to Miles and Huberman (Sugiyono, 2017). The procedures are: 1) The reduction of data. arranging and condensing the collected data to concentrate attention on those pertinent to the study's goals; 2) Classification. classifying information according to themes or sub-themes that surface from documentation and interviews; 3) Interpreting data. analysing the classified data to find trends, connections, and significance in the phenomena that have been seen; and 4) Verification: Verifying the reliability and validity of the data by using many sources or methods to guarantee the accuracy of the conclusions. As seen in Figure 1.



**Figure 1. Analysis Technique**

Source:(Sugiyono, 2017)

## 4.0 RESULTS AND DISCUSSION

### 4.1 Empirical Facts on the Forms, Levels, and Dynamics of Community Participation in Disaster Mitigation in West Kutai Regency

Empirical evidence shows that community involvement in disaster mitigation in West Kutai Regency has taken several forms but at different levels and dynamics, based on interviews with all relevant informants. Research findings are consistent with these different types of community involvement in disaster mitigation (Umeidini et al., 2019). In light of the growing threat of disasters, this illustrates the intricacy of connections between communities, the environment, and governmental institutions. Three primary categories can be used to group different types of community involvement:

#### 1) Preventive participation

One of the most important first steps in catastrophe mitigation is preventive engagement. Community involvement is essential in this situation, as demonstrated by the numerous catastrophe awareness initiatives run by the Environmental Agency and the Regional Catastrophe Management Agency (BPBD). These exercises are practical attempts to raise public awareness in the face of impending disasters rather than just formality. Environmental health education initiatives that engage the community in waste management and pollution control, for instance, are extremely important. The community are encouraged to actively participate in this activity by sorting rubbish, which has an impact on both their own health and the cleanliness of the environment. The community may avoid pollution that might cause environmental catastrophes, such as flooding from garbage-clogged waterways, by learning how to properly manage waste. According to the interview's findings, "We continue to encourage community participation from the prevention stage. Several villages have formed disaster preparedness volunteers, but this is not yet evenly distributed across the region." (BPBD Head, interview, October 2, 2025).

Additionally, early fire reporting is an essential form of participation, particularly during the dry season, when the public is expected to be sensitive and responsive in reporting hotspots that could potentially cause forest fires. Since public efforts to report fires can save thousands of hectares of land and prevent negative impacts on the ecosystem, it is critical that the Regional Disaster Management Agency (BPBD) provide the public with sufficient training and information on how to identify and report emerging fires as well as what to do after reporting them.

Another tangible example of preventive engagement is cooperating to clean up the environment. Mutual collaboration is seen in Indonesian culture as an expression of solidarity and empathy as well as a physical activity. Communities that work together to clean up the environment foster strong social relationships in addition to a healthier environment. In the context of disaster mitigation, this is essential since a strong and supportive community is better equipped to handle future calamities. Nevertheless, not all regions participate in this preventive phase equally, despite their efforts. According to scholars who are worried about the community's lack of awareness of catastrophe risks and preventative actions, some localities still need to improve disaster literacy.

A careful examination of this problem reveals that a number of variables, such as limited resources, poor education, and information access, can contribute to low disaster literacy in some areas. Communities that don't fully comprehend the hazards of disasters are less likely to take the appropriate safety measures, which eventually makes them more vulnerable to calamities. Therefore, it is crucial that the government and pertinent organisations work together to improve disaster literacy through both formal education programmes and community-based outreach initiatives.

One crucial component of catastrophe mitigation is preventive engagement. Communities can actively participate in disaster prevention through outreach initiatives, early reporting, and collaboration. To guarantee effective involvement at all societal levels, disaster literacy issues must yet be resolved. We can make the ecosystem safer and more resilient to future disasters by raising public knowledge and awareness of disaster risks. Preventive involvement will thereby improve community cohesiveness and solidarity while also lessening the effects of calamities.

## **2) Preventive Participation in Disaster Mitigation**

Additionally, community participation in catastrophe simulations is a key measure of preparation. In addition to government planning and infrastructure, community involvement in disaster preparedness is crucial. A high degree of understanding of the significance of disaster preparedness is demonstrated by the establishment of village preparedness committees with village administrators and community leaders. In this sense, community leaders are essential motivators since they have a big impact on raising awareness and inspiring locals.

Every member of society, including children and the elderly, can participate in regular evacuation scenarios. Residents learn how to identify warning signs and how to evacuate in the event of a disaster through these simulations. Health cadres and community health centres play a critical role in post-disaster health risk education in the health sector. Communities frequently experience severe health issues following a disaster, such as the spread of illness brought on by inadequate sanitation or a lack of access to medical care. Involving health cadres in preparedness programmes teaches communities how to preserve their health both before and after a disaster, in addition to evacuation procedures.

Vital public health is included in comprehensive preparedness, which goes beyond physical factors. Communities will be better equipped to handle the effects of catastrophes when they are aware of health hazards and how to mitigate them. It is hoped that a robust culture of readiness would be built through training and simulations encompassing all facets of society. Communities will be more adaptable and responsive to emergencies as a result of this culture, lowering the possibility of fatalities and property damage.

One crucial component that cannot be ignored is community involvement in disaster preparedness. Communities may greatly improve their level of preparedness through the creation of village preparedness groups, evacuation drills, and the participation of the health sector. All members of society, from infants to adults, must actively participate in order to develop a collective consciousness that is essential when dealing with calamities. Therefore, preparedness is not only the responsibility of the government but also a shared responsibility that requires the active participation of all members of society. This will guarantee that the

community can respond to a disaster in an effective and efficient manner, reducing any possible negative effects.

### 3) Responsive Participation

We refer to this type of participation as responsive participation, and it is most prevalent during the emergency reaction phase. When calamities like floods or forest fires strike, the Kutai Barat community's culture of collaboration becomes a vital asset. The community helps distribute supplies, evacuates on its own initiative, and upholds environmental security. Locals quickly set up an aid post and gave food and other supplies to families impacted by a significant flood in one area. This indicates that despite ongoing difficulties and barriers, the West Kutai community's social capital is still comparatively strong.

The degree of community involvement can be divided into the following categories based on field findings: At the top of the emergency response stage, in the long-term planning and preventive phase, it is relatively low, and in the preparedness phase, it is moderate. The conclusion that communities have not been fully involved in strategic decision-making or the creation of mitigation strategies is supported by academics' claim that community participation is still at the consultative level. As a result, community involvement is typically more reactive than proactive. Although there is an increase in collective knowledge during disasters, a sustainable mitigation culture has not yet been fully internalised. This poses special difficulties for future efforts to mitigate disasters more successfully.

A number of interconnected elements impact the dynamics of community engagement in Kutai Barat Regency. Particularly significant are social and cultural aspects. The community's cohesiveness is strengthened by a rich tradition of deliberation, customary punishments, and traditional values. Local knowledge acts as a social control system to save the ecosystem. Dayak customs involve guardianship of forests and natural resources that have been handed down through the centuries. This encourages a sense of shared accountability for disaster relief and the environment.

The dynamics of community engagement are also significantly influenced by institutional variables. Adequate institutional assistance is demonstrated by the functions of the village government, the health office, the environmental agency, the police, and the regional disaster management agency (BPBD). Training, outreach, and volunteer development have all been made easier by the government. Nevertheless, not every region has yet benefited equally from this facilitation. Disparities in disaster preparedness come from certain distant areas' continued inability to obtain sufficient information and training.

Geographical and structural considerations also present difficulties that cannot be disregarded. The large area of West Kutai, with its varied terrain and restricted access, makes equitable mitigation initiatives difficult to implement. As a result, different regions have different levels of readiness.

The dynamics of community engagement are also influenced by perception and literacy considerations. Prevention has not yet taken centre stage because some communities still see disasters as unavoidable natural occurrences. This highlights the significance of enhancing community-based disaster literacy by educating the people about hazards and ways to mitigate

them. It is intended that by raising public awareness and comprehension, their involvement in catastrophe mitigation will become more proactive and long-lasting. According to research findings (Suwaryo & Yuwono, 2017), effective community participation is encouraged by knowledge about disaster mitigation.

In Kutai Barat Regency, community involvement in disaster mitigation has taken many different forms, albeit at different intensities and levels. Communities have a great deal of capacity to deal with disasters thanks to prevention, preparedness, and responsive engagement, but there are still a lot of obstacles to overcome. While limited engagement in the long-term planning and preventive stages suggests that more work is needed to create a sustainable mitigation culture, the high level of community participation in the disaster response phase shows great solidarity. The results of this study regarding the significance of community involvement in catastrophe mitigation are consistent with studies by; (Haqiqi & Widyastuty, 2023), (Sarwadi et al., 2023), (Trisnawati, 2023), (Idris et al., 2024), (Ismowati et al., 2024), (Aidil et al., 2025), and (Nugraheni & Pargito, 2025). In addition to perception and literacy, social, cultural, institutional, structural, and geographic factors all have an impact on the dynamics of community engagement. In order to carry out disaster mitigation more successfully and sustainably in the future, it is imperative that all stakeholders work together to improve community participation.

#### **4.2 Supporting and Inhibiting Factors of Community Participation in Disaster Mitigation in Kutai Barat Regency**

Key informant interviews revealed that a number of social, cultural, institutional, and structural elements affect community involvement in disaster mitigation in Kutai Barat Regency. The dynamics of community involvement are shaped by the interaction of these enabling and impeding elements, according to field data.

##### **1. Factors Supporting Community Participation**

###### **a) Culture of Mutual Cooperation and Social Solidarity**

In Indonesia, especially in Kutai Barat Regency, the culture of social solidarity and collaboration is a vital cornerstone for fostering community involvement in a variety of areas, including disaster mitigation initiatives. Mutual collaboration is crucial in addressing the community's many problems, particularly in the event of natural calamities like floods and forest fires. According to the head of the Regional Disaster Management Agency (BPBD), the community's combined experience with catastrophes not only raises awareness but also equips them to take coordinated, efficient action. In this situation, members' shared experiences foster strong social ties and a sense of compassion.

Communities may greatly lessen the effects of calamities by supporting one another. This indicates that Kutai Barat Regency's social capital is still comparatively high and forms a crucial basis for community-based mitigation. In addition to pre-existing social networks that allow communities to work together in challenging circumstances, trust between individuals and groups forms this social capital. In community life, this spirit of cooperation has grown to be deeply ingrained. Residents spontaneously band together to support one another after calamities, according to community leaders. These deeds show bravery and a strong sense of

social duty in addition to solidarity. These findings suggest that despite challenges in terms of infrastructure and resources, social solidarity can be a key driver in disaster mitigation efforts.

Furthermore, the mutual collaboration culture is not just a custom but also a successful tactic in mitigating the growing risks of disasters brought on by climate change. Communities must have strong emergency response systems because natural catastrophes are becoming more frequent and intense. Communities can innovate and adapt to these difficulties through mutual cooperation. In this sense, it's critical to understand that mutual cooperation involves more than just providing assistance during emergencies; it also entails creating long-lasting support systems. Community preparedness for future disasters can be strengthened by social activities like training, frequent meetings, and disaster simulations. By using this strategy, communities become both active agents of change in catastrophe mitigation initiatives and recipients of relief. Therefore, fostering a culture of collaboration and social solidarity is crucial to raising community knowledge and readiness for catastrophes. The government and pertinent organisations must assist this endeavour by offering the resources and training required to increase community capability. Furthermore, developing a successful and long-lasting disaster mitigation strategy requires cooperation between the government, communities, and non-governmental organisations.

#### **b) Local Wisdom and Customary Sanctions**

In addition to being an integral part of their cultural identity, the indigenous people of Kutai Barat, East Kalimantan Province, Indonesia, rely heavily on their local knowledge to preserve the environment and lower the likelihood of disasters. In this sense, leaders of the indigenous community stressed that social punishments and customary laws act as tools for regulating community behaviour in order to preserve the ecosystem. These guidelines, which have been handed down through the generations, show a profound comprehension of how humans and the natural world interact.

In reality, breaking a customary rule has repercussions from both the community and the government. Sanctions might take the form of customary fines that must be paid or social exclusion, in which the offenders are disregarded in social gatherings within the community. The Dayak culture, which has particular ceremonies to punish members who transgress environmental rules, provides a tangible illustration of this mechanism. As a result, everyone becomes more conscious of the value of protecting the environment and feels accountable to their surroundings.

Additionally, this local knowledge helps to reduce the likelihood of calamities, especially forest and land fires, and to increase community ecological consciousness. By using sustainable and ecologically friendly agricultural practices, indigenous tribes have frequently been effective in preventing fires on their land and forests. In addition to preserving soil fertility, agroforestry techniques that combine food crops with forest trees lower the risk of fire by increasing humidity. According to research, regions that are well maintained through agroforestry have better humidity levels, which lowers the risk of fires. As a result, local knowledge is both a cultural legacy and a workable way to deal with increasingly difficult environmental problems.

A thorough comprehension of animal and plant behaviour as well as environmental cycles is another aspect of local wisdom. West Kutai's indigenous populations frequently have in-depth

knowledge of when it's optimal to plant, harvest, and preserve other natural resources. However, contemporary issues like climate change and careless resource extraction frequently jeopardise this traditional knowledge. Indigenous communities are under pressure to alter their way of life in order to satisfy increased financial demands, frequently disregarding sustainability considerations. It is crucial to keep in mind that local knowledge is dynamic.

### **c) Institutional Support and Social Networks**

In Kutai Barat Regency, the participation of volunteers for disaster preparedness, village officials, community health centre networks, and health cadres is essential to disaster mitigation activities. In this sense, it's critical to comprehend how each of these components plays a major role in enhancing community resilience to disasters. The local government has made an effort to support a number of outreach, training, and community development initiatives through the Regional Disaster Management Agency (BPBD), the Health Office, and the Environmental Office. The goal of these initiatives is to improve community preparedness for catastrophes, which is an essential part of risk reduction.

The Regional Disaster Management Agency (BPBD) offers disaster management training that fosters community confidence in addition to imparting technical expertise on disaster management techniques. Participants learn how to use fire extinguishers, evacuation protocols, and victim first aid during the course. The community can learn firsthand how to handle an emergency through realistic simulations, preventing fear and enabling prompt and appropriate action when a disaster truly strikes. This is important because the community's early response to an emergency scenario frequently dictates the magnitude of the losses incurred.

Additionally, scholars believe that developing a robust local community network is a strategic advantage for creating a participatory mitigation strategy. The government, the community, and non-governmental organisations are all included in this network. Rapid and accurate information transmission is made possible by a strong network, which is essential in emergency situations. There are still issues in spite of this institutional support, especially with regard to institutional coordination and integration. Implementing mitigation plans can frequently be hampered by ineffective communication between the Environmental Agency, the Health Office, and the Regional Disaster Management Agency (BPBD).

### **d) Trust in Officials and Government**

A key component of collaborative-based disaster mitigation's efficacy is public confidence in authorities and the government. According to the Kutai Barat Police Chief, early warning of possible forest and land fires is promptly provided by the local population. This responsiveness shows a high degree of trust in local administration and law enforcement, as well as the community's concern for the environment. In this situation, a crucial component that promotes community involvement in disaster mitigation initiatives is trust. Communities are more likely to cooperate and actively engage in planned mitigation initiatives when they believe that law enforcement and the government are there to protect and support them.

Additionally, communication transparency is essential to developing trust. The people will have a better understanding of the issue and feel more equipped to participate if the government is transparent about the mitigation measures being implemented. Additionally, training and

simulations can improve community-government cooperation. Participating in disaster management exercises will make the community more equipped and self-assured in handling crises. It's also critical to understand that building trust is a gradual process. For the government and authorities to gain the public's trust, all of their actions must be sustainable and consistent. Trust will naturally increase when the public perceives that officials actively participate in everyday activities and work to enhance their quality of life in addition to being present when issues emerge.

However, it is impossible to overlook the difficulty of establishing trust. The confidence that has been established may be harmed if there is an instance where officials fail to behave in accordance with public expectations. As a result, it is imperative that the government always operate with professionalism and integrity. The public will have more faith in politicians when they demonstrate a genuine dedication. The study's conclusions can be summed up as follows: social capital, a cooperative culture, and local knowledge are the primary drivers of community involvement. This conclusion is consistent with other research findings (Meyda et al., 2023).

## **2. Factors Inhibiting Community Participation**

### **a) Geographical and Structural Factors**

Although there is a lot of potential to boost community involvement in disaster mitigation, there are also barriers that need to be carefully considered. The geographical and structural circumstances that Kutai Barat Regency faces are one important aspect. Equitable distribution of outreach and training among the community is severely hampered by the large region, which includes a variety of topography, including mountains and dense forests, as well as restricted access to some settlements. Strengthening disaster mitigation initiatives in a sustainable manner is also significantly hampered by limited regional and village budgets. Village administrations frequently find it difficult to carry out the required outreach and training without sufficient funding.

Additionally, technology, such as mobile applications that offer current information on catastrophe risks and mitigation strategies, can be used to increase residents in remote locations' access to information and training. Communities that were formerly remote can now access the information they require to become more prepared thanks to technology. In order to guarantee the viability of these initiatives, budgetary increases for disaster mitigation programmes are also essential. To support mitigation measures, local governments must find alternate financing sources.

In this situation, raising community awareness of the significance of disaster mitigation is essential. In addition to disseminating information, outreach initiatives should include the community in the development and execution of mitigation initiatives. All facets of society, including women, youth, and community leaders, can participate in village-level discussion forums to share their thoughts and ideas about how disaster mitigation might be successfully applied in their communities. It is intended that by actively engaging the community, they will be more inclined to take part in current mitigation initiatives.

### **b) Traditional Practices and Economic Factors**

Particularly in regions susceptible to natural disasters and climate change, traditional land clearance methods continue to pose a significant obstacle to disaster prevention efforts. According to the head of the environmental agency, economic factors have a big impact on how individuals use their land. Even though they are aware that this activity can raise the risk of forest and land fires, many people are tempted to clear additional land in this situation in order to satisfy immediate economic requirements. When we examine the realities on the ground, we can see that the necessity of long-term environmental protection is frequently overshadowed by pressing economic demands.

Communities face difficult decisions as a result of the tension between immediate economic needs and long-term risk reduction considerations. For instance, in order to get a speedy harvest, a farmer can feel pressured to burn land. Under such circumstances, the farmer could think that by burning the area, he can accelerate planting and so boost agricultural output. However, in addition to harming the ecosystem, these activities may raise the possibility of natural disasters like forest fires, which have the capacity to spread and endanger the lives of nearby communities.

To save individuals from feeling stuck in bad decisions, it is imperative to develop sustainable and ecologically friendly economic alternatives. Creating training and extension programmes centred on sustainable agriculture methods is one strategy. Additionally, the development of these alternatives depends heavily on the assistance of the public and commercial sectors. Programmes that offer incentives to farmers who adopt sustainable farming methods may serve as an extra source of motivation.

### **c) Low Disaster Literacy**

Scholars stress that public disaster literacy is still comparatively low, especially when it comes to long-term planning and prevention. Given that Indonesia is vulnerable to natural disasters like earthquakes, tsunamis, and floods, this is a grave worry. In this sense, disaster literacy includes both a fundamental awareness of the various sorts of disasters and a more in-depth comprehension of how to prepare for and mitigate their effects. Rather than actively contributing to the creation of policies or mitigation strategies, communities are more likely to react to catastrophes by, for instance, fleeing for their lives or assisting stranded individuals. This inaction frequently results from a lack of awareness of the significance of careful planning ahead for a disaster, which ought to be a top priority.

The fatalistic belief that disasters are just a matter of fate is one of the biggest barriers to increasing disaster literacy. People who hold this position consider that whatever occurs is God's will; hence, they don't feel the need to prepare or mitigate. For instance, afflicted populations frequently use phrases like "it was fate" following a natural disaster. This suggests that creating a culture of preventive mitigation is hampered psychologically. A more empowering and instructional strategy is required to alter this perception so that people realise that although disasters cannot be prevented, their effects can be lessened with appropriate preparation.

There is an obvious need for further outreach and education on disasters. In addition to official settings like schools, this teaching must be carried out in local communities. People will then be more aware of the hazards they face and the steps they might take to mitigate them.

Involving local leaders and influential people in this educational process is also essential. When it comes to informing locals, community leaders have a big say. The community is more likely to be open and receptive when knowledge is presented by someone who is regarded and trusted.

The utilisation of technology as a disaster education tool is equally crucial in this context. Information may now be disseminated more quickly and efficiently thanks to technological advancements. It can be quite helpful to have mobile applications that offer current information on possible calamities, evacuation routes, and safety advice. Social media can also be used to educate the public about the value of disaster preparedness and to spread information. The people will have easier access to the information they need to get ready for emergencies.

#### **d) Limitations of Village Regulation and Planning**

One of the main things impeding efforts to mitigate disasters is the lack of institutions and rules at the village level. Village leaders frequently draw attention to the fact that not every village has certain rules pertaining to disaster mitigation. Given that villages are at the forefront of disaster risk management, this poses a serious problem. Existing mitigation strategies are frequently not methodically included in village development planning in the absence of precise and comprehensive rules. For instance, ambiguous legislation leaves communities without clear standards for managing natural resources or planning land use in some villages situated in disaster-prone areas, such as coastal or mountainous areas. This could make them more susceptible to calamities.

Additionally, because of these legislative constraints, mitigation efforts are frequently irregular and disorganised. For instance, village administrations and people frequently respond in an unorganised manner to natural disasters like floods or landslides. Village governments lack a defined emergency action plan, and communities that wish to assist frequently don't know what to do. We can see how a lack of control in such circumstances can have deadly repercussions for both community safety and the efficacy of current mitigation initiatives.

As a result, it's critical to support the creation of more thorough village-level regulations. Important facets of disaster mitigation, like community training, natural resource management, and land-use planning, should be included in these regulations. For instance, a village with sensible land use restrictions can steer clear of infrastructure development in regions that are vulnerable to disasters, like often flooded riverbanks. It is hoped that more focused and coordinated implementation of mitigation initiatives will be possible with defined legislation. To improve preparedness and responsiveness in the event of a disaster, for instance, community training on disaster mitigation techniques might be held on a regular basis.

Implementing mitigation programmes and policies must go smoothly. After regulations are established, it is necessary to make sure that everyone involved village governments and communities alike understands and abides by them. Effective communication and the participation of all stakeholders are necessary for this. Involving community leaders in the distribution of disaster mitigation rules, for instance, can improve community awareness and support for current initiatives. A careful examination of each of these elements shows that effective rules are more than just legal papers; they are also tactical instruments that can direct decisions and activities at the village level. Villages may design and carry out disaster

mitigation programmes more successfully and efficiently with clear and thorough laws, which lowers the risks of disaster for communities.

In conclusion, the primary barriers to disaster mitigation initiatives are the lack of organisations and rules at the village level. It is impossible to overestimate the significance of creating thorough laws since they will provide the foundation for all mitigation initiatives. Clear rules make it possible to undertake mitigation initiatives in a more targeted and integrated way, which increases their efficacy in lowering the risk of disaster. As a result, everyone involved must pledge to support and encourage the creation of laws that can deal with the difficulties of disaster mitigation at the village level.

### **e) The Role of Government and Related Institutions in Facilitating Participation**

According to the findings of the interviews, the government and pertinent organisations have made an effort to promote community involvement through a variety of sustainable and integrated strategies. To improve community preparedness for disasters, the Regional Disaster Management Agency (BPBD) has held training sessions. This programme gives participants a feel of possible catastrophic scenarios through both theory and practical application.

Additionally, the Health Office actively participates in educating people about potential health hazards during a disaster. This education includes teaching medical professionals how to treat victims of disasters and educating the public about illnesses like respiratory infections and diarrhoea that might develop following a disaster. In this situation, the Health Office serves as both a service provider and a catalyst for increasing public awareness of the significance of preserving environmental cleanliness and health, particularly following a disaster.

An equally significant role is played by the Environmental Agency, which promotes and monitors sustainable environmental management techniques. For instance, they run community-based garbage management and reforestation initiatives. By incorporating the community in these initiatives, the Environmental Agency promotes a sense of responsibility and ownership for the environment while also increasing awareness of the significance of environmental protection. This is important when it comes to disaster mitigation because a well-kept environment can lower the likelihood of disasters.

Additionally, the police take part in law enforcement and preventive measures against infractions that may raise the risk of disaster. For instance, they keep an eye on infrastructure development that violates laws, including structures that don't adhere to safety requirements. Strict enforcement of the rule is expected to increase public compliance with current laws and lower the likelihood of future disasters.

When it comes to community discussions and the creation of readiness groups, the village government is essential. Village debates give the community a platform to voice their goals and take part in the development and execution of mitigation initiatives. Another excellent way to improve community readiness is to form preparedness organisations. These organisations can engage everyone in the community in a variety of activities, such as outreach and role-playing. This makes community involvement in catastrophe mitigation more observable and quantifiable.

Social norms and customary sanctions that promote environmental protection are strengthened by customary institutions. Indigenous societies' customs are frequently highly regarded for preserving the equilibrium of the environment. To help with better decision-making, academics, on the other hand, gather village-based risk data, conduct training, and conduct research. Academic research can offer precise and pertinent knowledge on possible disaster hazards in a region. The community and government can develop more suitable and successful mitigation strategies with reliable data. Additionally, communities' comprehension and abilities to handle calamities might be enhanced by academic instruction.

Nevertheless, a framework for long-term multi-stakeholder engagement has not completely incorporated this facilitation. The ineffective communication between different institutions and the community is a clear indication of this. Therefore, in order for mitigation programmes to function more successfully, efforts must be made to foster synergy between various parties. It is intended that community involvement in disaster mitigation can be strengthened by establishing solid relationships between the government, communities, and other organisations. In addition to increasing each party's capabilities, this synergy will foster a sense of accountability and ownership for disaster mitigation initiatives.

## 5.0 CONCLUSION

The following conclusions can be made in light of the investigation and debate around community involvement in disaster mitigation in Kutai Barat Regency:

### 1. Types and Degrees of Community Involvement

In West Kutai Regency, community involvement in disaster mitigation has taken many different forms, including involvement in volunteer organisations or disaster-resilient villages, evacuation simulations, community cleanup events, and disaster awareness campaigns and training. Nonetheless, this degree of involvement stays at the functional and consultative levels. The community is typically not completely included in the strategic planning and decision-making process, instead acting as implementers or participants in government-designed activities.

### 2. Participation's Social Dynamics

Experience with disasters has a significant impact on community participation dynamics. Directly affected communities typically have greater awareness and readiness. One important asset in promoting community-based mitigation is social capital, which takes the shape of people's trust, solidarity, and cooperation.

### 3. Elements Encouraging Involvement

The following elements encourage community involvement in catastrophe mitigation:

- a) High social capital in the neighbourhood.
- b) Village leadership that is proactive and adaptable.
- c) The Regional Disaster Management Agency (BPBD) and associated organisations support outreach and training.

- d) The presence of volunteer organisations or communities dedicated to disaster preparedness.
- e) Elements Precluding Involvement

Community involvement is hampered by a number of causes, including:

- a) Limited communication and information on the hazards of disasters.
- b) Training and simulation frequency is low.
- c) Limited village-level funding and technical assistance.
- d) The fatalistic belief that catastrophes are inevitable.

The recommendations that can be submitted are as follows:

1. For Regional Governments and the Regional Disaster Management Agency (BPBD):

- 1) Increase the intensity and distribution of disaster mitigation outreach and training, even to remote villages.
- 2) Involve the community more actively in the planning stages of mitigation programs, not just as participants.
- 3) Develop a technology-based risk communication system and local wisdom to reach all levels of society.
- 4) Strengthen cross-sector coordination (BPBD, Health Office, Environmental Office, village officials, and police) in building an integrated mitigation system.

2. For Local Governments

- a) Set aside funds in the village budget for disaster preparedness initiatives and the creation of groups.
- b) Promote community involvement in disaster mitigation plans by holding village meetings.
- c) Incorporate traditional wisdom and local knowledge into catastrophe prevention plans.

3. For the Community

- a) Participate actively in training and simulations to raise awareness of and concern for disaster risks.
- b) Increase collaboration and solidarity as social capital in disaster management.
- c) Create neighborhood-based early warning systems and other local projects.

4. For Future Researchers

- 1) To better quantitatively and regionally compare the degree of community participation, do quantitative research.
- 2) Evaluate the disaster-resilient village program's efficacy throughout time to ascertain its long-term effects.
- 3) Take a closer look at how Kutai Barat Regency's indigenous populations contribute to local wisdom-based catastrophe mitigation.

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