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Building Community Resilience Through Collaboration with Government in Flood Preparedness in Lahat District, South Sumatra

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A B S T R A C T

Floods are a major threat worldwide, including in Lahat Regency, South Sumatra, where heavy rains and overflowing Lematang River often cause severe flooding. The Lahat Regency Government plays a key role in disaster response, but places more emphasis on post-disaster recovery than preparedness. There is limited research on how organizations collaborate in disaster management, especially in a developing country like Indonesia. This study addresses this gap by examining organizational collaboration across different stages of disaster management in Lahat Regency during 2023. The objectives of this study were to analyze the mechanisms of inter-organizational collaboration in flood management, identify challenges faced in early warning systems and aid distribution, and explore potential for improved coordination between provincial and district-level organizations. Using exploratory qualitative methods, the researchers analyzed flood preparedness and response based on the experiences of government officials, NGOs, and KBBM. Data were collected through semi-structured interviews, coded thematically, and validated through source triangulation. The findings highlight the importance of a proactive approach and shared responsibility, especially for communities affected by floods. The government faces challenges in early warning systems and aid delivery due to communication gaps. However, coordination between provincial and district-level organizations in South Sumatra has the potential to improve disaster management through improved information sharing and resource distribution. This study contributes to the understanding of disaster cooperation networks and underscores the need to strengthen collaboration and preparedness efforts.

INTRODUCTION

Flooding is one of the most frequent disasters today (Kodoatie, 2021). The Asian countries most affected by floods include Nepal, Bangladesh, Japan, Indonesia, and Malaysia (Gan et al., 2021). The impacts of floods include loss of life and property damage, loss of economic and agricultural output, and worsening environmental degradation (Merz et al., 2021). Increased flooding over the years can be caused by natural and human factors (Echendu, 2023b). Natural factors include river characteristics, high tides, and high rainfall Lee et al., (2021), while human factors include deforestation and poor drainage systems (Kumar et al., 2022). Development activities, especially on riverbanks, also cause a decrease in river capacity so that it overflows during the rainy season (Mase et al., 2022).

Flooding in Indonesia has always been a major disaster. Climate change is directly related to the causes of flooding (Wasko et al., 2021). Flooding is considered a regular occurrence in Indonesia as history shows that flooding happens every year (Merten et al., 2021), and it has been accepted as part of the daily life of agrarian and farming communities (de Vasconcelos et al., 2022). Flooding was later declared a 'Disaster', and disaster management and mitigation became a top priority for the government (Glago, 2021). The disaster occurred due to heavy rains, causing several regions in Indonesia to continue to be hit by major floods (Putri et al., 2023).

In early 2024, heavy rains caused several sub-districts in the Lahat district to be flooded, causing damage to gardens and rice fields (Tanjung Jasrial, 2024). Lahat district is considered vulnerable to the rainy season and landslides (Hidayat et al., 2023). Therefore, the government maintains an annual budget for rescue and relief, flood disaster preparedness, post-flood recovery, rehabilitation and public infrastructure (Glago, 2021). Disaster management efforts cannot be carried out by one institution alone. Due to the wide impact of disasters, cooperation is needed. This analysis shows the impact of vulnerability on disaster response, how collaboration can overcome obstacles, and how strategic planning can increase the resilience of Government officials, NGOs, and KBBM.

The government is the main institution in flood disaster management, and its activities assist communities affected by floods (Tambunan & Abdurrahman, 2023). The assistance comes from rescue operations, relief materials, temporary shelters, and financial assistance. The central and local governments are responsible for reducing or preventing the impact of flooding (Heryati, 2020), and Lahat district is no exception. Flood risk management is a strategic framework applied to assess, evaluate and mitigate flood impacts (Najafi et al., 2021). Flood disaster management in developing countries is based on the so-called 'reactive approach', where the government responds when a disaster occurs (Bhaskara et al., 2023).

Hizbaron et al. (2021) explain that instead of using a reactive approach, a proactive approach should be applied to develop collaboration between various government agencies, private institutions, non-governmental organizations and communities. One measure of the proactive approach is the participation of vulnerable communities in disaster preparedness, known as Community-Based Disaster Preparedness (Kesiapsiagaan Bencana Berbasis Masyarakat, KBBM) (Nakoe, 2021). In other words, community involvement in the disaster mitigation process is the priority of KBBM. Through KBBM, coping mechanisms and

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community trust can be built, leading them to become self-reliant communities (Kurnia & Pandjaitan, 2021). The psychological impact of flooding can be reduced in resilient communities (Bakic & Ajdukovic, 2021).

Given that it is not possible to prevent floods completely, community resilience has received more attention (Carmen et al., 2022). Community resilience in flood-prone areas has become an important element in flood mitigation and management to educate their communities to be better prepared for disasters (Andung et al., 2023; Taqiyah et al., 2024). However, in Indonesia, programs to assist communities in disaster preparedness and become resilient institutions are still in their infancy (Lubis, 2024; Mukarromah & Pranoto, 2024; Yuliani et al., 2024).

The current study was motivated to find out why community empowerment initiatives have not been fully and effectively implemented in Lahat Regency despite research showing the many benefits of KBBM, especially for communities at risk of flooding (Alifaza, 2023; Arinata et al., 2024). Our study answers the call for more research from the social sciences to look at human involvement in flood mitigation and management (Ali, M et al., 2023; Narulita et al., 2023). We also draw on previous research on flood disasters in Indonesia (Taryana et al., 2022) and contribute to the field by drawing on empowerment theory that positions flood disaster preparedness as an effort to increase awareness and readiness of communities and government agencies to deal with flood disasters (Mulyono et al., 2020; Rahma & Purbaningrum, 2024). Fokus penelitian ini adalah untuk mengetahui bagaimana pemerintah, masyarakat dan pemangku kepentingan lainnya melakukan kesiapsiagaan terhadap banjir, serta peran para aktor, kolaborasi antar instansi pemerintah, dan partisipasi masyarakat (Lemos et al., 2024; Nurdin & Arsyad, 2022; Putri & Rohmadin, 2024).

For this purpose, we use empowerment theory to look at increasing the power, capacity, and ability of individuals or groups to control their lives and participate in Society (Ulum & Anggaini, 2020). Flood disaster preparedness by government officials as representatives of government agencies involved in flood management in the Lahat district. Collaboration between government institutions and community participation is the central theme of this study. Collaboration reveals the various actors involved in disaster preparedness in the Lahat Regency. Various discourses on flood disasters have been discussed in previous studies. Sholihah et al. (2020) suggested that the discourse of flood disasters can be related to river overflow. The key aspects of empowerment theory are awareness raising, capacity building, improving aspects of resources, strengthening social position, and active participation (Ulum & Anggaini, 2020). This research aims to answer the question of how local community involvement increases community awareness and preparedness for flooding.

Preparedness is an effective and efficient effort to deal with disasters by making effective plans to anticipate them (Abdullah et al., 2024). Components of this preparedness include disaster response training, communication training and coordination between relevant agencies to help each other such as equipment, information, personnel and financial assistance during disasters (Danar, 2020; Jundi, 2022; Wahyuni et al., 2023). The concept of preparedness emphasizes the ability to make emergency preparations for disasters quickly and appropriately (Rahma & Yulianti, 2020; Torus et al., 2022). Disaster management is a comprehensive, integrated, sustainable activity or series of activities (Cui et al., 2021; Upadhyay et al., 2022), a cycle of activities (Figure 1).

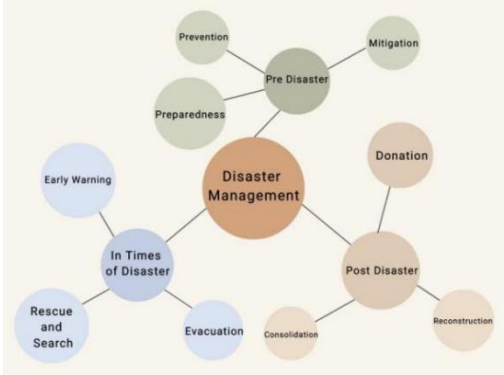

Figure 1. Disaster Management Cycle

Based on Figure 1, there are three stages in disaster management. The first stage, the pre-disaster period, requires efforts to prevent or reduce the impact of future disasters. Prevention efforts, for example, strengthen buildings to prevent flooding and build shelters. Mitigation efforts to reduce the impact of disasters, for example, establishing and providing disaster-resistant building codes and channel normalization. Preparedness efforts include organizing the placement of volunteers, training search and rescue volunteers, and organizing a system to distribute medical supplies as emergency activities. The second stage, the disaster period, occurs when a disaster strikes. Disasters can occur within seconds, such as floods and landslides. Disasters can even last for hours or days. Early warning efforts so that people who live in disaster-prone areas can save themselves. During this time, rescue and search efforts were made. Evacuation efforts include evacuating, providing emergency care, or providing shelter and food; at the same time, public health officials implement targeted or enhanced surveillance. The third stage is post-disaster after the disaster has occurred. Relief and service efforts, providing temporary assistance for basic living needs. Consolidated efforts to evaluate the activities that have been undertaken.

Collaboration between the government and the community is key to disaster management success and strengthens management efforts' sustainability (Nurfitri & Pancasilawan, 2024; Yunus et al., 2024). Collaboration between the government and the community is very important in disaster management because it can increase preparedness (Arfani, 2022; Lestiyono, 2024). Communities can actively participate in disaster prevention and mitigation efforts (Khatimah et al., 2021; Nursyabani et al., 2020). Collaboration enables faster and more effective responses to disasters (Azizi et al., 2024; Hidayah & Fitriana, 2024). Communities can be involved in post-disaster recovery and reconstruction (Agustina et al., 2024; Rahmatika et al., 2024). Collaboration can increase the community's capacity to deal with future disasters (Arfani, 2022; Ramdani & Resnawaty, 2021).

The collaboration model between the government and the community, among others, can be in the form of partnerships, network collaboration, community-based collaboration, Public-Private collaboration, and Multi-Stakeholder collaboration (Panneer et al., 2024). Research on collaboration was conducted by Anirwan & Haris, 2023; Awaluddin et al., 2024; and Sriyono et al., 2024) regarding flood forecasting systems involving the Community. According to Husniawati & Herawati,2023; and Sembung & Purnawinadi, 2023), many communities must be involved in flood preparedness activities. The resilience of urban

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communities is better prepared for flooding than rural communities (Maulana et al., 2024). Dachi et al., 2024; Nanda, 2024) examined how local communities mobilize to deal with emerging flood situations and recover from their impacts.

In this study, the authors tried to collect several flood-related articles through Scopus data. By using bibliometric analysis of biblioshiny application (Studio-R) Agnusdei & Coluccia; Moral-Muñoz et al., (2022; 2020) as a mapping of trends in published research topics and to see the position of this research from previous research. Method steps in the use of biblioshiny: (1) Data search through the Scopus database by entering the keywords "flood", "mitigation", and "disaster". The data found were 3,811 articles: (2) Data Reduction and Network Matrix Creation; (3) WordCloud and Country Scientific Production (Figure 2).

Figure 2. Analysis Biblioshiny "wordCloud" about flood

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Figure 3. Article Author Country Visualization

Figure 3 shows the scientific production by each country based on the country's affiliation with the author of an article. The number of publications is proportional to the color intensity of the country's scientific production map (Ribeiro et al., 2022). When scientific production is associated with countries based on author affiliation, the five countries with the largest scientific output are China with 441 articles, India with 79 articles, Indonesia with 62 articles, Italy with 50 articles, and Australia with 42 articles.

In the literature review, few studies can show that affected communities are resilient. Previous research was still reactive because it highlighted responses after a disaster occurred rather than preparedness. Considering this, the government is obliged to socialise about "shared responsibility" (Harahap, 2020). In the "shared responsibility" paradigm, every level of society is responsible for disaster management (Miles, 2021). In this sense, every social actor is important in disaster risk reduction and resilience (Imperiale & Vanclay, 2021a). In other words, shared responsibility is key to building disaster-resilient communities (Widiyarta & Arimurti Kriswibowo, 2023). The government also works with communities to talk about their experiences, and the government helps them understand the situation better by first changing their perspective on flooding (Crosweller & Tschakert, 2021; Dwiningrum et al., 2022; McNaught, 2024).

Based on the results of literature studies, there is still little research linking empowerment theory with the effectiveness of community-based flood preparedness strategies. The following is previous research, according to Monteil et al. (Monteil et al., 2022) community empowerment is an important concept. Researchers provide more information about empowerment to communities at risk of flooding so that they will think about the role of the Community (Haque et al., 2022; Rustinsyah et al., 2021). Then, they will understand that it is not an individual effort but a Community effort (Asim et al., 2022; Purwitaningsih et al., 2022). In this study, we show that to make them change their behaviour and actions, we need to change their attitude through their thinking (Azad & Pritchard, 2023). Changing their mindset, we need to introduce them to new discourses such as 'empowerment discourse', 'communitarian', and 'responsibility' (Raikes et al., 2022).

To change the perception of the community, the perception must be changed from a 'top-down' approach to a 'bottom-up' approach, emphasising KBBM, where they need to see themselves as part of the Community (HR et al., 2024; Saiman et al., 2022). Other studies that support the importance of community preparedness itself were conducted by Aprilia et al.,2023; Jalaludin, 2024; Rahmawati et al.,2022) which emphasized that the role of the community in disaster preparedness must be increased.

Communities are expected to handle floods independently (Widayati, 2023; Wirmando & Saranga, 2022). The community must be given adequate knowledge and guidance (Husniawati et al., 2023; Tijari et al., 2024). They must be trained to work together when facing floods (Hesti et al., 2023; Purba & Sitorus, 2024). This will change their perception and attitude towards flooding. Because many community members underestimate the seriousness of flooding, they take it for granted that they will deal with it when it happens (Nugrahani & Imamah, 2024; Pangestika et al., 2022) in the same way that they have been dealing with flooding year after year. Therefore, the government should take flooding seriously as a disaster.

The government can raise awareness of flood hazards through community programs (Irwanto, 2022; Putro et al., 2022; Susilawati et al., 2023). Communities should be educated to take some basic actions to reduce flooding (Echendu, 2023a; Masrohatun, 2022; Rachman et al., 2021). For example, people should be taught to dispose of garbage in its place rather than littering the surrounding drainage channels or rivers (Agustina et al., 2023; Hapsari et al., 2021). It is time for every level of society to play an active role in disaster preparedness (Muchsin, 2021; Sahendra et al., 2023). Communities must improve their preparedness from the basic level to the advanced level (Choudhury et al., 2021). For this purpose, hands-on training, emergency communication and response, and neighborhood response teams are required (Imperiale & Vanclay, 2021b). Therefore, community empowerment programs should be implemented to unite all community members (Saul, 2022).

Community empowerment programs must be implemented to unite all community members in disaster conditions for an area in disaster preparedness (Rahman & Hardina, 2023).

Community awareness of disaster preparedness (Pradhananga et al., 2022) is the practice of teaching and empowering communities through sharing information and knowledge about different types of disasters and their possible hazards. The resources and inner strength of affected community members can be enhanced when they perceive themselves as survivors and not as victims (Ali, T et al., 2021). This makes it possible to rebuild resilient and sustainable communities even after disasters (Hadlos et al., 2022). Therefore, the government should conduct effective community activities to instill resilience (Nakano & Yamori, 2021). Those who are not affected by floods should also be involved in community activities to become resilient communities.

Communities not affected by flooding should also be involved in preparedness activities (Nurillah et al., 2022). Unaffected communities are not very involved with flood-prone communities (Try et al., 2022). They only donate and do volunteer work, such as cleaning and distributing goods (Marcela & Usiono, 2023). It would be better if they help communities that are victims of floods (Arofah & Puspaningtyas, 2023; Assaad et al., 2024). Communities should be encouraged to participate in disaster learning to improve their awareness, knowledge, and skills (Arofah & Puspaningtyas, 2023). We must recognize that helping flood-prone communities when floods occur is not the only solution (Tambunan & Abdurrahman, 2023). The government should use a 'participatory approach' or 'shared responsibility and partnership' in disaster-related activities where flood-risk communities, as well as other parties, such as Non-Governmental Organizations (NGOs) and the wider community, are seen as partners through a systematic and organized way (Wahyuni et al., 2022).

Based on the background that has been presented, which tells the lack of multi-actor collaboration in flood preparedness in Lahat City. Lack of studies on the dynamic interaction between government institutions, communities, and the private sector in flood prevention. There is still little research that links empowerment theory with the effectiveness of community-based flood preparedness strategies. From the results of the literature review, this research question offers a proactive perspective, not just responsive, by developing a collaboration model based on community empowerment in flood preparedness. The question in this study is how the collaboration of government institutions and community participation in flood disaster preparedness in Lahat Regency, South Sumatra.

METHOD

This research adopts a qualitative research method, described by Creswell J.W. (2016). A qualitative approach is a research method that aims to understand and analyze the meaning of individuals or community groups related to certain social or humanitarian issues. Within the framework of this research, a case study approach is used, a research design applied in various fields, especially to conduct evaluations that involve in-depth analysis of a particular case, program, event, activity, process, or individuals Stake, 1995; Yin, as cited in Creswell J.W, (2020). This case study was conducted directly on the Regional Disaster Management Agency office in overcoming the flash flood disaster in Lahat Regency in 2023.

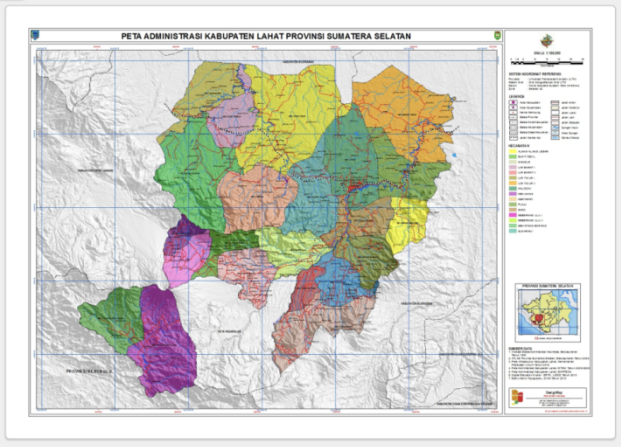

Figure 4. Map of Lahat District

In Figure 4, the map of Lahat Regency explains that Lahat Regency consists of 29 villages and sub-districts, consisting of 16 sub-districts and 13 villages. The Lahat Regency area is hilly, indicating that the Lahat Regency area is on the edge of the mountains, which makes it very possible for its residents to work in farming. The Lahat Regency area is very prone to disasters because the hilly areas are very prone to landslides, and because the area is close to the river, there is a high possibility of flooding.

A qualitative approach was used to identify various discourses of flood disaster preparedness based on the narrative experiences of government officials involved in flood mitigation and management. The main data are semi-structured interview transcripts. Purposive sampling was carried out where respondents were selected based on their experience and involvement in flood disasters. In addition to the prepared interview questions, several spontaneous questions were also asked during conversations with respondents. Data were coded based on common themes or ideas found in the text. Figure 5 shows the main stages in this research procedure.

This study involved interviews that were transcribed and double-checked by respondents to ensure that no confidential data was included. The data were analyzed to understand the experiences of flood disaster preparedness and management, as well as the challenges faced. The results were compared to the research questions and the concept of government-community collaboration to generate recommendations. The validity of the study was enhanced by using multiple sources, chains of evidence, and double-checking by informants. According to Yin (2016), the reliability of this research was measured rationally. Reliability was measured through consistent interview methods, with all reviewers present and data transferred in the same way.

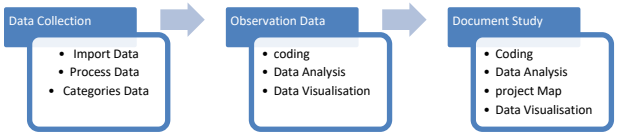

Figure 5. Stages of Research Procedures, 2024.

RESULTS AND DISCUSSION

This section presents the findings based on the analysis of the interviews. The aim is to identify their respective roles regarding their involvement in flood disaster preparedness and to discuss how the government and community collaborate and the challenges and enablers of successful collaboration. The discussion is based on three main themes that emerged: the condition of flood management in Lahat, disaster preparedness

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for floods, and the challenges and enablers of successful collaboration.

Current Flood Management in Lahat Regency

Based on Lahat Regency Regional Regulation Number 4 of 2016 concerning Regional Apparatus Organizations and Lahat Regency Regent Regulation concerning Details of Duties, Functions and Work Procedures of the Lahat Regency Regional Disaster Management Agency in which the duties, functions and structure of the BPBD of Lahat Regency are outlined. The Regional Disaster Management Agency (Badan Penanggulangan Bencana Daerah, BPBD) is responsible for regional disaster management activities to protect the community and regional assets from the impact of disasters. BPBD always performs its duties quickly and resiliently when dealing with floods, one of Lahat's most frequent disasters. BPBD handles disasters from before the disaster to after the disaster. BPBD Lahat cooperates with many related parties to overcome flood disasters. In overcoming disasters in the region, BPBD is the coordinator of disaster management assisted by various other Regional Apparatus Organizations (Organisasi Perangkat Daerah, OPD).

In disaster mitigation, there needs to be a shared responsibility approach in which the government, community, private sector, and non-governmental organizations share roles and responsibilities in disaster preparedness and response efforts. Thus, rather than relying solely on the government as the main actor in disaster mitigation, this approach emphasizes the active participation of local communities in reducing the risks and impacts of disasters.

For now, the most important issue for policymakers is enabling those at risk of flooding to make appropriate preparations before a flood occurs. Creating community engagement programs, especially those that incorporate indirect experiential techniques, can lead to improvements in individual preparedness behaviors and thus increase community resilience. Proactive multi-stakeholder collaboration is key to creating flood-resilient cities. This research shows that there needs to be more cooperation across levels of government in flood risk communication and management is one of the main barriers to addressing sustainable flood risk.

The program to empower the community's capacity to take initiative actions to reduce the impact of disasters in their neighbourhood is called KBBM. The KBBM program is participatory and is a cross-sectoral approach through mitigation measures directed at reducing physical, environmental, health, and socio-economic vulnerabilities and other unforeseen causes. The KBBM program aims to reduce the vulnerability of individuals, families and communities to the impact of disasters by providing information on disaster management.

The basic strategy of the KBBM Program is organization and training. By forming and training Community-Based Disaster Preparedness Teams (Sibat), it is expected that they can become the main actors in the implementation of the KBBM program and be able to encourage the community around them to participate fully. The planning of the CBFM program is done using a bottom-up approach. The most vulnerable communities are responsible for disaster prevention, reduction and management. What to do, the order of priority and methods to reduce disaster risk (mitigation) is the plan's basis.

The urgent needs identified by each community member are another important element of implementing mitigation efforts. To help each other, all residents joined a network. This effort focuses on improving the knowledge, attitudes and actions of communities vulnerable to disasters. Only through collaboration with the local government, starting from the sub-distric, distric, city, and province, which provides financial support and technical assistance, can the KBBM program be implemented. As beneficiaries, residents provide labour, materials and some funds. The success of a long-term disaster management plan depends on a strong partnership between the government and the community.

The KBBM program is part of preparedness and is an important component of overall disaster preparedness and management. In addition, the KBBM program is an important component of disaster management. Communities have long used reactive and conventional responses to disasters, usually through emergency services such as search and rescue (SAR), relief goods, health services and social psychological support, and emergency shelter or evacuation. Empowerment and awareness should focus on prevention, mitigation and response rather than just solving physical development problems. Its planning does not focus on the search for technological solutions alone. Instead, it emphasizes a proactive rather than reactive approach, more internal than external, and uses a bottom-up rather than top-down approach.

Active involvement of community members in building flood resilience, such as participating in meetings, training and awareness campaigns, is crucial to community ownership and flood risk management. However, it should be noted that excessive professionalization can hinder inclusivity and increase inequality. Therefore, to encourage active citizenship, all relevant stakeholders should balance professionalization with inclusivity, focusing on marginalized communities and providing capacity-building programs. A participatory approach is a key element of flood disaster management; the importance of the following mechanisms: (i) active stakeholder engagement, (ii) vulnerability assessment, (iii) scenario-based discussions, and (iv) analysis of adaptation measures to enhance resilience. This approach facilitates the identification of infrastructure vulnerabilities and informs the design of adaptation measures to improve flood resilience in local communities. The KBBM program uses a community participation approach to address disasters from this perspective. Disaster victims can now participate more actively in mitigation, preparedness, emergency response and recovery in the overall disaster management process. In contrast, previously, they were just resigned, passive, and dependent on aid providers.

Previous studies have shown that community-based disaster preparedness (KBBM) is important in increasing community resilience to disasters. A study by Dhungana et al (2023) emphasized that the success of KBBM is highly dependent on the active participation of the community in disaster mitigation, while Josè Moisès et al (2023) found that community-based programs in flood-prone areas are effective in increasing awareness and independent preventive actions. Research by Sharma, (2021) also identified main elements, such as empowerment, communication, and collaboration, that support the effectiveness of community-based mitigation programs. In addition, Long et al, (2025) highlighted the importance of cross-sectoral collaboration in strengthening early warning systems and post-disaster responses, which can accelerate the recovery of flood-affected areas. Thus, a KBBM approach involving various stakeholders is essential to ensure the sustainability of disaster mitigation, especially in flood-prone areas such as Lahat Regency.

Community Readiness in Lahat Regency to Bear Flood Disasters

The community must be able to handle disasters to a certain extent because the community is the initial actor in disaster management and the victim of disasters, so it is hoped that disasters will not develop to a larger scale. Community preparedness, especially in flood-prone areas, must be built. The successful handling of evacuation or evacuation during a flood is highly dependent on the community's preparedness. When a flood occurs, the situation is an emergency under chaotic conditions, so proper planning, coordination and training are needed to ensure proper handling and evacuation during a flood. Flood preparedness helps communities shape and plan what actions need to be taken during a flood.

Pre-flood disaster action is preparedness that needs to be considered by the community, such as knowing the terms of flood hazard warnings, knowing the level of vulnerability of the residence, knowing ways to protect our homes from flood hazards, knowing the channels and paths that flood water often travels and what impact it has on our homes, making preparations for evacuation, discussing with family members about the threat of flooding and planning a meeting place if family members are scattered, knowing the special needs of family members and neighbours if flooding occurs, preparing to be able to live independently for at least three days. Implementing all these preparedness measures depends on knowledge and attitudes, policies and guidelines, emergency planning, early warning systems, and resource mobilization. The emergency response plan aspects of the basic needs fulfilment plan include the preparation of food stocks, fresh water and drinking water, preparing clothing and personal needs, and personal hygiene/bathing equipment.

Flood preparedness involves a comprehensive approach covering various aspects of planning and implementation. First, risk mapping and assessment are essential, with flood risk maps created to identify vulnerable areas and assess the vulnerability of infrastructure and communities. Emergency plans that include evacuation routes and shelters should be laid out, followed by training and simulations to ensure all community members know the procedures to follow. Infrastructure management, such as improving drainage systems and building dams, is also crucial to reduce the impact of flooding. In addition, emergency supplies and response equipment need to be prepared, including food, clean water and rescue equipment.

Communication systems must function properly, including early warning and emergency communication plans to disseminate important information. Coordination with relevant parties such as BPBD, NGOs and the private sector is important to get the needed support. After a disaster, monitoring and evaluation are conducted to assess the effectiveness of the response and improve plans. Capacity building and community awareness through training and information campaigns are also part of the preparation, while implementing policies and regulations that support risk management, such as zoning and building regulations, can strengthen overall preparedness. This approach ensures that communities can effectively reduce the risk and mitigate the impact of floods.

The shared responsibility approach to disaster mitigation has been implemented in several countries, including Japan, the Philippines, and Indonesia. In Japan, communities actively participate in earthquake preparedness training through school and community programs, and each household has an emergency kit to deal with disasters (Nakai & Nakano, 2023). The Philippines adopted a community-based early warning system through the Community-Based Disaster Risk Management (CBDRM) program, which allows for rapid response to disasters such as floods and typhoons (Tan, 2022). In Indonesia, a study in Banjarmasin (Sari et al., 2023) showed that communities have developed preparedness mechanisms based on experience and local wisdom, despite the lack of government support in flood preparedness training. Meanwhile, in Semarang City, the concept of a resilient city is implemented through collaboration between communities and the government to manage the risks of tidal flooding and land subsidence (Warsilah, 2023). Various studies confirm that effective preparedness requires active community involvement, government support, and cross-sector collaboration to improve disaster resilience.

Challenges and Supporting Factors for Successful Collaboration on Flood Disaster Preparedness and Community Empowerment

The challenges and enablers of flood disaster preparedness and community empowerment have a profound and far-reaching impact on community resilience. When communities are prepared for disasters, the effectiveness of emergency response increases significantly, enabling quick action in evacuation and protection, which in turn reduces material and human losses. Community empowerment through training and education increases local self-reliance, allowing communities to better manage resources and make decisions during crises. This not only strengthens local resilience but also accelerates the economic recovery process by minimizing the impact on businesses and infrastructure.

Social impact reduction is also achieved, as good preparation reduces stress and trauma and ensures that basic needs such as food and shelter are met more effectively. In addition, coordinated disaster preparedness enhances collaboration between government, non-government organizations, the private sector and communities, improving the flow of information and assistance. Evaluation and learning from previous flood experiences promotes continuous improvement in mitigation plans, which is important for adaptation to climate change that may increase the frequency and intensity of flood disasters in the future. Overall, good preparedness and community empowerment strengthen communities' capacity to deal with disasters more effectively, reduce negative impacts, and accelerate long-term recovery and adaptation.

Among the challenges mentioned were the lack of public knowledge about disasters, limited human resources at the Regional Disaster Management Agency (BPBD), inadequate equipment, and limited budget. However, on the other hand, there are also supporting factors that help in disaster management, such as cross-sectoral cooperation between the police, army, and other related agencies, adequate budget availability, support from the community, 3rd parties, and businessmen, as well as policies issued by the regional head.

Research from various countries shows that disaster preparedness and community empowerment have a significant impact on the effectiveness of flood management. A study from the Center for Disaster Resilient Communities (CDRC) at the University of Washington emphasized the importance of community involvement in disaster risk management through education and evidence-based emergency response policies (Errett et al., 2023). According to Kourtis & Tsihrintzis (2021) ,

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it shows that good mitigation, such as drainage improvements and education programs can significantly reduce the impact of flooding. These studies emphasize that cross-sector collaboration, community training, and supportive local policies are key factors in improving preparedness, strengthening community resilience, and accelerating post-disaster recovery.

CONCLUSION

This article aims to understand how government agencies engage in flood disaster preparedness and community empowerment. Findings show that the government tends to attribute flooding to natural factors. The research highlights the collaboration between government agencies and community participation in flood management, where communities are generally positioned as victims and recipients of assistance. The traditional approach of relief and rehabilitation is still dominant in Lahat Regency.

The results of this research are expected to help policymakers develop rules that align with the needs of communities in these flood-prone areas. The Shared Responsibility approach does not mean replacing the role of government, but ensuring that communities also have an active role in disaster mitigation. If this approach is implemented well, communities will be better prepared for disasters and can reduce the impacts without relying too much on external assistance.

Disaster management needs to implement knowledge to improve response and long-term resilience. Rural context-tailored approaches, cross-sector collaboration and active community participation, are essential for disaster recovery and resilience. With direct community involvement, disaster prevention and management efforts can be more effective, efficient and sustainable. The study also identified relevant challenges and solutions for recovery in rural areas but was limited by the sample size and reliance on self-reported information.

This study has several limitations that need to be considered. First, this study focuses on flood disaster preparedness in Lahat Regency, which has certain geographical and social characteristics, so the results may not be fully generalizable to other areas with different conditions. Second, this study uses a qualitative approach with interviews and documentation analysis as the main methods, which although provide in-depth understanding, still have limitations in measuring the impact of policies quantitatively. In addition, limitations in access to official data on the effectiveness of collaboration between the government and the community also hinder the evaluation of policy outcomes more objectively. For future research, it is recommended to adopt a mixed-method approach that combines qualitative and quantitative data to obtain a more comprehensive analysis. In addition, comparative research in other flood-prone areas can be conducted to understand the specific factors that contribute to the success or failure of collaboration in disaster preparedness.

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