

Disaster Response Group Strategy For Dealing With Flooding In Bangga Village Dolo Selatan District

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Abstract: This study aims to analyze the strategies of disaster response groups in addressing flood events and to identify the forms of community cooperation in flood management in Bangga Village. Using a qualitative research design with observations, interviews, and documentation, the study involved five informants consisting of members of the disaster response group and residents affected by the 2019 flash flood. The findings show that flood mitigation strategies were implemented through logistical support, preparedness simulations, collective canal cleaning, the provision of water reservoirs, and ecological efforts such as reforestation and the reduction of illegal logging. These strategies enhanced community adaptive capacity and strengthened environmental sustainability. Furthermore, community cooperation emerged through collaboration between residents, disaster response groups, youth organizations, village authorities, the Regional Disaster Management Agency (BPBD), and several local foundations in rehabilitation and mitigation activities. The study highlights the importance of strengthening social networks and community-based approaches in improving flood disaster management.

Keywords: Strategy, Group, Mitigation

1. INTRODUCTION

Indonesia is one of the countries with the highest disaster vulnerability in the world due to its complex geographical and hydrological conditions. This situation requires the community to have adequate disaster literacy in order to be able to respond adaptively to various threats. Law Number 24 of 2007 emphasizes that disaster management is a series of systematic efforts to reduce the risk and impact of disasters. Floods are one of the most frequent disasters in Indonesia and cause material and psychological losses every year (Saragih et al., 2021). In line with this, Wisner et al. (2021) emphasize that disaster risk increases when community vulnerability is not addressed seriously. Therefore, community education and preparedness are important aspects of strengthening community resilience. The mass media, government agencies, and local organizations play a major role in providing accurate disaster information. However, information alone is not enough without a structured and collaborative mitigation strategy.

Previous studies have highlighted the significance of social capital, community capacity, and institutional coordination in disaster mitigation. Aldrich and Meyer (2015) explain

that communities with strong social capital recover faster than communities with weak social ties. Research by Rahman et al. (2020) also found that community-based mitigation is more effective than top-down structural approaches. However, most studies still focus on technical aspects such as infrastructure and early warning systems, while the dynamics of collaboration between local institutions are often overlooked. Hidayati's (2023) research shows that the success of disaster mitigation is influenced by the capacity of local organizations to mobilize the community. A weakness in previous studies is the lack of in-depth analysis of the strategies implemented by disaster preparedness groups at the village level. In addition, there has not been much research describing how these strategies are integrated with sustainable community cooperation. These limitations open up opportunities for more comprehensive studies.

Bangga Village in Sigi Regency is a concrete example of an area that has experienced repeated flooding in recent years. Flash floods in 2019 caused severe damage to settlements, public facilities, and agricultural land, forcing large numbers of residents to evacuate (BPBD Sigi, 2020). Despite evacuation and logistics distribution efforts by the government and humanitarian agencies, floods continued to occur in 2020, 2021, 2023, and even in 2024. This situation indicates that mitigation efforts have not been able to significantly reduce flood risk. The BNPB (2023) report also notes that areas with high rainfall and environmental degradation, such as Bangga, continue to have a high risk of flooding. Additionally, human activities such as illegal logging worsen the ecosystem's capacity to retain water runoff. This situation underscores the need for more adaptive and contextual mitigation strategies. Thus, Bangga Village is an important location for researching disaster preparedness group strategies and community cooperation dynamics.

Disaster preparedness groups (KSB) play a strategic role in strengthening community preparedness for recurring floods. Shaw's (2022) study explains that well-functioning local organizations can increase community resilience through coordination, education, and capacity building. In the context of Bangga Village, the DRG has carried out various activities such as logistical assistance, disaster simulations, drainage cleaning, and reforestation as part of non-structural mitigation. These efforts are in line with the Community-Based Disaster Risk Management (CBDRM) approach, which emphasizes community participation in all stages of disaster management. However, there has been little research documenting in detail how these strategies are implemented and how effective they are in the long term. In addition, the cooperation between the community, youth organizations, the village government, BPBD, and humanitarian agencies has not been studied in an integrated manner. Analysis of these strategies and cross-actor collaborations is important to understand the successes and challenges of flood mitigation at the village level. This study aims to fill this gap.

This article contributes by analyzing the disaster preparedness group's strategy in flood mitigation and community collaboration patterns in Bangga Village. This approach provides a broader understanding of how community capacity is built through the synergy of formal and informal actors. Benson et al. (2021) emphasize that sustainable mitigation requires active community participation and the integration of various local institutions. By studying the dynamics of these strategies and collaborations, this study

provides new insights into community-based flood mitigation studies in disaster-prone areas. In addition, the findings of this study are expected to serve as a reference for local governments and disaster management agencies to strengthen mitigation programs that are more adaptive and responsive to the local context. In particular, this study highlights the importance of strengthening social networks as the foundation for community resilience to recurrent flooding. Thus, the issues and objectives of this study are highly significant for the development of disaster risk management models at the village level. This article analyzes KSB strategies and forms of community collaboration as efforts to strengthen participatory and sustainable flood mitigation.

2. Method

This study uses qualitative research. The subjects of the study include behavior, perception, motivation, and action. The purpose of this study is to gain insight into this phenomenon. It is comprehensive, describing it using words and language, in a natural environment and through various natural techniques.

3. Main Heading of the First Analysis or Discussion

3.1. Development of Disaster Mitigation Programs

The disaster mitigation program in Bangga Village was developed in response to the recurring threat of flooding from 2019 to 2024. The program was developed by directly observing the vulnerability of the community, particularly due to high rainfall and river overflows that carry mud and wood debris. The mitigation program was designed to strengthen community preparedness through measures such as the construction of retaining infrastructure, cleaning of waterways, reforestation of barren areas, and education for residents on preventive measures. These activities are designed with the involvement of disaster response groups, residents, and village governments to ensure that mitigation strategies are in line with field needs. By planning mitigation measures before disasters occur, communities are expected to be able to reduce the risk of losses and improve their preparedness for floods that occur almost every year.

3.2. Disaster Response Team (KTB) Strategy in Flood Management

The Disaster Response Team's strategy is multi-layered, covering pre-disaster, during disaster, and post-disaster phases. In the pre-disaster phase, the team conducts simulations, socialization, and training to improve residents' ability to deal with floods. They also ensure the availability of basic equipment and logistics needed in emergency situations. When flooding occurs, the group's main focus is on rapid evacuation, rescue of residents, and securing affected locations. They prioritize vulnerable groups such as children, the elderly, and pregnant women. Post-disaster, the strategies implemented include cleaning up the area, assessing damage, distributing aid, and assisting residents in recovering physically and psychologically. These strategies illustrate how the group works systematically throughout all stages of a disaster for the safety of the community.

3.3. Capacity and Role of KTB in the Flood Management System

The capacity of KTBs can be seen from their ability to monitor, coordinate, and provide assistance directly in the field. Group members have specific roles such as monitoring upstream river conditions, providing information to residents, and supplying emergency equipment. They serve as important liaisons between the community and other parties such as the village government, BPBD, and humanitarian agencies. In addition, the group also has an administrative role in recording losses and reporting disaster conditions. This capacity enables them to make a significant contribution in accelerating evacuation, managing aid distribution, and maintaining order during emergencies. Despite limitations in equipment and personnel, their ability to coordinate and move quickly is an important foundation for flood management in Bangga Village.

3.4. Community Cooperation and Participation in Flood Management

Community cooperation is one of the main strengths in flood management. The community is actively involved in cleaning waterways, planting trees, and other mutual assistance activities aimed at reducing the risk of flooding. In emergency situations, residents help each other evacuate neighbors, especially vulnerable groups, and secure important belongings. Cooperation is also evident after the flood recedes, when residents work together to repair damaged houses and clean the environment of mud and wood debris. Support from various parties such as youth organizations, village governments, BPBD, and humanitarian foundations adds to the strength of community solidarity. Through strong cooperation, the residents of Bangga Village are able to build community resilience and accelerate the recovery process.

3.5. Early Warning and Emergency Communication System

The early warning system in Bangga Village utilizes various communication tools to ensure that flood information is quickly conveyed to the community. The Disaster Response Team uses sirens, walkie talkies, and social media platforms to warn residents about upstream river conditions and potential flooding. Monitoring teams are stationed at strategic points to observe rising water levels. The information received is then immediately disseminated to residents, either through loudspeakers or direct communication between neighbors. Through this system, residents can prepare themselves, secure their valuables, and evacuate if necessary. This communication system not only increases awareness but also builds a habit of mutual reminders among residents, so that preparedness is more evenly distributed throughout the village.

3.6. The Impact of KTB Strategies and Community Cooperation on Community Resilience

The combination of KTB strategies and community cooperation has proven to strengthen community resilience. Training, simulations, and early warning systems have made residents better prepared to face floods, which occur almost every year. Working together to clean waterways, planting trees, and providing post-disaster support demonstrate a high level of social solidarity. The positive impact of this strategy is evident in the increased sense of security, residents' knowledge of safety measures, and collective ability to recover after a disaster. Although there are still challenges, such as

low participation in simulations, the commitment to improve and strengthen preparedness remains a great potential in building Desa Bangga as a community that is resilient in the face of disasters.

4. CONCLUSION

The results of the study show that the Disaster Response Team (KTB) strategy in Bangga Village has included mitigation, preparedness, emergency response, and recovery measures carried out in coordination with the community and village government. Various efforts such as disaster simulations, cleaning of waterways, distribution of logistics, and the use of early warning systems have strengthened the community's ability to deal with recurring floods from 2019 to 2024. The synergy between the DRT and the community is an important foundation for reducing risk, increasing security, and strengthening social resilience in the face of annual flooding.

Furthermore, the research findings confirm that community participation plays a crucial role in the success of flood mitigation strategies, although challenges remain, such as low involvement in simulation activities. Based on this, future research is recommended to explore the factors that influence the level of community participation in disaster preparedness, as well as to conduct comparative studies with other villages or regions with similar disaster characteristics. This is expected to enrich community-based flood management models and provide more comprehensive strategic recommendations.

REFERENCES

BPBD Provinsi Sulawesi Tengah. (2024). Banjir Rendam Pemukiman Warga di Dua Desa Kabupaten Sigi. *Admin Pusdalops*. <https://doi.org/https://pusdalops-bpbd.sulteng.com/detail-berita-publik/96>

DIBI BPBD Kabupaten Sigi. (2023). Kode Bencana Indonesia (KBI). *Admin Dibi Bpbd Sigi*. <https://doi.org/https://dibi.bnbp.go.id/xdibi2/read2/60771>

Koran Tempo. (2022). Kampung-Kampung Menghilang. *Tempo*. <https://doi.org/https://koran,tempo.co/read/nasional/471908/kampung-hilang-akibat-banjir-bandang-beruntun-di-kabupaten-sigi>

Pemerintah Pusat RI. (2007). Undang-Undang Republik Indonesia Nomor 24 Tahun 2007 tentang Penanggulangan Bencana. In *UNDANG-UNDANG NO. 24* (Nomor 235, hal. 245). <http://digilib.unila.ac.id/4949/15/BAB II.pdf>

Saragih, I. J. A., Sirait, M., & Sari, D. A. (2021). Deskripsi Opini Publik tentang Bencana Alam untuk Rencana Studi Mitigasi di Indonesia (Studi kasus: Bencana Hidrometeorologi). *MKGJ: Jurnal Meteorologi, Klimatologi Geofisika dan Instrumentasi*, 1(1), 33–39.

Voa Indonesia. (2019, April). Banjir Bandang di Sigi Sulawesi Tengah. *Yoanes, Litha*. <https://doi.org/https://www.voaindonesia.com/a/banjir-bandang-di-sigi-sulawesi-tengah-1-tewas-2-ribu-mengungsi/4896553.html>

Zuchri, A. (2021). *Matode Penelitian Kualitatif* (R. Patta (ed.); Cet-1). CV Syakir Media Press.

Irwansyah, *Penelitian Hukum; Pilihan Metode dan Praktik Penulisan Artikel*. Yogyakarta: Mirra Buana Media, 2020.

Menski, Werner. *Comparative Law in a Global Context, The Legal Systems of Asia and Africa*. Cambridge: Cambridge University Press, 2006.

Journal article:

Footnotes:

¹ Moh Nutfa et al., “Social Change and Threat to Agrarian Rights of the Tau Taa Wana Indigenous People in Central Sulawesi,” *Jurnal Sosiologi Walisongo* 7, no. 2 (2023): 115–26, <https://doi.org/10.21580/jsw.2023.7.2.13118>.

² Restu Monika Nia Betaubun et al., “Function of Givu as Traditional Law of the Tau Taa Wana Tribe,” *Musamus Law Review* 4, no. 2 (2022): 63–69, <https://doi.org/10.35724/mularev.v4i2.4188>.

References (in alphabetical order):

Adrisal Kaliongga, Ade Iriani, and Mawardi Mawardi, “Reintegrasi Dan Kontekstualisasi Kearifan Lokal Sintuwu Maroso: Upaya Menjawab Tantangan Pendidikan Di Era Revolusi Industri 4.0 Menuju Society 5.0,” *Scholaria: Jurnal Pendidikan Dan Kebudayaan*, no. 2 (2023): 117–27, <https://doi.org/10.24246/j.js.2023.v13.i2.p117-127>.

Moh Nutfa et al., “Dramaturgi Aktor Pada Konflik Pertambangan Poboya Kota Palu Actor Dramaturgy in the Poboya Mining Conflict in Palu City,” *Jurnal Entitas Sosiologi* 13, no. 01 (2024): 1–19, <https://jes.jurnal.unej.ac.id/index.php/JES/article/view/43424>.