Society: Jurnal Jurusan Tadris Ilmu Pengetahuan Sosial
Volume 15, No. 2, Bulan Desember Tahun 2024, hlm. 25-29
P-ISSN: 2087-0493 E-ISSN: 2715-5994

FLOOD RISK KNOWLEDGE AND COMMUNITY PREPAREDNESS IN KAMPUNG BINA BARU, BIMA CITY: A QUALITATIVE STUDY

Muhammad Malthuf [1)], Nety Fathuljannah [2)]
[1) 2)]Development of Islamic Society Study Program, State Islamic University Mataram, Indonesia, m_malthuf@uinmataram.ac.id.

Abstract

Hydrometeorological disasters frequently impact Indonesia, with floods constituting a recurrent threat, including in Bima City. The persistent occurrence of flooding in Kampung Bina Baru, Kelurahan Dara, primarily stems from high rainfall intensity, deforestation, and ineffective waste management. This study aims to analyze the residents' level of knowledge regarding flood disasters and identify the influencing factors. Employing a qualitative descriptive approach under a naturalistic paradigm, data collection was conducted via observation, interviews, and documentation. Data analysis encompassed reduction, presentation, verification, and conclusion drawing, while data validity was ensured through triangulation techniques. Findings indicate a generally low level of disaster preparedness knowledge among residents, primarily due to limited outreach and training on flood mitigation. Key influencing factors include internal elements such as education, occupation, age, and gender, and external elements such as infrastructure, socio-cultural conditions, and environmental context. Enhanced disaster education and community-based preparedness programs are critical for bolstering local resilience.

Keywords: Knowledge, Risk, Flood Disaster, Bima City

1. INTRODUCTION

Flooding remains one of the most pervasive and destructive hydrometeorological hazards affecting communities globally, particularly in tropical regions such as Indonesia. In recent decades, the increasing intensity and frequency of extreme weather events have exacerbated the vulnerability of urban and rural settlements alike. Bima City in West Nusa Tenggara Province exemplifies this scenario, where seasonal flooding recurrently impacts infrastructure, economic stability, and public health. Kampung Bina Baru in Kelurahan Dara, located in a low-lying coastal area, faces elevated flood risk due to a combination of topographic, climatic, and anthropogenic factors. Key among these are heavy rainfall, deforestation in upstream catchments, and unregulated urban development that impairs natural drainage.

In light of these conditions, public awareness and preparedness have become pivotal in mitigating disaster risk. Recent scholarly work underscores the role of community knowledge in enhancing flood resilience. Devi Erlia (2017) found moderate preparedness among residents and local authorities in Martapura Barat, while Nur Alzain et al. (2022) reported mixed levels of flood knowledge and preparedness in Manokwari. Fitri Andriani et al. (2017) highlighted a high level of awareness in Sragen, though gaps remained in dissemination and implementation. These studies collectively suggest that while awareness may exist, consistent educational interventions and

systemic community engagement remain limited.

Despite the recurrent nature of flooding in Kampung Bina Baru, residents' understanding of flood risk and preparedness strategies remains inadequate. The general solution lies in systematically enhancing public knowledge and attitudes towards disaster preparedness through targeted education, community engagement, and institutional support mechanisms aimed at promoting resilience and risk mitigation.

The present study draws from the literature which emphasizes the significance of disaster education as a core element of community resilience. Research by Notoatmodjo underscores knowledge as a precursor to behavioral change, asserting that awareness influences individuals' and communities' attitudes and responsiveness to disaster scenarios. Ningtyas and Sanjoto further elaborate on disaster knowledge as a cognitive capability encompassing awareness of risks, consequences, and actionable preparedness strategies.

Additionally, the concept of disaster preparedness as operationalized through local training, simulation exercises, and community organization—such as the Red Cross Youth or localized disaster task forces—has shown effectiveness in various regions. These interventions not only increase public understanding but also foster collective action, which is crucial in hazard-prone environments. The synthesis of these frameworks informs the study's objective to assess and enhance flood-related knowledge within the Kampung Bina Baru context.

Prior investigations by Devi Erlia (2017), Nur Alzain et al. (2022), and Fitri Andriani et al. (2017) have shed light on community readiness and the pivotal role of awareness in flood-prone regions. These studies, while comprehensive, primarily employed quantitative methods and were situated in varied geographical contexts, each demonstrating moderate to high levels of public knowledge. However, they did not delve deeply into the qualitative nuances of how knowledge is acquired, contextualized, and acted upon within specific communities.

In contrast, the present research identifies a significant gap in the depth of understanding concerning knowledge dynamics within Kampung Bina Baru, especially in relation to socio-environmental vulnerability. No comprehensive qualitative study has addressed the lived experiences, local knowledge formation, and behavioral responses to flooding in this specific locale. This study seeks to bridge that gap by employing a grounded, field-based qualitative approach.

This study aims to assess the level of knowledge among residents of Kampung Bina Baru, Kelurahan Dara, concerning flood disaster risks, and to identify the socio-demographic and infrastructural factors influencing such knowledge. The novelty of this study lies in its qualitative naturalistic approach, providing a nuanced exploration of local knowledge systems through firsthand observation and community engagement. The scope encompasses both internal and external factors shaping public awareness, including education, occupation, environmental setting, and institutional preparedness, thereby contributing to the formulation of more context-sensitive disaster mitigation strategies.

2. RESEARCH METHODS

This study adopts a qualitative research approach, specifically utilizing a naturalistic methodology to explore the knowledge levels of residents concerning flood disasters in Kampung Bina Baru, Kelurahan Dara, Kota Bima. The qualitative paradigm is predicated on the principles of interpretivism, emphasizing the complexity and contextuality of human experiences. The approach enables in-depth exploration of community perceptions, behaviors, and local knowledge regarding flood risk and preparedness. This method is particularly suitable for understanding the dynamic interplay of

environmental and social variables influencing disaster response in a localized setting.

The research was conducted in Kampung Bina Baru, situated within Kelurahan Dara, a flood-prone area in the city of Bima, West Nusa Tenggara. The region is characterized by its low-lying topography, proximity to coastal zones, and frequent flood events, especially during the rainy season. The research subjects comprised residents of varying demographics, including community leaders, elders, and youth, as well as the head of the Kelurahan. A purposive sampling strategy was employed to select seven key informants with diverse backgrounds to ensure representativeness and the richness of the data collected.

Data collection was executed using three primary techniques: observation, interviews, and documentation. Observations involved direct engagement with the community to capture behavioral patterns and environmental conditions related to flood preparedness. Semi-structured interviews were conducted with selected informants to elicit detailed accounts of their experiences, perceptions, and knowledge concerning flood risks. Documentation methods included photographic evidence and audio recordings, as well as the analysis of secondary data from local government reports, scholarly articles, and community archives to complement and corroborate primary findings.

The analytical process followed the Miles and Huberman model, encompassing data reduction, data display, and conclusion drawing and verification. Data reduction involved coding and summarizing transcripts to identify key themes related to flood knowledge and preparedness. Data display was facilitated through narrative matrices that enabled pattern recognition across different respondent groups. Conclusions were systematically verified through triangulation, which involved cross-checking data from multiple sources and methods. Triangulation was further reinforced by validation techniques, including source triangulation, method triangulation, and time triangulation, ensuring the credibility and dependability of the study's findings.

3. RESULTS AND DISCUSSION

The analysis revealed that the level of knowledge among residents of Kampung Bina Baru regarding flood disasters is generally moderate to high, shaped predominantly by recurring exposure to flooding events. Respondents demonstrated awareness of flood risks and basic preparedness measures such as safeguarding household assets, identifying safe evacuation routes, and maintaining personal safety during flood occurrences. This knowledge is primarily experiential, drawn from past incidents and informal community learning.

Interview data indicated that although many residents comprehend the causes and consequences of flooding, their preparedness actions remain limited by infrastructural constraints and inadequate formal education on disaster mitigation. Contributing internal factors include age, educational background, occupation, and gender, whereas external influences encompass the availability of emergency infrastructure, socio-cultural attitudes, and the environmental context. Several informants emphasized the absence of regular training or government-led simulations as a barrier to enhanced community preparedness.

Compared to studies by Devi Erlia (2017) and Nur Alzain et al. (2022), where community readiness was moderate due to sporadic educational interventions, the residents of Kampung Bina Baru exhibit comparable levels of awareness but face distinct contextual challenges. Unlike the high preparedness levels reported by Fitri Andriani et al. (2017) in Sragen, where government engagement was more consistent, Kampung Bina Baru residents lack continuous institutional support. Nevertheless, the frequent experience of flood events has cultivated a form of situational knowledge,

which, although informal, demonstrates resilience through adaptive practices.

In contrast, Malthuf's (2023) investigation into social vulnerability in disaster-prone areas—though focusing on earthquake risks—provides a relevant comparative framework. His study concludes that "social vulnerability, shaped by education level, occupational status, and community social networks, substantially affects disaster response and preparedness"[4]. The findings underscore that not only physical but also socio-economic conditions critically shape resilience, a perspective highly applicable to the flood-prone context of Kampung Bina Baru. The current study advances the discourse by providing a nuanced, qualitative understanding of how localized environmental and social structures mediate flood knowledge and behaviors. The findings underscore the critical role of experiential learning in shaping community responses and highlight the necessity for integrated disaster education programs (Ningtyas & Sanjoto, 2020).

These findings carry significant implications for both disaster risk reduction (DRR) policy and community resilience planning. The high dependence on experiential knowledge suggests an urgent need for formalized, culturally contextualized education on flood preparedness. Local governments must implement targeted interventions, including simulations, workshops, and informational campaigns that engage all demographic groups.

Malthuf (2023) emphasizes that addressing social vulnerability—particularly low education, economic instability, and weak social cohesion—is central to enhancing community preparedness[6]. This aligns with Notoatmodjo's (2012) assertion that knowledge serves as the foundational determinant of disaster-related behaviors[7]. Integrating these insights into a localized preparedness framework can significantly bolster the community's adaptive capacity. The case of Kampung Bina Baru, therefore, contributes not only empirical evidence but also reinforces theoretical propositions regarding vulnerability reduction in disaster-prone settings.

4. CONCLUSION

This study concludes that the level of knowledge among residents of Kampung Bina Baru, Kelurahan Dara, Kota Bima, regarding flood disasters is influenced by a complex interplay of internal and external factors. Internally, variables such as education, occupation, age, and gender shape individual understanding and preparedness. Externally, infrastructure availability, environmental conditions, and socio-cultural dynamics significantly impact community resilience. Despite the relatively high frequency of flood events, which fosters experiential knowledge among residents, formal disaster preparedness remains limited due to the lack of structured training, outreach, and government-led initiatives.

The implications of these findings underscore the necessity for comprehensive disaster education programs tailored to the local context. Enhancing public awareness through participatory simulations, workshops, and continuous community engagement is critical to improving preparedness and reducing vulnerability. This research contributes substantively to the discourse on community-based disaster risk management by providing empirical evidence on the role of localized knowledge and the gaps in institutional support.

Future research should explore longitudinal assessments of educational interventions and their effectiveness in transforming knowledge into sustained behavioral change. Moreover, integrating indigenous knowledge systems and social capital into official disaster mitigation strategies may yield more robust and culturally sensitive preparedness frameworks. The study's limitations, including its focus on a single locale and reliance on self-reported data, suggest the need for broader comparative analyses across similar high-risk regions.

5. BIBLIOGRAPHY

Andriani, F., & Rekan. (2017). *Analisis tingkat pengetahuan masyarakat terhadap bencana banjir di Desa Tangkil Kecamatan Sragen Kabupaten Sragen* (Skripsi). Universitas Negeri Semarang.

Devi, E. (2017). *Analisis kesiapsiagaan masyarakat dan pemerintah menghadapi bencana banjir di Kecamatan Martapura Barat Kabupaten Banjar* (Skripsi). Universitas Lambung Mangkurat.

Kodoatie, R. J., & Sugianto. (2002). *Bencana alam*. Yogyakarta: Andi Offset.

Malthuf, M. "Analisis Tingkat Kerentanan Sosial Penduduk terhadap Bencana Gempabumi di Kabupaten Klaten." *Jurnal Plano Buana*, vol. 3, no. 2, 2023, pp. 112–121. Ningtyas, R. E., & Sanjoto, T. B. (2020). Pengetahuan kebencanaan masyarakat di kawasan rawan bencana. *Jurnal Penanggulangan Bencana, 11*(2), 123–134.

Pemerintah Kota Bima. (2006). *Peraturan Daerah Kota Bima Nomor 17 Tahun 2006 tentang Pembentukan Kelurahan Dara*. Notoatmodjo, S. (2012). *Ilmu perilaku kesehatan*. Jakarta: Rineka Cipta.

Ningtyas, R. E., & Sanjoto, T. B. (2020). Pengetahuan kebencanaan masyarakat di kawasan rawan bencana. *Jurnal Penanggulangan Bencana*, *11*(2), 123–134.

Notoatmodjo, S. (2012). *Ilmu perilaku kesehatan*. Jakarta: Rineka Cipta.

Nur Alzain, N., & Rekan. (2022). Kesiapsiagaan masyarakat terhadap bencana banjir di Kelurahan Wosi, Manokwari, Papua Barat. *Jurnal Pengabdian Kepada Masyarakat*, *4*(1), 75–83.

Pemerintah Kota Bima. (2006). *Peraturan Daerah Kota Bima Nomor 17 Tahun 2006 tentang Pembentukan Kelurahan Dara*.

Republik Indonesia. (2007). *Undang-Undang Republik Indonesia Nomor 24 Tahun 2007 tentang Penanggulangan Bencana*. Jakarta: Sekretariat Negara.

Sugiyono. (2016). *Metode penelitian kualitatif, kuantitatif dan R&D*. Bandung: Alfabeta.