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Community Preparedness in Facing Flood Disaster in Martapura Timur District, Banjar Regency

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ABSTRACT

This study is to examine community preparedness as an effort to mitigate flood disasters. Research related to community preparedness in dealing with disasters is needed to manage disasters in the future. Thus, this is the first step in building a disaster-aware community. So that when a disaster occurs, the community has the attitude and ability to understand how to prepare for a flood disaster. This type of research is quantitative, with data analysis used with quantitative descriptive methods. Data collection is used by directly collecting the results of questionnaires prepared in advance to the public and collecting documents related to research variables using survey methods. The research was conducted in Martapura Timur District, Banjar Regency. This study analyzes the community s preparedness data in dealing with floods by using data analysis of the percentage of community preparedness to face flood disasters. Community preparedness is calculated based on an interval classification of community preparedness scores based on five parameters: knowledge and attitudes, policies and guidelines, emergency response plans, disaster warning systems, and the ability to mobilize resources. The results of the scoring analysis regarding community preparedness in dealing with flood disasters in Martapura Timur district show that the highest answer score is mainly between the 8-15 interval with a frequency of 192 research respondents with a percentage of 56% of the total 344 research respondents. These results show that community preparedness in facing flood disasters is low.

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1. INTRODUCTION

Environmental conditions in Indonesia are strongly influenced by the location and geographical characteristics that stretch between the Pacific Ocean and the Indian Ocean. Indonesia has three basic climate patterns: monsoonal, equatorial, and local climate systems that cause dramatic differences in rainfall patterns. This condition is increasingly complex due to challenges from the effects of global warming and the effects of climate change, such as rising temperatures and sea levels in the territory of Indonesia which is on the equator. This tends to create a high potential for various types of hydrometeorological disasters, such as floods and flash floods (Setyowati, 2019; Susilowati, 2020).

This condition causes frequent natural disasters in various areas, such as polluted rivers and forest damage, which results in ecosystem instability and is also the cause of one of the problems of flood disasters (Maryono, 2020). The problem of flooding, in general, is always related to the rapid development of urban areas, accompanied by an increase in population, economic activity, and the need for land for settlements. Land conversion occurs due to limited urban land, which should be used as a conservation area and green open space as a residential area. As a result, the water catchment area decreases, increasing surface runoff (Junef, 2016).

he first step in reducing disaster risk is to carry out mitigation activities; one of the efforts to reduce disaster risk as stipulated in Law no. 24 of 2007 concerning Disaster Management, namely mitigation activities, such as physical development and the importance of building awareness and increasing capacity to deal with disaster threats. Disaster mitigation activities on a small scale can be carried out by increasing public awareness of threats in their respective areas (Muis & Anwar, 2018)

Lack of awareness and knowledge of natural disasters has resulted in low community preparedness for floods and the impacts caused by floods. Disaster management in emergency response and post-disaster rehabilitation and reconstruction activities is still the main focus of the government and most communities, so community preparedness has not yet become a priority. However, community participation and authorities as subjects and actors are vital in disaster management. At the smallest scope, such as self and family preparedness, each is also a form of participation, while at a broader scope, such as the community or community groups (Hidayati, 2008; Subiyakto, 2005).

Based on data on flood events in South Kalimantan obtained from BNPB for the 2008-2021 period, Banjar Regency is in second place after Balangan Regency with the most flood events during that year. Banjar Regency is in second place for the most flood events in the 2008-January 2021 period; there were 32 flood events in Banjar Regency. The Martapura Timur sub-district occupies the second position with the areas that have the most high-risk and very high-risk levels after the Martapura sub-district. Apart from being a flood-prone area every year, Martapura Timur District is also an area that has a high level of vulnerability to flooding (BNPB, 2021).

When a disaster occurs, the community generally lacks information regarding the state of the flood, causing panic; the community often panics due to a lack of knowledge about flood disaster mitigation. Knowledge and attitudes are needed so that the countermeasures and actions taken are appropriate and can reduce the risk of flooding. Communities in the face of a flood disaster need an evacuation guide. There are no signs that make it difficult for the public to know the development of the situation when a flood occurs.

The author is interested in studying community preparedness in dealing with floods in Martapura Timur District, Banjar Regency, South Kalimantan Province, by assessing community preparedness in affected areas using the community preparedness index. This research is undoubtedly an innovation from previous research. In addition, there has been no similar research in Martapura Timur District, so this research is new in the research area. This research is expected to reference recent research with the same study.

Based on this background, the problem to be answered in this study is to examine community preparedness as a flood disaster mitigation effort. The need for research related to community preparedness in dealing with disasters is urgently needed to manage disasters in the future. Thus, this is the first step in building a disaster-aware society. So that when a disaster occurs, the community has the attitude and ability to understand how to be prepared for a flood disaster.

2. METHODS

This type of research is quantitative, with data analysis used with quantitative descriptive methods. Data collection was used by collecting the results of interviews conducted using interview guidelines (question materials) prepared in advance and addressed directly to the community. Collection of documents related to research variables using survey methods. The research was

conducted in Martapura Timur District, Banjar Regency. The type of data in this study consisted of primary data obtained from field results using a questionnaire.

Meanwhile, secondary data was obtained from the Banjar Regency BPBD agency and data on flood events at the Martapura Timur District Office. The population in this study is the community in Martapura Timur District, Banjar Regency, with a total of 32,896 people and 18 villages and two sub-districts. The sample in this study was 22,335 village communities affected by floods in Martapura Timur District, Banjar Regency, with a total of 11 villages. Data analysis in this study used quantitative analysis, the results of which were percentages. This study uses data from documentation sources, such as observations, interviews, and administrative documents. Researchers document the observation time in photos to show the actual situation in the research field. Besides that, researchers are never separated from relevant literature as a source of research.

The percentage technique is used to find out how much the percentage of respondents' answers is from the given questionnaire. This descriptive percentage is processed by dividing the frequency by the number of respondents multiplied by 100% (Sudjana, 2001), as follows :

$$P = \frac{f}{n} x\ 100\%$$

Information:

P = Instrument reliability coefficient
N = Total frequency/number of individuals
F = The percentage being searched for is the frequency
100% = Constant

Based on the analysis results, it can be obtained that community preparedness classes in dealing with flood disasters in Martapura Timur District are shallow, low, medium, high, and very high.

$$P = \frac{rentang}{banyak\ kelas}$$

The answers to each instrument item using the Guttman scale are as follows:

1). Score 1 for the answer Yes
2). Score 0 for the answer No

Is known:

Highest score = 40
Lowest score = 0
Number of classes = 5
So:
range = Scorehighest – Lowest score + 1
= 39-0+1
= 40
Class Length = Range: Many Classes
= 40:5
= 8

The above calculation is carried out to determine the class's Length in determining the community preparedness category for flood disasters. The table of classification or categorization of community preparedness for flood disasters refers to table 1.

Table 1. Classification of Community Preparedness Levels in Facing Flood Disasters

No	Score Intervals	Information
1.	0-7	Very low
2.	8-15	Low

3.	16-23	Currently
4.	24-31	Tall
5.	32-40	Very high

Source: Processed data, 2022

3. FINDINGS AND DISCUSSION

Success in tackling and handling floods depends on the preparedness of the community and individuals' preparedness. The assessment of community preparedness in dealing with floods in Martapura Timur District is measured from five preparedness parameters, namely, 1) Knowledge and Attitudes, 2) Policies and Guidelines, 3) Emergency Response Plans, 4) Disaster Warning Systems, and 5) Ability to Mobilize Resources. Based on the results of research conducted using interview techniques with flood-affected village communities in Martapura Timur District.

A. Knowledge and Attitude

The assessment of the knowledge and attitudes of the community in the research area of Martapura Timur District shows a lack of public knowledge regarding insight into flood warning terms, and the community also lacks knowledge about flood disasters, such as matters related to flood risk and its impacts. The level of education obtained by the community is closely related to their knowledge and attitudes. In general, basic knowledge about flood disasters must be discussed with family members. The majority of research respondents did this to their families (Hastuti et al., 2022).

Figure 1. Documentation of interviews with residents of Tambak Anyar, Martapura Timur District	Figure 2. Interview Documentation of Residents of Antasan Senor Village, Martapura Timur District
	

Source: Personal Documentations in 2022.

When a disaster occurs, the community often neglects to listen to information from print and electronic media because the community's precarious condition when facing a disaster is accompanied by a sense of worry and panic, causing the community not to focus on obtaining information about the disaster. Most people do not know how to predict when floods will occur because people often ignore information related to weather forecasts that will hit their area. The community needs to consider flood insurance, both life insurance and disaster insurance, which helps reduce the adverse effects.

The lack of public knowledge causes many things that are important to know, such as terms or words related to flood disaster management. The higher the community's knowledge, the higher the preparedness level; which shows a reasonably strong positive relationship between community knowledge about floods and community preparedness in dealing with disasters. Knowledge is essential in reducing the adverse effects and minimizing the threat of flood disasters; protecting houses from flood disasters is one of the basic knowledge about flood disasters (Winasih, 2013).

B. Policies and Guidelines

Disaster policies and guidelines are the responsibility of the competent authorities. However, the community must also understand that good policy must be supported by the community, who can collaborate to support it. The policies formulated include educational programs, simulation exercises, organizational formation, and public knowledge with existing regulations. However, regarding policies and guidelines for research respondents in their area, there are still no programs such as regular simulation exercises, no disaster preparedness team, and a lack of knowledge of disaster-related legislation.

Disaster policies and guidelines are the responsibility of the competent authorities. However, the community also needs to understand that good policies must also be supported by the community who can collaborate to support this; according to research conducted by the system of people's behavior in dealing with disasters is influenced by formal and informal institutions (officers, responsible agencies, and communal institutions) (Mulyani, 2014).

C. Emergency Response Plan

Plans for emergencies are one of the parameters that influence individual or community preparedness in anticipating all kinds of adverse impacts during a flood disaster. During an emergency, it is essential to know what kind of needs are needed by family members, plans to live for at lTimur three days, how to turn off water meters, turn off electrical instruments, keep records of property, store valuables in a safer place, participating in helping when a disaster occurs, and being able to use clean water efficiently. The research respondents indicated their readiness for an emergency response plan, although some respondents were not ready to be alert in terms of an emergency response plan.

Figure 3. Documentation of Former Flood Heights in Dalam Pagar Village

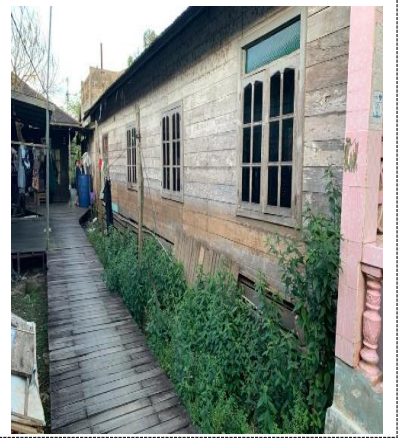

Figure 4. Documentation of Former Flood Heights in Mekar Village

Source: Personal Documentations in 2022.

Indications of a lack or low capacity of individuals/communities in mobilizing resources are assessed from skills capacity regarding first aid, victim evacuation, and clean water management. The majority of respondents answered that they did not use clean water efficiently. This shows that people lack awareness of using clean water, such as being frugal and wise in using clean water and only using

clean water for essential things, while some people are less wise in using clean water due to a lack of awareness and knowledge to be wise in using clean water when a disaster occurs.

D. Disaster Warning System

Assessment of the disaster warning system still needs the community to increase their understanding of the early warning system. Socialization activities are not enough to create a prepared community, but this step is only one of the many steps that need to be carried out in an early warning system. Research respondents. Many research respondents in Martapura Timur District did not know about flood disaster warnings, and the information obtained was still minimally related to the disaster warning system. The community considers that disaster warning is rarely carried out because when floods occur, it is easier for them to get information from word of mouth about disaster warnings than a disaster warning system that is according to procedures (Angriani et al., 2021).

The community is less anticipatory when a disaster occurs due to the lack of an adequate disaster warning system, be it facilities such as the EWS (Early Warning System) in this case such as the AWLR (Automatic Water Level Recorder), which knows the water level which has the potential to cause flooding. There are no supporting facilities for the disaster warning system in the study area, and this proves the disaster early warning system will affect the flow of information and actions in anticipation of a flood that will get worse. When the flow of communication and anticipatory action has been formed with a disaster warning system, it changes an adaptive society to a responsive society (Nurromansyah & Setyono, 2014).

E. Ability to Mobilize Resources

The results showed that the sub-variable ability to mobilize resources by the community in Martapura Timur District was low in the ability of the community to mobilize resources. When the weather gets worse and the flood inundation gets higher. The community also does not prepare savings, insurance, or reserves (money, capital, and land) in relatively safer places. Therefore, the need to increase the capacity of individuals/communities to mobilize their resources both during and after a flood occurs.

The availability of complete facilities will affect the community in the disaster area; facilities such as disaster posts (emergency tents, shared kitchens, evacuation shelters), early warning system tools, and socialization in the community will foster a spirit of preparedness in the community, and if this potential can be appropriately developed then it can be formed disaster resilient villages/communities as proven by research (Aji et al., 2015). The community is still unaware of solid currents when the weather worsens and the flood inundation increases.

The results of the research respondents' answers were obtained after going through the process of tabulating, editing, and the results of scoring calculations referring to table 1, which were processed using the Guttman scale based on the results of scoring from the results of a questionnaire containing questions answered directly by research respondents. Then the classification of the level of community preparedness in the District of Martapura Timur is obtained, which is presented in the table below.

Based on the research results, primary data was obtained to determine the level of community preparedness in dealing with floods, which was carried out through direct surveys to locations and through distributing questionnaires and interviews. The results of the scoring analysis regarding community preparedness in dealing with floods in Martapura Timur Sub-District, it is known that the highest score of the highest answers is between the 8-15 interval with a frequency of 192 research respondents with a percentage of 56% of the total 344 research respondents. This proves that community preparedness in dealing with floods in Martapura Timur District, Banjar Regency, is in a low category. Several things cause low community preparedness in Martapura Timur Sub-District, based on research parameters for community preparedness in dealing with flood disasters, such as knowledge and attitudes, policies and guidelines, plans for emergency response, disaster warning systems, and the ability to mobilize resources. To find out overall preparedness, an assessment of the sub-variables is carried out based on the classification of the level of community preparedness in table 2 as follows.

Table 2. Classification of Community Preparedness in Facing Flood Disasters in Martapura Timur District in 2022

No.	Score intervals	Frequency	Percentage	Information
1	0-7	32	9%	Very low
2	8-15	192	56%	Low
3	16-23	92	27%	Currently
4	24-31	18	5%	Tall
5	32-40	10	3%	Very high
Amount		344	100	

Source: Processed data, 2022

4. CONCLUSION

The results of the scoring analysis regarding community preparedness in dealing with floods in Martapura Timur Sub-District, it is known that the highest score of answers is at most between the 8-15 intervals with a frequency of 192 research respondents with a percentage of 56% of the total 338 research respondents. Therefore, these results show that the level of Community preparedness in dealing with flood disasters is in a low category.

5. SUGGESTION

The data used in research should use the latest parameter data so that the results obtained are more relevant to conditions in the field. Before conducting research, it is better to make more references regarding the theoretical basis, the data needed, and the case studies taken.

REFERENCES

Aji, A. (2015). Kesiapsiagaan Masyarakat Dalam Menghadapi Bencana Banjir Bandang Di Kecamatan Welahan Kabupaten Jepara. *Indonesian Journal of Conservation*, *4*(1).

Angriani, P., Rahman, A. M., & Hastuti, K. P. (2021). MANAGEMENT OF KUIN RIVER USING THE ECO-HYDRAULIC APPROACH. *JURNAL SOCIUS*, *10*(1), Article 1. https://doi.org/10.20527/jurnalsocius.v10i1.10453

BNPB. (2021). *Pedoman Penyusunan Rencana Evakuasi Bencana Banjir Tingkat Desa/Kelurahan*.

Hastuti, K. P., Alviawati, E., Setiawan, F. A., Rahman, A. M., & Muhaimin, M. (2022). Pemberdayaan Ekonomi Berbasis Potensi Lokal untuk Meningkatkan Ketangguhan Masyarakat di Daerah Rawan Banjir. *Jurnal Pengabdian ILUNG (Inovasi Lahan Basah Unggul)*, *1*(3), Article 3. https://doi.org/10.20527/ilung.v1i3.4116

Hidayati, D. (2008). Kesiapsiagaan Masyarakat: Paradigma Baru Pengelolaan Bencana Alam (Community Preparedness: New Paradigm in Natural Disaster Management). *Jurnal Kependudukan Indonesia*, *3*(1), 69–84.

Junef, M. (2016). Penegakan Hukum Dalam Rangka Penataan Ruang Guna Mewujudkan Pembangunan Berkelanjutan. *Jurnal Penelitian Hukum De Jure*, *19*(10), 517–538.

Maryono, A. (2020). *Menangani banjir, kekeringan dan lingkungan*. UGM PRESS.

Muis, I., & Anwar, K. (2018). Model Kesiapsiagaan Masyarakat dalam Pengurangan Risiko Bencana Tanah Longsor di Desa Tugumukti, Kecamatan Cisarua Kabupaten Bandung Barat. *Asian Social Work Journal*, *3*(4), 19–30.

Mulyani, D. (2014). *Kesiapsiagaan Masyarakat Dalam Menghadapi Bencana Banjir Di Desa Ngombakan Kecamatan Polokarto Kabupaten Sukoharjo*. Universitas Muhammadiyah Surakarta.

Nurromansyah, A. N., & Setyono, J. S. (2014). Perubahan Kesiapsiagaan Masyarakat DAS Beringin Kota Semarang dalam Menghadapi Ancaman Banjir Bandang. *Jurnal Wilayah Dan Lingkungan*, *2*(3), 231. https://doi.org/10.14710/jwl.2.3.231-244

Setyowati, D. L. (2019). Pendidikan Kebencanaan. *Universitas Negeri Semarang*.

Subiyakto, B. (2005). Menjadikan Sungai Sebagai Objek Studi. *Jurnal Kandil Edisi Tahun III Mei-Juli*.

Sudjana, G. (2001). *USULAN MODEL PENGEMBANGAN PENDIDIKAN PROFESIONAL KEPERAWATAN: Studi Kasus Praktek Klinik Keperawatan Siswa Praktikan Sekolah Perawat Kesehatan di RSUP Dr. Hasan Sadikin*. Universitas Pendidikan Indonesia.

Susilowati, E. (2020). The influence of waters environment on the existence of Martapura port in Banjarmasin, South Kalimantan. *E3S Web of Conferences*, *202*, 07029. https://doi.org/10.1051/e3sconf/202020207029

Winasih, W. (2013). *Kesiapsiagaan Masyarakat Dalam Menghadapi Bencana Banjir Di Kelurahan Kedung Lumbu Kecamatan Pasar Kliwon Kota Surakarta* [S1, Universitas Muhammadiyah Surakarta]. https://doi.org/10/09._Daftar_Pustaka.pdf