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Level of Student Preparedness in Disaster Alert Schools in Bengkulu City in Dealing with Potential Disaster Threats

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ABSTRACT

Bengkulu City is an area that has a high potential threat of natural disasters. The purpose of this study is to examine how ready Bengkulu City disaster preparedness schools (SSB) students are to handle a crisis. This research approach is descriptive and qualitative in nature. The elementary, middle, and high schools in Bengkulu City red zone of disaster threat comprised the study population. This study included a sample of respondents (teachers and students) as well as a sample of the school environment. School environment samples were taken using purposive sampling techniques. The Proportionate Stratified Random Sampling approach was used in this study to choose student and instructor responders. Specifically, 10% of each class's students in each disaster-prepared school were selected. The results of the research indicate that, with a score of 53.9 or 50.00 <75, students at SDN 1 Kota Bengkulu, a disaster preparedness school, are in the ready category. The readiness of students at the disaster preparedness school SMPN 15 Bengkulu City falls into the ready category with a score of 53.57 or 50.00 <75. Students in the SMAN 6 Bengkulu City disaster preparedness school fall into the ready category, with scores of 71.25 or <75.

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1. INTRODUCTION

The preparedness of school institutions in Bengkulu City in facing potential disaster threats is still very worrying. Schools as stakeholders who play an important role as a source of knowledge and disseminating disaster knowledge can provide practical guidance in disaster management both pre, during and after a disaster (Pramajati et al, 2020). This is known from the level of preparedness which only reached the under-prepared category in 2009 (Irawan, 2009).

Following up on this, Bengkulu Province took swift steps by establishing a Disaster Preparedness School (SSB) in 2011. The SSB formed by the government is a collaborative program with the United National Development Program (UNDP) which is engaged in climate change mitigation and has the aim of supporting national implementation of the Indonesia Green Economy Model (I-GEM), a model that aims to provide input for policy planning for a long-term transition from the brown economy to low-carbon development.

The primary goal of this study is to assess how well-prepared Bengkulu City Disaster Preparedness School which has been in operation for more than 10 years, teachers, students, and the surrounding community are for potential disaster risks. Preparedness is defined as actions that enable governments, organizations, society, communities and individuals to be able to respond to a disaster situation quickly and effectively (Rahma, 2018).

There are five aspects that must be paid attention to in developing preparedness including, a) planning and organization; b) Resources; c) Coordination; d) Readiness and; e) Training and Community Awareness (Wulandari et al, 2023) . Factors that can affect a community's disaster preparedness, namely; a) external motivation includes policies, education and training, funds; b) knowledge; c) attitude; and d) expertise (Samah, 2019).

Preparedness efforts in schools were discussed at the eleventh World Conference on Disaster Reduction (WCDR) resulting in the Framework For Action/HFA 2005-2015 framework, the conclusion of which was to integrate knowledge about disaster risk reduction into the educational curriculum (Susilowati and Khoirunisa, 2016) . Schools are public areas, where the school community is the most vulnerable object if a disaster occurs. Schools must be able to protect the school community from a natural disaster (Bramasta and Irawan, 2018).

Education in primary and secondary schools is very helpful in playing an important role in saving lives and protecting community assets/property during disasters (Ningsih, et al, 2019). Disaster literacy factors in primary and secondary schools are very important to improve the ability of students to deal with disasters. Factors as a basis in determining the next steps aimed at providing the role of disaster mitigation for students in dealing with tsunami disasters (Nurazis et al, 2023). Therefore, the formation of the SSB has become the right step to take to build disaster preparedness. SSB is a school-based program to build community preparedness, raise awareness of all elements in the field of education, both individually and collectively in schools and the school environment, both before, during and after a disaster occurs(Lestari et al, 2018).

Education is a means of increasing community capacity in reducing disaster risk. Learning about disaster mitigation must be provided to all levels of society, including in schools (Alfi and Maryani, 2019; Sakti, et al, 2021). The aim of holding a disaster preparedness school is to build a culture of preparedness and safety in schools as well as building resilience in facing disasters by the school community, increasing the capacity of school institutions and individuals in creating a safer learning place for students, teachers, members of the school community and the community surrounding the school, and disseminate and develop disaster knowledge to the wider community through schools (Febrianto, 2019). Through disaster education, it is hoped that it will be able to increase disaster knowledge and change

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attitudes and behavior to always be aware of disasters (Pribudianto et al, 2023). Disaster mitigation learning media that can be used can be visual, audio, or audio-visual (Akbar et al, 2021).

The SSB that will be the objects of this research are SDN 1, SMPN 15 and SMAN 6, Bengkulu City. These three schools have become government pilot projects and received guidance from LIPI with the hope of continuing the Disaster Risk Reduction (PRB) program on an ongoing basis with assistance from government and non-government parties (Hatthakit and Chaowalit, 2011). Even though they receive assistance to become SSB, there is still a possibility that these schools will have a low preparedness index. This low preparedness index is related to the role of the government and school community in various supporting facilities (Herawati and Mutiawati, 2019).

For this reason, the role of the school community is very important in increasing school preparedness in facing potential disaster threats (Budianto, 2020). Therefore this study will focus on measuring the level of preparedness of the SSB community in facing disaster threats in Bengkulu City.

2. METHODS

Qualitative descriptive methodologies are used in this study. Research that is descriptive in character and has a tendency to generate concepts and understanding from factual findings into a scientific hypothesis is known as qualitative research. The qualitative research method is a method of data analysis by describing objects, facts, phenomena or events outlined in descriptive writing. The descriptive method is a research method used to describe problems that occur in the present or are currently ongoing, aiming to describe what happened as it should at the time the research was conducted (Waruwu, 2023). This type of research is used to measure the level of SSB preparedness in Bengkulu City.

The population in this study were SDN 01, SMPN 15 and SMAN 6 which are SSB in Bengkulu City. A sample of respondents and a sample of the school environment made up the study sample. Purposive sampling is the technique used for the school environment sample. Purposive sampling is a sampling method that requires thought. The reason why the school sampling technique uses purposive sampling is because the schools designated as samples in this research are schools that have been appointed by the government and received assistance and guidance from United Nations (UN) grant funds for 1 year. The sample of respondents or research subjects was focused on students, teachers and the school environment. Using the Proportionate Stratified Random Sampling technique, 10% of the students in each class were selected to participate in the sampling of student and instructor responders for this study. The total number of research samples is 187 students. Sampling was done by a) knowing the total number of students per class in each class; b) selecting 10% of students per class . Sampling of teacher respondents used the Total Sampling technique. The sample of school principals and teachers is 117 people. Meanwhile, the environmental sample contained 3 SSB. This research uses disaster study data analysis techniques according to LIPI-UNESCO (United Nations Educational and Scientific Cooperation) / ISDR (International Strategy for Disaster Reduction) which uses unweighted composite index numbers, meaning that all questions in these parameters have the same weight. An index is a comparison number between one number and another which contains certain characteristics at the same or different times and places (Waruwu, 2023).

The parameters measured include knowledge (K), policy (PS), emergency response plan (EP), disaster warning (EW) and resource mobilization (RMC). The index is measured from

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several data sources, namely: household (RT), government (P) and school community (KS). The categories of this index value can be seen in **Table 1**.

Table 1. Disaster Preparedness Index Value Category

No	Index	Value
1	76 - 100	Very Ready
2	50 - <75	Ready
3	25 - <50	Not Ready
4	0 - <25	Not Ready

Source: Wulandari et al (2023)

Determination of the index value for each parameter is calculated based on the formula:

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

P = Percentage
f = Frequency
n = Number of Samples
Criteria for analyzing research data (Waruwu, 2023).

3. RESULTS AND DISCUSSION

3.1 Preparedness of SDN 1 Bengkulu City Students

Frequency Distribution of Student Preparedness in disaster preparedness schools at SDN 1 Bengkulu City in Facing the Threat of Earthquake and Tsunami Disasters.

Table 2. Disaster Preparedness Index Value Category

Category	Frequency Distribution	
	Frequency (f)	Percentage (%)
Tall	20	44.45
Currently	25	55.55
Low		
Very low		
Total	45	100

Source: Data analysis (2023)

Table 2 indicates that, in SD Negeri 1 Bengkulu City, which is located in the red zone, students knowledge has a high preparation level of 44.45%. Medium category as much as 55.55%. Finding the frequency distribution of knowledge among students at SD Negeri 1 Bengkulu City who are in the red zone due to the threat of earthquakes and tsunamis is the

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goal of the analysis of knowledge indicators. The following table shows the frequency distribution of emergency response plans:

Table 3. Frequency Distribution of the Emergency Response Plan (EP) of SDN 1 Bengkulu City in Facing the Threat of Earthquake and Tsunami Disasters

Category	Frequency Distribution	
	Frequency (f)	Percentage (%)
Tall	15	33.3
Currently	25	55.6
Low	5	11.1
Very low		
Total	45	100

Source: Data analysis (2023)

The emergency response plan for students at SD Negeri 1 Bengkulu City, which is located in the red zone, has a high preparation level of 33.3%, according to **Table 3** The medium preparedness category was 55.6%. The low preparedness category was 11.1%. Finding the frequency distribution of emergency response plans in SD Negeri 1 Bengkulu City which is in the red zone for earthquake and tsunami disaster risk is the goal of the study of emergency response plan indicators. The following table shows the frequency distribution of catastrophe warnings:

Table 4. Distribution of Disaster Warning Frequency (WS) of SDN 1 Bengkulu City in Facing the Threat of Earthquake and Tsunami Disasters

Category	Frequency Distribution	
	Frequency (f)	Percentage (%)
Tall	13	28.9
Currently	22	48.9
Low	10	22.2
Very low		
Total	45	100

Source: Data analysis (2023)

Table 4 indicates that the high preparation category of 28.9% pertains to catastrophe warnings at SD Negeri 1 Bengkulu City, which falls inside the red zone. The medium preparedness category was 48.9%. The low preparedness category was 22.2%. Finding the frequency distribution of emergency response plans in SD Negeri 1 Bengkulu City which is in

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the red zone for earthquake and tsunami disaster risk is the goal of the study of emergency response plan indicators. The following table displays the frequency distribution of resource mobility:

Table 5. Frequency Distribution of Resource Mobility (RMC) of SDN 1 Bengkulu City in Facing the Threat of Earthquake and Tsunami Disasters

Category	Frequency Distribution	
	Frequency (f)	Percentage (%)
Tall	10	22.6
Currently	25	55.6
Low	10	22.6
Very low		
Total	45	100

Source: Data analysis (2023)

Table 5 indicates that SD Negeri 1 Bengkulu City, located in the red zone, has a high preparedness grade of 22.2% for emergency resource mobility. The medium preparedness category was 55.6%. The low preparedness category was 22.2%. The analysis of resource mobility indicators aims to determine the frequency distribution of emergency response plans at SD Negeri 1 Bengkulu City which is in the red zone in facing the threat of earthquake and tsunami disasters. The following image displays a graph of the students degree of readiness at SDN 1 Bengkulu Citys disaster preparation school to deal with the danger of earthquake and tsunami catastrophes based on the data processing results from the questionnaire:

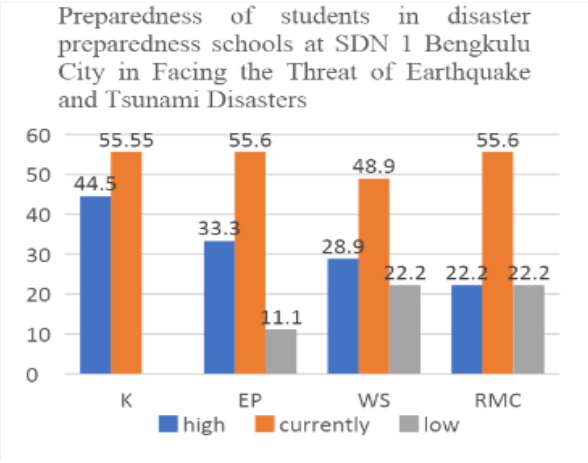

Figure 1. Graph of student preparedness levels at disaster preparedness schools at SDN 1 Bengkulu City in facing the threat of earthquake and tsunami disasters

3.2 Preparedness of SMPN 15 Bengkulu City Students

The frequency distribution of student preparation in SMPN 15 Bengkulu City disaster-preparedness schools in light of the threat posed by earthquake and tsunami

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Table 6. Distribution of Knowledge Frequency (K) of SMPN 15 Bengkulu City Students in Facing the Threat of Earthquake and Tsunami Disasters

Category	Frequency Distribution	
	Frequency (f)	Percentage (%)
Tall	14	33.3
Currently	23	54.8
Low	5	11.9
Very low		
Total	45	100

Source: Data analysis (2023)

Table 6 indicates that students at SMPN 15 Bengkulu City, located in the red zone, have a high preparation rating of 33.3% for their knowledge. The medium category is 54.8%. The low category is 11.9%. Finding out the frequency distribution of students' knowledge at SMPN 15 Bengkulu City, which is in the red zone when it comes to the threat of earthquake and tsunami catastrophes, is the goal of the study of knowledge indicators. The following table displays the frequency distribution of emergency response plans:

Table 7. Frequency Distribution of the Emergency Response Plan (EP) of SMPN 15 Bengkulu City in Facing the Threat of Earthquake and Tsunami Disasters

Category	Frequency Distribution	
	Frequency (f)	Percentage (%)
Tall	17	40.5
Currently	20	47.6
Low	5	11.9
Very low		
Total	45	100

Source: Data analysis (2023)

The emergency response plan for students at SMPN 15 Bengkulu City, which is located in the red zone, has a high preparation level of 40.5%, according to **Table 7** The medium preparedness category was 47.6%. The low preparedness category was 11.9%. The analysis of emergency response plan indicators aims to determine the frequency distribution of emergency response plans at SMPN 15 Bengkulu City which is in the red zone in facing the threat of earthquake and tsunami disasters. The distribution of disaster warning frequencies can be seen in the following table:

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Table 8. Frequency Distribution of Disaster Warnings (WS) of SMPN 15 Bengkulu City in Facing the Threat of Earthquake and Tsunami Disasters

Category	Frequency Distribution	
	Frequency (f)	Percentage (%)
Tall	15	34.8
Currently	24	57.1
Low	3	7.1
Very low		
Total	42	100

Source: Data analysis (2023)

Table 8 indicates that the red zone disaster alert for SMPN 15 Bengkulu City has a high preparation category of 34.8%. Medium preparedness category is 57.1%. The low preparedness category is 7.1%. The analysis of emergency response plan indicators aims to determine the frequency distribution of emergency response plans at SMPN 15 Bengkulu City which is in the red zone in facing the threat of earthquake and tsunami disasters. The frequency distribution of resource mobility can be seen in the following table:

Table 9. Frequency Distribution of Resource Mobility (RMC) of SMPN 15 Bengkulu City in Facing the Threat of Earthquake and Tsunami Disasters

Category	Frequency Distribution	
	Frequency (f)	Percentage (%)
Tall	12	28.5
Currently	23	54.8
Low	7	16.7
Very low		
Total	42	100

Source: Data analysis (2023)

Table 9 indicates that SMPN 15 Bengkulu City, located in the red zone, has a high preparedness grade of 28.5% for emergency resource mobility. The medium preparedness category was 54.8%. The low preparedness category was 16.7%. Analysis of resource mobility indicators aims to determine the frequency distribution of emergency response plans for SMPN 15 Bengkulu City which are in the red zone in facing the threat of earthquakes and

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tsunamis. The graph of the level of preparedness of students in disaster preparedness schools at SMPN 15 Bengkulu City in dealing with the threat of earthquakes and tsunamis from the results of the questionnaire data processing above can be seen in the following figure:

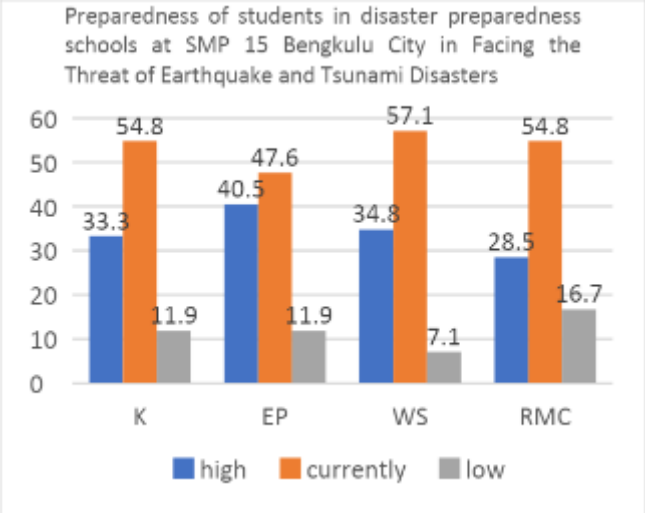

Figure 2. Graph of the level of preparedness of students in disaster preparedness schools at SMPN 15 Bengkulu City in dealing with the threat of earthquake and tsunami

3.3 Student Preparedness at SMAN 6 Bengkulu City

Frequency Distribution of Student Preparedness in Disaster Preparedness Schools of SMAN 6 Bengkulu City in Facing the Threat of Earthquake and Tsunami Disasters

Table 10. Frequency Distribution of Knowledge (K) of SMAN 6 Bengkulu City Students in Facing the Threat of Earthquake and Tsunami Disasters

Category	**Frequency Distribution**	
	Frequency (f)	**Percentage (%)**
Tall	70	70
Currently	17	17
Low	13	13
Very low		
Total	100	100

Source: Data analysis (2023)

Table 10 indicates that students at SMAN 6 Bengkulu City, located in the red zone, have a high ready category of 70% for their knowledge. Medium category as much as 17%. The low category is 13%. Analysis of knowledge indicators aims to determine the frequency distribution of knowledge of students of SMAN 6 Bengkulu City who are in the red zone in facing the threat of earthquakes and tsunamis. The frequency distribution of emergency response plans can be seen in the following table:

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Table 11. Frequency Distribution of Emergency Response Plans (EP) at SMAN 6 Bengkulu City in Facing the Threat of Earthquake and Tsunami Disasters

Category	Frequency Distribution	
	Frequency (f)	Percentage (%)
Tall	73	73
Currently	10	10
Low	17	17
Very low		
Total	100	100

Source: Data analysis (2023)

Table 11 indicates that SMAN 6 Bengkulu City's emergency response plan, which is located in the red zone, has a high preparation rating of 73% for students. Medium preparedness category is 10%. The low preparedness category is 17%. The analysis of emergency response plan indicators aims to determine the frequency distribution of emergency response plans at SMAN 6 Bengkulu City which is in the red zone in facing the threat of earthquake and tsunami disasters. The distribution of disaster warning frequencies can be seen in the following table:

Table 12. Frequency Distribution of Disaster Warnings (WS) at SMAN 6 Bengkulu City in Facing the Threat of Earthquake and Tsunami Disasters

Category	Frequency Distribution	
	Frequency (f)	Percentage (%)
Tall	67	67
Currently	25	25
Low	8	8
Very low		
Total	100	100

Source: Data analysis (2023)

Table 12 indicates that SMAN 6 Bengkulu City, which is in the red zone and under disaster warning, has a high preparation level of 67%. The medium preparedness category is 25%. The low preparedness category is 8%. The analysis of emergency response plan indicators aims to determine the frequency distribution of emergency response plans at SMAN 6 Bengkulu City which is in the red zone in facing the threat of earthquake and tsunami disasters. The frequency distribution of resource mobility can be seen in the following table:

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Table 13. Frequency Distribution of Resource Mobility (RMC) at SMAN 6 Bengkulu City in Facing the Threat of Earthquake and Tsunami Disasters

Category	Frequency Distribution	
	Frequency (f)	Percentage (%)
Tall	75	7
Currently	20	20
Low	10	10
Very low		
Total	100	100

Source: Data analysis (2023)

Table 13 indicates that SMAN 6 Bengkulu City, located in the red zone, has a high preparedness grade of 75% for emergency resource mobility. Medium preparedness category is 20%. Low preparedness category of 10%. The analysis of resource mobility indicators aims to determine the frequency distribution of emergency response plans at SMAN 6 Bengkulu City which is in the red zone in facing the threat of earthquake and tsunami disasters. A graph of the level of preparedness of students at the disaster preparedness school at SMAN 6 Bengkulu City in facing the threat of earthquake and tsunami disasters from the results of the questionnaire data processing above can be seen in the following picture:

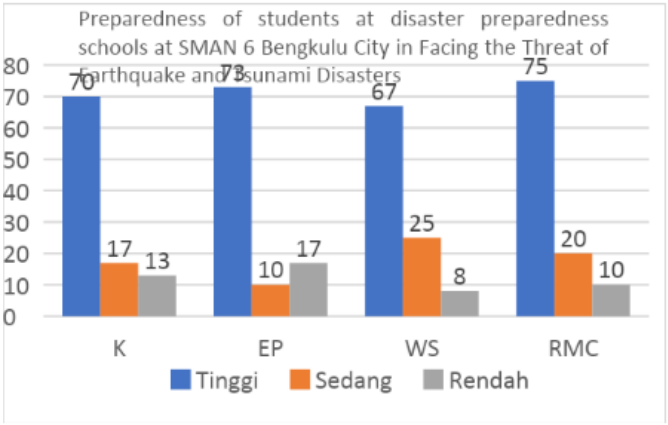

Figure 3. Graph of student preparedness level at disaster preparedness school at SMAN 6 Bengkulu City in facing the threat of earthquake and tsunami disasters

4. CONCLUSIONS

An assessment of the school's disaster preparedness at SDN 1 Bengkulu City which is in the red zone was carried out by distributing questionnaires to the school community, students and teachers. With a score of 53.9 or 50.00<75, students at the SDN 1 disaster preparedness school in Bengkulu City were found to be prepared, according to the analysis's findings, which are based on the responses from the student respondents who completed the questionnaire. An assessment of the preparedness of disaster preparedness schools at SMPN 15 Bengkulu

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City, which is in the red zone, is carried out by distributing questionnaires to student respondents. Based on analysis, it has been determined that students at SMPN 15 Bengkulu City's disaster preparedness school fall into the ready group, with a readiness score of 53.57 or 50.00.<75. An assessment of the preparedness of disaster preparedness schools at SMAN 6 Bengkulu City, which is in the red zone, is carried out by distributing questionnaires to student respondents. Based on analysis, it has been determined that pupils at SMAN 6 Bengkulu City's disaster preparedness schools fall into the ready group, scoring 71.25 or less than 75.00.

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6. REFERENCES

Akbar, I., Maryani, E., & Ningrum, E. (2021). The Contribution of Geography Learning to Disaster Preparedness of Students in Public Senior High Schools in Kendari. Jurnal Geografi Gea, 21(2), 188-196.

Akmaluddin, A., & Mutiawati, M. (2018). Program Kepala Sekolah Dalam Meningkatkan Mutu Lulusan Pada Smp Babul Magfirah Aceh Besar. Journal of Education Science, 4(2).

Alfi, M., & Maryani, E. (2019, November). Development Of Natural Disaster Mitigation Teaching Materials To Improve Understanding Of Disasters. In Journal of Physics: Conference Series (Vol. 1387, No. 1, p. 012079). IOP Publishing.

Bramasta, D., & Irawan, D. (2020). Mitigasi Bencana Gunung Meletus di Sekolah Rawan Bencana. Jurnal Publikasi Pendidikan, 10(2), 154-159.

Budianto, F. (2017). Habitus Kesiapsiagaan Masyarakat Jepang Terhadap Bencana. Jurnal Kajian Jepang, 1(1), 41-63.

Febriyantoko, D. (2018). Pengembangan Sekolah Siaga Bencana Ditinjau Dari Kemampuan Orientasi Dan Mobilitasi Pada Jalur Evakuasi Bencana Studi Kasus MTs LB/A Yaketunis Yogyakarta. LINTAS RUANG: Jurnal Pengetahuan dan Perancangan Desain Interior, 6(1).

Hatthakit, U., & Chaowalit, A. (2011). Tsunami Preparedness Of People Living In Affected And Non-Affected Areas: A Comparative Study In Coastal Area In Aceh, Indonesia. Australasian Emergency Nursing Journal, 14(1), 17-25.

Herawati, H., & Mutiawati, M. (2019). Dilematika Sistem Pendidikan Di Indonesia. Journal Of Education Science, 5(2), 38-53.

Irawan, Y. (2009). Kajian Mitigasi Dan Kesiapsiagaan Bencana Tsunami Di Kota Bengkulu (Doctoral dissertation, Universitas Gadjah Mada). UGM Campus Repository. https://etd.repository.ugm.ac.id/penelitian/detail/44327

Lestari, A. W., & Husna, C. (2017). Sistem Peringatan Bencana Dan Mobilisasi Sumber Daya Dalam Menghadapi Bencana Gempa Bumi Dan Tsunami. Idea Nursing Journal, 8(2), 23-29.

Ningsih, Y. W., Imawati, N. D., A'dawiyah, R., Prihastomi, A., & Gunawan, W. W. Identification of Muhammadiyah Middle School Readiness to Implement a Disaster Preparedness School in Wedi District Klaten Regency. La Geografia, 18(2), 99-108.

Nuraziz, S., Maryani, E., & Yani, A. The Effect Disaster Literacy On Students Preparedness Mitigating Tsunami In Coastal Area Pangandaran. Jurnal Geografi Gea, 23(1), 60-66.

Pramajati, H., Sukaesih, N. S., Lindayani, E., Purnama, A., Nuryani, R., & Ridwan, H. (2020). Peningkatan Kesiapan Sekolah Siaga Bencana melalui Pelatihan Siswa Kader Sekolah Siaga Bencana di SMPN 1 Cimalaka. Jurnal Pengabdian Pada Masyarakat, 5(3), 843-853.

Pribudianto, A. R., Maryani, E., & Darsiharjo, D. Analysis Of Students Preparedness In Public And Private High School Students For Landslide Disaster Risk In Maja District. Jurnal Geografi Gea, 23(1), 50-59.

Rahma, A. (2018). Implementasi Program Pengurangan Risiko Bencana (PRB) Melalui Pendidikan Formal. Jurnal Varidika, 30(1), 1-11.

Sakti, A. D., Rahadianto, M. A. E., Pradhan, B., Muhammad, H. N., Andani, I. G. A., Sarli, P. W., ... & Wikantika, K. (2021). School Location Analysis By Integrating The Accessibility, Natural And Biological Hazards To Support Equal Access To Education. ISPRS International Journal of Geo-Information, 11(1), 12.

Samah AA, Zaremohzzabieh Z, Shaffril HAM, D'Silva JL, Kamarudin S. Researching Natural Disaster Preparedness Through Health Behavioral Change Models. Am J Disaster Med. 2019;14(1):51–63

Susilowati SA, Khoirunisa N. Kesiapan Madrasah Ibtidaiyah Muhammadiyah Sebagai Sekolah Siaga Bencana Di Kecamatan Gondangrejo Karanganyar. Profesi Pendidik Dasar. 2016;2(1):1–11

Waruwu, M. (2023). Pendekatan Penelitian Pendidikan: Metode Penelitian Kualitatif, Metode Penelitian Kuantitatif Dan Metode Penelitian Kombinasi (Mixed Method). Jurnal Pendidikan Tambusai, 7(1), 2896-2910.

Wulandari, F., Budijanto, B., Bachri, S., & Utomo, D. H. (2023). The Relationship Between Knowledge And Disaster Preparedness Of Undergraduates Responding To Forest Fires. Jàmbá-Journal of Disaster Risk Studies, 15(1), 1408.

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