

## Knowledge, Attitude and Education on Tourist Preparedness in The Tourist Locations of Penatapan Sibolangit, North Sumatra In Facing Potential Natural Disasters

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### ABSTRACT

Indonesia, as a country full of vulnerabilities, will never be free from disasters. Apart from causing many losses and casualties, vulnerability due to ignorance in managing disaster risks is one of the factors that makes people trapped in situations when disasters occur. so it is important to start caring and changing their mindset regarding the importance of disaster management or better known as Disaster Risk Reduction. This research used explanatory research with a research sample of 66 tourists from a population of 278. Data was obtained by interviews using a questionnaire and analyzed using logistic regression at CI: 95%. The aim of this research: to analyze the influence of tourist knowledge, attitudes and education on tourist preparedness in facing disaster risks at tourist locations. The results of the research after statistical tests were carried out on the variables of knowledge, attitudes and tourist education had a significant relationship. It is hoped that the Karo Regency Government and the North Sumatra Provincial Government can provide support for the implementation of disaster education so that at all levels of education they have the same understanding of the need for preparedness as an effort to reduce the risk of natural disasters.

**Keyword:** Knowledge, Attitude, Education, Preparedness, Disaster.

### ABSTRAK

Indonesia sebagai negara yang penuh dengan kerentanan tidak akan pernah lepas dari bencana. Selain menimbulkan banyak kerugian dan korban jiwa kerawanan akibat ketidaktahuan mengelola resiko bencana menjadi salah satu faktor yang membuat masyarakat terjebak dalam situasi saat terjadi bencana. sehingga penting untuk mulai peduli dan mengubah pola pikir mereka akan pentingnya penanggulangan bencana atau yang lebih dikenal dengan Pengurangan Risiko Bencana. Penelitian ini menggunakan penelitian eksplanatori dengan sampel penelitian sebanyak 66 wisatawan dari jumlah populasi sebanyak 278. Data diperoleh dengan wawancara menggunakan kuesioner dan dianalisis dengan regresi logistik pada CI: 95%. Tujuan penelitian ini: menganalisis pengaruh pengetahuan, sikap dan pendidikan wisatawan terhadap kesiapsiagaan wisatawan dalam menghadapi resiko bencana di lokasi wisata. Hasil penelitian setelah dilakukan uji statistik pada variabel pengetahuan, sikap dan pendidikan wisatawan memiliki hubungan yang signifikan. Diharapkan Pemerintah Kabupaten Karo dan Pemerintah Provinsi Sumatera Utara dapat memberikan dukungan terhadap pelaksanaan pendidikan kebencanaan agar pada semua jenjang pendidikan memiliki pemahaman yang sama tentang perlunya kesiapsiagaan sebagai upaya pengurangan resiko dari bencana alam

**Kata Kunci:** Pengetahuan, Sikap Pendidikan, Kesiapsiagaan, Bencana.



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## 1. Introduction

In accordance with the purpose of protecting the state contained in the preamble to the fourth paragraph of the 1945 Constitution of the Republic of Indonesia which reads "Protect every nation and all of Indonesia's bloodshed". The obligation to protect the entire Indonesian nation and all of its bloodshed is not merely the duty of the state or government alone. The active participation of citizens is also needed to protect the nation. The government and society must collaborate to protect each other and protect the elements of life in all aspects of vulnerability and danger that will occur in this country, one of which is natural disasters. Starting from the establishment of institutions that handle disasters, regulations, providing education, management, to disaster mitigation. As we all know, the arrival of disasters cannot be avoided, but in fact we can overcome disasters and minimize the risks and vulnerabilities. According to data compiled in the Indonesian Disaster Information Data (DIBI) BNPB, it can be seen that from more than 3,814 disaster events in the period 2010 to 2020. Law Number 24 of 2007 concerning Disaster Management, states that a disaster has a definition as an event or series of events that threatening and disrupting people's lives and livelihoods caused, both by natural factors and/or non-natural factors as well as human factors, resulting in human casualties, environmental damage, loss of property, and psychological impacts.

The condition and geographical location of Indonesia which is surrounded by three tectonic plates and also being a country that has an area with vast and large continental, oceanic and mountainous exposures adds to the potential for high vulnerability to natural disasters. In addition to Indonesia's geographical, demographic, sociological and historical terms and conditions that make Indonesia's territory prone to disasters (natural, non-natural and social) (Wardyaningrum, 2014), the diversity and complexity of the population, culture and man-made also contribute to the occurrence of natural disasters. Indonesia as a country full of vulnerability from all aspects will never be separated from events called disasters, various kinds of disasters such as earthquakes, volcanic eruptions, droughts, floods, landslides, tsunamis and a number of other tragic natural disasters keep stopping and coming one after another. and caused a lot of loss and loss of life.

The Aceh tsunami disaster has taught the whole community, especially tourist groups, that vulnerability due to ignorance of disaster risk management is one of the factors that make people trapped in a situation when a disaster occurs. This is also used as the right moment for the community to start caring and also change their mindset on the importance of disaster management, or better known as Disaster Risk Reduction (DRR). The development of tourism in Indonesia is very large and diverse to be developed into an attractive tourism destination and a major world tourist destination. Currently, the development of tourism that refers to the beauty of nature, is in great demand by the public. However, people often ignore the vulnerabilities and risks of the tourist sites they visit. The development of the tourism sector is often vulnerable to various disaster events. Unknowingly, the tourism sector often has risks and vulnerabilities to be affected by disasters or trigger disasters.

The tourism sector is currently attracting a lot of attention in various circles. Tourism is an industry that depends a lot on natural resources and potential as well as human resources. Tourism objects and tourist attractions are part of the tourism industry. The number of tourist destinations offered along with the attractions that are served makes the demand for tourism even higher. Therefore tourism is a leading sector which is increasingly needed, because in Indonesia itself tourism is a very influential commodity and is a leading sector. Tourism is arguably the key to development, prosperity and happiness. The increase in tourism destinations and investment makes tourism a key factor in export earnings, job creation, business development and infrastructure.

North Sumatra Province itself is informed that it has a variety of vulnerabilities to disasters, such as floods, volcanic eruptions to landslides in mountainous areas. North Sumatra Province is well known as an exotic place that offers various panoramas, beauty and diversity of tourist objects. This is certainly an attraction for every tourist, both local and foreign. Various incidents have sufficiently reduced tourists' sense of confidence to travel apart from cleanliness and comfort, safety is also one of the main causes of the reluctance of tourists to visit. Efforts can be made by the government and also the private sector as managers of tourism objects in preparing themselves for environmental developments as well as changes that can occur in the future (Fadhil Ali Hakim, 2020: 608). Tourism management certainly has to be voiced by various people who care about disasters and the local government as well as disaster-related agencies and institutions. Such as managing waste in tourist attractions and providing education and understanding of tourist sites on the vulnerability of

the disasters that people visit. Losses due to natural disasters in the tourism sector are felt by people who depend on tourism for their lives.

Penatapan Sibolangit itself has a fairly strategic location, which is located in the area of the Medan - Kabanjahecauseway, Jamin Ginting, Doulu, Karo Regency. This place is used as a tourist location by tourists who just stop by to unwind from the trip if they want to go to Berastagi or vice versa. Apart from its location which is right on the side of the road, with the right position on the edge of a cliff, open 24 hours, Penatapan also offers a variety of food or snacks that tourists can enjoy, of course, at very affordable prices. But because of its location, which is quite extreme, many naughty tourists often take pictures to capture the moment without seeing the condition, which is quite vulnerable, especially when the fog is thick. Apart from that, the phenomenon of naughty tourists littering also increases the vulnerability to flooding and the build up of tourism waste.

Apart from that, the trip to this location is also very challenging for the adrenaline, because we will be faced with cliffs and ravines that are facing and spread out as far as the eye can see. Therefore, accidents often occur due to driver negligence and also natural disasters such as landslides. Natural disasters that have occurred in this location include flash floods, thick fog, heavy rains and landslides, which have claimed lives and lost property. For the preparedness of the people themselves at this location, they are ready to assist local officials, police and related agencies to clear roads when landslides occur so that access to Berastagi which was stopped due to this natural disaster can return smoothly as before. This preparedness is certainly an asset that people in disaster-prone locations have to help themselves, their families and of course other people. However, it is different from tourists who tend to lack knowledge and awareness of disaster vulnerabilities in the locations they visit. Therefore it is very important to have awareness and knowledge of disasters wherever we are.

## 2. Literature Study

### 2.1. Theory of Competence

Davenport and Prusak (2001) define knowledge as a combination of experiential frameworks, contextual information, values and expert views that provide a framework for evaluating and integrating experience and information. In other words, knowledge is a combination of information and experience. Knowledge is information that changes something or someone for the better by making it the basis for action, as well as making individuals or organizations capable of taking more effective actions (Peter DRucker, 2001).

### 2.2. Disaster

According to Law No. 24 of 2007 concerning Disaster Management, natural disasters are disasters caused by events or a series of events caused by nature, including: in the form of earthquakes, tsunamis, volcanic eruptions, floods, droughts, hurricanes, and landslides. landslide. The geographical position of this country is quite unique, making the Indonesian archipelago at the confluence of three giant tectonic plates (Eruasia, India Australia and the Pacific) and is located between the continents of Asia and Australia and the Indian and Pacific Oceans and consists of  $\pm$  17,000 islands, most of which face the sea. off with a coastline of more than 81,000 km

### 2.3. Disaster Risk Reduction

Disaster risk assessment is a method to show potential negative impacts caused by potential existing disasters. Calculation of potential negative impacts also takes into account the vulnerability and capacity of the area. This potential negative impact illustrates the potential number of casualties, property losses, and environmental damage that may be suffered as a result of a disaster. Disaster risk reduction according to Government Regulation No. 21 of 2008 concerning Implementation of Disaster Management is carried out through the following activities:

- Disaster risk recognition and monitoring
- Participatory disaster management planning
- Development of disaster awareness culture
- Increased commitment to disaster management actors
- Implementation of physical, non-physical efforts, and disaster management arrangements.

### 2.4. Disaster Education

Disaster education is part of the five main agendas of the National Action Plan on Disaster Risk Reduction.

This is very important and certainly becomes a bridge to build human morality so that they can uphold environmental moral values in life, and are more willing to take action and participate in finding basic answers to disaster management. Developing and increasing public awareness through disaster education is important in efforts to equip communities side by side with the threat of disaster. With existing awareness, people can act, participate actively and work hard to reduce disaster risk from an early age.

### 2.5. Disaster Basic Concepts of Disaster Preparedness

According to Carter (1991) in LIPI-UNESCO/ISDR (2006), preparedness is actions that enable governments, organizations, families and individuals to be able to respond to a disaster situation quickly and effectively to reduce losses and casualties. Included in preparedness measures are preparation of disaster management plans, maintenance of resources and training of personnel. The concept of preparedness that is used is more emphasized on the ability to take preparatory actions to face disaster emergencies quickly and precisely. (LIPI- UNESCO/ISDR, 2006). According to (IDEP, 2007) states the purpose of preparedness is as follows:

- Reduce threats
- Reducing Families' Vulnerability
- Reducing Consequences
- Establish cooperation

## 3. Research Method

### 3.1. Data Type

This research was carried out in the form of a survey using an explanatory research approach, namely research that explains the relationship between variables through hypothesis testing (Singarimbun, 1996). Explanatory research to analyze the effect of independent variables, namely the influence of knowledge, attitudes and education of tourists on the dependent variable, namely the preparedness of tourists in facing disaster risk at the Sibolangit tourist location.

### 3.2. Population and Sample

The population in this study were all tourists who traveled to the Penatapan Doulu tourist site, Karo Regency, North Sumatra. Based on the data, sampling was carried out by means of stratified proportional random sampling, namely the population consisting of several tourist sites was proportionally sampled, while at each tourist location the samples were taken using Simple Random Sampling, in order to obtain more precise and satisfactory population characteristics.

Table 1. Number of Tourism Actors as Research Samples

No	Location	Ammount of Tourist Actors	Sample of Tourist Actors
1	Barcelona	128	$128 / 278 \times 66 = 30$
2	Juventus	69	$69 / 278 \times 66 = 16$
3	Arsenal	37	$37 / 278 \times 66 = 9$
4	Brama	44	$44 / 278 \times 66 = 11$
	Ammount	278	66 Tourist

Source: Research Results, 2022 (Data processed)

### 3.3. Data Collection Technique

The method of collecting primary data in this study was through observation and direct interviews with tourism practitioners as respondents at the Penatapan Sibolangit tourist site guided by the prepared questionnaire. This questionnaire was first tested for validity and reliability by conducting trials on 30 tourism actors whose areas had the same characteristics as the research sites. Secondary data was obtained directly from respondents at the Penatapan Sibolangit tourist location, namely about the general description of Sibolangit and data related to disaster management. Data reliability is an index that shows the extent to which a measuring device can show accuracy and can be trusted using the Cronbach Alpha method, namely analyzing the reliability of a measuring instrument from one measurement, provided that if  $r \text{ Alpha} > r \text{ table}$ , then it is declared reliable.

### 3.4. Measurement Method

In this study the instrument used was a list of questions (questionnaire) for direct interviews with respondents. The measurement method is guided by: variables, measuring methods, measuring scales, measurement categories and measuring results, as shown in Table 2. and 3 the following:

Table 2. Aspects of Measuring Knowledge and Attitudes of Tourist Actors

Variabel	question	Category	Value	Measuring result	Measuring scale
Knowledge	14	a. yes	2	a. good	Ordinal
		b. no	1	b. not good	
		c. don't know	0		
Attitude	16	a. strongly disagree	0	a. Positive	Ordinal
				b. Negative	
		b. agree	1		
		c. disagree	2		
		d. strongly agree	3		
Education	1	a. D3/S1/S2 b. SMA c. SMP d. SD e. No School / Not Completed In Primary School		a. High (D3/S1/S2) b. Medium (SMA/SMP) c. Low (SD/NO Sekolah/NO	Ordinal

Source: Research Results, 2022 (Data processed)

Table 3. Aspects of Measuring the Preparedness of Tourism Actors

Variable	Question	Category	Value Weight	Result Measure	Measure Scale
Preparedness Of Tourism Actors	6	a. yes b. no c. don't know	2 1 0	a. ready b. not ready	Ordinal

Source: Research Results, 2022 (Data processed)

### 3.5. Data Analysis

Data analysis in this study include:

- Univariate analysis, namely explaining each research variable by presenting it in a frequency distribution table.
- Bivariate analysis to see whether there is influence of knowledge, attitudes and education of tourists on preparedness in dealing with natural disaster risks at the Penatapan Sibolangit tourist location using the chi square test, taking into account the data scale which is an ordinal scale.
- Multivariate analysis to determine the most dominant factor of the independent variables (knowledge, attitudes and education) on the dependent variable (tourist preparedness in facing natural disaster risks) at the Penatapan Sibolangit tourist location was carried out using a logistic regression test at a confidence level of 95% ( $\alpha=0,5$ ).

## 4. Discussion

The result discussed in this study include the results of the Univariate Analysis Results, Results of Bivariate Data Analysis, Results of Multivariate Data Analysis.

#### 4.1. Univariate Analysis Results

The Univariate analysis was carried out to see the frequency distribution of the independent variables, knowledge, attitudes and education of tourists on the dependent variable, namely preparedness in dealing with natural disaster risks at the Penatapan Sibolangit tourist location.

##### 1. Respondents Education Level

Based on the distribution table below, it can be seen that the education level of the respondents consisted of lower education (non-school and SD/MIN level), secondary education (Junior/MTsN and SMA/MAN level), and higher education level (academy/university level).

Table 4. Distribution of Respondents' Education Levels at the Penatapan Sibolangit Tourism Site

<b>Respondent,s level of education</b>	<b>F</b>	<b>%</b>
Low	13	19,7
Medium	34	51,5
High	19	28,8
<b>Total</b>	<b>66</b>	<b>100,0</b>

Source: Research Results, 2022 (Data processed)

##### 2. Respondents Knowledge

Information that has been combined with understanding and the potential to act embedded in one's mind is also known as knowledge. In general, knowledge has the ability to predict something as a result of recognizing a pattern. When information and data only have the ability to inform or even cause confusion, then knowledge has the ability to direct action. This is what is called the potential to act.

Table 5. Distribution of Respondents Knowledge

<b>Respondent,s Level of Knowledge</b>	<b>F</b>	<b>%</b>
Not Good	29	39,4
Good	37	60,6
<b>Total</b>	<b>66</b>	<b>100,0</b>

Source: Research Results, 2022 (Data processed)

Based on table 5, it can be seen that the description of the distribution of knowledge of respondents regarding the preparedness of tourism practitioners in dealing with natural disaster risks is more that those who have good knowledge are equal to 56.1% compared to respondents who have poor knowledge (43.9%).

##### 3. Attitudes of Respondents

The attitude of tourists in this study is based on 16 statements with alternative answers Strongly Agree, Agree, Disagree and Strongly Disagree. Based on the results in the field with 66 Tourism Actors at the Penatapan Sibolangit Tourism Site regarding the attitude of Tourist Actors can be seen in Table 6 below:

Table 6. Distribution of Attitudes of Respondents

<b>Respondent's attitude</b>	<b>F</b>	<b>%</b>
Negative	28	42,4
Positive	38	57,6
<b>Jumlah</b>	<b>66</b>	<b>100,0</b>

Source: Research Results, 2022 (Data processed)

In order to get an overview of the distribution of respondents according to attitudes, two categories were made by using the average values as the cut off points, namely negative attitudes and positive attitudes. Based on these attitude categories, we get a description of the respondents (table 4.8) who have a negative attitude with a score <27.8, namely 28 people (42.4%) and the rest with a score > 27.8, namely as many as 38 people (57, 6%) have a positive attitude in dealing with the risk of natural disasters.

#### 4. Respondents Preparedness

To illustrate the percentage of respondents' preparedness at the Penatapan Sibolangit tourist location, see the table below:

Table 7. Distribution of Respondents Preparedness

Respondent Preparedness	F	%
Not ready	26	39,4
Ready	40	60,6
<b>Total</b>	<b>66</b>	<b>100,0</b>

Source: Research Results, 2022 (Data processed)

Based on the table above, it can be seen that the distribution of respondents' preparedness in dealing with natural disaster risks is more that they are ready, namely 60.6% and this figure is greater when compared to respondents who are not ready in facing natural disasters, which is only 39.4%.

#### 4.2. Bivariate Analysis Results

##### 1. Relationship between Education Level and Preparedness of Tourist Actors

The results of the research on the relationship between education level and the preparedness of tourists in facing natural disaster risks at the Penatapan Sibolangit tourist site can be seen and presented in the following table:

Table 8. The Relationship between Education Level and Tourist Preparedness in Facing Natural Disaster Risks

Education Level	Preparedness				Total		P. Value
	Not ready		Ready		F	%	
	f	%	F	%			
Low	9	69,2	4	30,8	13	100,0	0,040
Medium	12	35,3	22	64,7	34	100,0	
High	5	26,3	14	73,7	19	100,0	
<b>Total</b>	26	39,4	40	60,6	66	100,0	

Source: Research Results, 2022 (Data processed)

Based on the results of the research as presented in table 8 it can be seen that 69.2% of respondents who have a low level of education stated that they were not ready to face the risks of natural disasters, conversely the higher the level of education, the more prepared tourists are to face the risks of natural disasters, namely 73.7%. The results of statistical analysis showed that the probability value (p-value) was 0.040 or  $p < 0.05$ . It can be concluded that at a significance level of 95% there is a significant relationship between the level of education and the preparedness of tourism actors in dealing with disaster risks at tourist sites.

##### 2. Relationship between Knowledge and Preparedness of Tourist Actors

Based on table 7, it can be explained that the proportion of respondents who have poor knowledge and are not ready to face the risk of natural disasters is 55.2%. This figure is relatively small when compared to respondents who are well-informed and ready to face natural disaster risks with a proportion of 73.0% at the Penatapan Sibolangit tourist location.

Table 9. The Relationship between Knowledge and Preparedness of Tourists in Facing Natural Disaster Risks

Knowledge	Preparedness				Total		P. Value
	Not ready		Ready		F	%	
	f	%	F	%			
Not good	16	55,2	13	44,8	29	100,0	0,039
Good	10	27,0	27	73,0	37	100,0	

<b>Total</b>	26	39,4	40	60,6	66	100,0
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Source: Research Results, 2022 (Data processed)

Statistical test results with the Chi-Square Test, obtained p-value = 0.039 ( $p < 0.05$ ) so that  $H_0$  is rejected and  $H_a$  is accepted, this means that at CI: 95% there is a significant relationship between knowledge and the preparedness of tourists in facing the risk of natural disasters at the Penatapan Sibolangit tourist site.

### 3. Relationship between Attitude and Preparedness of Tourist Actors

The results of the study revealed that the proportion of respondents who had a negative attitude and were not ready to face natural disaster risks was 57.1%, this proportion was relatively smaller when compared to respondents who had a negative attitude and had prepared actions in dealing with natural disaster risks at tourist sites, namely by 73.7%. For more details, see the table below:

Table 10. The Relationship between Attitude and Preparedness of Tourists in Facing Natural Disaster Risks

Attitude	Preparedness				Total		P. Value
	T		Ready		F	%	
	f	%	F	%			
Negative	16	57,1	12	42,9	29	100,0	0,023
Positive	10	26,3	28	73,7	37	100,0	
<b>Total</b>	26	39,4	40	60,6	66	100,0	

Source: Research Results, 2022 (Data processed)

### 4.3. Multivariate Analysis Results

Multivariate analysis was carried out to look at several variables which together are related to the preparedness of tourism actors in dealing with natural disaster risks. In this study, multiple linear regression tests were used to find the most dominant factor in the respondent's preparedness. Multivariate analysis aims to obtain the best model in determining the dominant variable related to respondent preparedness. In this modeling all candidates are tried together, then if there is a variable that has a p-value  $> 0.05$  it will be excluded sequentially starting from the largest p-value (backward selection), as shown in Table 11 below:

Table 11. Results of Multiple Logistic Regression Tests for Identification of Variables that Will Be Included in the Factor Model of Tourism Actors' Preparedness in Facing Natural Disaster Risks

Variabel Independen	B	P-Value	OR	95% CI
Knowledge	0,912	0,036	2,488	1,060 – 5,839
Education level	1,404	0,018	4,073	1,276 – 13,007
Attitude	1,293	0,027	3,644	1,162 – 11,430
Constant	-1,988			

Source: Research Results, 2022 (Data processed)

In this modeling process, an interaction test was also carried out between combinations of independent variables that substantially/biologically interacted. Interactions that have a p value  $< 0.05$  will be included in the model. This variable will be included in the multiple logistic regression analysis model, this can be seen in table 12:

Table 12. Final Results of Logistic Regression Analysis Modeling Factors of Preparedness of Tourism Actors in Facing Natural Disaster Risks

Variabel	B	SE	Wald	df	Sig.	Exp (B)	95% CI for Exp (B)
Lvel of education	0,912	0,435	4,388	1	0,036	2,488	1,060 – 5,839
Knowledge	1,404	0,592	5,622	1	0,018	4,073	1,276 – 13,007
Attitude	1,293	0,583	4,914	1	0,027	3,644	1,162 – 11,430
Constant	-1,988	0,743	7,157	1	0,007	0,137	

Source: Research Results, 2022 (Data processed)



From the results of the study after carrying out multivariate analysis with the Binary Logistic Regression statistical test, it was found that the dominant influencing factor in relation to the preparedness of Tourists was the knowledge factor of the Tourists themselves, because this variable was the most dominant predictor variable. The OR (Odds Ratio) value of this variable is the highest among the other variables. The greater the OR value, the greater the possibility that these risk factors will cause respondents to be unprepared to face the risks of natural disasters at the Penatapan tourist site in Doulu village, Karo District, North Sumatra.

#### *4.4. The Urgency to Build Disaster Aware Tourism Actors in Tourism Locations*

The efforts made so far have not been maximized because they are still one-sided and have not touched all aspects of Indonesian society. From this incident, the government started to focus on disaster mitigation as a priority through bigger budget planning and the introduction of disaster courses in schools and universities. Effective solutions need to be found for these challenges so that future mitigation efforts can bring significant results which can be reflected in reduced casualties and property from disaster events that have the potential to occur in the future.

#### *4.5. The Influence of Knowledge of Tourist Actors on Disaster Preparedness at Tourist Locations*

The results of the research on the knowledge variable of respondents on the preparedness of tourists in facing natural disaster risks clearly show that the respondents' knowledge about the preparedness of tourists in facing natural disaster risks is more knowledgeable, namely 37 people (56.1%). The results of statistical analysis using the Chi-Square Test showed that the probability value (p-value) was  $p < 0.05$ . It can be concluded that at a significance level of 95% there is a significant relationship between knowledge and the preparedness of tourists in dealing with the risks of natural disasters in tourist locations. So it can be concluded that the higher the knowledge of tourism practitioners at the Penatapan Sibolangit tourist location, the better they are in dealing with the risks of natural disasters.

#### *4.6. The Influence of Knowledge of Tourist Actors on Disaster Preparedness at Tourist Locations*

Implementation of disaster preparedness by practicing directly at tourist attractions and can be accessed through gadgets starting from the tourist attractions in question, how to get there, what tours can be visited, how much it costs, what hotels or inns are available, how much it costs, what are the hotel facilities, what disaster events have occurred and may occur, how to prepare for and mitigate the disaster, how is the evacuation route the best method in an effort to increase the behavior of visitors to visit because with such detailed information/knowledge even regarding disaster preparedness and mitigation and how carrying out disaster preparedness, which is carried out directly (making a simulation), making visitors calm and comfortable visiting. The findings of this study also have implications for the simplest and most convenient planning and implementation of disaster preparedness as an effort to increase the behavior of visitors to visit tourist attractions. tourism, how to get there, how much it costs, what can be visited at tourist attractions, what hotels or inns, what are the facilities, how much does it cost, what disasters have occurred and are likely to occur again, how to prepare for or mitigate disasters, routes evacuation.

#### *4.7. The Government Contribution to Disaster.*

The results of the study revealed that there was a lack of preparedness of tourism actors in anticipating disasters. The need to increase the preparedness of tourism actors in order to reduce the number of victims of disasters. To develop disaster preparedness tourism based on collaborative governance, analysis of needs by tourism actors so that they are right on target and according to the needs of both the type and amount, Increasing the effectiveness and efficiency of coordination and integration both between related institutions and programs so that they are under one command, strengthening mechanisms for institutions disaster management agencies through education and training in the field of disaster (Tagana), as well as empowering tourism actors regarding disaster preparedness that may occur at any time, so that disaster risks can be minimized.

## 5. Conclusion

Disaster-aware tourism actors are tourism actors who have knowledge, understanding, skills, and care about matters related to disasters and potential disasters, have the awareness to behave and apply them in an adaptive behavior pattern. Disaster-aware tourism actors are tourism actors who have good knowledge, attitudes and behavior regarding disasters. Disaster-aware tourism actors are tourism actors who travel but have adaptive behavior to minimize or overcome the impact of a disaster. Disaster Aware Tourism Actors are Tourism Actors who consciously and responsibly participate in disaster mitigation efforts in order to minimize or overcome the impact of disasters, especially in the tourism industry. Disaster-aware tourism actors are considered important to strengthen disaster mitigation efforts, where disaster mitigation efforts can not only save human lives, but also save the tourism industry.

The strategy used in the development of disaster-aware tourism actors is to instill the behavior of disaster-aware tourism actors in tourism actors, develop disaster-aware tourism actors through strengthening social norms, socialize and promote the concept of disaster-aware tourism actors until it is adopted into a trend that can assist mitigation efforts. and increasing disaster preparedness, optimizing the role of disaster-aware tourists to encourage the availability of supporting infrastructure and policies related to disaster mitigation efforts in tourist areas and the tourism industry, the government and tourism industry players providing supporting infrastructure for disaster-aware tourists, increasing collaboration between governments, business actors, and tourism actors to improve disaster mitigation efforts in the area and in tourism activities, create and implement policies or special rules governing disaster mitigation efforts in activities and the tourism industry by strengthening supervision, sanctions and enforcement.

Based on the results of the analysis and discussion of the research, it can be concluded that regarding the influence of knowledge, attitudes and education on the preparedness of tourism practitioners in dealing with the risk of natural disasters as follows:

- 1) There is a significant relationship between the education of tourism actors who act as tourism actors and preparedness in dealing with natural disaster risks at tourist sites.
- 2) There is a significant relationship between knowledge of tourism practitioners and preparedness in dealing with natural disaster risks at tourist sites.
- 3) There is a significant relationship between the attitude of tourists towards preparedness in dealing with natural disaster risks at tourist sites.
- 4) The knowledge variable is the most dominant variable. It is known that the value of  $OR = 4.1$  means that the greater the  $OR$  value, the greater the possibility of risk factors causing respondents with low knowledge to be unprepared in dealing with natural disaster risks, so knowledge is the main factor of preparedness.
- 5) Tourists who visit the Doulu/Sibolangit tourist location are concerned about the potential for disaster hazards at tourist sites that can suddenly occur at any time. But there are still tourists who don't really think about it.
- 6) Tourism managers have done their best in terms of realizing disaster-resilient tourism, but there are various problems such as weak coordination between related agencies, not yet optimal budget support for tourism and lack of efforts to realize facilities in the form of symbols of disaster anticipation to delay the realization of tourism ideals sustainable.
- 7) The capacity of the Regional Disaster Management Agency is still not optimal in providing education to Tourists at tourist sites.
- 8) Human resources that are still lacking in support for community participation programs in disaster management.
- 9) The perception of the people who still think that disaster is a fate that cannot be avoided and must be faced by everyone so that they feel unable to deal with disasters.

## References

- Aida Nur Azqiya, Ardiyanto, D., Alvian, D., Rakhmanita, E., Firda Azzahra, F., Fitriyah, Sri Widyantoro, H., Nur Marfu'ah, I., Rusmawati, P., & Nur Azizah, R. (2022). Pemetaan Wilayah Sebaran Covid-19 Untuk Pembentukan Desa Tangguh Bencana Di Desa Simo, Kecamatan Simo, Kabupaten Boyolali. *Indonesian Journal of Environment and Disaster*, 1(1), 33–46. <https://doi.org/10.20961/ijed.v1i1.70>
- Davenport T., & Prusak L. (2001). *Working Knowledge*. Harvard Business School Press.
- Dewi, I. K., Istiadi, Y., & Istiadi, Y. (2016). Mitigasi Bencana Pada Masyarakat Tradisional Dalam Menghadapi Perubahan Iklim Di Kampung Naga Kecamatan Salawu Kabupaten Tasikmalaya (Disaster Mitigation On Traditional Community Against Climate Change In Kampong Naga Subdistrict Salawu Tasikmalaya). *Jurnal Manusia Dan Lingkungan*, 23(1), 129. <https://doi.org/10.22146/jml.18782>
- Hakim, F. A., Banjarnahor, J., Purwanto, R. S., Rahmat, H. K., & Widana, I. D. K. K. (2020). Pengelolaan Obyek Pariwisata Menghadapi Potensi Bencana Di Balikpapan Sebagai Penyangga Ibukota Negara Baru. *Nusantara: Jurnal Ilmu Pengetahuan Sosial*, 7(3), 607–612.
- LIPI–UNESCO/ISDR. (2006). Kajian kesiapsiagaan Masyarakat dalam Mengantisipasi Bencana Gempa Bumi dan Tsunami. *Jakarta Manual, WHO, Geneva*.
- Nursyabani, N., Putera, R. E., & Kusdarini, K. (2020). Mitigasi Bencana Dalam Peningkatan Kewaspadaan Terhadap Ancaman Gempa Bumi Di Universitas Andalas. *Jurnal Ilmu Administrasi Negara ASIAN (Asosiasi Ilmuwan Administrasi Negara)*, 8(2), 81–90. <https://doi.org/10.47828/jianaasian.v8i2.12>
- Peter DRucker. (2001). *The Economis*. The Next Society.
- Singarimbun. (1996). *Penduduk dan Perubahan*. Pustaka Pelajar.
- Situmorang, M. T. N. (2023). *Mitigasi Bencana Kawasan Bencana* (M. Hidayat & M. Islamiah, Eds.). Pusat Pengembangan Pendidikan dan Penelitian Indonesia.
- Wardyaningrum, D. (2014). Perubahan Komunikasi Masyarakat Dalam Inovasi Mitigasi Bencana di Wilayah Rawan Bencana Gunung Merapi. *Jurnal ASPIKOM*, 2(3), 179. <https://doi.org/10.24329/aspikom.v2i3.69>
- Wulan, T. R., Ambarwulan, W., Wahyuningsih, D. S., Maulana, E., & Raharjo, T. (2016). Mitigasi Bencana Berbasis Potensi Wisata: Studi Kasus Pantai Pandawa, Desa Kutuh, Kecamatan Kutu Selatan, Kabupaten Badung, Provinsi Bali. *Prosiding Seminar Nasional Kelautan 2016*.
- Zaenuri, M. (2014). Mengelola Pariwisata-Bencana: Perlunya Perubahan Paradigma Pengelolaan Pariwisata Dari Adaptive Governance Menuju Collaborative Governance. *Journal of Social Sciences and Humanities*, 36(81), 157–167.