

# The Influence of Awareness of Taruna Coral Youth on the Mitigation of Longsor Land Disaster in the North Tapanuli Regency

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## Abstract

*North Tapanuli Regency is one of the districts in North Sumatra Province which is prone to landslides. Almost every year landslides are recorded in North Tapanuli Regency. This condition certainly must be responded to by both the government and the community to mitigate landslides. Youth groups from Taruna Coral have the potential with the demographic bonus of youth and the awareness they have to play a role in mitigating landslides. Therefore, this study wants to see how the awareness of Taruna Coral towards landslide mitigation in North Tapanuli Regency. This study uses a quantitative approach using tests and questionnaires as a measuring tool. The collected data were analyzed using multiple regression analysis techniques and the F test to see the effect of awareness of Taruna Coral on landslide disaster mitigation. The results showed that the awareness of Taruna Coral which consists of aspects of knowledge, attitudes, and behavior has a positive and significant effect on landslide disaster mitigation which includes prevention, preparedness, and countermeasures.*

## Keywords

awareness; youth; disaster mitigation; Taruna Coral; Tapanuli Utara



## I. Introduction

North Tapanuli Regency is located in an area that has the topography of hills to mountains. The height of North Tapanuli Regency is at 150-1700 m above sea level. In terms of climate, rainfall is high in North Tapanuli Regency which is 3000-3200 mm/year. In addition to altitude and climate conditions, North Tapanuli Regency is also included in the Sumatra fault line. Therefore, it is not surprising that this district is often hit by natural disasters, both earthquakes and landslides. Some areas are prone to landslides, including Tarutung, Siatas Barita, Garoga, Pahae Julu, Purba Tua, Pahae Jae and Simangumban (BPBD, 2016).

According to Regulation of the Minister of Home Affairs no. 33 of 2006 states that disaster mitigation, which is part of disaster management, becomes the duty of one of the central and local governments in order to provide a sense of security and protection from possible disaster threats. Disaster mitigation is a disaster management effort at the pre-disaster stage. Efforts aimed at reducing the impact of disasters both natural disasters, human disasters and a combination of both in a community which is then given responsibility to the government in collaboration with the local community or organizations in a particular area to carry it out.

Taruna Coral is a youth organization in North Tapanuli Regency and is a place for the development of the social soul of the younger generation. Taruna Coral organization should get more attention from the community, the government and related parties.

Awareness of Taruna Coral youth is needed to be able to participate in landslide disaster management efforts in North Tapanuli Regency. There needs to be a deep understanding from Taruna Coral youth on ways to deal with the risk of landslides that can at any time threaten the safety of them and other communities. Therefore, the author is interested to study this phenomenon in a study entitled "The Influence of Taruna Coral Youth Awareness on Landslide Disaster Mitigation in North Tapanuli Regency".

## II. Review of Literature

### 2.1 Regional Planning

In general, there are two important elements in planning that are what you want to achieve and how to achieve it. In the planning process, both elements are both explicit and implicitly loaded on various nomenclature such as, vision, mission, objectives, objectives, strategies, policies, programs, projects, activities and so on. Planning has a dimension of space and time, so it requires an explanation of past and future phenomena, as well as their spatial distribution. In addition, the most basic thing in planning is the development that is carried out sustainably. Therefore, planning should also be interpreted by the social performance of the community in line with its environmental sustainability (Rustiadi et al., 2009:4).

### 2.2 Taruna Coral

In regulation of The Ministry Of Social Affairs No. 77/HUK/2013 article 1 explains that Taruna Coral is a social organization as a forum and means of development of every member of the community that grows and develops on the basis of awareness and social responsibility from, by, and for the community, especially the young generation in the village / village area, especially engaged in social welfare efforts.

### 2.3 Natural Disasters Landslides

The main conditions that cause landslides are influenced by hazard factors related to geological conditions, soil, marbles and vulnerability factors related to the condition of residents, buildings, settlements, and settlements. These factors are the main parts that need to be considered in analyzing and estimating the risk of landslides. Landslide disasters are one of the natural disasters that often occur in Indonesia, especially in Java Island which has a very high frequency of landslide events and almost every year experiences an increase triggered by topographical conditions combined with rainfall. Topographic conditions range from steep to very steep. Landslide disaster is one of the natural disasters that cause fatalities and materials that cause enormous damage to agricultural land, settlements, public facilities, and others (Budiman, 2013).

### 2.4 Disaster Mitigation

Based on law number 24 of 2007 mitigation is a series of efforts to reduce the risk of disasters, both through physical development and awareness and improvement of disaster management capabilities. Disaster mitigation measures, namely mapping disaster-prone areas, monitoring to anticipate disasters so as to facilitate rescue, dissemination of information, socialization and socialization counseling on all aspects of disasters, and training related to evacuation procedures.

### **III. Research Methods**

This type of research is quantitative descriptive by using survey approach. Data collection techniques using observation methods, questionnaire methods, test methods, and documentation methods. Data analysis techniques use univariate analysis, bivariate analysis, and multivariate analysis. This research was conducted in North Tapanuli Regency, North Sumatra Province. Based on landslide-prone areas, there are three districts that are research sites, namely in Adian Konting, Pahae Jae, and Simangumban Districts.

### **IV. Results and Discussion**

This research was conducted to test the influence of Taruna Coral Youth awareness on landslide disaster mitigation in North Tapanuli Regency. Overall testing conducted through the SPSS for windows version 20.0 program suggests the existing hypothesis is acceptable. Hypothesis testing shows a positive and significant impact on landslide disaster mitigation in North Tapanuli Regency. Reynaldo Flores in Alahmad (2020) stated that, the principle of operant and classical conditioning do not account for spontaneous behavior in humans. It rejects the possible role of biological factors in human behaviour, unlike the biological approach which considers nature and important factor. Awareness of Taruna Coral Youth consisting of aspects of knowledge, attitudes, and behaviors has proven to have a positive and significant effect on landslide disaster mitigation in North Tapanuli Regency. This can be seen from the results of statistical calculations which show the value  $f_{count} = 8.074$  with a significant value of 0.004 while  $f_{table} 4.105$  by using the significance limit of 0.05.

#### **4.1 The Influence of Taruna Coral Youth Knowledge on Landslide Disaster Prevention Mitigation in North Tapanuli Regency**

Young coral cadets have knowledge of good prevention mitigation. Youth coral cadets realize that preventing is always better than having to deal with the conditions where landslides occur. Therefore preventive measures will be very important. Based on the results of the chi square test obtained the significance of knowledge on preventive mitigation of 0.019. With this amount, knowledge affects prevention mitigation. This condition is also reinforced by the results of multiple linear regresi where knowledge affects disaster mitigation ( $0.000 < 0.05$ ). With these two test results, the variable knowledge of taruna coral youth has an effect on landslide disaster prevention mitigation in North Tapanuli Regency.

#### **4.2 The Influence of Taruna Coral Knowledge on Landslide Disaster Preparedness Mitigation in North Tapanuli Regency**

Young Taruna Corals have knowledge of good preparedness mitigation. Young taruna coral realizes that the knowledge they have must continue to be nurtured with readiness to always be on standby. Youth coral cadets realize that although disaster detection tools are increasingly sophisticated without being followed by a good standby attitude will be very troublesome when suddenly landslide disasters occur in North Tapanuli Regency. This is usually done with disaster mitigation trainings so that in the event of a landslide disaster has the knowledge and ability to cope and make a family rescue plan (ready to do what) in case of landslide disaster emergency and prepare simple evacuation equipment and tools in case of landslide disaster. Based on the results of the chi square test obtained the significance of knowledge on preparedness mitigation of 0.032.

With this amount, knowledge affects the mitigation of preparedness. this condition is also reinforced by the results of multiple linear regresi where knowledge affects disaster mitigation ( $0.000 < 0.05$ ). With these two test results, the variable knowledge of taruna coral youth has an effect on the mitigation of landslide disaster preparedness in North Tapanuli Regency.

#### **4.3 The Influence of Taruna Coral Knowledge on Landslide Disaster Mitigation in North Tapanuli Regency**

Young Taruna Corals have knowledge of good mitigation countermeasures. Young Taruna Corals realize that when landslide disasters occur in North Tapanuli Regency their knowledge of the aspects needed in terms of countermeasures is needed. Departing from this understanding, the youth of taruna coral must continue to update and understand every aspect of it. The application of these conditions is carried out when there is a landslide disaster youth coral cadets urge the community to stay away from the site of landslide disaster. Based on the results of the chi square test obtained the significance of knowledge on mitigation countermeasures amounted to 0.048. With this amount, knowledge affects countermeasures mitigation. This condition is also reinforced by the results of multiple linear regresi where knowledge affects disaster mitigation ( $0.000 < 0.05$ ). With these two test results, the variable knowledge of taruna coral youth has an effect on landslide disaster mitigation in North Tapanuli Regency.

#### **4.4 The Influence of Taruna Coral Attitude on Landslide Disaster Prevention Mitigation in North Tapanuli Regency**

Young Taruna Coral have an attitude about good prevention mitigation. Youth coral cadets realize that their response to landslide disasters is indispensable, for that every young taruna coral must continue to strengthen their attitude by trying to prevent. Based on the results of the chi square test obtained the significance of attitude to preventive mitigation of 0.000. With this number, attitudes affect prevention mitigation. This condition is also reinforced by the results of multiple linear regresi where attitudes affect disaster mitigation ( $0.012 < 0.05$ ). With these two test results, the variable attitude of taruna coral youth has an effect on landslide disaster prevention mitigation in North Tapanuli Regency.

#### **4.5 The Influence of Taruna Coral Attitude on Landslide Disaster Preparedness Mitigation in North Tapanuli Regency**

Young Taruna Coral have an attitude about mitigating good preparedness. Young Taruna Coral realize that their attitude to be ready and alert whenever disaster occurs. The effort can be seen from the actions of forming a special team that is ready to deal with the possibility of landslide disasters. Based on the results of the chi square test obtained the significance of attitude to mitigation of preparedness of 0.000. With this number, attitudes affect the mitigation of preparedness. This condition is also reinforced by the results of multiple linear regresi where attitudes affect disaster mitigation ( $0.012 < 0.05$ ). With these two test results, the variable attitude of youth coral cadets has an effect on the mitigation of landslide disaster preparedness in North Tapanuli Regency.

#### **4.6 The Influence of Taruna Coral Attitude on Landslide Disaster Mitigation in North Tapanuli Regency**

Young Taruna Coral have an attitude about good mitigation countermeasures. Young Taruna Coral realize that their response to landslide disasters is indispensable, for that every young taruna coral must continue to cultivate their attitude and their ability to cope with landslide disasters that occur in North Tapanuli Regency. This can be done by preparing the evacuation site in the event of a landslide disaster and immediately evacuate all family members/ communities that are very vulnerable such as infants, children, pregnant women and the elderly. Based on the results of the chi square test obtained the significance of attitude to mitigation countermeasures of 0.000. With this number, attitudes affect the mitigation of countermeasures. This condition is also reinforced by the results of multiple linear regression where attitudes affect disaster mitigation ( $0.012 < 0.05$ ). With these two test results, the variable attitude of taruna coral youth has an effect on landslide disaster mitigation in North Tapanuli Regency.

#### **4.7 The Influence of Taruna Coral Behavior on Landslide Disaster Prevention Mitigation in North Tapanuli Regency**

Young Taruna Coral try to behave by exemplifying how to prevent landslides. This can be done by actively involved in the construction of steep slope retaining walls in order to reduce the risk of landslides in the environment. Based on the results of the chi square test obtained behavioral significance to preventive mitigation of 0.029. With these numbers, behavior affects prevention mitigation. This condition is also reinforced by the results of multiple linear regression where behavior affects disaster mitigation ( $0.013 < 0.05$ ). With these two test results, the variable behavior of taruna coral youth has an effect on landslide disaster prevention mitigation in North Tapanuli Regency.

#### **4.8 The Influence of Taruna Coral Behavior on Landslide Disaster Preparedness Mitigation in North Tapanuli Regency**

Young Taruna Coral have behaviors that are in line with good preparedness mitigation. Young taruna coral realize that the behavior they show and do must always be in line with their readiness to always be alert whenever landslides occur in North Tapanuli Regency. This can be done when landslide disasters occur, youth coral cadets are ready to help the community in the district and outside the district. Based on the results of the chi square test obtained behavioral significance to mitigation preparedness of 0.015. With this amount, behavior affects preparedness mitigation. This condition is also strengthened by the results of multiple linear regression where behavior affects disaster mitigation ( $0.013 < 0.05$ ). With these two test results, the behavior variable of youth youth organizations has an effect on mitigation of landslide disaster preparedness in North Tapanuli Regency.

#### **4.9 The Influence of Taruna Coral Behavior on Landslide Disaster Mitigation in North Tapanuli Regency**

Young Taruna Coral have behavior that is in line with good mitigation. Young Taruna Coral realize that the behavior they show and do must always be in line with their efforts to cope when a landslide occurs in North Tapanuli Regency. This can be done by participating in cleaning up locations affected by landslides and participating in evacuating victims affected by landslides. Based on the results of the chi square test, the behavioral significance for the mitigation of countermeasures is 0.039. With this amount, the behavior will affect the mitigation of countermeasures. This condition is also strengthened by the results of multiple linear regression where behavior affects disaster mitigation ( $0.013$



<0.05). With these two test results, the behavioral variables of youth organizations affect the mitigation of landslide disaster management in North Tapanuli Regency.

## V. Conclusion

Based on the findings of the study, it can be drawn some conclusions as follows:

1. There is a significant influence between the knowledge of Young Taruna Coral on mitigation, prevention, preparedness, and disaster management for landslides in North Tapanuli Regency.
2. There is a significant influence between the attitudes of Young Taruna Coral towards mitigation, prevention, preparedness, and disaster management for landslides in North Tapanuli Regency.
3. There is a significant influence between the behavior of Young Taruna Coral on mitigation, prevention, preparedness, and disaster management for landslides in North Tapanuli Regency.

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