

Community Participation Relationship with Flood Disaster Mitigation in Boliyohuto District, Gorontalo District

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Abstract. *Disaster is the incident or sequence which threatens and disrupts people's lives that caused of natural and non natural factors as well as human factors resulting in fatalities environmental damage, and property loss. The objective of research was to determine the relationship between society's participations with flood disaster mitigation at Tolite village, Boliyohuto sub district. The design used quantitative descriptive with cross sectional study approach. The populations are 1101 respondents of societies with sampling was used purposive sampling technique with the samples determinate used slovin formula therefore obtained the samples are 92 respondents. Statistical test used chi square. With significance value is p value= 0,005 small than ($p < 0,05$) thus H_0 is rejected and H_a is accepted. Concluded, there is significance relationship between between society's participations with flood disaster mitigation at Tolite village, Boliyohuto sub district.*

Keywords: *Flood Disaster Mitigation, Society's Participations*

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INTRODUCTION

Flood disaster is an overflow of water that exceeds the normal water level so that it overflows from the riverbed which causes inundation of low land on the river side. Flood disasters cannot be prevented, but can be controlled by reducing the impact of losses due to these disasters, so it is necessary to prepare for handling quickly, precisely and in an integrated manner. Generally floods are caused by high above normal rainfall, so the water drainage system consisting of rivers and creeks and an artificial flood storage drainage system is unable to accommodate the accumulated rainwater so that it overflows. (Nurjanah et al., 2012).

Flood disasters in Southeast Asia and South Asia began in 2014, a series of floods have hit the regions of Malaysia, the Philippines, Thailand and Sri Lanka. About 237,000 refugees have been evacuated and the death toll is 21 in Malaysia, 13,000 refugees and the death toll is 31 in the Philippines, 10,000 refugees and the death toll is 15 in Thailand, and in Sri Lanka the refugees are around 50,832 and the death toll is around 39. Scientists have predicted that as climate change will get worse, storm patterns will become more erratic and severe. Rapid development that does not consider the environment and waste disposal problems are said to be the cause of flooding. In Thailand, Prime Minister Prayut Chano-cha said that the floods that occurred in the three border areas in the south namely Yala, Pattani and Narathiwat were the worst floods this year, and were made worse because most of the roads were built without

sewers. Senior meteorological officer of the Malaysian Meteorological Department's National Weather Center

Flood disasters in Indonesia occurred in almost several areas, namely in Aceh 3,733 houses were submerged and 38,323 people were displaced, in Lampung there were 2,688 houses that were submerged displaced 11,185 people, 13 people died and 3 were injured, in Dki Jakarta the house that was submerged 12,476 people who died 1 person, in West Java, 31,946 houses were flooded, 101,958 who died 4 people, in Central Java, 26,121 houses were submerged, 106,081 people died 5 people and injured 1 person, in East Java, houses submerged 23,466 100,999 who were displaced 5 people died and 1 person was injured, in East Kalimantan 13,800 houses were submerged, 80,203 were displaced, in Gorontalo 2,082 houses were flooded and 18,338 people displaced, in Papua 3.17 houses submerged displaced 2,395 and those who were injured wounded 130 people. (National disaster management agency, 2018).

Since Gorontalo City has grown to become the provincial capital in urban areas, it has created its own problems. This is in line with the increase in population. The total population during the last 5 years shows an upward growth trend (BPS Kota Gorontalo, 2009). This has an impact on increasing land needs and demand for the fulfillment of city service and infrastructure needs which can have an impact on decreasing environmental quality such as environmental degradation and natural disasters. One of the problems that often occurs every year is floods. Flood disaster in Gorontalo Province displaced 774,918 victims, and there were 13,360 houses submerged, 6 people died. (National disaster management agency, 2016-2018)

METHODS

The research design carried out in this study uses quantitative descriptive research methods, quantitative research methods are research methods based on the philosophy of positivism, which is used to research on certain populations or samples. The sampling technique is generally carried out randomly, data collection using research instruments, data analysis is quantitative

RESULTS AND DISCUSSION

Characteristics of Respondents

Characteristics of Respondents by Age

Table 4. Frequency Distribution of Respondents Based on age in Tolite Village, Boliyohuto District

Age	Frequency	%
26-35 Year	27	29.3
36-45 Year	39	42.4
46-55 Year	15	16.3
56-65 Year	11	12.0
Total	92	100.0

Source: Primary Data (2019)

Based on table 4, the frequency distribution based on the age of the most respondents in this study was 36-45 years, as many as 39 respondents (42.4%). And the least is 56-65 years, as many as 11 respondents (12.0%).

Characteristics of Respondents based on gender

Table 5. Frequency Distribution of Respondents by Gender in Tolite Village, Boliyohuto District

Gender	Frequency	%
Man	52	56.5
Women	40	43.5
Total	92	100.0

Source: Primary Data (2019)

Based on table 5, the frequency distribution based on the sex of the most respondents in the study was male, namely 52 respondents (56.5%). And there are at least 40 women respondents (43%).

Characteristics of Respondents based on education

Table 6. Frequency Distribution of Respondents by Education in Tolite Village, Boliyohuto District

Frequency	Education	%
primary school	64	69.6
Junior high school	14	15.2
Senior High School	13	14.1
Bachelor degree	1	1.1
Total	92	100.0

Source: Primary Data (2019)

Based on table 6, the frequency distribution based on the education of the respondents with the most education in the study was SD as many as 64 respondents (69.6%) and less with S1 education by 1 respondent (1.1%)

Univariate Analysis

Univariate analysis is an analysis used to analyze each variable from the research results. Conducted to see the frequency distribution with each independent variable (Community Participation), and the dependent variable is Disaster Mitigation.

Characteristics of Respondents based on community participation

Table 7. Distribution of Respondents Frequency Based on Community Participation in Tolite Village, Boliyohuto District

Society participation	Frequency	%
Have a role	45	48.9
Less of a role	47	51.1
Total	92	100.0

Source: Primary Data (2019)

Based on table 7, the results of the frequency carried out show that the most respondents in the study were people with less role as many as 47 people (51.1%).

Characteristics of Respondents based on flood disaster mitigation

Table 8. Distribution of Respondents Frequency Based on Disaster Mitigation in Tolite Village, Boliyohuto District

Disaster mitigation	Frequency	%
Good	54	58.7
Not good	38	41.3
Total	92	100.0

Source: Primary Data (2019)

Based on table 8, the results of the frequency carried out show that the most disaster mitigation in this study is good as many as 54 (58.7%)

Bivariate Analysis

Is a simultaneous analysis of two variables. This is done to see whether one variable is related to other variables (liza dwi) 2016

Community Participation in Flood Disaster Mitigation

Table 9. Relationship between Community Participation and Flood Disaster Mitigation in Tolite Village, Boliyohuto District, Gorontalo District

Disaster mitigation							
Society participation Have a role	Good		Not Good		Total	Total	p-value
	N	%	N	%	n	%	
Less of a role	36	39.1	9	9.8	45	48.9	0,000
Total	18	19.6	29	31.5	47	51.1	
Society participation	54	58.7	38	41.3	92	100	

Source: Primary Data (2019)

Based on the research data, it shows that of the total respondents, there are 92 respondents. Community participation plays a role in flood disaster mitigation, which is 36 respondents or (39.1%) Community participation plays a role in mitigating bad flood disasters, which is 9 respondents or (9.8%) total community participation plays a role of 45 respondents or (48.9%), less community participation play a role with disaster mitigation either 18 or (19.6%) community participation does not play a role in mitigating disasters, which is 29 respondents or (31.5%) so the total of community participation does not play a role with a total of 47 respondents or (51.1%), After statistical tests Chi square obtained p-value = 0.000 ($P > 0.05$), here it can be seen that there is a relationship between community participation and flood disaster mitigation in Tolite Village, Boliyohuto District, Gorontalo Regency.

Univariate Analysis

Community Participation

From the results of the research on 92 respondents, it was found that community participation played a role in preventing disasters as many as 45 people (48.9%) and community participation had less role as many as 47 people (51.1%).

According to the results of the research, community participation plays a role in disaster mitigation as many as 45 people or (48.9%) because the community cares about floods, while community participation has less role as many as 47 people or (51.1%) because the community prefers to participate in overcoming floods but they are not aware of the occurrence of flood disasters and preventing flooding, before there will be a flood they themselves are less aware of flooding so that water overflows up to residents' homes.

Flood is an event that the land sinks by water. Flood is a natural phenomenon that often occurs in various countries including Indonesia. Floods can be caused by river water overflowing into the surrounding environment and excessive surface flow with high rainfall intensity and of a long duration (Revelation: 2010).

Disaster Mitigation

Based on the data on the results of the frequency carried out, it was found that the most disaster mitigation in this study was either 54 respondents or (58.7%). According to research, the most flood disaster mitigation in this study is either 54 or (58.7%). Because the community is good at preventing floods such as constructing water retaining walls or embankments along the river even though the embankments are broken so that water overflows into the village of Tolite. The flood was not good as many as 38 people or (41.3%) due to their lack of knowledge in preventing floods and taking actions that could aggravate the occurrence of flooding, namely disposing of garbage in rivers, building houses in floodplains.

Imamsari & Triastuti (2017) with community participation, we can mobilize our community members by cleaning the environment, which can be done by holding village clean-up cooperation such as cleaning gutters and cleaning drains or culverts that are clogged with garbage so that if the rainy season arrives, it can be avoided. From the occurrence of flooding which is done at least once a week and can be started in our respective homes.

A flood can be a disaster if it disrupts human activities. Therefore, flood disaster is not only a physical problem but includes many socio-economic and public health aspects. Flood hazard maps can be used as the basis for flood disaster mitigation, in the preparedness stage, as well as reconstruction and construction of embankments or weirs in the handling / reduction of the flood threat.

Bivariate Analysis

Relationship between Community Participation and Disaster Mitigation in Tolite Village, Boliyohuto District, Gorontalo Regency

Based on the research data, it was found that from the total number of respondents, which amounted to 92 respondents, community participation played a role in mitigating flood disasters, which was 36 respondents or (39.1%). Community participation played a role in mitigating unfavorable flood disasters amounted to 9 respondents or (9.8%) total participation community has a role of 45 respondents or (48.9%), community participation does not play a role in disaster mitigation, either 18 or (19.6%) community participation has less role in mitigating disasters, it is 29 respondents or (31.5%) so the total of community participation does not play a role with a total of 47 respondents or (51.1%), after the chi square statistical test was carried out, it was obtained p-value = 0,000 ($P > 0.05$), here it can be seen that there is a

relationship between community participation and flood disaster mitigation in Tolite Village, Boliyohuto District, Gorontalo Regency .

According to researchers, community participation plays a role in mitigating flood disasters, namely 36 respondents or (39.1%) because in flood disaster management, the community is responsible not only for the government, the community maintains the cleanliness of river waterways and does not throw garbage in the river and the community works together when anticipating floods. so that participation in anticipating flood disasters, the community plays a role in flood disaster mitigation, in mitigating community flood disasters, both because the community has made retaining walls and embankments along the river. Community participation plays a role in mitigating flood disasters, amounting to 9 respondents or (9.8%) because some people have played a role in maintaining river waterways and not throwing garbage in the river, while in disaster mitigation, the community is still not good at training flood disaster alertness from the management agency regional disaster (BPBD). So the total community participation has a role of 45 respondents or (48.9%), the community is already good at dealing with flood disasters without training from BPBD so that people need to be included in disaster mitigation training. community participation has less role in mitigating flood disasters, namely 18 respondents or (19.6%) due to community participation in overcoming flood disasters, the community still cannot reduce vulnerability by increasing their ability to handle flood disasters and lack of cooperation with other communities when anticipating flood disasters so that the community does not play a role in anticipating flood disasters, while in flood disaster mitigation it is good because the community has built retaining walls and embankments along the river and has not disposed of garbage in the river.

Community participation does not play a role in mitigating disasters, amounting to 29 respondents or (31.5%) because of community participation in anticipating flood disasters, there are still many people who are not responsible for flood disaster management, do not maintain the cleanliness of river channels, resulting in losses including submerged houses, some land community sawa is muffled and some pets are lost in the flow of floods, in mitigating flood disasters the community is not good because of a lack of awareness or public attention to embankments, lack of training from BPBD so that the community is not good at mitigating flood disasters. So the total participation of the community did not play a role with the number of 47 respondents or (51.1%), because in anticipating flood disasters the community did not play a role so that it resulted in losses in the community, while in flood disaster mitigation the community was not good enough so the need for training so that the community could be good at mitigating flood.

CONCLUSION

Based on the results of research and discussion of the relationship between community participation and disaster mitigation in Tolite Village, Boliyohuto District, Gorontalo Regency (1) From the research results, it was found that community participation played a role in preventing disasters as many as 57 people (62.0%) (2) From the research results, it was found that the most disaster mitigation in this study was good as many as 52 people (56.5%). (3) obtained from the p-value = 0.000 ($P > 0.05$), it can be seen that there is a relationship between community participation and flood disaster mitigation in Tolite Village, Boliyohuto District, Gorontalo Regency.

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