Original Research Article

Mobilization of Community Resources as a Preparedness Effort for Disaster in Aceh, Indonesia

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ABSTRACT

Aceh is one of the provinces in Indonesia that is a highly disaster-prone area. People in Aceh are required to have disaster preparedness to reduce the disaster risk and impacts. One indicator of preparedness is resource mobilization which can be seen from the preparation of human resources, technical guidance and provision of materials, funding and logistics, social networks, and also monitoring and evaluation. This descriptive study aims to find out how community resources are mobilized. The research method used is descriptive quantitative with a survey approach. The sample collection technique used proportional random sampling with the 257 respondents. Data were collected using the questionnaire used from LIPI-UNESCO/ISDR (2006). A univariate test was used to assess the resource mobilization. The results obtained were 50. 6% of respondents in the poor resource mobilization category. 75% of respondents do not have good human resource preparation, 61.1% of respondents have not participated in technical guidance and provision of materials, 61.9 respondents have not prepared funding and logistics, 77.8% have not prepared social networks well, and 74.3% monitoring and evaluation is still rarely carried out. This research shows evidence that village governments need to increase the mobilization of community resources through collaboration with Non-Governmental Organizations (NGO) to provide disaster preparedness counseling and training. 9 respondents have not prepared funding and logistics, 77.8% have not prepared social networks well, and 74.3% monitoring and evaluation is still rarely carried out. This research shows evidence that village governments need to increase the mobilization of community resources through collaboration with Non-Governmental Organizations (NGO) to provide disaster preparedness counseling and training. 9 respondents have not prepared funding and logistics, 77.8% have not prepared social networks well, and 74.3% monitoring and evaluation is still rarely carried out. This research shows evidence that village governments need to increase the mobilization of community resources through collaboration with Non-Governmental Organizations (NGO) to provide disaster preparedness counseling and training.

Keywords: Disaster, Preparedness, Resource Mobilization

INTRODUCTION

Disasters are events caused by natural factors, non-natural factors and human factors that occur suddenly and are capable of threatening and disrupting people's lives because they result in human casualties, environmental damage, property loss and psychological impacts[1,2]. The Indonesian region has quite high potential for natural disasters because if we look at its geographical location, Indonesia is located between 3 world plates and is surrounded by active volcanoes[3].

On the 2014-2022, 28,420 disasters occurred in Indonesia and claimed up to 6,240 lives. One of the disasters that often occurs is earthquakes, namely there were 8,264 earthquakes and 11 damaging earthquakes in

Indonesia in 2020[4]. The existence of an active earthquake source whose path is close to residential areas certainly poses a threat in itself, such as in the Aceh region which is located at the edge of the meeting of three plates[5]. There were 1,244 disasters that occurred in Aceh in the period 2014-2022 and the most dominant ones were floods (404 incidents), tornadoes (336 incidents), and forest and land fires (318 disasters)[6]. These various disasters require fast and targeted handling in order to reduce the risk of loss[7]. Disaster risk reduction can be done in several ways, such as increasing disaster preparedness, creating buildings based on disaster risk reduction, and building supporting facilities and infrastructure. Raising awareness, increasing the ability to face disasters and actively implementing physical and non-physical efforts by the community are also forms of disaster risk reduction[2]. This effort is not only carried out by the government but requires mobilization of resources from the community[8]. Resource mobilization is an effort to increase all resources in society. Resource mobilization includes human resources, technical guidance and provision of materials, funding and logistics, social networks, and monitoring and evaluation[9].

Resource mobilization in disaster management is one of the factors that can influence community disaster preparedness. In resource mobilization, the community needs to be included in training, guidance and explanation of preparedness materials. Apart from that, people also need to prepare savings or life and property insurance as a preparedness effort, including preparing funding and logistics. Lack of community participation in preparedness efforts can lead to a high potential risk of the impact of a disaster considering that the community can be the first to be affected and the first to respond to disasters that occur in the surrounding environment. Seeing this phenomenon, researchers are interested in conducting research related to "Community Resource Mobilization as a Disaster Preparedness Effort in Baitussalam District, Aceh Besar".

MATERIALS & METHODS

This type of research is exploratory descriptive research with a survey approach. Exploratory descriptive research is a research method that aims to describe a research result, but the results do not make or discuss general conclusions[10].

The population in this study were all registered families in Blang Krueng Village, Baitussalam District, Aceh Besar, totaling 722 families consisting of 5 hamlets, namely Cot Sibati Hamlet (250 KK), Menasah Bayi Hamlet (85 KK), Menasah Trieng Hamlet (165 KK), Lam Kuta Hamlet (127 KK), and Ujong Timpheun Hamlet (95 KK)

The sample determination method used in this research is the purposive sampling method, namely a sample selection technique based on considerations specified in the inclusion criteria. The inclusion criteria set by the researchers were: aged people > 25 years. The number of samples was calculated using the Slovin formula. Researchers set levels The tolerable error is 5%, so the sample size is determined to be 257 families. Furthermore, the sampling technique for each hamlet uses a proportional random sampling technique or simple random sampling by taking samples from representatives of each sub-population.

The instrument used in this research aims to measure community resource mobilization which was adapted from a standard questionnaire called the preparedness instrument from LIPIUNESCO 2006[9]. The results of the validity test on 25 communities found that all answers had an r value ≥ 0.396 so they can be said to be valid. The results obtained from the reliability test were a Cronbach alpha value of 0.968.

STATISTICAL ANALYSIS

Data analysis in this research is univariate analysis, univariate analysis is used to explain or describe the characteristics of each variable. The purpose of univariate analysis in this research is to determine the

mobilization of community resources in Baitussalam District, Aceh Besar. The data analyzed is demographic data and a questionnaire for mobilizing community resources as a preparedness effort.

RESULT

The distribution of demographic data in this study shows that the average age of respondents is 42 years. The majority were female, 175 people (68.1%), 91 people had a high school education (35%), and the majority of respondents occupation was housewife (housewife) 145 people (56.4%).

Tabel 1: Demographic Data of the respondents (n=257) Variables	Frequency	Percentage (%)
Age (M±SD)	(M=42 ± SD=11,62)	
Gender		
Woman	175	31,9
Man	82	68,1
Education		
No school	2	0,8
Elementary School	47	18,3
Junior high school	50	19,4
Senior high school	91	35,4
College	67	26,1
Work as		
PNS/TNI/POLRI	39	7,4
Housewife	145	15,6
Self-employed	44	56,4
Farm workers	27	19,8
Retired	2	0,8

The results of data collection for the community resource mobilization variable in Baitussalam District which was carried out on 257 respondents can be seen in table 5.2.

Frequency Distribution of Community Resource Mobilization in Baitussalam District, Aceh Besar (n=257).

Tabel 2. Community Resource Mobilization of the respondents (n=257)

Variables	Categori	Frequency	Percentage (%)
Community Resource Mobilization	Good	127	49,4
	Not Good	130	50,6
a. Human Resource	Good	90	35
	Not Good	167	75
b. Technical Guidance And Material Provision	Good	100	38,9
	Not Good	157	61,1
c. Funding And Logistic	Good	98	38,1
	Not Good	159	61,9
d. Social Networks	Good	57	22,2
	Not Good	200	77,8
e. Monitoring And Evaluation	Good	66	25,7
	Not Good	191	74,3

Based on the community resource mobilization score in table 5.2, the results were obtained the highest 130 people (50.6%) were in the not good category. Of all respondents who conducted the research, the highest result was 167 people (75%) in not good category in the human resources sub-variable, 157 people (61.1%) in the not good category in the subvariable. 159 people (61.1%) were in the not good category in the sub-variables of funding and logistics, 200 people (77.8%) were in the not good category in social networks, and 191 people (74.3%)

were in the not good category on monitoring and evaluation subvariables.

DISCUSSION

Mobilization of community resources is one of the factors that really determines disaster preparedness. The risk and impact of disasters can be influenced by community mobilization capabilities. The ability to mobilize resources for preparedness leads to potential and increased resources in society[8].

The research results show that the highest percentage of community resource mobilization criteria is in the unfavorable criteria, namely 50.6%.Researchers found that many respondents still do not understand the importance of preparedness efforts, one of which is because they are rarely exposed to information regarding what can be done to reduce disaster risk, so it is important to provide education or socialization and preparedness training.A resource mobilization index value that is in the underprepared category is an indication of the lack or low capacity of individuals/communities in mobilizing their resources during and after a disaster occurs[11]. The community needs to be involved in overcoming disaster risks. Therefore, it is important for each individual to have good awareness and knowledge regarding disaster preparedness efforts[12].Resource mobilization has the principle of sustainable resource management while increasing the environmental carrying capacity for various disaster risks by referring to community needs and their rights. The community together with non-governmental organizations, business institutions and other institutions from outside the community can build mutually beneficial cooperation to jointly reduce disaster risks[13]. Resource mobilization includes human resources, technical guidance and provision of materials, funding and logistics, social networks, and monitoring and evaluation[9].

Human Resources
The human resources in this study are skilled people who have preparedness knowledge and skills obtained by attending disaster preparedness training, preparing savings or life and property insurance, including preparing funding and logistics[9], Human resources in this study were in the poor category (75%), one of the reasons being that only a few respondents in the study had attended training. The training was only held once several years after the 2004 Aceh tsunami disaster.

This research shows the same results like Widayanti and Husain's research, in their research human resources were in the poor category due to a lack of preparedness training provision from the local government[14]. Community participation in education or preparedness training should be important because the more frequently the community participates in disaster training, the more prepared they are mentally and have mature readiness so that they can reduce the risk of disasters[15].

Technical Guidance And Material Provision
Technical guidance and provision of materials are activities that can provide an idea of what steps can be taken when a disaster occurs so that they can avoid the impacts of disasters both physically and non-physically[9]. Only a few respondents know what skills they need to have (61,1%), this is because technical guidance activities are rarely carried out and only a small number of people participate, and there has been no follow-up from the government to provide retraining to the community.
Technical guidance and the provision of materials related to preparedness can provide an idea of what steps or skills should be prepared to reduce disaster risk. A person's skills reflect knowledge, understanding, and assessment of a variety of cognitive, technical or psychomotor skills and personal attitudes. The importance of skills in disaster preparedness such as first aid skills, evacuating victims, building refugee tents, and so on obtained by following technical guidance or preparedness training can reduce a series of disaster risks[16].

Funding And Logistic
Funding and logistics in resource mobilization as a disaster preparedness effort, means that the community has an insurance card or other health insurance, supplies of basic necessities, disaster kits, bags which contains important documents, vehicles, etc[9]. The research results show that respondents already have insurance, only a

few of them do not have insurance. However, in terms of preparing disaster preparedness equipment and supplies, many respondents have not prepared all of this (61,9%). This is due to a lack of public awareness and a lack of information about the importance of preparing disaster preparedness equipment and supplies. Insurance can ease the burden of financial risks arising from the occurrence of an illness, including the impact of disasters, and these tend to be unpredictable and the value or costs can be very large[17]. Then apart from insurance, supplies of basic necessities, disaster kits, bags containing important documents, vehicles, etc. are also important because all of this can reduce risks and losses during and after a disaster occurs. Emergency management officials and disaster planners say that in the first 72 hours of a disaster, individuals and families should be prepared to do what they can because services and supplies may be inadequate and emergency aid may not be immediately accessible. So, encouraging people to provide a family disaster survival kit can be a major factor in reducing the effects of disasters[18].

Social Networks

Social networks such as relatives/family/close friends who are willing to help if a disaster occurs is something that is really needed by everyone as social creatures when a disaster occurs. Apart from that, important telephone numbers that can be contacted when a disaster occurs, such as the Search and Rescue (SAR) team, fire brigade and others are also very necessary in seeking help during a disaster[9]. Respondents in this study still lacked information and there was also a lack of awareness among respondents to find out about these important numbers. This can be seen in table 2 which shows that social network coverage is in the low category, namely 77.8%. One of the reasons for this is the lack of educational activities or outreach on disaster preparedness.

This result is also in line with Murbawan's research, in his research the majority of

respondents did not have a good social network and were able to be a helper if a disaster occurred. Most individuals/people admit that they do not save important telephone numbers but still have relatives or friends who are ready to help if a disaster occurs. However, researchers are of the opinion that the habit of helping local communities can cover the lack of resources of families and other parties[19]

Monitoring And Evaluation

The research results showed that 74.3% of the community had not carried out good monitoring and evaluation of preparedness efforts, another 25.7% had carried out monitoring and evaluation of preparedness efforts. This is also due to a lack of awareness from the community and local government to carry out monitoring and evaluation activities. There have been no meetings between residents and local government that specifically discuss disaster preparedness in the village.

Evaluation aims to get feedback on needs ongoing programs, to find out the gaps between planning and targeting. In this way, it can be seen, for example how much power needs to be added or subtracted, tools orwhat facilities need to be prepared to implement the program, how much additional time is needed, and so on[20].

Monitoring and evaluation in resource mobilization as disaster preparedness are activities are activities that can be carried out by the local government together with the community to monitor and evaluate preparedness efforts. Such as monitoring logistics availability, evaluating disaster risks and so on[9].

CONCLUSION

Based on the results of research conducted on the community in Blang Krueng village, Baitussalam District, Aceh Besar with a total of 257 families of respondents, it can be concluded that the ability to mobilize the majority of resources is still not good, each sub variable shows the poor category, one of the main causes is because the community

rarely gets disaster preparedness information and training. The community is expected to increase awareness of disaster preparedness, especially in terms of community participation in preparedness training to increase community resource mobilization in Baitussalam District, Aceh Besar. Local governments can collaborate with Non-Governmental Organizations (NGOs) or Non-Governmental Organizations (NGOs) to provide education and training on disaster preparedness.

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