The Preparedness Level of Community in Facing Disaster in West Java Province

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Abstract. Preparedness in facing disaster becomes a must when living in disaster-prone areas. West Java province, Indonesia, has frequent disasters such as tsunamis, earthquakes and landslides. The level of preparedness to be important in minimizing the loss of life in case of disaster. This research aim at analyse the community preparedness in the face of the three disasters that often occur in their respective areas in West Java province. This research uses descriptive quantitative approach, with the survey method. The results showed that the level of preparedness of the community in the district of Pangandaran to the tsunami disaster has categorized Very Ready, people in Tasikmalaya regency for earthquake disaster has categorized Ready, and society in Garut for landslides has categorized Less Ready. In conclusion, there are significant differences between community preparedness in Pangandaran, Tasikmalaya and Garut regencies.

1. Introduction
West Java Province is a province that is very prone to disasters, especially earthquakes. The Southern region of West Java, an area that is prone to earthquakes, as the area dealing directly with attendance plate highly prone to earthquakes [1]. The location is adjacent to the epicentre compounded with rock formations which generally are alluvial deposits, which led to the propagation of the earthquake will be ushered well into the surroundings. Districts in the south of West Java are prone to earthquakes are Tasikmalaya regency.

Tasikmalaya, Indonesia, was hit by an earthquake of 5.4 on the Richter scale. Earlier, on 3 November 2009 an earthquake measuring 7.3 on the Richter scale rocked the Tasikmalaya district, which resulted in many casualties and huge losses [2].

A domino effect of earthquakes is the tsunami disaster. West Java Province which has a coastline that deal directly with attendance plate, resulting in a very vulnerable affected by the tsunami. July 17, 2006 the southern coastal district of Pangandaran an earthquake measuring 6.9 on the Richter scale at a depth of 8 kilometers, the incident triggered a wave as high as 1 to 3.5 meters. The tsunami wave impact extends along the southern coast of Java, and the resulting deaths of approximately 500 people [3].

The southern region of West Java Province has a relief of the earth's surface bumpy, hilly, and mountainous then, one only is Garut. State area as that caused Garut highly prone to landslides. The National Disaster Management Agency (BPBD) Garut, information has a massive landslide occurred in District Caringin who decided the provincial road traffic along the southern Garut 100 meters [4].
The purpose of this study to analyse the level of community preparedness in the face of disaster in three districts and three different disaster. If there are differences in the level of preparedness, there will be analysis of why there are such differences. Factors that cause these differences will be analysed to determine the extent of its role in influencing the level of community preparedness.

Understanding of the disaster is a good event caused by the nature and human saving for humans. Disaster is a serious disturbance of the function of society, which causes the deadly losses of society's ability [5]. No one wants disaster come to him, either intentional or unintentional, a disaster would be very harmful to the person or the environment around him. Disaster is an event that is caused by the nature and human concerned victims of human property and to the disruption of life and livelihood of society [6].

The conclusion of a disaster is an event caused by the natural factors or the human factors that causes harmful to joints of human life that is around it. Manipulating natural events or caused by human factors that cannot live humans is not called a disaster.

Disaster Mitigation and Disaster Preparedness are very difficult to distinguish. Measures of prevention / mitigation tend to be geared to major policy decisions at government level; also they are usually directed primarily from senior management levels. Preparedness measures, however, tend to be more strongly oriented towards action by individual organisations [7]. Preparedness is a part of the disaster management process that develops in the concept of disaster management, primarily an effort in disaster risk reduction activities that are pre-disaster or pra-disaster [8]. Preparedness can work effectively and efficiently, the rehabilitation of disasters will also run well and quickly, mobilization of aid will be fast and accurate if we learn from experience and implement it. Therefore, the benefits of preparedness are very important in the face of a disaster.

The nature of the preparedness of a society will always be dynamically decreased or increased along with the time and condition of the environment. Disaster preparedness is a process that must be continually improved repeatedly and actively, then towards improvement in a better direction [5]. The level of community preparedness is very flexible and may decrease as time goes on, and strongly influenced by the social dynamics that occur [8].

Disaster preparedness should be recorded ongoing basis to obtain the data on whether there is a decrease or increase of preparedness in the community, so that it can be formulated or made appropriate decisions and policies in improving disaster preparedness so that disaster risk can be minimized. It was concluded that preparedness is the ability to minimize the impact before the disaster occurs. Efforts to minimize the impact can be by learning how to save themselves, what to bring, and where to go evacuation in case of disaster.

2. Methods
The research methods used in this study included in the Descriptive Method. Descriptive research method is a method of research in researching an object in order to obtain the data or events in the present factually, then can see the relationship between the phenomena investigated [9]. Implementation of the research process in the field using survey method. Survey research method takes samples from a population by using questionnaire questionnaires as the main data taker is directly in the field [10].

3. Results and Discussion
Comparison of the level preparedness of community in the face of disaster in Pangandaran district, Tasikmalaya and Garut after T test, then the results are set forth in the table 1.
According to the table 1, there are significant differences between community preparedness in the face of disasters in Garut Tasikmalaya District, between Tasikmalaya District Pangandaran Regency, and Regency pangandaran with Garut. Makes it easy to see the difference in the level of preparedness of communities in three districts in the face of disaster, the result of filling the questionnaire will be categorized into several categories using a scale of five, and the resulting five categories: very ready, prepared, poorly prepared, not ready, and it was not ready [11]. The number of the questions in the questionnaire which confirms the theory of disaster preparedness sourced [7, 8], after getting some modifications are total 15 items. The average ideal (R2) is the maximum score is divided into two, namely 30: 2 = 15, then determined again Ideal Standard Deviation (SD) by dividing the average 3 ideal is 15: 3 = 5. After the calculation, the classification is as follows.

- R2 + 1.5 SD = 22.5 to 30 Very Ready
- R2 + 0.5 SD = 17.5 to 22.5 Ready
- R2 - 0.5 SD = 12.5 to 17.5 Less Ready
- R2 - 1.5 SD = 7.5 to 12.5 Not Ready
- 0 to 7.5 Very Not Ready

Based on the categorization, the results for the third level of community preparedness districts of Garut, Tasikmalaya and Pangandaran Regency forth in table 1.

Results tables and calculations mentioned that to the level of community preparedness in the face of disaster for Garut regency occupies the lowest position that had an average score of 15.56 and entrance into the category of Less Ready. This means that people are less prepared Garut regency in the face landslides. Then followed by the District of Tasikmalaya had an average score of 18.64 and entrance into the category of Ready, which has the meaning of Tasikmalaya Regency society prepared to deal with earthquakes. Finally the most high is Pangandaran Regency has an average score of 23.53 and fit into the category of Most Ready, which means that people in the district of Pangandaran Very Ready in the face of the tsunami disaster.

Reinforce the difference in the level of preparedness in the face of disaster obtained by the third district, then created a bar chart such as in the diagram in figure 1.
Viewed from the table 1 of the three districts are the peoples of Pangandaran Regency that are most prepared in face of the disaster, compared with Garut and Tasikmalaya regency.

Based on the results of the third district, the people of Pangandaran Regency are in a state of preparedness for disaster, compared with Garut and Tasikmalaya. This is reflected in the fairly complete facilities such as tsunami alarms, evacuation route banners, and frequent simulations of emergencies that are often done in Pangandaran Regency. A community based early warning system helps to raise public awareness when a disaster strikes [12]. The incident happened in two other districts that have not completes like as Pangandaran. Tasikmalaya regency that is vulnerable to earthquake disaster is still quite minimal in preparation process of preparedness, let alone implemented simulation and evacuation. Evacuation behavior after the earthquake disaster is very important to be considered in the earthquake disaster relief [13].

Garut regency becomes the least prepared district in the face of the disaster than the other two districts. Road links between districts are also is very difficult to pass. This is because the condition of the damaged road is also steep terrain, severely hampering the flow of information and renewal to enter the countryside. Garut government also has not tried maximally in the preparation and prevention of landslides in the area. The transparency of disaster management is very important for stakeholders to reduce the impact of disasters [14]. The number of steep slopes in Garut Regency caused the vulnerability of landslide disaster is higher. Slope factors are a very dominant factor in creating landslide disaster, coupled with soil types and agricultural patterns in a region [15].

Differences in disaster preparedness levels in addition to disaster-affected infrastructure are also influenced by culture. Open society will more easily received new information, compared with closed society. A more open society will be easy to accept a new things, the new information will be easily absorbed by the community, as well as disaster information.

The society who lives in Pangandaran Regency as a tourist area, make it openly accept new cultural and information communities. Tourism has become an important cross-cultural manifestation, as it enters the territory of fulfilling citizens of different countries with different backgrounds, diverse social environments [16]. Pangandaran as a tourist area to make the peoples is very open. It is this openness that makes disaster information easily accessible to the public.

The tsunami event in Pangandaran on 2006 made peoples enthusiastic about receiving new things about the tsunami, they wanted to prepare whenever the disaster happened again. The Government of Pangandaran Regency always held a simulation against the disaster. The role of local government in preparing for disaster is an important factor in shaping public preparedness [17]. In addition to government, other stakeholders such as private parties are very important roles in disseminating disaster preparedness, it is very important to building the community preparedness [18]. Integrated activities between local government, the private sector and the international community are critical in reducing vulnerability to possible disasters [19].

Unlike the case with people in Tasikmalaya and Garut regency. Communities in both districts appear less open to new information, therefore it is difficult to included new information, and the impact of disaster preparedness is lower than Pangandaran Regency.

It is often forgotten that the casualties caused by the disasters are not only adults, children are also often victims. The children often escape attention, when they are one of the most vulnerable groups to disaster [20]. Active participation of children in disaster prone areas should received attention in an effort to reduced the impact of disasters [21]. It is unfortunate that in Pangandaran, Tasikmalaya and Garut districts there is no special effort to increased the disaster of preparedness for children.

4. Conclusions
There is a significant difference in the community preparedness Garut, Tasikmalaya and Pangandaran Regency in the face of disaster. Differences were found affected from the completeness of infrastructure disaster, such as a warning alarm, banners and billboard disaster information, then the evacuation route instructions. Another factor is the presence or absence of education about the disaster from the relevant authorities on society.
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