DESCRIPTION STUDY OF PANDEGLANG COMMUNITY KNOWLEDGE ON NATURAL DISASTERS AND GOVERNMENT POLICIES RELATED TO NATURAL DISASTER PREPAREDNESS IN 2022

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Abstract. Pandeglang Regency, which is a disaster-prone area, requires people who have sufficient knowledge to create community preparedness in dealing with disasters and can assist in the disaster mitigation process. This study aims to find out how the community's knowledge and community preparedness related to natural disasters and what efforts have been made by the government to improve the readiness of the people of Pandeglang Regency. This research method is descriptive and quantitative with 451 respondents. The results of the study showed that the people of Pandeglang Regency still did not know correctly the different types of threats or types of disasters that occurred, 59% of respondents were on standby to prepare their emergency items, but there were still many people who did not keep essential telephone numbers needed in an emergency, the community Pandeglang Regency prefers information sources through electronic media, this is supported by the demographic factor of the Pandeglang Regency population, the majority of which are aged 30 to 49 years or generation X, who are still not familiar with the development of internet technology.

Keywords: Disaster Knowledge, Natural Disaster, Policy Implementation

Absstrak. Kabupaten Pandeglang yang merupakan wilayah dengan rawan bencana memerlukan masyarakat yang memiliki pengetahuan yang cukup dan memadai agar dapat tercipta kesiapsiagaan masyarakat dalam menghadapi bencana dan dapat membantu dalam proses mitigasi bencana. Penelitian ini bertujuan untuk mengetahui bagaimana pengetahuan masyarakat serta kesiapsiagaan masyarakat terkait bencana alam dan upaya upaya apa saja yang telah dilakukan pemerintah dalam upaya meningkatkan kesiapsiagaan masyarakat Kabupaten Pandeglang. Metode penelitian ini ialah deskriptif kuantitatif dengan responden sebanyak 451 responden. Hasil penelitian didapatkan jika masyarakat Kabupaten Pandeglang masih belum mengetahui dengan benar perbedaan jenis ancaman atau jenis bencana yang terjadi, 59% responden telah siaga untuk mempersiapkan barang darurat mereka, masih banyak masyarakat yang tidak menyimpan nomor nomor telepon penting yang diperlukan ketika situasi kegawat daruratan, masyarakat Kabupaten Pandeglang lebih memilih sumber informasi melalui media elektronik, hal ini didukung dengan faktor demografi penduduk kabupaten pandeglang yang mayoritas masyarakat ialah berusia 30 hingga 49 tahun atau generasi X, yang masih belum terbiasa dengan perkembangan teknologi internet.

Kata Kunci: Pengetahuan Bencana, Bencana Alam, Kebijakan Penanggulangan Bencana
INTRODUCTION

Indonesia is a country with a reasonably high level of vulnerability to natural disasters. According to the World Risk Report data in 2022, Indonesia ranks 38th most prone to natural disasters worldwide. During 2022 the National Disaster Management Agency has recorded that from January 2022 to July there have been 2,152 natural disasters that have occurred in Indonesia. Natural events that dominate during 2022 are disasters caused by extreme weather, such as 845 floods, 400 landslides, and 742 extreme weather events.

Indonesia is geologically located in the ring of fire position or the path of the earthquake disaster circle. It is also in the position of the three major world plates: the Indo-Australian, Eurasian, and Pacific. In addition, Indonesia has more than 500 volcanoes (128 active volcanoes), a composition of 2/3 water, and 500 large and small rivers, with 30% of rivers passing through densely populated areas. Besides, it has a large population that is not evenly distributed, so almost 87% of Indonesia’s territory is a disaster-prone area (1). Indonesia, which is a disaster-prone country, requires such management, in the form of disaster communication management.

Disaster communication management is one of the comprehensive efforts that can help reduce risk, prevent and manage messages or information related to disasters that occur, as well as how to spread and receive disaster-related news, starting from the pre-disaster stage, during the disaster, to after the disaster (2). One part of the disaster management process is disaster mitigation or what is known as disaster preparedness (3). A disaster preparedness effort requires good communication between relevant stakeholders, from the government to citizens, to obtain a common understanding of the natural disaster preparedness process.

In the last five years, from 2017-2022, Regional Disaster Management Agency also recorded several disaster events which often occurred: floods, flash floods, residential fires, extreme weather, droughts, landslides, waves, earthquakes, tsunamis, epidemics, and pandemics (4). In addition, one of the disasters that mainly contributed to victims and damage in 2018 in Indonesia was the tsunami in the Sunda Strait caused by the landslide of Mount Anak Krakatau, which then caused sea waves to hit the coastal areas of western Banten and several regions of Lampung South (5).

Community preparedness in disaster-prone areas is essential to anticipate the possibility of a disaster that can result of life and property loss (6). The Pandeglang Regency is an area that is classified as a disaster-prone area, almost every year it is hit by natural disasters from landslides, floods, and cyclones to tsunamis (7). BPBD stated that The Pandeglang Regency has many flood-prone points, landslides, earthquakes, tornadoes, droughts, and residential fires, one of the losses caused by natural disasters in 2022 including nearly 1,700 houses damaged by the earthquake in January (8).

Public knowledge is a factor that can affect disaster preparedness in the community, lack of knowledge in the community can cause a large number of fatalities (9). People need to get valid information to support community knowledge related to disasters. Access to information in the community is also one of the factors that can lead to a lack of public knowledge (10). In addition to knowledge of ownership of emergency numbers by the community, it is something that needs to be considered in disaster preparedness. This is also in the competence of family preparedness for the independent evacuation process in the preparedness manual (11). This study aims to describe the knowledge of the people of The Pandeglang Regency towards disasters, and the efforts of the local government in anticipating disasters.

METHOD

The method used in this research is quantitative descriptive research with a descriptive observational approach that can objectively describe the knowledge and understanding of the community regarding disaster management by using numbers. The population used in this study is all people aged more than 15 years who live in the Pandeglang Regency, Banten—selecting the sample using the purposive sampling method with inclusion and exclusion criteria. The inclusion criteria in this study were male or female who are over 15 years old, reside in The Pandeglang Regency, have communication tools, can read, write, and speak good Indonesian, and are willing to be respondents. The exclusion criteria in this study were men or women under 15 years of age and living outside the Pandeglang district, men and women who were being treated for mental disorders, so that a sample of 451 samples was obtained.

RESULTS

In this study, it was found that the male gender was the majority of the respondents. Respondents dominated the level education respondents in this study with a low level of education, namely Elementary School, as many as 213 respondents.
Table 1. Respondent Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>296</td>
<td>65.6%</td>
</tr>
<tr>
<td>Woman</td>
<td>155</td>
<td>34.4%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 – 29 years old</td>
<td>154</td>
<td>34.1%</td>
</tr>
<tr>
<td>30 – 49 years</td>
<td>201</td>
<td>44.6%</td>
</tr>
<tr>
<td>Over 50 years old</td>
<td>96</td>
<td>21.3%</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No / not married</td>
<td>110</td>
<td>24.4%</td>
</tr>
<tr>
<td>Marry</td>
<td>341</td>
<td>75.6%</td>
</tr>
<tr>
<td><strong>Last education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>213</td>
<td>47.2%</td>
</tr>
<tr>
<td>Intermediate</td>
<td>209</td>
<td>46.3%</td>
</tr>
<tr>
<td>High</td>
<td>29</td>
<td>6.4%</td>
</tr>
</tbody>
</table>

Types of Natural Disasters

Based on the findings, the majority of respondents, as many as 366 people or 81.2%, had experienced earthquakes, 62 respondents (13.7%) experienced COVID-19, and 41 respondents (9.1%) had faced flood disasters.

![Frequency of Natural Disaster in Pandeglang Regency](image_url)

Figure 1. Frequency of Natural Disasters in The Pandeglang Regency 2014-2018
The Pandeglang Regency area which has a high risk of an earthquake disaster needs to be prepared for disasters that are likely to occur again. Disaster Mitigation in Minister of Home Affairs Regulation number 33 of 2006, and also in the Decree of the Head of the Education and Training Agency related to Prevention and Mitigation, four things need to be considered, namely:

1. Information and maps of disaster-prone areas are available for each type of disaster
2. Socialization to increase public understanding in dealing with disasters caused by living in disaster-prone areas
3. Knowing what to do if a disaster occurs
4. Regulations related to the arrangement of disaster-prone areas.

In mitigation, awareness of the threat of disaster is one of the efforts that must be made in reducing disaster risk (12). However, its implementation in The Pandeglang Regency in the understanding test related to natural and non-natural disasters, the majority of the people of The Pandeglang Regency still have a wrong understanding of natural and non-natural disasters, this is evidenced by as many as 73.20% or as many as 329 respondents who stated that the pandemic was a disaster. nature, but a pandemic is a type of non-natural disaster that comes from a biological threat.

Adequate knowledge related to natural disasters in the community will be able to influence community preparedness for the next disaster, this is following research by Evie and Hanie (13) which states that if people's knowledge is less, disaster preparedness is also low, in line with Chan.'s research (14) in his research shows that the level of community knowledge shows the greatest influence in calculating the level of family preparedness in dealing with disasters.

The knowledge possessed often influences the attitudes and concerns of residents to be ready and alert in anticipating future disasters, especially for people who live in areas prone to disasters (11).

In the study, it was found that 59% of respondents had prepared emergency items, but the percentage of respondents who had not prepared emergency items was also quite high, namely 41%. Preparing emergency items is one of the seven indicators of disaster emergency response plans in the community. This needs to be improved because it will affect the level of preparedness of the people of The Pandeglang Regency in facing the upcoming disaster (15).
In the regulation of the Head of National Board for Disaster Management Indonesia number 15 of 2012 regarding the guidelines for the Center for Control of Disaster Management Operations, there are 4 main functions, namely:

1. The Center for Control of Disaster Management Operation functions as recipient, processing and distribution of Policy Information

2. The Center for Control of Disaster Management Operation functions as recipients, processors and forwarders of early warnings to relevant agencies and the community

3. The Center for Control of Disaster Management Operation has the function of emergency response, as a facilitator, mobilizing resources, for handling emergency responses quickly, effectively and efficiently

4. The Center for Control of Disaster Management Operation functions as communication coordination and synchronization of disaster management implementation (16)

In its implementation, the position of the Center for Control of Disaster Management Operation in disaster management is as a sector in charge of organizing information and communication systems in disaster management (17). This is different from Regional Disaster Management Agency which plays a role in formulating and implementing government policies. In the last 2 years, The Center for Control of Disaster Management Operation has experienced obstacles in the implementation of Tangguh village because the budget that should have been used in the Tangguh Village program was diverted for handling COVID-19 (18). This has an impact on people's understanding of the emergency response plan which is described if the community's knowledge of emergency numbers is very low, which is below 30%.

Figure 3. Attitude of Preparing Emergency Items

Preparation of Emergency Items

<table>
<thead>
<tr>
<th>Prepare</th>
<th>Not Prepare</th>
</tr>
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<tbody>
<tr>
<td>72%</td>
<td>28%</td>
</tr>
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</table>
Communication has an important role in the implementation of disaster mitigation because communication in disasters is not only needed at the time of a disaster, but good communication between the government and the community before a disaster occurs is much more important (3).

From the results of data collection, on knowledge related to Disaster information sources, the majority of the people of Pandeglang district get news, and disaster-related information through electronic media percentage of 28% compared to socialization, seminars, or meetings with the smallest percentage of 7%. Electronic media as a source of information media for the majority of the people of The Pandeglang Regency can be influenced by population demographic factors because the people of The Pandeglang Regency are dominated by people in the age group of 30 to 49 years or can be called Generation X. Generation X is a generation that is not familiar with the development of the internet (19).

**Government Regulation**

In disaster management, both the central government and local governments have issued several regulations related to disaster management, several policies issued by the government include,

The Pandeglang Regency Government also has a policy related to disaster management, namely Pandeglang Regent Regulation Number 17 of 2021 concerning Disaster Emergency Management Plans in Pandeglang Regency.

DISCUSSION

Demographically, the majority of respondents in the Pandeglang Regency are male 65.6%, while the proportion of females is 34.4%. The respondents were also dominated by the 30-49 year age group. There is a relationship between the age factor of the community and disaster preparedness, the older the individual, the more prepared he is to face disasters (20). The Pandeglang Regency is positioned around the Eurasian and Indo-Australian plates, and when there is an activity from the Indo-Australian plate that infiltrates the Eurasian plate, it makes The Pandeglang Regency prone to earthquakes (21).

The community is the leading actor in increasing community capacity for disaster risk reduction and increasing disaster knowledge in the community is one of the efforts to reduce disaster risk. They can affect preparedness attitudes (22). The Peoble of The Pandeglang Regency still have a wrong understanding of natural and non-natural disaster. This deduction is proven by 73% of respondents believing that COVID-19 is a natural disaster. Considering that the Pandeglang Regency is a disaster-prone area, people need to know the classification of disaster according to their type. This knowledge can also help them carry out disaster mitigation, which, when, in an emergency, requires fast and appropriate decision-making to reduce the future risk of disaster (11).

Another finding in this research is that many people in The Pandeglang Regency who live in disaster-prone areas still do not have an emergency number. Having an emergency number is something the community needs to have in disaster preparedness (11). In increasing public knowledge related to disasters, people need to get correct information related to disasters. In delivering information, it is necessary to pay attention to the media so that the target can accept the information we convey.

Research by Madanih & Purnamasari in 2021 showed that the total active social media users in Indonesia are 160 million, equivalent to 59% of the total population of Indonesia (23). Besides, regarding health communication, social media has the potential to get social support for its users. However, in this study, most of the population of Kabupaten Pandeglang obtains disaster news sources through electronic media such as TV and radio.

Most of the people of Pandeglang district obtain disaster-related information from electronic media such as TV and radio. The media selection for delivering disaster-related information to the public should be reconsidered. This finding is still in line with the digital literacy report by (authors). That there are still many people who believe more in news sources coming from television because there are transparent news sources besides clear and complete data. They believe that the news is trustworthy (24).

In handling disasters, Indonesia has a legal umbrella, namely the Law of the Republic of Indonesia Number 24 of 2007 concerning disaster management (12). In the disaster management law, the government has given a mandate to formulate planning and development based on disaster mitigation. In its implementation, the regional apparatus that carries out the tasks and functions of disaster management in the region is the Regional Disaster Management Agency and the Fire Department (4).

The Regional Disaster Management Agency and the Fire Department have duties and functions in regional disaster management, which have been stated in the Pandeglang Regent Regulation 123 of 2021 concerning the position, organizational structure, task details, and functions work procedures. The function of the Regional Disaster Management Agency and Fire Department of The Pandeglang Regency is as an agency that establishes guidelines and directions for disaster management, fire and rescue efforts, which also includes prevention, and it functions in setting standardization of disaster management needs, compiling, and also establish and inform disaster-prone maps.

One of the efforts in disaster mitigation and also the preparedness of the central government through the Regional Disaster Management Agency is to encourage the formation of a strategy for the
formation of a disaster-resilient village which has been stated in the Head of BNPB Regulation No. 1 of 2012 (25). However unfortunately, during the COVID-19 implementation, this Disaster-Resilient Village had obstacles in its implementation. Disaster or what is called Destana, the Pandeglang district has several other programs that become other assistance programs, namely Disaster Safe Schools, Disaster Prepared Youth, and Disaster Prepared Villages (26).

One of the steps that can influence awareness in the community of disaster problems is the delivery of information that can be easily digested and understood by the community. However, this study discovered many disasters information from the government through the media has side effects that make people confused and also misunderstand. BPBD and the Center for Disaster Management Operations Control (PUSDALOPS), as responsible party, should pay attention to two-way communication, especially during disaster preparedness situations.

**CONCLUSION**

This study concludes that the knowledge of the people of The Pandeglang Regency’s knowledge of the types of disasters is still lacking, and this needs to be considered because knowledge related to the types of threats or types of disasters can affect a person’s preparedness for disasters. Many people in The Pandeglang Regency still do not know the emergency number. Hence, many people do not prepare their emergency items. Socialization or any activity that aims to improve disaster knowledge should provide an understanding of the importance of storing emergency numbers and preparing emergency goods for people living in disaster-prone areas.

Several disaster-related programs, such as Resilient Village, Safe School, Preparedness Youth, and Prepared Village, are policies issued by the central government and implemented by the Pandeglang district government to reduce disaster risk.

**RECOMMENDATIONS**

In delivering information to increase public understanding regarding disasters, the Regional Disaster Management Agency and The Center for Control of Disaster Management Operation need to pay attention if most of the people of The Pandeglang Regency get information through social media. However, through electronic media, disaster information dissemination needs to be done, with the hope that information conveyed through advertisements, campaigns, or radio broadcasts can be understood easily by the people of the Pandeglang Regency. Further research assesses the preparedness level of the people of The Pandeglang Regency to face the next disaster, which is assessed from the seven indicators of preparedness.

**REFERENCES**


