Study on community capacity of south lampung in dealing with disaster

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Abstract. The high potential of disasters coupled with the increasing number of people who are vulnerable and the inability to deal with disasters causes the risk of disaster is still relatively high. To reduce disaster risk, disaster management actions need basic information including the level of disaster risk and the ability of the community to deal with disasters. This study aims to: (1) identify public knowledge related to earthquake and tsunami disasters, (2) identify disaster emergency response, and (3) analyze community capacity in dealing with disasters that occur in the South Lampung region. The method used to achieve these objectives is explorative-survey, with a geographic approach that is the territorial approach. The population in this study were all regions in South Lampung (Kalianda Regency and Kota Agung and Rajabasa). The observation sample was determined by using purposive sampling technique in each region. Data collection is done by observation, interview, literature study, and documentation using percentage analysis. The results showed that in general the people of South Lampung have the capacity to deal with disasters in terms of knowledge aspects of disaster and emergency response when a disaster occurs.

1. Introduction
The geological, geomorphological and climatic characteristics of the Indonesian archipelago which are at the confluence of three large tectonic plates that are active and collide with each other, supported by variations in relief configurations, with a wet tropical climate causing a high potential for natural disasters. Various catastrophic events that have occurred have caused property losses and fatalities in an insignificant amount. This situation shows that the risk of natural disasters in Indonesia is still quite high. Apart from the many types of hazards that threaten, disaster risk is also caused by the increasing number of people who are vulnerable to disaster threats and the low ability of the community to deal with disasters [1,2]. As mandated in Law Number 24 Year 2007 concerning disaster management and PP Number 21 Year 2008 concerning the implementation of disaster management, disaster risk can be reduced by taking disaster management actions. For people who are in areas with high disaster potential, disaster management is one of the basic needs. Given that disasters always occur in Indonesia and disaster risk is still relatively high, disaster management including disaster risk assessment needs to be implemented immediately. To support these efforts, it is first known areas that are vulnerable and at high risk of disaster, therefore mapping of disaster-prone areas as well as the level of disaster risk becomes the basic basis in supporting the implementation of disaster management [9,10].

South Lampung Regency is a natural disaster-prone area. Almost all sub-districts in the tip of Sumatra regency have the potential for natural disasters, such as tsunamis, tidal floods, landslides, tornadoes and fires. The geographic location of South Lampung Regency which is surrounded by beaches and mountains makes Lamsel categorized as natural disaster-prone. The coastline sub-districts...
are prone to strokes, tidal floods and abrasion. Such as Ketapang District, Bakauheni, Rajabasa, Kalianda, Sragi, Sidomulyo and Katibung [3]. Furthermore landslide-prone areas are the Districts of Rajabasa, Penengah and Bakauheni because this area is under the foothills of Rajabasa. Then the potential for catastrophic floods is in the Districts of Natar, Sidomulyo, Tanjungsari, Tanjungbintang, Katibung, Candipuro, Palas, Sragi and Bakauheni. While the potential for tornado disasters can occur in all areas of South Lampung. At this time BPBD South Lampung has 75 personnel who are ready to jump into the field at any time. A number of personnel currently have been placed in disaster management posts that have been established such as Ketapang and Natar Districts [3]. In disaster management, disaster risk identification provides information, direction, and consideration for making various policies related to disaster management such as mitigation, evacuation in disaster emergency situations, as well as post-disaster rehabilitation and reconstruction. The current disaster management paradigm which tends to emphasize pre-disaster aspects also requires disaster risk assessment.

The ability to deal with disasters is one aspect that is used in disaster risk assessment in addition to the danger and vulnerability of disasters. The ability to deal with disasters is an important aspect because it comes from within the community itself and tends to change the situation from time to time. This is different from danger and vulnerability which are relatively difficult to change and reduce. With risk and capability assessments in dealing with disasters, including hazard and vulnerability studies, then disaster management directives can be prepared, particularly disaster mitigation and preparedness [4-6]. Therefore, based on the facts above, this research focuses on how the capacity of the people of South Lampung in facing disaster. This research aims to (1) identify community knowledge related to earthquake and tsunami disasters, (2) identify disaster emergency response, and (3) analyze community capacity in responding to disasters that occur in the South Lampung region.

2. Method
This research uses explorative-survey method. Data collection is done by using a sample that is expected to represent the population under study. This research was conducted with a geographic approach that is a regional approach which also includes spatial and ecological approaches. The geographical concepts used include location, distance and accessibility, interaction, and distribution in space. While the geographical principles used in this study are location and distribution, interrelation and network systems, as well as structure patterns, functions, and processes. Population and Sample The population in this study is the entire South Lampung region and its socio-cultural elements. Sampling was done by purposive sampling technique in each area that experienced an earthquake or tsunami. Research on seismicity was carried out in the Agung City and Rajabasa areas, while for the Tsunami it was conducted in the Kalianda area of South Lampung. Research population of all communities living along the Kalianda coast. The number of samples is 144 families. Data collection tools using questionnaires and data calculated by percentage techniques.

The analysis is carried out with a percentage on basic knowledge about disaster and emergency response. Disaster knowledge consists of knowledge 1) causes of earthquake disasters, 2) earthquake-prone areas, 3) earthquake-prone buildings, and 4) natural signs as identification when the earthquake and tsunami disaster process occurs. Whereas emergency response knowledge, measured by indicators 1) knowledge of high risk family members, 2) evacuation routes, 3) evacuation sites, 4) disaster response training, 5) communication tools, 6) emergency monitoring equipment, and 7) number of institutions that can be contacted.

3. Results and Discussion
Tsunami events are caused by earthquakes, both by tectonic earthquakes and volcanic activity at sea. Tectonic earthquakes always occur in the area where two plates of the Earth meet, by both vertical and horizontal movements. The meeting of two plates is in the south of the Indonesian Archipelago which extends from Sabang to Merauke. As for volcanoes in the sea, one of them is in the Sunda Strait, namely Mount Krakatoa. Seen from the source of the earthquake, it means that in Indonesia the potential for an earthquake to cause a tsunami is very high [7]. Areas affected by tsunamis always occur in coastal areas.
The State of Indonesia is an island nation or a maritime country, which means the land area is surrounded by beaches. According to BIG data, the length of the coast in Indonesia is 99,093 kilometers [8]. Based on the length of the coast, the area affected by the tsunami in Indonesia is quite extensive and spread across several islands. Almost all large and small islands in Indonesia are inhabited by residents. Except for a very small island that does not allow it to be a residence so there are no inhabitants. On each of the large and small islands, many settlements are located on the coast. Likewise at this time with the development of tourism many tourist sites use the beach as a tourist destination. With the large number of residents living near the beach and coastal tourism activities, there will be many Indonesians who will be at risk of loss of life, injuries during the tsunami. The death toll from the tsunami during the last 15 years in Indonesia is quite fantastic. More than 250,000 people were killed in 2004 in Aceh Province. Then 2 years and the last 1 year, fatalities befall people who live near the beach in Palu and people in the Sunda Strait area, namely in Anyer Beach, Banten Province and in Kalianda Beach. In the area of Anyer Beach, especially many fatalities from people who are traveling. Although there are many areas that have the opportunity to be affected by the tsunami, the loss of life and property such as those already experienced need not be repeated. How to suppress it, the community must recognize: potential sources of tsunamis, places prone to be exposed and safe from tsunamis, recognize signs of tsunamis, be skilled at evacuating, know evacuation routes, family members who should receive primary attention during a tsunami, have communication tools, have relevant agency contact numbers. In coastal areas there must be a tsunami warning tool, the agency responsible for providing information and individually having the ability to mobilize resources. At the end of 2018, Kalianda was one of the coastal areas in Lampung Province that was affected by the tsunami. As many as 24 people have become victims. The names of victims are enshrined in a monument on the beach. All victims are natives in the area living along the coast. Half of the victims were those consisting of children under five and elderly, over 60 years. This soul victim is attracting attention to conduct research in the Kalianda area.

3.1 Earthquake disaster knowledge
Community knowledge about earthquake disasters can be started with several indicators. In this study, knowledge indicators are focused on the knowledge of the causes of earthquakes, awareness of earthquake-prone areas, knowledge of earthquake-prone buildings, and knowledge of natural signs as an identifier when an earthquake or tsunami disaster occurs. In this study, knowledge of the causes of earthquakes that were asked to the public was only related to volcanic activity, landslides, and active faults. Knowledge of the causes of the earthquake caused by the meeting of the two plates is not asked to the public because the community already knows. Faults can rub horizontally and vertically. Horizontal movements may be very difficult to be known by the public directly because the event rarely appears, so it does not become an experience for him. Thus, a fault that moves vertically is estimated that events are rarely experienced by the community during his lifetime. In stark contrast to the eruption and landslide events. The eruption of mountains and landslides almost every year in the news. But vertical and horizontal fault movements are not broadcast like the two natural events above.

| No | Causes of Earthquakes | Knowing F | Knowing % | Not Knowing F | Not Knowing % |
|----|-----------------------|-----------|-----------|---------------|---------------|
| 1  | Mountain eruption     | 33        | 75        | 11            | 25            |
| 2  | Landslide             | 32        | 73        | 12            | 27            |
| 3  | Fault                 | 6         | 13        | 38            | 87            |

Judging from the statement above, more than 70 percent of the people of South Lampung know that volcanoes erupt and landslides in large numbers can trigger earthquakes. However, 87 percent of the people did not know of active faults as the cause of the earthquake. Ignorance of fault areas can cause earthquakes, allegedly by the experience and knowledge gained at school. Faults can rub horizontally and vertically. Horizontal movements may be very difficult to be known by the public directly because the event rarely appears, so it does not become an experience for him. Thus, a fault that moves vertically is estimated that events are rarely experienced by the community during his lifetime. In stark contrast to the eruption and landslide events. The eruption of mountains and landslides almost every year in the news. But vertical and horizontal fault movements are not broadcast like the two natural events above.
Rarely getting earthquake experience from a cesarean event could be the cause of the lack of public knowledge in this area. In terms of the knowledge of the Vulnerable Areas Affected by the Earthquake, it is known that what is still not widely known by the people of South Lampung is the fault area or fault area. While people in this area live in the fault area known as the Semangko Fault. Areas that are close to fault areas are areas that are more vulnerable to damage in the event of an earthquake [9]. In Table 2 below is a statement of public knowledge about it.

| No | Knowledge Vulnerable to Earthquakes | Knowing F | % | Not Knowing F | % |
|----|------------------------------------|----------|---|---------------|---|
| 1  | 1 km away from the fault area       | 14       | 32| 30            | 68|
| 2  | 5 km away from the fault area       | 10       | 23| 34            | 77|
| 3  | 75 km away from the fault area      | 12       | 27| 32            | 73|

Based on the statement above, more than 70 percent of the people do not know the dangerous distance from the fault line. Ignorance of the vulnerability to damage in the event of an earthquake can be caused by knowledge of the fault and its fault areas as the community statement described in the first table. Judging from the aspect of knowledge of Vulnerable Buildings to Earthquakes, based on field observations, buildings that were erected by the community, especially buildings for shelter, have different resiliencies. Buildings made of walls but bones made of iron are more easily collapsed than buildings made of wood or bamboo in the event of an earthquake. Knowledge about buildings like this needs to be owned by the community in areas that are potential for earthquakes. Following is the statement of the public regarding buildings vulnerable to earthquake shocks. 38 percent of the people in the area know about buildings, which are vulnerable to damage from earthquakes.

As for aspects of natural signs as an identification of earthquake or tsunami processes, data based on Animal Behavior knowledge is obtained when an earthquake will occur. Animals have a high sensitivity, when an earthquake will occur, Is an earthquake caused by a volcanic eruption or an earthquake caused by a shift in the earth's layers. Mountain animals such as monkeys, pigs, snakes or other animals will move from their habitat to move to another place if the mountain where the animal lives will erupt. Likewise, fish in the sea will head to the beach if in the area where their lives will occur an earthquake. Signs of animal behavior like this can be a clue for people to be aware of in their area that an earthquake will occur. Following is the knowledge of the community to recognize the natural signs mentioned above. As many as 40 percent of people know the signs of animal behavior. From the statements of the people of Lampung regarding earthquake knowledge measured through the four indicators above, it shows that:

a. The 3 causes of earthquakes, namely fault areas, volcanic eruptions and landslides, which are widely known by the people of Lampung are earthquakes caused by volcanic eruptions and land avalanches, but do not yet know much about fault areas or faults.
b. From 3 knowledge of the distance the fault area is vulnerable to damage due to an earthquake, some people do not know that the fault area or area is very dangerous places if an earthquake occurs.
c. More than half of the people of South Lampung do not yet know of buildings that are vulnerable to damage in the event of an earthquake.
d. More than half of the people of South Lampung do not yet know animal behavior as a sign of an earthquake.

3.2 Tsunami Disaster Knowledge

As has been stated in the background that the tsunami disaster claimed many lives of the people of Indonesia. To reduce the risk of casualties caused by the disaster, the people who live near the coast need to know the source of the cause of the tsunami, the areas prone to tsunami impacts and recognize the signs of a tsunami. Table 3 below will describe the knowledge capacity of tsunami sources. Based on the statement in table 5 above, 65 percent of Kalianda people know the cause of the tsunami. The most well-known causes of tsunamis are underwater volcanic eruptions, then earthquakes and
underwater landslides. The cause of the tsunami caused by volcanoes is more widely known by the people of Kalianda, estimated to be related to direct experience of natural phenomena that occurred in the region recently. Krakatau Mountain is one of the volcanoes in the sea around Kalianda.

Based on the statement above, it shows that overall, on average, more than 70 percent of the population knows areas that are vulnerable to tsunami disasters. But from the area in question, the river area which is affected by tides, half of the people do not know that the area is very vulnerable to the tsunami. It is estimated that the size of the community knows areas that are prone to less prone due to their latest experiences. One year ago, this area was hit by a tsunami. Houses that are a few meters from the mouth of the beach are heavily damaged compared to houses that are located some distance from the beach. Likewise, the location of houses in higher areas, even though facing the mouth of the beach is not damaged. Many of the victims died were those who lived in houses directly opposite the beach in the lowlands. It is suspected that this direct experience has become a knowledge for the Kalianda community. As for the knowledge of rivers affected by the tides, half of them do not know the area as dangerous as the area directly facing the coast, it is estimated that in this area there are no large rivers leading to the sea, so that experience does not shape the knowledge of half of the people in this area.

Table 3. Knowledge capacity of tsunami causes in Kalianda community in South Lampung.

| Statement                        | Knowing | Not Knowing |
|----------------------------------|---------|-------------|
| Underwater earthquake            | 96      | 48          |
| Eruption of underwater volcano   | 105     | 39          |
| Underwater landslides            | 79      | 65          |

As for the capacity of the community's Knowledge in Recognizing the Signs of a Tsunami, data is obtained that before the tsunami will be preceded by an earthquake first. A natural sign after an earthquake that will cause a tsunami is the receding of sea water several meters to hundreds of meters from the coast. After the phenomenon occurred next was a roar coming from the sea. Communities around the coast, both natives and migrants who are going on tours need to know the signs of the tsunami. Knowing these signs can reduce casualties for people who are around the coast. These two natural signs are sometimes not observed as they did in Banten and Kalianda in 2018. According to information, the two signs escaped the observation of the community around the coast so that many people were shocked and panicked and did not have time to do protection. Many casualties in the Banten and Kalianda areas because these two signs were not observed earlier by the surrounding community. Table 4 below is the statement of the people in the Kalianda area in recognizing natural signs of a tsunami.

Table 4. Knowledge Capacity of Kalianda Community in Recognizing the Sign of a Tsunami

| Statement                                | Knowing | Not Knowing |
|-----------------------------------------|---------|-------------|
| Low tide a few meters from the mouth of the beach | 121     | 23          |
| Rumbling from the sea                   | 110     | 34          |

Based on the statement above, more than 80 percent of Kalianda people know of the two signs of a tsunami. This shows that knowledge about tsunami signs is already known by most people in this area. The large number of people who already know the signs of a tsunami will be an indication that the alert to face a tsunami disaster in this area is already good. There is a possibility that many people died in the communities along the Kalianda beach, due to the signs of the tsunami which escaped the public's observation so that they did not have time to save themselves. Most of the Kalianda people know that signs of a tsunami are something that is expected by all parties, both the government and the general public. Because by getting to know these signs can be used as a guide to casualties in the community in this area in the future can be minimized or reduced. Judging from the three kinds of indicators of
community knowledge in recognizing sources, hazard-prone areas will be affected and signs of a tsunami will occur in the Kalianda community, most people already know it.

3.3 Emergency response
Emergency response knowledge, measured by the following indicators: knowledge of high risk family members, evacuation routes, evacuation sites, disaster response training, communication tools, emergency monitoring equipment, and number of institutions that can be contacted [11]. The community statement regarding the above indicators is as listed in Table 5 below.

| Statement                                      | Knowing F | Knowing % | Not Knowing F | Not Knowing % |
|------------------------------------------------|-----------|-----------|---------------|---------------|
| Children, elderly, pregnant women              | 38        | 86        | 6             | 14            |
| Evacuation routes for families                 | 20        | 45        | 24            | 55            |
| Places for family evacuation                   | 18        | 41        | 26            | 59            |
| Attended evacuation training                   | 7         | 16        | 37            | 84            |
| Have communication tools                       | 23        | 52        | 21            | 48            |
| Have an emergency monitoring device            | 40        | 91        | 4             | 9             |
| Has a BPBD contact number                      | 5         | 11        | 39            | 89            |
| Have Hospital contact number                   | 11        | 25        | 33            | 75            |
| Have a Police contact number                   | 7         | 16        | 37            | 84            |

Based on the table, seen from the knowledge of the emergency response above as a whole 41 percent knew and 59 percent did not know. Knowledge that is widely known by the public is family members who are vulnerable to the effects of the earthquake and tools to monitor emergencies such as radio and television. This knowledge is more than 85 percent of the community owns and knows evacuation routes, evacuation sites and has communication tools in the event of an earthquake emergency. However, most of the people, namely more than 75 percent did not know how to evacuate because they had never attended training; do not know the contact number of BPBD, Hospital and Police; because it does not have the contact number or does not have the number of the related agency. The disaster warning system is measured by two indicators, namely modern and traditional earthquake warning devices in the area and the institution responsible for providing information. The community statement through the two indicators is presented in Table 6 as follows:

| Statement                                      | Knowing F | Knowing % | Not Knowing F | Not Knowing % |
|------------------------------------------------|-----------|-----------|---------------|---------------|
| Earthquake warning equipment by government agencies | 6       | 14        | 38            | 86            |
| Government agency earthquake warning information sources | 12      | 28        | 32            | 72            |

Based on community warnings, the government has more than 80 percent of the earthquake warning tools and sources of earthquake information. Nearly 86 percent of the public did not know of the earthquake warning equipment owned by the government and 72 percent did not know of the earthquake information provider. This shows that the disaster warning system is little known by the people of Lampung. Resource mobilization is an important part of an earthquake emergency. This resource mobilization is measured by 3 indicators, namely: attending meetings related to earthquake events, preparing funds to deal with emergencies, and having relatives who can help and receive in an emergency. Public statements relating to the three indicators above are as follows.

As many as 91 percent of Lampung people have never attended earthquake training meetings or training. This means that almost all Lampung people have never mobilized family members to prepare
for an earthquake emergency. As many as 80 percent of Lampung people do not have the funds intended to prepare for emergencies due to an earthquake. However, as much as 75 percent have family members to be able to accept in case of an emergency. The capacity of Tsunami Disaster Response in Kalianda Community in South Lampung can be characterized by the capacity to conduct evacuations and respond to disasters. Life safety from a tsunami event, is not sufficiently supported by knowledge of knowing the source of the disaster, knowing areas of the disaster-prone areas, and signs of a disaster, but the speed of saving themselves, their families and all communities is a very decisive contribution as well. The speed of saving themselves is supported by at least 2 (two) things, namely: (1) The ability to evaluate and (2) having the tools and numbers of the relevant department. The ability to evaluate is measured by having attended training, knowing the evacuation route, where to evacuate, family members who should receive major attention during a tsunami. Having tools and the number of related institutions is measured by the existence of communication tools that can be used, access to get information and contact numbers with the relevant institutions. In Table 7 below the community statement relates to the evacuation response capability of the Kalianda community.

### Table 7. Capacity or ability to evacuate family members in the Kalianda community

| Statement                                      | Knowing |  | Not Knowing |  |
|------------------------------------------------|---------|---|-------------|---|
|                                                 | f       | % | f           | % |
| Have followed the method of evacuating victims  | 35      | 24 | 109         | 76 |
| Evacuation routes                               | 113     | 78 | 31          | 22 |
| Evacuation sites                                | 127     | 88 | 17          | 12 |
| Children, the elderly take precedence when evacuating | 119 | 83 | 25          | 17 |

Based on the statement on Table 8 above, less than 25 percent of Kalianda people have never attended a victim evacuation training. However, more than 80 percent of the people already know the pathways for evacuation, places to evacuate and family members who must take precedence when facing an emergency. The large number of residents knows the route and place of evacuation as well as family members who must take precedence in dealing with emergencies already shows the preparedness of the Kalianda community in dealing with disaster emergencies is quite good. The speed of contact with various parties is an important part when facing a disaster emergency. Communication tools that can be used and important numbers that can be contacted are part of the elements that can save lives. The faster you can contact important numbers whether it is your family or related institutions, the goal of saving lives will soon be overcome. Therefore, having communication tools and having important numbers that can be contacted is part of the disaster emergency response. Below is the statement of the community regarding the communication response capacity of the Kalianda community.

### Table 8. Communication capacity with related offices in the Kalianda community.

| Statement                                      | Knowing |  | Not Knowing |  |
|------------------------------------------------|---------|---|-------------|---|
|                                                 | f       | % | f           | % |
| Communication tools                             | 119     | 83 | 25          | 17 |
| Access to information (Radio / TV)              | 86      | 59 | 58          | 41 |
| Contact number BPBD                             | 11      | 8  | 133         | 92 |
| Hospital contact number                         | 23      | 16 | 121         | 84 |
| Police contact number                           | 21      | 15 | 123         | 85 |

Based on the statement of Table 8 above, more than 80 percent of the people have communication tools, 59 percent of the people have tools to access information from TV and radio. However, on average less than 10 percent of people have contact numbers with local disaster management agencies, 16 percent have hospital contact numbers and 15 percent have police contact numbers. At least the community that has an important number of related institutions is suspected to have something to do with the function of agency services. All these important institutions are public service institutions where numbers can be found in public places as well. Contacting agencies can be helped by other communities. So that it is
not difficult to get an Institution number and easily get help from others, important numbers that can be contacted during an emergency can be judged not need to be owned privately.

Aside from the service function of the institution, it is also suspected to be related to disaster events that are difficult to predict, and these institutions will always be present to serve every disaster without having to be contacted. With disaster prediction difficult to predict, people will ignore each event, so it may be negligible to have contact numbers from the institution [11]. Likewise in the event of a disaster, the relevant institution will present itself to the scene without having to be contacted. The presence of the institution itself to the disaster sites, can neglect to have contact numbers listed in the personal communication tool in every community member in this area. Judging from the capacity of the emergency response, the Kalianda community is good, both in the ability to evacuate, in having communication tools and access to information. However, it is not good to have important contact numbers of related institutions. Another important factor among the many factors that must be prepared by communities in areas prone to being affected by the tsunami, is the ability to mobilize resources. Resource mobilization must be prepared, namely: preparing family members for training, preparing emergency funds, and relatives who can help. The Table 9 below is a statement of the Kalianda community regarding the mobilization of the resources they have.

**Table 9.** Mobilization of resources owned by the Kalianda community when experiencing a tsunami disaster

| Statement                                                      | Owning F | %   | Not Having F | %   |
|---------------------------------------------------------------|----------|-----|--------------|-----|
| Have family members who have attended tsunami alert training  | 32       | 22  | 112          | 78  |
| Deposits that can be used when facing a tsunami disaster       | 56       | 39  | 88           | 65  |
| Families who are ready to accommodate when experiencing a disaster | 108      | 75  | 36           | 25  |

Based on Table 9 of the community statement above shows that 78 percent of the population does not have family members who have participated in tsunami disaster preparedness training. 22 percent of the population has family members who have participated in tsunami disaster preparedness training. Tsunami alert training for people living along the Kalianda coast is very important because at all times the people in this area must always be on alert. Having a family that has received training will simplify and speed up handling during an emergency. The speed of handling carried out by each family can reduce the death toll on each family. Likewise, the availability of funds owned by the family can be used when facing an emergency can reduce the burdens regarding the needs needed in an emergency. With many people stating that they do not yet have family members involved in training when facing a disaster, government agencies need to immediately disseminate disaster preparedness training to the Kalianda community.

To reduce the risk of a tsunami disaster, tools need to be provided that provide warning signs as well as the institutions responsible for providing appropriate information to the community. The existence of the tools and institutions responsible for this is very important for the community because the certainty that a disaster will occur can be known in advance by the community. So that people will be quick to save themselves. Speed to save themselves means reducing the risk of loss of life to the community. Likewise, the existence of an institution responsible for providing information will provide accuracy, certainty, trust and calm to the community. The existence of this institution at the time of the disaster can reduce panic and unrest in the community. In Table 10 below, the community statement relates to the availability of tsunami warning equipment and the existence of a responsible agency providing information.

**Table 10.** Capacity of tsunami warning systems and information providers in the Kalianda area

| Statement                              | Owning f | %   | Not Having f | %   |
|----------------------------------------|----------|-----|--------------|-----|
| Tsunami warning devices in this area    | 38       | 26  | 106          | 74  |
| Institutions providing tsunami information resources | 64       | 44  | 80           | 56  |
Based on the statement in Table 10 above, 26 percent of the population stated that there was a tsunami warning device in their area and 44 percent of the community stated that there were other tsunami / disaster information providers. At least the community who stated that there was a tsunami warning device was suspected to have only been installed in certain places and not yet installed elsewhere or did not know. So that the people in the area have not installed the tools or do not know, do not mention it. However, information providers in this area, almost half of the people said that they existed. Judging from the 2 (two) indicators of the tsunami warning system [12], the outline has only reached 35 percent. Seeing that the capacity of the information system has only reached 35 percent, then in the area along the inhabited Kalianda coast, if a warning device has not been installed, the station is added and disseminates information-giving institutions to the community. Because of the existence of a warning system in tsunami-prone areas, its role is significant in reducing the number of victims, as well as in reducing panic for its people.

4. Conclusion
The capacity of the community in dealing with disasters in South Lampung in general starts with basic knowledge about disaster and emergency response. Disaster knowledge consists of knowledge of causes, vulnerable areas, vulnerable buildings, and natural signs as an identifier when the earthquake and tsunami disaster process occur. Whereas emergency response knowledge, measured by indicators of knowledge of high-risk family members, evacuation routes, evacuation sites, disaster response training, communication tools, emergency monitoring equipment, and number of institutions that can be contacted. Disaster response capacity in communities living along the coast of Kalianda, South Lampung in general has knowledge of tsunami disaster, the ability to evacuate and mobilize families, but the capacity is not good in having contact numbers of related institutions, in having a tsunami warning tool, in mobilizing families attend training on tsunami preparedness and mobilize disaster emergency funds.

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