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Natural Disaster Mitigation Values in Discourse: The True Story of the Acehnese Tsunami Victims

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Abstract

This article aims at investigating natural disaster mitigation values in Acehnese Tsunami Victims. Natural disaster mitigation is an important issue for people who live in disaster-prone countries such as Indonesia. The hermeneutical approach was employed in this study to reveal the values of disaster mitigation contained in the true storybook of the survivors of the Earthquake and Tsunami that occurred on 26 December 2004. The results of this research indicated that there are eighteen values of natural disaster mitigation, with details of 9 mitigation values about what to do when a tsunami occurs, three mitigation values about what should be avoided, and six mitigation values about preventive measures to reduce tsunami risk. Finally, this research reveals that these empirical facts can strengthen the theories and concepts of mitigation of the Earthquake and Tsunami disaster and as a reference to various educational contexts.

Keywords: disaster, mitigation, value, survivor, Aceh, Tsunami.

1. Introduction

Indonesia is in the red zone of natural disasters due to its geological location (Murtianto, 2010; Banowati, 2013; Hermon, 2015; Gadeng, 2017). First, Indonesia is located where three plates, the Eurasian plate, Indo-Australian plate, and Pacific plate, meet (Murtianto, 2010; Banowati, 2013; Hermon, 2015; Gadeng, 2017). Second, Indonesia also contains many active faults (Gadeng, 2017). Three, Indonesia is located on the ring of fire, so it has many active volcanoes (Banowati, 2013; Gadeng, 2017). This geological condition, as been explained above, is spread in all regions of Indonesia, so Indonesia has become a country which is highly vulnerable to natural geological disasters, such as earthquakes, tsunamis, volcanic eruptions, landslides, floods and heavy floods and drought disasters (Gadeng, 2017; Gadeng *et al*., 2019a).

Likewise, the geological conditions in Aceh Province, as stated by Gadeng (2017:2), are: First, Aceh Province is located between two active plates in the world, namely the Indo-Australian Plate and the Eurasian Plate. Second, Aceh Province is traversed by a fault line or active fault known as the Sumatran Fault (Semangko Fault). Third, Aceh Province is also crossed by Bukit Barisan and ends in Lampung Province, which is at the tip of the island of Sumatra. Fourth, Aceh Province is also traversed by the Mediterranean Circum, so in Aceh Province, there are five active volcanoes, namely Mount Jaboy in Sabang City, Seulawah Agam Volcano in Aceh Besar District, Peut Sagoe Volcano in Pidie Jaya Regency, Geureudong Volcano, and Mt. Burni Telong Fire in Bener Meriah Regency.

So, with these geological conditions, Aceh Province is very prone to tectonic earthquakes and volcanic earthquakes. The Earthquake and Tsunami disaster that occurred on 26 December 2004 in the Indian Ocean was one of the most extensive damages in history. The disaster was caused by the collision of two plates under the province of Aceh, namely the Indo-Australian Plate and the Eurasian Plate. This was the second largest earthquake after the eruption of Prince William Sound in Alaska in 1964, with a magnitude of 9.2 on the Richter scale (Arthuloka and Budi, 2005).

The earthquake and tsunami on 26 December 2004 in Aceh province did destroy not only infrastructure but also killed a massive amount of people. The ruined houses and buildings due to the earthquake and tsunami reached 1,3 million units, and an overall death reach of 300,000 people (Budiman dan Subandono, 2007; Tejakusuma, 2005; Rofi *et al*., 2006; Shofiyati, 2005; Gadeng *et al*., 2018; Gadeng *et al*., 2019b; Gadeng *et al*., 2019c).

The effects of the Earthquake and Tsunami in Aceh caused more than 250 thousand people to die, and infinite damage also occurred to infrastructure networks, public facilities, schools, and human settlements (Pathirage, 2008). The death toll in Aceh was 165,708, with estimated material losses of 4,747 million US dollars. The highest number of deaths occurred in Banda Aceh, accounting for 22.2% of the total death toll (Doocy, 2007).

There are high numbers of people in Indonesia who become victims of various natural disasters occurred (injured or dead). The death is caused by a lack of preparedness in facing disaster. It is because people do not know the correct procedure for natural disaster mitigation. As natural disasters frequently occur in Indonesia, people are expected to be more aware when facing various natural disasters (Gadeng, 2017; Gadeng *et al.*, 2019a).

Human and environmental resources lost by a disaster are not easy to replace. There were approximately 2,640 teachers from a total of 22,615 in Aceh province (Syah, 2011). Following thousands of children were orphaned, lost their friends and relatives, and more became homeless, even some who are now grown up in a relative host hold in a different tribe, nation, race, and even religion. It was not to mention the other psychological effects of the victims that affected his personality now and in the future.

The story of the devastating Earthquake and Tsunami in Aceh has been documented in a book of true stories or testimonies of victims of the Earthquake and Tsunami. Yusuf *et al.* (2006) found that the book "Tsunami dan Kisah Mereka" ("Tsunami and Their Story") loads recording actual events experienced by victims who were struggling with the tsunami. The recording of this tragic event is one of the historical records of various other historical accounts of the Tsunami disaster. This book becomes one of the memories for humanity as momentum to reflect on what happened on 26 December 2004.

This study examines the message contained in the discourse of testimony of the victims of the Earthquake and Tsunami of Aceh. In particular, this research discovers, explores and elaborates disaster mitigation values explicitly and implicitly in the text contained in the book of the true story. The message of disaster mitigation is a cultural experience of the people of Aceh that will benefit the rest of the world in the face of big disasters, especially earthquakes and tsunamis.

Tsunami-related research in Aceh has been widely practised by (Pearce *et al.*, 2006; Gaillard *et al*., 2008; Kitzbichler, 2011; Syafwina and Kobayashi, 2011; Rauzi and Nobuyuki, 2013; Gadeng *et al.*, 2018). In most research of the international context, no one has examined the values of disaster mitigation in the context of discourse. In Indonesia, research on disaster mitigation in the context of discourse has already been conducted (for example, Permana, 2011; Thene, 2016; Lelono; 2015; Maskud, 2016; and Sukmawan *et al*., 2017). The value of disaster mitigation is excavated from local wisdom contained in literary discourse or cultural tradition. The smong local wisdom in Simeulue regency, Aceh province, has a close relationship with tsunami disaster mitigation traditionally, and has been delivered through the poems contained in manafi-nafi (folklore), mananga-nanga (a lullaby), nandong (humming), which have been introduced to the posterity from the cradle to the old age (Gadeng, 2017; Gadeng *et al*., 2018; Gadeng *et al.*, 2019b).

However, research exploring the values of disaster mitigation comes from the non-literature discourse is not exist in the literature. This is what distinguishes this research from previous studies. Non-literature discourse is based on facts and objective nature taken from science and the occurring phenomena. Knowledge is always associated with universal truths based on the research that has been done, such as the exact science and humanities. Non-literature discourse that becomes the source of this research data is a true story, so it has high rationality to become a reference in disaster mitigation.

The study on disaster mitigation is critical because many victims of natural disasters are caused by a low understanding of the community about disaster mitigation. Thousands of victims of the Tsunami of Samoa (2009), Chile (2010), Japan (2011), and Palu, Indonesia (2018) show that the community has not learned much from the Tsunami disaster that occurred. Pathirage *et al.* (2008) state that the number of human casualties can be eliminated if people have a good awareness of disaster. Preparing the community to be ready to face disasters is an important thing to do, such as educating the community to have knowledge and skills about the disaster as well as action to prevent the potential for disaster in the future.

Thus, the community needs to know about disaster mitigation efforts. Disaster mitigation is a variety of efforts or a series of actions that can be taken when a disaster occurs to save oneself from a disaster in order to reduce or minimise the potential negative impacts of a disaster. Disaster mitigation also includes both planning and implementation actions to reduce risk. The impact of a disaster carried out before a disaster occurs, including preparedness and long-term risk reduction measures. (Wells and Coppersmith, 1994; Nielsen and Lidstone, 1998; Handayani, 2011; Jokowinarno, 2011; Zakaria *et al*, 2011; Tondobala, 2011; Desfandi, 2014; Gadeng, 2017).

According to the regulation of the Republic of Indonesia, no. 24, the year 2007, the definition of mitigation is a series of efforts to reduce disaster risks, either through physical development or

awareness raising and capacity building facing the threat of disaster. The Minister of Home Affairs Regulation No. 33 of 2006 there are four important things in disaster mitigation, namely (1) available information and maps of disaster-prone areas for each type of disaster; (2) socialisation to improve community awareness and awareness in facing disaster because they live in disaster-prone areas; (3) knowing what needs to be done and avoided, and knowing how to save themselves if disaster arises, and (4) setting and structuring disaster-prone areas to reduce the threat of disaster. In tsunami mitigation, some actions must be taken and avoided by the community. Then some actions can be taken before, when and after a tsunami. All of them are done so that no community becomes a victim of the tsunami waves (Gadeng, 2017). This article investigates natural disaster mitigation values in Acehnese Tsunami Victims from the book "Tsunami dan Kisah Mereka" or "Tsunami and Their Story". In detail, this research problem is formulated: (1) What should be done when a Tsunami strikes? (2) What should be avoided when a Tsunami strike? (3) What preventive action needs to be taken to reduce the impact of the Tsunami disaster? (4) Where are the areas affected by the tsunami and evacuation location?

2. Research Method

This qualitative research investigates the values of disaster mitigation manifested in the words, phrases, and sentences contained in the discourse of testimony of the victims of the Earthquake and Tsunami of Aceh victims. The source of research data is from the book "Tsunami dan Kisah Mereka" or "Tsunami and Their Story", with 348 pages (Yusuf *et al*., 2006). Identification and interpretation of disaster mitigation values are undertaken within the framework of a qualitative approach. A qualitative approach is chosen because of several reasons: (1) it uses real-life texts, (2) researchers as key instruments (Bogdan and Biklen, 1982; Siddiqui and Suttee, 2019; Udenze, 2019), and (3) the exposure and discussion are descriptive-interpretative-explanatory (Denzin and Lincoln, 2009; Chenail, 2012; Politano *et al*., 2017; Celik *et al*., 2020), (4) it prioritises process rather than outcome, (5) the data analysis is done interactively, (6) the meaning is a significant concern (Lincoln and Guba, 1985; Frolova *et al*., 2016; Kapanadze, 2018).

Research data were analysed by using the hermeneutical interpretation method. This method is relevant for this research as it refers to Palmer's (2005) suggestion that hermeneutics is a study of understanding, especially the understanding of texts. Hermeneutics is tied to two things first to ensure the content and meaning of a word, sentence, and text. Secondly, to understand the instructions contained in symbolic forms (Bleicher, 2003: Ramakrishnana *et al*., 2015; Czakon, 2016; Kirschner, 2017; Zainol *et al.*, 2018). Thus, hermeneutics is closely related to interpretive activities and understanding of meaning. In this study, interpreted meanings are words, phrases, sentences, or texts that the victims tell of the Earthquake and Tsunami. The research location was in Aceh Province (Figure 1).

Astronomically, Aceh Province is located at 2000'00" -6004'30" North Latitude and 94058'34" -98015'03" East Longitude, with the provincial capital located in Banda Aceh, Aceh Province has an area of 56,758.85 Km² or 5,675 850 Ha in other words 12.26 per cent of the area of Sumatra Island, Aceh Province has an ocean area of 12 miles covering an area of 7,479,802 Ha with a coastline of 2,666.27 Km². In 2009, Aceh Province had 23 regencies/cities consisting of 18 regencies and five cities, 276 sub-districts, 755 residential areas and 6,423 kampongs or villages (Gadeng, *et al.*, 2020).

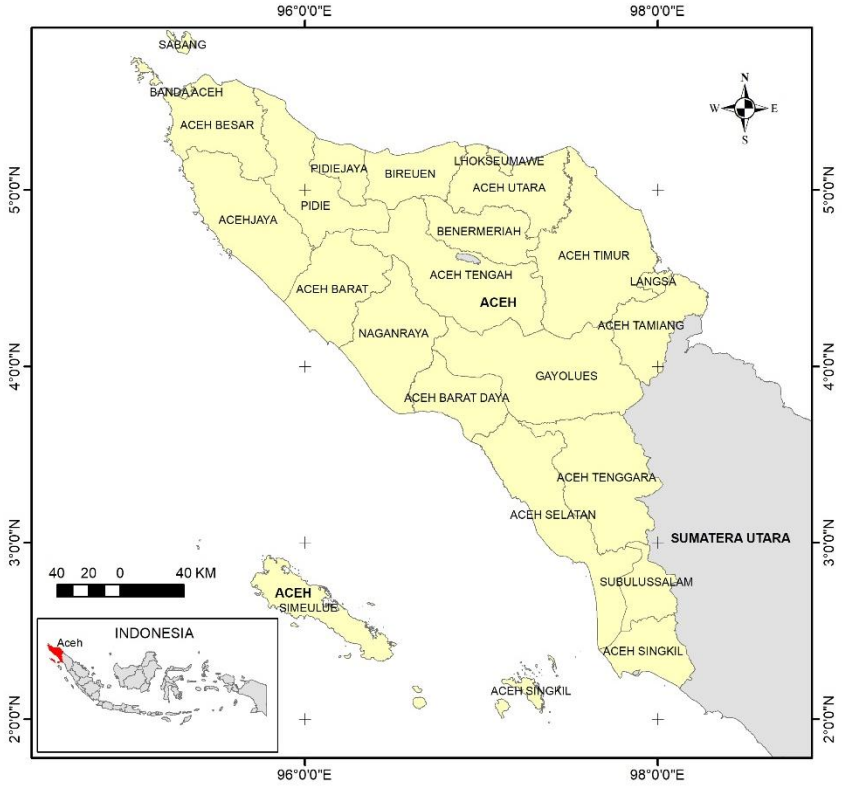

Figure 1. The Map of Aceh Province.

Aceh Province has topographic conditions ranging from flat to mountainous. Areas in Aceh Province which have flat to sloping topography are around 32 per cent of the total area of Aceh Province, while areas with hilly to mountainous topography make up about 68 per cent of the total area of Aceh Province. Areas with mountainous topography are located in the central part of Aceh Province, part of the Bukit Barisan mountain range and areas with hilly and sloping topography are located in the northern and eastern parts of Aceh Province (Gadeng *et al*., 2020).

Based on the condition of the topography of the region, Aceh Province has a flat topography (0-2%) spread along the west coast to the south and the north to the east coast of 24.83 per cent of the total area; sloping (2-15%) spread between the mountains of Seulawah and the Krueng Aceh River, on the West to the south coast and north to the east coast of 11.29 per cent of the total area; rather steep (15 -40%) by 25.82 per cent and very steep (> 40%) which is the ridge of the Seulawah Mountains, Mount Leuser, and the shoulders of the rivers that amount to 38.06 per cent of the total area (Gadeng *et al.* ., 2020).

Aceh province has an average height of 125 meters above sea level. The percentage of areas based on their altitude are: (1) Areas with an altitude of 0-25 MDPL are 22.62 per cent of the total area of Aceh Province (1,283,877.27 ha), (2) Areas with an altitude of 25-1,000 MDPL are 54.22 per cent of the total area of Aceh Province (3,077,445.87 ha), and (3) Areas with an altitude above 1,000 MDPL amounting to 23.16 per cent of the total area of Aceh Province (1,314,526.86 ha) (Gadeng *et al*., 2020).

So overall, the life of the people of Aceh Province divides the area into three parts, namely, First: East Coast Aceh Province, which consists of Sabang City, Banda Aceh City, Aceh Besar Regency, Pidie Regency, Pidie Jaya Regency, Bireun Regency, Regency North Aceh, Lhokseumawe City, East Aceh District, Langsa City, and Aceh Tamiang District. Second: Aceh Province, the Central Coast, which consists of Bener Meriah Regency, Central Aceh Regency, Gayo Lues Regency and Southeast Aceh Regency. Third: South West Coast Aceh Province consists of Aceh Jaya District, West Aceh District, Nagan Raya District, Southwest Aceh District, South Aceh District, Singkil District, Subulussalam City, and Simeulue District (Gadeng *et al*., 2020).

3. Results and Discussion

The research data was obtained from the book "the Tsunami dan Kisah Mereka" or "Tsunami and Their Story", which is the true story of the Earthquake victims and tsunami victims that occurred on 26 December 2004. This book contains 111 true stories of the Earthquake and Tsunami that were retold by victims who survived. The story of the victims in the select parts of the story contains the meaning of disaster mitigation. The story below is initially written in Indonesia. For this research, the story has been translated into English. This makes it easier to readers to understand the content of the story. Below is the mitigation value found in this research.

The summary of values of mitigation disasters contained in the story of the victims of the Earthquake and Tsunami can be seen in Table 1. The mitigation values in Table 1 are the local wisdom of the people of Aceh that can be used as an adaptation strategy to the environment and become one of the guidelines in thinking and acting as well as a basis for knowledge in dealing with disasters. Other than that, the value of disaster mitigation above is an actual Tsunami victim experience of the people of Aceh that can be used as a source of knowledge for the rest of the world. The values of disaster mitigation contained in this true story can at least be used as supporting empirical evidence to corroborate existing theories or concepts of mitigation of disasters.

Table 1. Source of Tsunami Disaster Mitigation Stories and Values.

No.	Mitigation Value	Story
A.	**Which must be done**	
1.	Go up to the high ground	Within seconds, the shop collapsed. I fell with the collapse of the shop building. Then, I bounced again to the top of the coconut tree around it. I feel safe in the tree for a while (Yusri bin M. Ali, 36 years).
2.	Run to the river	… because dragged through the river channel, I did not experience any serious impact. I cannot imagine if I was dragged not through the river. At that time, I made sure that many hard- bodied objects carried by the current hit my body (Zulfansyah bin Syamsuddin, 36 years).
3.	Utilising nature to survive	The swift Tsunami waves continued to take me to downtown of Banda Aceh (land). Moments later the current waves dragged me back into the sea. At that time, I was still aware and tried to save myself by grabbing a banana tree that was drifting. Maybe with the banana stem I can float, because I cannot swim (Merlinia Anggilia bint Arlin, 19 years).
4.	Come down when the water is really low	... I managed to swim to reach the coconut tree and quickly hold it. ... When the water was beginning to recede, I went down and looked for a safer place. Suddenly there was another wave, there was an old grandfather, he said, "Dad, come up here, to this house!", I went straight up to the house. ... For about two hours I was at the house waiting for the water to recede. When I made sure the water was completely receding and the waves were gone, the old man and I went down. (Usman bin Djuned, 25 years).
5.	Utilising nature to survive	After four days and nights at the post with other people, I joined a group that was going to Banda Aceh on foot. Since the highway had been cut off, we were forced to walk around the hills, across the rivers with our own rafts of wood or debris around them. To anticipate the feeling of emotion and hunger, we only eat coconut and drink the water (Rosita bin Idris, 13 years).
6.	Stronger victims help weaker victims	.... I suddenly saw two boys, each about 3-4 years old. They were caught in the ruins. I heard, one of them kept saying "Lailahailallah" while the other one kept crying. Their position is about forty meters from me. At that time, I thought, if I helped the child I will survive because they are innocent people. Without think too long time, I immediately jumped from the wood, swam toward the boys to take him with another (Yusri bin M. Ali, 36 years).
7.	Ensure the conditions of the victims before being put into a body bag	... I can still feel what's going on around me, but I could not move and say anything more. A few moments later came a group of volunteers who collected corpses. I felt my body being put by the volunteer into a yellow body bag. They thought I was dead. The volunteer closed the zipper of the body bag, I could not do anything. The little boy I picked up was still near me. Then he cried out crying, "Om is alive, om is alive ". Volunteers reopened the zipper bag of the corpse (Noverizal bin Mahyuddin, 28 years).
8.	The spirit of life must go on	Toward the evening, after closing my mother's body with a piece of cloth that was washed away at that time, then said goodbye to my mother. ... Not long afterwards I managed to find my brother in a lifeless state again. I screamed and yelled as if I did not believe in what I had just

No.	Mitigation Value	Story
		experienced.... But unfortunately, I have not met my father until now. ... The torrent of the tsunami has left a very deep sorrow for me. I was very close and spoiled because I am the youngest child in our family. Now that there is no mother, father and sister, and the only brother returned back to work in Banda Aceh just so we can always look at life again. However, the spirit of life must keep going on. (PocutYuliabintiTeuku Anwar, 20 years).
9.	Always remember God being a source of strength	I pulled my mother's hand and ran with all her strength so that my mother's hand slipped off the handle. I kept running through the back of the house while saying Lailahaillallah.... In the escape had time to look back ...., then I was hit by the black water. ... In that wave reel, I thought I was going to die. ... In a floating state, I always mention the name of Allah (Nikmatul Akbar bin Firdaus, 19 years).
B.	**That should be avoided**	
10.	Do not use the vehicle in self-evacuation	.... It was so crowded that people were running around and gathered in the street, some of them colliding with each other. It was inevitable. Some people crash into vehicles, and there are also vehicles that crash into people. A garbage truck driver who had just returned from a garbage dump was briefly beaten by several village youths for bumping into people.The young men did not know if the water had started to rise, while the truck drivers already knew it (Zulfansyah bin Syamsuddin, 36 years).
11.	Never return home	.... Not to mention getting home, I saw people running around shouting water ..., water ..., water .... Seeing the people running, I also ran with them to the intersection to the housing Complex, holding hands with a fellow friend boarding. At that time, I remember my important documents and other important things, I was with the boarding house back to the house.Approximately, ten meters away before getting home, people are increasingly crowded running in a state of panic. Seeing this situation, I think it is impossible to return home (RamaliaMutiabinti Mustafa, 22 years).
12.	Do not do anything that is not commendable	…Along the way many visible bodies are scattered, and also people that I do not know take gold jewelry in the body of the corpse. My heart says why they do that (Muhammad bin Daud, 65 years).
C.	**Preventive Actions**	
13.	The sea water receded quickly as a sign of a Tsunami	After the earthquake, I picked up the shrimp. I'm surprised the water has subsided so far. The water at the fish pond place is usually at chest level, but it is only at knee-level. Approximately 1 km, I was able to see rocks that were previously invisible. ... Suddenly I heard eruption ... I saw a wave about 2 km distance to land, about five times the height of coconut trees (Faisal bin TohJareh, 34 years).
14.	Know the position of the sea	After about 15 minutes of the earthquake, there was a screaming, "The sea water rises ...!" I turned towards the mouth of the Krueng Aceh, local river. A wave about 20 meters high was headed for Lampulo direction, my position. Without taking long time, I ran to the East of the TPI complex (Fish Auction Place). There's no door there. Precisely, the wall as high as 2.5 meters blocking, at the top of the wall there are barbed wire. Somehow, I'm as old as this can jump the wall. Up on the opposite side of the new wall I realised that the trousers were loose, caught in the barbed wire (Shamsuddin Ismail, 70 years).
15.	Know the correct direction of evacuation	... Not long afterwards, approximately 200 meters ahead of us, a tidal wave of water about 10 meters high, rumbled violently and raced, ripping through everything in front of it. ... I hold the youngest child running aimlessly, the thought is running and running (Abdullah bin Muhammad Yusran, 38 years).
16.	Tsunami wave occur not just once	... Moments later, I see the next wave, as high as the first wave, ... The second wave hit the coconut tree again with me. Coconut trunks are uprooted. I was thrown again into the water (Faisal bin Toh Jareh, 34 years).
1 7.	The importance of the existence of mangrove trees	Shortly after the second wave, came another third wave as high as four meters. Mangrove trees (mangroves) where I hung was hit by waves, the tree fell and I was washed away by the flow of water. I am still holding on to the mangrove tree that was washed away to the village of Gano, approximately two kilometers from the original place. ... I was constantly taken with water, then stuck to a rather large mangrove tree (Surya Darma bin Abdul Manaf, 21 years).

No.	Mitigation Value	Story
18.	The importance of air transport in the event of a disaster	.... My physical condition was very weak, while my right foot was injured enough. I cannot walk. ... On 8 January, 2005, the doctor sent me to Banda Aceh by an Australian army helicopter. I arrived in Banda Aceh via Lanud Iskandar Muda, then operated on my leg injury at the Airport Emergency Hospital (Abdul Rani bin Hasan Basri, 28 years).

3.2. What must be done

When a Tsunami occurs, people are encouraged to escape to high ground, such as a coconut tree, a hill, a tall building, or any tree. To save yourself is a priority as the chances of life taken by the enormous waves of tsunami. Management in a tsunami disaster is as follows: when an earthquake occurs, and the seawater near the coast recedes suddenly so that the seabed is visible, immediately provide information to all people and authorities. Furthermore, the community is recommended to go to a place higher than the coast, such as mountains or hills, which is considered safe by the community (Gadeng, 2017, Gadeng, 2018).

In any case, in Banda Aceh, an area of considerable impact on the 2004 Tsunami, there were few escape buildings, whereas the distance between the Earthquake and Tsunami was relatively fast. Wesnawa and Christiawan (2014) stated that one of the actions taken when management in a tsunami disaster is as follows: if trapped in a house or building room, reach for objects that can float. Many Tsunami victims have died from the impact of complex objects carried by the tsunami. The objects include drums, banana trees, spring beds, and wooden beams.

Based on the local wisdom of the Simeulue community in tsunami disaster mitigation, Gadeng (2017) The community is advised to be in a higher place (mountain or hill) from the coast for a while. As their experience that the next wave is likely to occur, the value of mitigation is that people must stay in the high place for two hours, then down to the mainland. Wesnawa and Christiawan (2014) stated that one of the actions taken when management in a tsunami disaster was as follows: If possible, bring along emergency equipment, such as first aid kits, communication tools, food and drinks and wallets. Communities must prepare and bring all essential documents and food to refugee camps (Gadeng, 2017).

Wesnawa and Christiawan (2014) one of the actions taken when managing the tsunami disaster is as follows: Check, contact and ensure the safety conditions of self, family, and relatives. Avoid buildings that experience cracks, large sloping trees, disconnected cables, or electrical installations. Avoid using open water wells as drinking water because it has been contaminated. The Acehnese people, who adopted religious values in life, believed in the destiny and power of the creator.

The Acehnese people of Aceh strongly believe in the will of the creator (God). This is one source of spiritual power that gives enormous energy so that the weak in physic can become strong again when a disaster occurs or even post-disaster. After being struck by the same disaster twice, namely the tsunami disaster in 1883 and 1907, a period that is not too far away, the community has begun reorganising its future.

3.3. What to avoid

The story above teaches us that when a Tsunami occurs, do not use a vehicle, especially a car, to run away from the Tsunami waves. The crowded people on the road make it difficult for vehicles to pass, and even vehicles will slow down the evacuation process and harm others. The earthquake that occurred in 2004 showed that many people became victims of being hit by a vehicle while they were running, intending to avoid the sea as far as possible. Practising regularly and knowing evacuation routes is very useful for a disaster so that panic does not occur (GeoHazard International, 2009; ICHARM UNESCO, 2010; Morin *et al.*, 2008; Murata, 2010).

When a Tsunami wave occurs, we need to quickly avoid and move away from the direction of the wave. We do not need to think about anything else, including trying to save the belongings such as diplomas, and land certificates, because the Tsunami wave rate is very fast. If we are out of the house, we do not need to return home to save anything because we will lose time away from the tsunami waves. Based on stories of survivors, many victims died or disappeared because they returned home to save their belongings. Wesnawa and Christiawan (2014) one of the actions to be avoided when managing a tsunami disaster is as follows: during a disaster, staying in a low place or staying in a house adjacent to the coastal area when the tsunami arrives inland.

Disaster mitigation is related to the physical rescue and recovery of the victims' souls because the unstable mental condition also affects a person physically. The above story informs that when the disaster happens, there are also people who misbehave, such as taking/stealing gold jewellery from the corpse's body. The victim who witnessed this improper action would increase the pain experience. For that purpose, treat the bodies of Tsunami victims humanely according to the culture and beliefs of the community. This message is relevant to be submitted to evacuating teams, volunteers, or anyone assigned to evacuate the bodies of disaster victims.

3.4. Preventive Actions

Smong or tsunami in the Simeulue community is a rolling sea tidal wave higher than regular waves in general, accompanied by a huge booming sound originating from the middle of the sea, with very high-water speed, and hitting all settlements residents (Gadeng, 2017; Syafwina, 2011; (Kodoatie and Syarief, 2010; Ramalanjaona, 2011). The tsunami waves that hit Aceh reached a height of 7 to 10 meters at a speed of 500 to 800 km/hour (Saatcioglu *et al*., 2005:80). When the Tsunami of 2004, people did not know if the sea water receded dramatically as a sign of the tsunami so many people catch the fish because the sea water receded very quickly.

There are three steps to a safe evacuation after a tsunami disaster (Imamura *et al*., 2009): collect information, issue an official warning and choose a proper route and safe destination for the evacuees. The drill is expensive to carry out, and it is not easy to enable many residents to participate. The community must know which areas are the red zones of the disaster and control their territory. "Focusing on the last point, one way to provide people with knowledge on safe route and destination is by conducting regular evacuation drills.

The above story (Table 1) shows the victim who did not know the right evacuation direction, so people ran aimlessly. This can be fatal because it could be running to a place that is not beneficial for the rescue effort. The message of mitigation of this story is that people living in disaster-prone areas must be aware of the evacuation routes in their home environment. The government must conduct intensive socialisation so that people have sufficient knowledge about the correct evacuation path. In addition, the government must also install evacuation route signs in every disaster-prone settlement area. Jokowinarno (2011) stated that tsunami mitigation activities in the coastal environment include: understanding the characteristics of natural disasters and the damage that exists in coastal areas, understanding the level of risk and vulnerability of coastal areas to disasters, understanding environmental conditions, socio-culture, and local wisdom. Gadeng (2017) Do not forget to provide evacuation routes and signposts to areas that are safer from the tsunami disaster. Adiyoso and Kanegae (2013) are familiar with evacuation routes to help people find safer places when a tsunami disaster occurs. Thus, frequent visits to or conducting various exercises in tsunami evacuation routes is one of the essential attitudes in tsunami preparedness. GeoHazard International (2007) created a tsunami hazard and evacuation route map as an excellent example of initiating preparedness efforts.

After the first wave, there is a chance, followed by the second and third waves. At the location of the tsunami formation (earthquake epicentre area), the tsunami wave height is estimated to be between 1.0-2.0 m (Kodoatie and Syarief, 2010: 326; Ramalanjaona, 2011). Unlike a tsunami, the waves only occur once or twice simultaneously. UNESCO (2007) Tsunamis move out of their generating area through a series of waves.

It is irrefutable that mangrove trees are beneficial in resisting the rate of ocean waves. Tsunami disaster mitigation is broadly divided into two categories, natural and artificial measures. The message of mitigation is for the government and all levels of society to be able to plant and conserve mangroves in all coastal areas prone to Tsunami disasters. Tsunami mitigation can be carried out through several steps, namely (Kongko and Hidayat, 2014; Baeda *et al.*, 2015): Earthquake and Tsunami damage to infrastructures means the arrival tsunami wave will not reach the infrastructure. This condition is challenging in the effort to help victims far from urban or health centres. In this condition, the existence of air transport, especially the type of helicopter, is needed. Unfortunately, the Indonesian government does not seem to prioritise air transportation.

3.5. Where to Go

Evacuation site is important aspect to improve disaster reduction. Figure 2 shows the word of cloud expressing the evacuation site that is extracted from the book. There are some locations is commonly used to evacuate from tsunami such as mosque, hospital, evacuation barracks, school, university, stadium. As seen in Figure 2, the most appeared word for the place to evacuate are village, mosque, and hospital. It indicates that people tend to go to the nearest and most known public place to be safe from disaster.

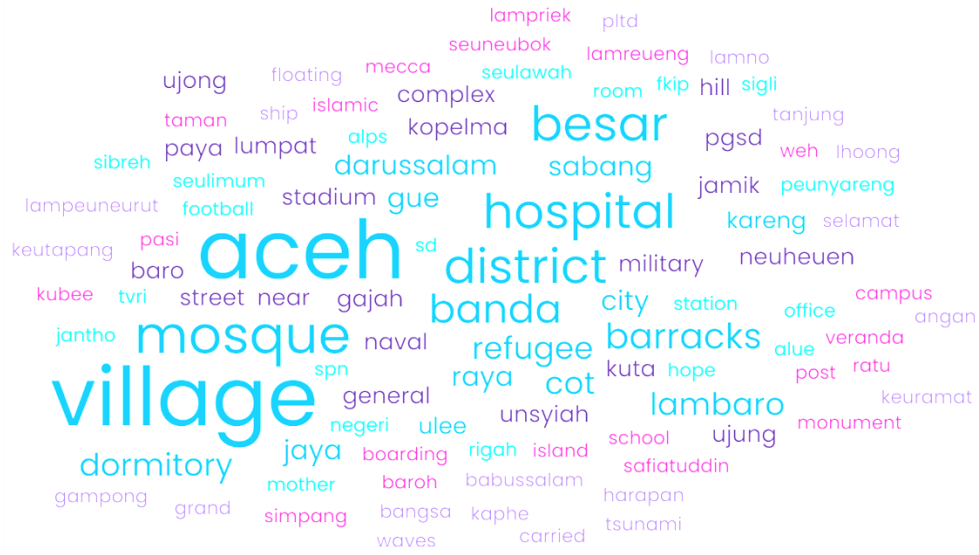

Figure 2. Word Cloud of the Location to Evacuate.

4. Conclusion

The earthquake and tsunami that occurred in Aceh Province on Sunday, 26 December 2004, can be taught from generation to generation. Discourse analysis with a hermeneutic approach is appropriate to find out and interpret the values of disaster mitigation from the real experiences of Aceh's victims. This experience becomes knowledge that can be taught from generation to generation. In addition, the results of this study can be used as learning materials for disaster education to raise public awareness about the importance of attitudes and behaviour in disaster knowledge.

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