

Social Adaptation in the Downlift Area (Case Study of Tompe Village, Sirenja District)

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ABSTRACT

The purpose of this study was to describe the social adaptation that occurred after the PASIGALA disaster in Tompe Village, Sirenja District. The research method used is qualitative research with a case study approach. This research unit represents the Pasigala disaster-affected community. The determination of informants in this study used a "purposive" technique, namely, taking as many as 5 informants on purpose. Data collection techniques in field research collect data by means of observation, interviews, and documentation. The results showed that in Tompe Village, after the natural disaster, there was a downlift impact that caused the sea level to rise. With the tide of sea water rising every two weeks in a month in the Hijri calendar, there are peaks of sea water rising in the 15th, 16th, 17th, and 18th months. Adaptation in Tompe Village includes three components: social adaptation, economic adaptation, and physical impact. The social adaptation that is carried out is by surviving in the current environment after the disaster, economic adaptation is carried out by some people shifting livelihoods and some people remaining on their pre-disaster livelihoods; and the physical impacts that occur are damage to people's homes, poorly maintained residential areas, infrastructure that suffered a lot of damage, and changes to the social and economic community.

Keywords: *adaptation, high tide, downlift.*

INTRODUCTION

Natural disasters are one of the phenomena that threaten human survival. The potential causes of disasters in Indonesia can be grouped into three types: natural disasters, non-natural disasters, and social disasters. The negative impact that is caused can be in the form of material or non-material losses. Natural disasters are a phenomenon of life that cannot be predicted with certainty. Examples of natural disasters include floods, landslides, earthquakes, and land subsidence (downlift).

The natural disaster of the September 28, 2018 Pasigala earthquake and tsunami hit the cities of Palu, Sigi, Donggala (Pasigala), and Parigi Mautong Regencies. The tsunami occurred a few minutes after a large earthquake measuring 7.7 on the Richter scale shook Donggala Regency, Palu City, and its surroundings at 17.02 WIB. The epicenter of the earthquake was at a depth of 10 km, to be precise, 27 km east of the Donggala Sea. After the earthquake, high tides in the Sirenja sub-district were submerged in the late afternoon and into the evening. The villages that were inundated by the high tide included the villages of Tompe, Lompio, Lende, and Tanjung Padang. High tide causes floods that submerge coastal residents' homes.

Natural disasters such as earthquakes and tsunamis cause natural phenomena such as land subsidence, also known as down lift, which is the lowering of the soil surface caused by a change in the volume of the rock layers beneath it. Usually this event takes place over a long period of time, so if it is not prevented or resolved, it will have an impact on the surrounding environment. Land subsidence also causes tidal flooding, water intrusion, infrastructure damage, rainwater stagnation, and a decreased quality of life.

In Tompe Village, Sirenja District, the majority of the people live on the coast, which resulted in their house where they lived collapsing due to the strong shocks from the earthquake and tsunami that forced them to be relocated, but some of them, namely the majority of fishermen,

asked not to be too far from the shoreline where they seek their livelihood. The government has strictly prohibited construction within 200 meters of the shoreline because it has become a "red zone," but people continue to build houses within 50 meters of the shoreline. The occurrence of a downlift causes the tides in the sea to rise for a long time, which hinders community activities.

The community is already aware of the signs of tidal floods due to the occurrence of tides. Based on the experience of residents who counted the arrival of the rob, that is, the first rob occurred seven times in the sky, then receded within a few days, and then rose again. The two larger ones usually happen when the moon is 15 times in the sky; this can be seen using the Hijri calendar (Ahdiah, Karim, dan Muhammad 2020).

When a disaster strikes, every member of a family thinks of ways to survive on their own. Ability to survive and adapt in a place that is frequently hit by natural disasters, including high tides. The ability of an individual to adapt has value for its survival. The greater the adaptability of a living thing, the greater the possibility of the creature's survival. Maintaining human life is required for adaptation. In this case, adaptation refers to a reciprocal process between living things and their environment. Adaptation can be seen as a process that increases the possibility of living things surviving from one generation to the next under certain environmental conditions. Even though it is a flood-prone area due to tides, the people who still live in the coastal area of Tompe Village are still coping with this situation by means of, among others, raising the floors of their houses and adding floors to the building. Communities living in disaster areas tend to be more responsive when dealing with disasters that occur.

The natural phenomenon is the downlift, which causes sea tides to flood up to 50 cm. Based on the background put forward on how they survive by adapting, this makes the writer interested in conducting in-depth research on the reality of life experienced by the Tompe people. In Tompe Village, Sirenja District, it became the main foundation and starting point for the author, so that he was interested in studying and researching the adaptation of the lives of people living on the coast by raising the title "Social Adaptation in the Downlift Area (Case Study of Tompe Village, Sirenja District)".

METHOD

This type of research is a case study. Based on the form of qualitative research, sample selection was carried out using the "purposive" method, by determining 5 informants. In collecting data, I used several techniques, namely, observation, interviews, and documentation. The research location is located in Tompe Village, Sirenja District, Donggala Regency, regarding "Social adaptation in the downlift area (a case study in Tompe Village, Sirenja District)". The location was chosen in Tompe Village, Sirenja District, because it is famous for its natural phenomena, namely the ebb and flow of sea water, which hinders transportation travel activities and the activities of the local community. This is what drives researchers to find out what the community is doing to adapt after the disaster.

RESULT AND DISCUSSION

Community Adaptation When Down Lift

The new environment felt by the people of Tompe Village caused many changes to occur in various systems of community life. Changes in society can be seen in the form of adaptation made by the people of Tompe Village to the impact of the downlift that occurred, or what people usually call it in the regional language, *nepone buse*. The community adjusts its behavior to the tides that occur, and the community can anticipate the situation. The people of Tompe Village have a habit of establishing a community-based adaptation relationship to their current environment. This behavior can be seen in various systems, starting from the elevation of the house, which can

prevent the tide from entering the house, the need to make a living, the adaptation of costs depending on the location of the residence, and up to the demands of daily life.

The initial response made by the people of Tompe Village after the disaster that resulted in a flood was to save their possessions and move them to a higher place, such as a table. After the receding of the sea water, some people raised their foundations so that the sea water could not reach them. The occurrence of tides, which the people of Tompe Village saw from the moon in the sky, was described by an informant, Mr. Ambar, 56 years old.

"The tides occur on certain days, and we look at the moon in the sky to find out the rise in sea level." Usually sea water rises, namely in the 7th month in the sky, but it doesn't rise too much to the surface. The peak rises to the surface on the 15th, 16th, 17th, and 18th months, and on the 19th month, the sea water doesn't rise as much anymore. "The ebb and flow of sea water rises in the morning and evening at separate times; that is, in one year it is common for sea water to rise for six months in the morning, and another six months in the afternoon" (Result of interview, 19 May 2020).

From the interview above, it was concluded that when the sea water rises in a month, it can be once every 2 weeks, but there is a certain time for the sea water to rise. The people of Tompe Village are getting used to the rise of sea water to the surface.

a. Community Adaptation in Social Aspects

In social life, that can influence the pattern of life so as to form social life. To understand social conditions, we must first understand what social meaning itself is, starting from the social understanding in social science, which refers to the object of society. Meanwhile, the activities aimed at overcoming the problems faced by the community in the field of welfare are work and social welfare. The condition of the people in Tompe Village had to begin earlier because of the disaster that occurred in the coastal area. As felt by the informant, Mr. Ampe G. Hanasu, 69 years old, he said:

"Before the disaster, I felt comfortable living in my house, which still had cement floors, and I was comfortable living in my previous house." However, after this disaster, many things changed, namely starting again from scratch. I had to look for wood to build my own house, and that required money, so I had to work extra again while my income was uncertain. After my stage house was finished, it turned out to be very hot during the day. "But I am still grateful for what is happening now, I am still given health to support my family" (Result of interview, May 20, 2021).

From the interview with Mr. Ampe G. Hanasu, it can be concluded that they still don't accept the current situation. However, in order to make a living, they have to survive and support their family, even though the conditions are so difficult to live with. They are making an effort and surviving by meeting their daily needs. Based on the job, some of the fishermen are required to get a job outside the fishing industry. With the income from work as a fisherman, not all needs are met, so other jobs are needed that can increase income. This is a way for some fishing communities to get out of their current situation and live a better life. Some of the fishing communities have side jobs, namely as construction workers, to supplement their income. This is how Mr. Ambar, who is 56 years old, has a profession as a fisherman and a side job as a construction worker.

"I have been working as a fisherman for almost 20 years. By being a fisherman, I can support my family, but after the disaster, I thought about taking a side job, namely as a construction worker. I took a job as a construction worker because the results of going to sea were not the same as before. What's more, with rising sea levels, sometimes I don't go out to sea. That's why I took my side job, namely, construction work. Building work also sometimes produces erratic results, depending on the builders who call us to

help them. "However, I remain focused on fishermen because I have been in this job for a long time" (interview, May 19, 2021).

Based on the interview with Mr. Ambar, it can be concluded that when you do not get income from the sea, it is the result of side jobs that increase your income. Fishing alone cannot meet all the daily needs of their family, so Mr. Ambar takes another job to supplement their income so that they have enough. However, research also concludes that no matter how much additional income they earn, they remain loyal to the job they have had for a long time.

b. Community Adaptation in Economic Aspects

For the community, the existence of an economic aspect will provide opportunities to increase their income. The economic aspect for the community is to provide income in the form of taxes. The income level of the people in Tompe Village is part of economic life. This level of income is, of course, inseparable from the results they get every day. After the disaster, Tompe Village, Sirenja Subdistrict, started a new life and environment to fulfill jobs and the economic needs of the family. Post-community income levels are reduced due to unsupportive natural conditions. Mr. Vendi is a 43 year old fisherman who is a victim of reduced income since the disaster occurred.

"I am a fisherman who has been a fisherman for almost 14 years. My and my family's lives are defined by the money we earn. Every day I go to sea to earn a living for my family. After I return home, my wife sells my catch at the fish station. I go out to sea every night until early in the morning, and in the afternoon I go out to sea. The rise is usually at night, and I do it every day. My daily income is IDR 100,000, but sometimes it's more than that. However, after the disaster, my income decreased because my fish catch was not what it used to be. This incident, after the disaster, was one of my toughest tests because previously my house was by the sea. After that incident, my income decreased from Rp. 100,000 before the disaster. After the disaster, it became Rp. 50,000, and I no longer went to sea every day. "This is because I am slow to go to sea because my house is now quite far from the beach" (Result of interview, May 20, 2021).

From the results of the interview above, it is known that Mr. Vendi's job as a fisherman before the disaster generated quite a lot of income. However, income decreased after the disaster because the houses that were close to the seafront before the disaster collapsed, and not only them, but all of the people living on the seafront, had to be relocated. The location where they live can no longer be inhabited because it has become a "red zone," and it is prohibited by the government to build in that place again. This is very different from Mr. Lanadin, who worked as a fisherman before the disaster, but after the disaster, his profession was selling sea water stored in jerry cans and then selling it at fish stations.

"My job now is after the disaster, that is, when the seawater rises, I take it with a dipper and then store it in the jerry can to sell to the fish seller at the base." I sell the jerry cans filled with seawater for Rp. 2,000 per jerry can to my wife, who usually helps me sell the seawater. My family and I only survive with this income. "My income now depends on rising sea water, but sea water does not rise every day, therefore I stock up jerry cans filled with sea water to sell" (Result of interview, May 20, 2021).

The results of the interview show that the positive impact after the disaster was actually experienced by Mr. Lanadin, whose daily income was generated from natural phenomena, namely the tides that caused the land to sink. Mr. Lanadin's income depends on the condition of the tides. The same thing is felt by Mr. Vikran, who works odd jobs, namely that his work is erratic and his income is also erratic. When the tide comes in, Mr. Vikran's

day job is as a motorcycle taxi driver. His work also depends on natural phenomena that occur in Tompe Village, Sirenja District.

"My job is doing odd jobs that don't make a steady living." One of my jobs is to be a motorcycle taxi driver when it's time for the sea water to rise to the surface. I work from 7 a.m. to 10 p.m.; I wait for people to go to the office, usually high school students because one of the high schools has to cross sea water. My income here is not bad for my family's daily life. My income as a cart taxi driver is Rp. 20,000 per motorcycle. My income depends on how many motorcycles I cross, but I share this income with three more friends. "After this disaster, there are also benefits for workers like me who don't have a permanent job" (Result of interview, May 20, 2021).

The results of the interview above show that it is not only Mr. Lanadin who is dependent on this natural phenomenon but also Mr. Vikran, who benefits from being a cart taxi driver. Although the income he gets is shared with three more friends, it is enough for their daily lives. In the post-disaster conditions, the people of Tompe Village are aware of their feelings of gratitude and acceptance of the conditions they are currently experiencing. Some of the people benefited from the rising sea water reaching the settlements, and some were harmed by the rising sea water. Even though this happened, they are still grateful for what they have now.

Physical Impact

a. Home or Residence

The natural phenomenon that occurred on September 28, 2018, had a negative impact on community settlements, especially those living on the coast. As is the case with one of the affected villages, Tompe Village, which was previously a clean, comfortable, and beautiful place for the Tompe people to live, but now that the settlement has changed since the disaster, the community houses in Tompe Village where they live are now only the ruins of houses that left because the earthquake caused the houses to collapse and level the ground; they also could no longer build where they returned. Then, some of the people of Tompe Village built houses that were not too far from their previous livelihoods.

b. Residential Environment

The impact of natural phenomena also has an impact on the environment, as shown by the sea tides. The Tompe Village community, which used to be a clean and well-maintained environment, is now dirty and has an unpleasant odor, which also causes changes in the community environment. This is caused by rising sea water; when the sea water recedes and mixes with the mud, it creates an unpleasant odor. As a result, the environment around the settlement or where people live becomes dirty and smelly, causing a lack of comfort for the community.

c. Infrastructure

The impact of sea water tides, which cause the land to sink, is also having an impact on infrastructure, which greatly disrupts people's daily activities because of damage to infrastructure such as roads due to frequent flooding due to sea water. People have to brave the water to go to their respective workplaces, and not infrequently, people do not go to work because the floods, are too high to be hit. But more and more people are used to this situation, so that it is no longer an obstacle to community activities. A cart taxi driver is also employed by the community to cross their vehicles, but only motorbikes.

d. Economy

For the people of Tompe Village, who have a livelihood as fishermen, this does not completely have a negative impact on their work because they are still able to catch fish

when seawater rises, although their catch is not as much as before the disaster. The people of Tompe Village often do not even go to work because the sea water is too high to be hit.

e. Social

Disruption of people's daily activities, starting from morning activities to going to their respective workplaces. When sea water rises, school activities are also hampered, causing difficulty accessing roads that are inundated by rising sea water, making it difficult to pass.

CONCLUSION

From the results of the discussion of this study, the researcher concluded that:

1. From several self-adjustment or adaptation processes carried out by the people of Tompe Village, Sirenja District, the social life of the post-disaster Tompe Village community adaptation where they continue to try to survive in a changing environment after natural disasters. The economic life of the Tompe Village community after the disaster is in a recovery phase. After the disaster caused fishermen's previous livelihoods to change professions because the situation they experienced caused the boat they previously owned to be damaged due to the natural disaster that occurred, some of them changed professions. Some of the people of Tompe Village take advantage of natural phenomena to find a livelihood.
2. The impact of the tides caused a lot of damage, including physical damage to their houses, which collapsed and became uninhabitable. The previously well-kept residential environment has become unkempt, the infrastructure has suffered extensive damage as a result of the downlift, and the social and economic aspects of the community have also changed as a result of the disaster.

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