Open Access Indonesia Journal of Social Sciences

Social Capital in Mitigating Flood Disaster in the People of Aceh Tenggara, Indonesia

Hikmah Santi[1], Bengkel Ginting[1], Henry Sitorus[1], Rizabuana Ismail[1*], Ria Manurung[1]

[1] Master of Sociology Program, Universitas Sumatera Utara, Medan, Indonesia

ABSTRACT

The objective of this research was to analyze and discuss the social capital owned by the community in Aceh Tenggara in mitigating flood disasters. The research used the descriptive qualitative method. Our study revealed social capital owned by the community in Aceh Tenggara could help mitigate flood disasters. Cooperation among the central government, the regional government, and the local people seemed to be very good. It was performed commencing from helping the people in the post-incidence of the flood until its mitigation plan. The Cooperation has eventually established trust in the local people and the government that was involved in the policymaking, relocation activity, and distribution to the flood victims. The use of the values of people's local wisdom, such as 'Pelengakhi' (working together) by the local people, helped the flood victims. They also helped spread information about the flood through mosque loudspeakers. This social capital has become a collective strength owned by the local people in mitigating flood disasters.

1. Introduction

Geologically and geographically, Indonesia is vulnerable to natural disasters such as floods, earthquakes, landslides, drought, volcano eruptions, and other natural disasters in almost the whole Indonesian territory (Hidayati, 2008; Kusumastuti et al., 2014). Aceh province is the region that has the most risk of having a flood. Some regencies, such as Aceh Barat, Aceh Singkil, Aceh Jaya, and Aceh Tenggara, often undergo floods. BPBK (District Disaster Mitigation Board) of Aceh Tenggara stated that 18,302 families became the tremendous flood victims in Aceh Tenggara in 2017, which caused the rivers to overflow, and tremendous floods occurred in some sub-districts in Aceh Tenggara Regency (BPS, 2015).

Tremendous flood often occurs in Aceh Tenggara Regency (Azmeri et al., 2013). Some natural and social factors are allegedly the causes of these disasters. Social factors such as activities in extending residential areas as the result of population growth have caused environmental support capacity to be weakened so that tremendous flood occurs. There are some regions in Aceh Tenggara that often undergo tremendous floods, such as Simpang Semadam, Lawe Sumur, Lawe Bulan, Bambel, Bukit Tusam, and Badar Sub-districts. Tremendous floods which strike some sub-districts in Aceh Tenggara Regency, including

Badar Sub-district, are caused by the overflow of the Alas River, which begins to undergo a decrease in environmental quality; it can be seen from the problems of its DAS (Watershed) in the rainy season that can cause a flood on its corridor and overflows to the land. Besides the problems of the Alas River watershed, the embankment in the upper course of the river has been eroded so that it is unable to hold the flow velocity of the river water when it rains (BPS, 2015).

Even though the flood is a serious threat for some of the people in Aceh Tenggara Regency, it seems that they and the government are not fully aware of preserving the environment. Some problems which are faced by the Aceh Tenggara District Government in planning the mitigation risk and handling disaster emergencies are as follows: rehabilitating reconstruction has not been prioritized, lack of facilities and infrastructures, and awareness, knowledge, education, and innovation of resistance against disasters are not done maximally even though disaster mitigation is an important activity and inseparable part of sustainable development.

Social capital is the main component that can function to encourage people who have a sense of togetherness, mobility, idea, mutual trust, and mutual benefit to achieve mutual advancement. It consists of the appearance of social organization in which there are some aspects of belief, norms (reciprocal relationships), and networks (community bonds). People's efficiency can be created by coordination and Cooperation in order to achieve mutual benefit (Putnam, 2007). Social capital ties and unites those who have similarities in important things, especially when they are facing problems and attempting to find a way out together. One of the similarities in their dwellings and region (Fathy, 2019). Developing and decreasing the vulnerable risk of disasters can be achieved through the use of capital; in this case, it social capital is emphasized. Therefore, this writing discusses how social capital owned by the people in

Aceh Tenggara is used to mitigate flood disasters.

2. Literature Review
Social capital

Suharto (Aman et al., 2013) points out that social capital is manifested in the forms of trust, norms, and networks. This statement is closely related to social capital, which has been mentioned by Putnam. He further points out that social capital comprises information potential, obligation and expectation, effective norm and sanction, relationship and authority, and related social organizations (Putnam, 2007). Fiel (2010) divides social capital into two types, exclusive social capital, and inclusive capital. Exclusive social capital is bound based on primordial relationships such as family relationships, intimate friends, and other close relationships. This social capital tends to confirm that it is the result or the product of intensive relationships or interactions among people. He further points out that social capital is manifested in the forms of trust, norms, and social networks. These three components can influence people's productivity because, basically, people do the life of exclusive and homogenous group identity. Inclusive social capital bridges and connects different people, but they move in the same circle.

Social capital is not meant as the materials; it is social capital in a person personally, such as a group, institution, organization, and anything which can cause Cooperation. It emphasizes the potency of a group or inter-groups, with the space of attention on trust, networks, norms, and values that come from group members and become group norms. As what happens with the other capitals and the analogy with the system of production, the use of social capital highly depends on the facilities which are made to preserve, take care of, strengthen, renew, if possible, and use it (Dwiningrum, 2014). The misuse of social capital will cause loss and other negative effects. On the other hand, good management will yield positive energy for many people.

Fukuyama (Santoso, 2020) even studies this social capital by analyzing modern society. Economic, human, social, political, and democratic stability development can occur when there is social capital, and social capital can reduce various problems and social deviation in many countries. Fikuyama points out that a lot of deviations and social problems are influenced by the lack of social capital which grows in society. The weakness of social capital in society will cause weakness in the spirit of Cooperation. This condition will eventually worsen the social condition and cause poverty, criminality, and unemployment which obstruct any attempts to increase people's welfare.

3. Methods

This research was conducted in the community at Natam Village, Badar Sub-district, Aceh Tenggara Regency, Aceh Province, Indonesia. This village is the area that undergoes the most vulnerability to flooding disasters and has become the location that gets full attention from the central government concerning disaster mitigation and village development to avoid floods. The data were gathered by conducting observation, in-depth interviews, documentary study, and available secondary data. The observation was conducted by observing people's dwellings that underwent the impact of the flood. The researchers could observe the great impact of the flood on the lives of the people who live by the river. The result of the researchers' observation was used as material for discussion with the local government's personnel concerning the disaster. An in-depth interview was done with the local people of Natam Village who underwent the impact of the flood, BPBD (Regional Disaster Mitigation Board), and the Social Affairs Agency. This interview was aimed at finding out what social capital is still owned by the local people and how to use it to help mitigate the disaster. Secondary data were used to analyze the previous research through articles, books, and other documents which could be used to support this research.

4. Results and Discussion

People's social capital in mitigating disaster

Local people's social capital at Natam Village, Badar Sub-district, consists of Cooperation, trust, values, and norms. It is really a challenge for them to be able to use and empower it as their own in facing flood disasters. Social capital as a social reality cannot stand by itself without any individuals and communities in reality. Knowledge of disaster is one of the types of social capital in the local people of Natam Village. Through a dialectical process, social reality (social capital) can be seen in 3 (three) stages: the first stage is the process of externalization, starting from the process of interaction through messages contained in social capital with individuals (the villagers), village institutions, the other community institutions, The people at Natam Village used loudspeakers and siren as the communication and information media in announcing flood disaster. Most of them believed that they could rely on their own capability of handling disasters, and the network came from social products. The awareness of developing this network needs the process of long-term symbolic interaction among the individuals so that they will eventually understand it.

External cooperation

The effort to mitigate flood disasters in Aceh Tenggara Regency begins with the awareness between the people and the local government that they need to pay attention to mitigate flood disasters which include the policy and the operational strategy stipulated by the local government in mitigating flood disaster; in this case, the government needs Cooperation with and participation from the local people.

The Cooperation with the external elements is concerned with the fulfillment of the need for help from the external elements such as BPBK, BPBD, BPBA, the Social Affairs Agency, and the Waters Agency, which play an important role in providing aid during the

recovery period; they have to provide temporary places for the evacuees, provide soup kitchens in the post-disaster so that they can allocate the flood victims temporarily. The Social Affairs Agency and the Aceh Tenggara District Government provide socialization concerning the development plan and committee establishment. The objective of establishing a committee is to formulate the plan for constructing aid housing, and the supervisors will consist of all the government employees at the village, the *dusun,* the sub-district, the religious leaders, and the construction builders. Besides that, there are other teams that participate in the building activities; They are instructed by the Minister of Social Affairs; they are MRI Aceh and MRI Sumatera Utara volunteers, the Army, the Police, BPBD, *Tagana,* and the local people.

BPBD of Aceh Tenggara Regency cooperates with the other components in doing its task. With its existence in every region in the regency, it became the first fort for the people in Aceh Tenggara to mitigate the disasters so that there would be no agency and LSM (non-government agency) work alone. Therefore, the more agencies that monitor the mitigation of disasters in a region, the easier and the faster they handle any problems of disaster. Disaster mitigation or any attempt to be done in the post-disaster has been the responsibility of BPBD, and everyone, group, social institution, and even foreigner can help and cares for disasters because the government, the people, and businesses are a triangle of power that have to work together in mitigating disasters.

External element also helps the people solve the problem of people's land acquisition by the government. The Minister of Social Affairs provides help in the form of housing for the flood victims whose houses were devastated by the flood and totally damaged on the condition that the victims have to build rights certificates of the damaged houses. They will be granted IDR.30,000,000 (thirty million rupiahs). Their houses will be constructed by the government in places far from the mouth of the river

(estuary). The government also plans to build a disaster alert village. The victims whose houses undergo mild and moderate damage will be moved to apartments even though they only rent the houses or houses without having any certificates. The victims whose houses have certificates will be moved to apartments, plus compensation of IDR.10,000,000 (ten million rupiahs) per family. All of the actions are done in order for the river dam to be reconstructed, and the estuary will function maximally by planting mangroves and implementing various regulations and sanctions so that the people will not build their houses by the river banks.

Internal cooperation

The network established by the internal community can be used for various needs. First, the spread of information during the process of pre-evacuation is done through loudspeakers in some mosques of the village or through organization members, social media, and from mouth to mouth. Secondly, the process of spreading the information is done by the volunteers of the other villages, while the volunteers of the Natam Village act as the coordinator of the disaster mitigation; they will direct the victims where to go, how to get assistance or persuade the victims to move to the evacuating places. Thirdly, Most people choose to build their new houses close to their relatives' dwellings in order that their relatives can protect them if something bad happens to them.

However, since the tremendous flood occurs, it seems that a big change occurs in the relationship among the local people. Some communities undergo difficulties in maintaining ties of friendship with their new neighbors, although they used to be closely related to each other in the pre-disaster. The village's condition is far different from the one before the disaster occurred. This is because their activities and work have changed, along with the changes which occur in their neighborhood. In the post-disaster, a villager will do some different jobs, such as a farmer, a

wage earner in the smallholder, a wage earner in a wet rice field, a day laborer, or, at the same time, a water hawker.

Trust

Trust in the form of the readiness to take a risk in a social relationship is based on self-confidence that other people will do something according to what he is expecting, and he always acts in a mutual supporting pattern in order not to harm him and his group (Coleman, 1994). Aceh Tenggara is a very multicultural area where its people are very heterogeneous; they comprise various tribes, cultures, and customs. Nevertheless, they can live together and interact with each other in socio-political unity. Social trust is obtained through the process of social interaction. Law and ethics are the main sources of trust, while institutional structure and kinship are the forms of structural trust. The interview with Mrs. G as the inhabitant of the Ginting clan is quoted below:

"I have lived at Natam Village for a very long time, about 45 years now. I have no wonder undergoing flood here; I'm really used to it. But this time, the flood was tremendous. It used to be flooded with big water flow and recede quickly, but in the previous years, the floods carried and set adrift logs and big rocks so that they washed away my house and farmland. I moved here when I still had a child; I bought a durian farm. I did not have relatives here; they lived at Kabanjahe. I myself immigrated to this place, and some of my children even got married to the natives here, and some of them converted to Islam. The people here are very heterogeneous; they never differentiate one clan from another or one's religion from another. Everyone is treated equally here. If there is a party and we are invited, we will come. If someone dies, we come to give our condolence. The same is true for our religion; if we have a wedding party, we invite the Moslems, and we separate the meals for them since we are Christians. In short, we work together, and we help each other peacefully."

From this interview, we can conclude that the local people's trust runs naturally so that there will be no conflict among the races, religions, tribes, and cultures. The strong attitude toward tolerance and solidarity has created a sense of trust among the local people at Natam Village. Positioning the same self-disposition when facing all types of disaster or incidents has made this group of people relies on each other and has the same obligations. Trust in the local people at Natam Village, which becomes one of the determining factors for the success of the disaster mitigation program, is possibly part of their belief that a tremendous flood that devastates their village is a warning from God to His followers. Religious value becomes the basis for the people at Natam Village to develop trust and attitude toward positive thinking toward other people and, at the same time, the attitude toward more closer to the Creator.

Trust between the government and the local people in mitigating the flood disaster can also be seen in the distribution of aid. Some logistic aids given to the flood victims at Natam Village are tents, clothes, food, utensils, blankets, medicines, and other aids without any conflicts between the local people and their leaders. The involvement of other elements in providing aid has made their attitude more transparent toward other parties.

Values and norms

The people who live in Aceh Tenggara Regency, especially at Natam Village, have the values which regulate their activities collectively. It can clearly be seen when they have *a pemamanen* tradition (Alas cultural tradition) and a *pelengakhi* (working together) system. *Pemamanen* tradition is an original tradition of the Alas tribe which has become a part of the immigrants who live in that place so that it becomes part of a new culture which has to be followed as a sign that the immigrants take part in the contribution in organizing it.

The implementation of the values of local wisdom, such as working together, negotiation, and a sense of togetherness, still exists in Aceh Tenggara Regency, in which its natives are Alas (*Khang Alas*). These values are used as the strategy in the process of recovery from disaster by the local people at Natam Village. They are expected to be able to increase the sense of solidarity

762

of the people who are tied together in order to increase coordination and Cooperation. The term, *Pelengakhi*, plays a very important role in the people in Aceh Tenggara Regency, especially in those who live at Natam Village. It can be seen when they are in the same position when they are undergoing flood disasters so that the process of allocating them to safe places gets no difficult. Today, their sense of consideration is greater in helping each other without being forced or getting ulterior motives. They also work together to save their remaining belongings, which can be used post-disaster. They work together to clean up their village in the post-disaster and help process the reconstruction of someone's new house in the village.

Good disaster mitigation includes people's active participation in fulfilling their real needs. Mitigation is considered effective when people themselves formulate their project proposals and will negotiate with the government or related agencies (Coburn et al., 1994). Therefore, people's social capital is needed as the referential framework in implementing the accurate and quick process of disaster mitigation. In practice, social capital can have good and bad impacts on the process of disaster mitigation. It can be used to support the process of disaster mitigation when a community develops a network as broad as possible, along with the volunteers and the government; the important thing is participating in all activities concerning the process of disaster mitigation. Meanwhile, social capital is regarded as obstructive in the process of disaster mitigation when a community that has a strong bond has a narrow scope of trust. They believe in only a certain person; for example, they believe in the figure of the caretaker of Mount Merapi. Their close relationship with and highly belief in the caretaker of Mount Merapi has made the process of disaster mitigation very difficult to be done. The best solution is by broadening the scope of trust and increasing the social bond not only in a community but also outside a community.

In this case, social capital plays a very important role in mitigating flood disasters in Aceh Tenggara Regency. There are two things that have to be done in mitigating flood disasters – structural mitigation and non-structural mitigation. A lot of efforts have been made to mitigate flood disaster by all components, especially by village structural components that always give guidance and Cooperation in facing flood which devastates Natam Village, Badar Sib-district, each year. Cooperation between the village structure and the local people at Natam Village has run very well so that the former has an active role in helping the people face the disaster. In general, the social capital at Natam Village, Badar Sub-district, Aceh Tenggara Regency, plays its role as a motivating force, connector, and supporter in creating the relationship among the people at Natam Village. Social capital becomes the supporter when all of them are affected by the calamity, and as a social relation, it can help them work together and rise from their depression. It becomes the connector when not all of them have a broad network in giving aid, let alone the Minister of Social Affairs comes directly to the disaster location, which is in a very remote area. It becomes the motivating force when it initiates Cooperation by making the people at Natam Village participate.

5. Conclusion

Social capital owned by the people at Natam Village is used properly in an attempt to mitigate flood disaster, which often occurs. It begins with the Cooperation between the people and the government in improving the people's dwellings which have been devastated by floods. They also cooperate and spread information concerning flood disasters through mosque loudspeakers. Another social capital is the sense of trust between the people and the government through the giving of physical and non-physical aid and participation in flood disaster mitigation planning. The people's participation can also be seen very well by using local values such as *Pelengakhi* in helping the people who have been affected by flood which

763

devastates their dwellings.

6. References

Aman K, Suman A. 2013. Identification of social capital in farmer groups and its availability on the welfare of farmer groups. Malang: Faculty of Economics and Business Universitas Brawijaya.

Azmeri A, Sundary D. 2013. Flash Flood Disaster Mitigation Study, Leuser District, Southeast Aceh Through Analysis of River Behavior and Watersheds. National Conference on Civil Engineering (pp. 1-7). Surakarta: Universitas Sebelas Maret.

BPS. 2015. Southeast Aceh in Figures 2015. Southeast Aceh District: Central Bureau of Statistics for Southeast Aceh District.

Coburn A, Spence R, Pomonis A. 1994. Disaster Management. Cambridge: UNDP World Development.

Coleman JS. 1994. Social capital, human capital, and youth investment. London: Cambridge University Press.

Dwiningrum SI. 2014. Social Capital in Educational Development (Theory and Practice Perspective). Yogyakarta: UNY Press.

Fathy R. 2019. Social Capital: Concepts, Inclusiveness and Community Empowerment. Journal of Sociological Thought, 6(1): 1-17.

Fiel J. 2010. Social Capital (Translation). (Nurhadi, Trans.) Bantul: Discourse Creation.

Hidayati D. 2008. Community Preparedness: A New Paradigm of Natural Disaster Management in Indonesia. Indonesian Population Journal, 8(1): 69-84.

Kusumastuti RD, Viverita V, Husodo ZA, Suardi L, Danarsari DN. 2014. Develop resilience index to natural disasters in Indonesia. International Journal of Disaster Risk Reduction, 10: 327-340.

Putnam R. 2007. Education and Social Capital. Journal of Eastern Economics. 33(1).

Santoso T. 2020. Understanding Social Capital. Surabaya: CV Saga Jawadwipa.