

Local Based Natural Wisdom of the Linge Aceh Tengah District Community as Landslide Mitigation Disaster

Ramdan Afrian^a, Bachtiar Akob^b, Hamdani^c, Sofyan^d, Bukhari^e

^aGeography Education Studies lecturer, FKIP Samudra University, Langsa City, Aceh, Indonesia

email:ramdan.afrian_geo@unsam.ac.id

^bLecturer of History Education Studies Program, FKIP Samudra University, Langsa City, Aceh, Indonesia.

^cLecturer of Mechanical Engineering Study Program, FT Samudra University, Langsa City, Aceh, Indonesia

^dLecturer of Mathematics Education Study Program, FKIP Samudra University, Langsa City, Aceh, Indonesia

^eLecturer of History Education Studies Program, FKIP Samudra University, Langsa City, Aceh, Indonesia

Abstract

The regency of Aceh Tengah is one of the districts within Aceh Province which is a highland area, hills and coastal areas which are plantation and agricultural areas. The district of Aceh Tengah has 14 districts with a total of 295 villages with the number of landslides nearing 1240 landslides. Geographical condition of this region which is in the mountains area consists of hills, valleys and forest areas with high rainfall, causing this area often experience natural disasters of floods and landslides. causing this area often experience natural disasters of floods and landslides. therefore, this article aims to expose the local nature-based wisdom of the Linge District community. Disaster mitigation system based nature is actually part of the local wisdom that developed in Indonesia and have been hereditary. Local wisdom to read and avoid the impact of disasters is also in Linge District, Regency of Aceh Tengah. In this region, people observed orangutan sounds as a sign of the emergence of heavy rain and floods and landslides. They play an important role in disaster preparedness, risk management around areas considered vulnerable.

Keywords: Local Wisdom, Natural Production, Arul Item, Disaster Mitigation, Landslide

1. Introduction

Aceh Tengah is one of the districts within Aceh Province which is a highland area, hills and coastal areas. Aceh Tengah has a slope classification of <8%, 8-15%, 16-25%, 26-40%, and > 40%. Based on the slope, the dominant slope in Aceh Tengah Regency is 8% -15% with the area of 167,501.19 Ha or 36% of the total area of the regency which is the area of plantation and agriculture. Aceh Tengah regency has 14 sub-districts with 295 villages with the number of landslides reaching almost 1240 landslide points. (Draft of Urban Planning of Aceh Tengah District, 2012).

The hilly topography of Aceh Tengah and the number of micro fractures resulted in this area very vulnerable to landslides. The condition is exacerbated by high rainfall ranging from 1,082 to 2,409 millimeters per year with the number of rainy days between 113 and 160 days per year. (Central bureau of statistics of Aceh Tengah, 2013).

Aceh Tengah has 14 Sub-districts, from 14 Sub-districts, Linge sub district has a high landslide incidence rate. In general, the landslide that hit Linge District in 2011 occurred, about 70% of the residential area and occurred almost in the whole village, from 26 villages that there are only 7 villages were not affected by landslides. The main potential of disaster in Linge District is landslide disaster that occurs almost every year in the rainy season. The landslide-prone areas in Linge district are in residential areas along hills that pass through 19 villages of 26

existing villages.

Linge District with an area of 2078.28 Km² and the population of 9775 people is a hilly area that connects Aceh Tengah District with Gayo Lues District (Blangkejeren). Most residents in Linge District live on slopes and hills. The mileage District with linge district about 45 km or about 1 hour 30 minutes with a difficult terrain to go.

Natural disasters often cause harm to the community such as loss of life, property, injuries and the difficulty of evacuation (refuge). Areas prone to disasters such as Aceh Tengah need to have good disaster mitigation. One good disaster mitigation is that which is in accordance with the local wisdom of the area. Each region has its own local wisdom to face the disasters for example in Aceh, The Siemeulue community through Linon and Smong folklore managed to save lives at the Tsunami in Aceh 2014.

In this article, the author wants to explore the local wisdom that existed in the village community Arul Item District Linge. The local wisdom that we want to explore is a local based natural wisdom.

2. Research Method

The research itself uses descriptive research method with qualitative approach. Data collection is done through observation and interview. Observations in observation activities conducted on community activities, mountains, forests, rivers and the surrounding environment. interviews were conducted to interviewees and informants, namely traditional chairman, village leaders, elders, and villagers of Arul Item. The information gathered is the traditional way of preventing or reducing disaster risks.

The data and information that have been collected is processed by using qualitative descriptive analysis. The data analyzed include custom rules and local provisions in the Arul Item community, local wisdom and disaster mitigation in the tradition of screaming imo (siamang) and teger (the roar above the sky and the turbid river water mixed with oil).

3. Result and Discussion

Aceh Tengah regency has a topographic area that varies from the plateau with a slope 0-2%, ramps with a slope of 2-8%, wavy with a slope of 8-15%, surging with a slope of 15-25%, hilly with 25-40% slope, mountain with slope > 40%. This region is dominated by hilly and mountainous topography. For more details can be seen in Figure 1 and Table.1

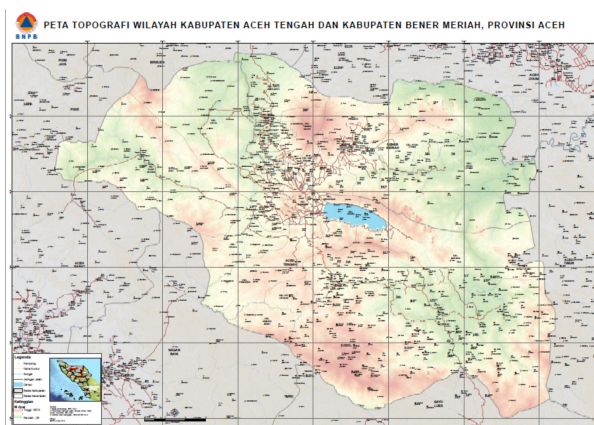


Figure 1. Topography maps of Aceh Tengah and Bener Meriah Regency, Aceh Province

Table.1 Tilt of Land, Form and Area of Aceh Tengah Regency

No	Tilt Slope (%)	Region Form	Large Territory (Ha)	(%)
1	0 – 2	Flat	4.780,91	1,07
2	2 – 8	Sloping	7.100,07	1,59
3	8 – 15	Wavy	32.115,33	7,21
3	15 – 25	Surging	101.180,05	22,72
4	25 – 40	Hilly	184,932,46	41,52
5	>40	Mountainous	115,295,30	25,89
Total			445.404,12	100,00

Source: Sanitary Book of Aceh Tengah Regency, 2013



Figure 2. Map Location of Avalanche of Aceh Province

Based on the picture above it is clear that Aceh Tengah District has the highest landslide prone point compared to other areas in Aceh. Middle Aceh has 14 sub-districts, one of which is Linge Sub-district. Linge sub-district is the most frequent landslide disaster. Linge Sub District has geographical location bordering on Bintang subdistrict and Laut Tawar subdistrict (North side), Gayo lues regency (South side), District Jagong Jeget and District Atu Lintang (West side), Gayo Lues regency and Aceh timur Regency (East).

Linge district with the capital of ISAQ has an area of 2,075.3 KM2 is half of the width of Aceh tengah District. While the number of villages in the subdistrict linge amounted to 26 villages namely: Ise-ise Village, Lumut Village, Owaq Village, Jamat Village, Reje Payung Village, Delung Sekinel Village, Kute Reje Village, Linge Village, Penarun Village, Umang Village, Simpang Tige Uning Village, Pantan Nangka Village, Mungkur Village, Gewat Village, Kemendeng Village, Kute Rayang Village, Kute Riyem Village, Kute Keramil Village, Kute Baru Village, Robel Village, Gelampang Gading Village, Dispot Linge Village, Arul Item Village, Antara

Village, Gemboyah Village and Pantan Reduk Village.

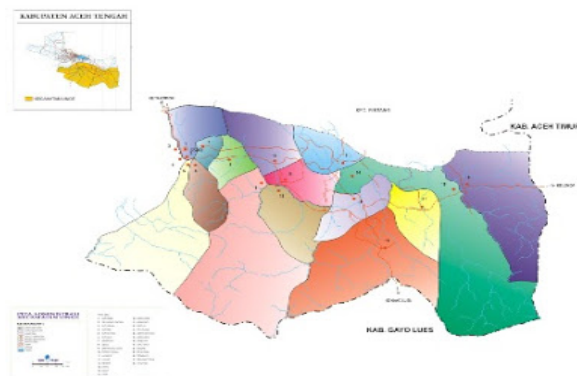


Figure 3 Map of Linge District Administration

In Indonesia's Disaster Prone Index (2011) explained that landslide is one type of mass movement of soil or rock, as well as mixing both, down or out of the slope due to disturbance of soil stability or slope constellation rocks. Landslides occur due to thick soil conditions, steep slopes, slope loading and very high rainfall in the area.

This highly volatile landslide. The condition ideally forces local communities to equip themselves with early warning systems as part of disaster mitigation efforts. The simplest and most easily understood early warning system of the people is the signs given by nature. the simplest and most easily understood early warning.

Disaster mitigation is defined as an effort made to prevent a disaster or reduce the impact of a disaster. According Subiyantoro (2010), disaster mitigation is actually related to the cycle of disaster management in the form of handling efforts before the disaster. As according to the Decree of the Minister of Home Affairs RI. 131 in 2003, mitigation (defined also as *penjinaka*) is defined as efforts and activities undertaken to reduce and minimize the consequences of disasters that include preparedness and alertness.

Disaster mitigation system based nature is actually part of the local wisdom that developed in the community. Gayo people living in mountainous areas are accustomed to living with changes in the natural environment of course have local wisdom associated with natural disasters. Gatra (2012) explains that research conducted by Koen Meyers and Princess Watson (Simeulue, Nias, and Siberut, Indonesia Dongeng, Ritual and Architecture in the Mountain Belt Terrain) revealed that local wisdom practices proven to reduce the impact of natural disasters on three islands Sumatra, namely Simeulue, Nias, and Siberut.

Arul Item is one of the villages in Linge District that is prone to landslide disaster. Based on the results of interviews to some community leaders in this village there is local wisdom in the community. Local wisdom begins usually from a family circle consisting of four to five households. Each member jointly arranges meetings, and makes decisions when disaster strikes.

Local wisdom to mitigate landslide disaster begins this village community ask first to tetue (elder), what a good day and not the heavy rainy season. According to their belief, the elders in the village understood the signs of heavy rain and landslides. Then the elders with his team held a ritual *mumenge leng Imo*. Pay attention to the *teger* (the roar above the sky); the presence of turbid river water mixed with oil and the most influential is shout *imo*. Mas village, the elders and his team down the hill and hear the voice of orangutans (*imo*) who shouted continuously. If the orangutan's voice is heard longer and longer, it will signal heavy rain and cause a landslide.

For the people of Linge Sub-district, they believe that the landslide disaster as a dragon incident or a giant snake that descends from the mountain "*ulak mien kau berdu, oya kati murelas, ho... toron ni nege kene jema jemen* (the point is because the mountain is avalanche, by the people he said there is a dragon down) ". Signs will flood and landslide "*...uren porak lo kelem...*" (*... the sign of rain day and night ...*) "*..te uren-uren a pe I paloh*

gelep.. . "(rain below here clouds clouded dark sky ..) "*..weh kul..*' (flood) Oya kati kene jema jemen gere nguk nebeng kayu musepit, kayu wan karang rom kayu I ulu ni weh" "(That's why the ancients declared forbidding timber harvesting, wood that grows on the slopes and wood near the springs)) " ngere nguk mayo ku uten rum nebang kayu, torah ara berijin ari pawange ya, ike mulanggar oya kona dene" (anyone can not enter and carelessly cut down the forest, there must be a permit either from reje kampong or from the authorized person (Gayo: 2016).

Gayo communities, especially linge sub-districts, are very fortunate to have distinctive local wisdom as a form of community-based disaster mitigation of landslide disaster. Due to the nature of the community itself, the socialization of disaster mitigation can be easily absorbed and remembered by the community from various lines. This local wisdom will form a group of people who swift and responsive in the face of disaster, especially landslides. In addition, this form of disaster mitigation based on local wisdom can be maintained as a hereditary heritage to posterity.

4. Conclusion

Almost every community has a distinctive local wisdom as an adaptation strategy to the environment. With such wisdom a society can survive and successfully live his life well. Strategies for success in the life of a society can not be separated from the beliefs and customs that are taught and practiced in the way of generations from generation to generation. In the community of Arul Item Linge Sub-district, still holds strong trust and customs with full of wisdom. One of the local wisdom of the community is related to the prevention of disasters (mudslide disaster mitigation. Arul Item community through their local wisdom of hearing imo screams, hearing *teger* (rumbling in the sky) and and watching the turbid river water and mixed with oil proved capable of preventing (mitigation) landslide disaster.

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Ramdan Afrian (April 18, 1988) was born on April 18, 1988 in Palembang, South Sumatra, Indonesia. Master graduate in geography education postgraduate faculty of Malang State University. Active as a lecturer in the educational program of geography teacher education faculty and education Samudra University.

Bachtiar Akob (May 19, 1961) was born on 19 May 1961 in Aceh Barat, Aceh, Indonesia. Doctorate, IPS Doctoral Studies Program, Postgraduate Program, Syiah Kuala University (2017). Currently active as president of Samudra University.

Hamdani (November 7, 1965) was born in Bireuen on 07 November 1965. In 1989 completed his Bachelor Degree in Mechanical Engineering Department of Syiah Kuala University. Beginning in 1991 working as a lecturer at the Department of Mechanical Engineering Faculty of Engineering, Syiah Kuala University. In 1995 finished his master degree at Mechanical Engineering Department of ITB. In the Year 2003-2005 served as Head of Department of Mechanical Engineering Faculty of Engineering, Syiah Kuala University. In the Year 2009-2012 served as Secretary of the Mechanical Engineering Department Postgraduate Program Syiah Kuala University. Courses taught Engineering Thermodynamics, Renewable Energy and Fluid Engines. The field of study is Renewable Energy and Fluid Mechanics. In 2014-2015 served as the Dean of Engineering Faculty, Samudra University, Langsa, Aceh. Beginning 2015-now serving as Deputy Rector for Administration and Finance at Samudra University.

Sofyan (December 22, 1965) was born on December 22, 1965 in East Aceh, Aceh, Indonesia. Master Graduate in masters education program in mathematics. Postgraduate program. Syiah Kuala University. Currently active as dean of teacher faculty and education sciences, Samudra university.

Bukhari (March 02, 1961) was born on 02 March 1961 in Meureudu, Aceh, Indonesia. Master Graduate in Master of History Studies. Post-graduate program. Syiah Kuala University. Currently active as vice dean of general and financial of teacher faculty and education sciences, Samudra University