Vol. 2 No. 1 (pp.30-38) December 2019 p\_ISSN 2655-5085 e\_ISSN 2655-5239

# SOCIETY SURVIVAL IN AREAS PRONE TO LANDSLIDES IN THE VILLAGE OF NORTH TANDIKEK PATAMUAN SUB-DISTRICT, PADANG PARIAMAN DISTRICT

# \* Al Fajri Yusra<sup>1</sup> and Erianjoni<sup>2</sup>

<sup>1</sup> Master Program of Social Science of Universitas Negeri Padang
<sup>2</sup>Lecturer Master Program of Social Science of Universitas Negeri Padang
Email: fyusra15@gmail.com

\*Corresponding Author, Received: Augustus 14, 2019, Revised: October 17, 2019, Accepted: November 11, 2019

#### **ABSTRACT**

This research is motivated to find out the survival of the Society survival in areas prone to landslides In The Village Of North Tandikek Patamuan Sub-District, Padang Pariaman District. Research location in the village of North Tandikek. This research uses qualitative approaches with case study research types, data collection techniques by observation, interviews and documentation. The selection of informant is done by Purposive Sampling. The Analysis of this research uses functional structural theory by Talcott Parsoons AGIL. The results of the research are that (1). The reasons for society to stay in the research site are: a). Environmental Factors, b) Economic Factors, c) Social Cultural Factors, d) Education Factors. (2). Society strategies for survival in landslide prone areas that is: a). Looking for a safe haven b). Greening empty land c). Mutual Cooperatin

Keywords: Survival, Disaster Prone Areas, landslide Disaster

## INTRODUCTION

In general, natural disasters are a detrimental event that is Ezurafrom natural processes. Examples include floods, storms, volcanic eruptions, earthquakes, tsunamis, and more. Disaster is an event or incident caused by nature or human that can inflict casualties, loss of material, and damage to the environment (Hermon, 2010; Hermon, 2011). In Barlian and Ernawati (2012); Hermon (2012), states that natural hazards occur as a result of the interaction between natural settings by a system of natural use by humans. Due to natural disasters is loss of life, injury or illness, damage to property, loss of family income, and psychological impact.

# **SENJOp**http://senjop.ppj.unp.ac.id/index.php/senjop

#### Science and Environmental Journals for Postgraduate

Vol. 2 No. 1 (pp.30-38) December 2019 p\_ISSN 2655-5085 e ISSN 2655-5239

One of natural disasters is earthquakes and landslides (Hermon, 2015; Hermon, 2016; Hermon, 2017). Earthquake and landslide events in west Sumatra on Wednesday, September 30, 2009, 7.9 SR. centered in the Indian Ocean 57 km southwest of Pariaman with theinner 71 km resulted in considerable damage to the Padang Pariaman districts, Padang City, Pesisir Selatan, Pasaman districts and Agam district. An earthquake that claimed around 1,000 lives and damaged homes, farmland such as rice fields, irrigation facilities, victims of livestock animals secycle 650 livestock and so on (Saidi, 2011; Hermon; 2014; Oktorie, 2017; Oktorie, 2018; Oktorie, et al., 2019). The toughest damage caused by the earthquake accompanied by an avalanche is in Padang Pariaman districts, beside damaged houses, agricultural infrastructure, as well as gardens and rice fields are buried by avalanche. One of the village in Padang Pariaman District, which suffered damage from the earthquake occurred on 30 September 2009 at 17.15 WIB magnitude 7.9 SR Tandikek Village, Village It consists of 11 Korong, where 3 villages include the Cumanak-Paraman, Lubuak Laweh and Kepalo Koto the worst suffered a landslide. The avalanche of the earthquake originated from the Bukik Gunung Tigo and Bukik Lubuak laweh slopes, which killed more than 276 victims buried there (interview with the Secretary of the village of north tandikek Indra 35 year).

So far the three locations are Cumanak-Paraman, Lubuak Laweh and Kepalo Koto is a disaster prone area. Korong Lubuak Laweh is now the Village of North Tandikek after the expansion of the year 2011. The population in the year 2019 in the village of north Tandikek is based on village data of 2570 people and the number of household heads (KK) is 697 KK. While the number of population living in disaster prone areas is about 1200 people living mainly from the state of the meeting (The interview results of Secretary of the village of north tandikek indra 35 year). People who live in this region have a high enough potential to risk the risk of landslides, on agricultural land as an economy, but the people of the North Tandikek village still survive in the region.

The research was in line with previous research but this study was different from previous studies. Research conducted by (A Saidi DKK. 2011) entitled Landslide Study due to earthquake in Tandikek village Partamuan District of Padang Pariaman Regency of West Sumatera, Indonesia. Further research is done by (Hermon et al, 2017; Rohani



Vol. 2 No. 1 (pp.30-38) December 2019 p\_ISSN 2655-5085 e ISSN 2655-5239

Budi, 2018; Hermon et al, 2018; Hermon et al, 2019) titled Disaster-Aware Society: Learning from Karo, Banjarnegara, and Japan.

Results of observations and interviews of researchers at north Tandikek village, Patamuan district has six (6) KOrong, that is: 1). Paraman Talang, 2). Sialang, 3). Tandikek Asli, 4). Air Kelok, 5). Lubuak Laweh Kampung Apa, 6). Lubuak Laweh jajaran. The reason society to remain on the disaster prone area is a landslide is a karena neighborhood that is far from urban making a sense of comfort and tranquility with its environment. Soil fertility that allows the community can cultivate the land by planting so that it can meet the needs of the economy. There is a sense of solidarity between people very closely, the community has long lived in this area and is a land of birth and has an inheritance property of the ownership of land that must be in defend.

## **METHOD**

The community has become the focus of the research in disaster prone areas. Research conducted in Nagari Tandikek District Patamuan District Padang Pariaman. This study used a qualitative approach with research type case study (Lexy J. Moleong. 2000) The selection of informant with the technique of *Purposive Sampling* (Suyanto, bagong. 1995). The selection of the informant is conducted in accordance with the criteria of (1) Regional disaster Management Agency (BPBD), (2) The Regent of North Tandikek Village, (3) Community figures, (4) Citizens and communities of North Tandikek village. Data collection In this study used interview techniques, observations and documentation. Data Validity techniques using triangulation Source, triangulation of data collection techniques and triangulation time (Basrowi and Suwandi. 2009). Data Analysis techniques using the data analysis of F quality developed by (Miles and Huberman. 1992), consist of three components: a). Data reduction, B). Data presentation, c). Conclusion Pullers

## **RESULTS AND DISCUSSION**

In this case the authors desribe the results of several Research findings based on observations and direct interviews in the field. Based on the results of interviews with



Vol. 2 No. 1 (pp.30-38) December 2019 p\_ISSN 2655-5085 e ISSN 2655-5239

some Informant There are several reasons for informant to remain in the area prone to landslide disaster:

## Society survival in areas prone to landslides.

There are several factors that cause the community to survive in the area of the landslide disaster area in north tandikek village:

#### a. Environmental factors

Environmental factors are one of the factors causing the people of North Tandikek to stay in the area of disaster prone to landslides. This is because the environmental condition in the North Tandikek villge is a safe area of noise, away from air pollution and a sense of comfort and calm is the main reason the community to stay alive and live in the area prone to landslide.

## b. Economic factors

The job location aims to know if the job depends on the area that mereka lives. This can be seen from most of the livelihoods of the north tandkek village community is farming. At this location the work of the north tandkek community cultivates land for farming, rice farming and farming which is a source of income for the community in general.

#### c. Social and cultural factors

Social factors are one of the reasons for society to survive. This can be seen because of the social ties and social interaction of the community is very high with the existence of associations or Social organization in the neighborhood. The Birthland and inheritance inheritance system that is the land or housegiven by his parents is declining, This is a tradition of the family. This affects the people of north tandikek village to stay afloat in areas pron to landslides.

# d. Education factors

The educational factor of one of the factors affecting the reason society remains in disaster prone areas. The Level of Education and the Viewpoint of society is heavily influenced by educational background. The lower the level of a person's education, then their perspective on natural disasters also tends to be resigned and accept what nature



Vol. 2 No. 1 (pp.30-38) December 2019 p\_ISSN 2655-5085 e ISSN 2655-5239

afforded, seeing natural disasters as destiny is inevitable. It can be seen that the education level of North Tandikek Villagers in general is still low.

# Strategy of Communities Living in landslide prone areas

#### a. Look for a safe haven

The experience of north tandikek villagers in dealing with natural disasters has direct implications for the people in an area. When there is an earthquake and heavy rain (Hermon et al, 2018; Hermon, 2019), people who live in areas prone to landslides (Hermon, 2019), seek safer places to protect (Hermon, 2019). This is an adaptation of the people of North Tandikek village in an area prone to landslides, in order to reduce the impact of natural disasters.

# b. Greening empty land

Greening vacant land is one form of the strategy of the North Tandiek village community, so that it can survive in areas prone to landslides. We can see that the community is able to cultivate land by planting, both in the form of agriculture and plantations with the aim of meeting economic needs and survival in landslide prone areas.

Based on data from the village the amount of land used for agriculture (Hermon, 2019), rice is 175 ha, 1 ha corn, red onion and long beans 1 ha. As for the plantation land that is used for coconut plants amounting to 15 ha, 7 ha cocoa, and 10 ha rubber. The use of land by the North Tandikek village community for the agriculture and plantation sectors, is a form of community strategy to minimize the movement of land. It is also beneficial to the community, by selling agricultural and agricultural products to meet economic needs for survival in a disaster prone area.

# c. Mutual Cooperation

One of the community strategies for landslide-prone areas in North Tandikek village is mutual cooperation. Mutual cooperation is community cooperation to clean up the environment where he lives in areas prone to landslides.. Community cooperation activities carried out by the community are cleaning up roads and the environment, so that it aims to protect the natural ecosystem. This activity aims for the community to be able to survive in areas prone to landslides. Based on the results of interviews with

# Science and Environmental Journals for Postgraduate Vol. 2 No. 1 (pp.30-38) December 2019



p\_ISSN 2655-5085 e ISSN 2655-5239

community leaders every Korong in the village of North Tandikek do mutual cooperation activities conducted every Tuesday, by clearing the road in order to be able to access the road to be taken by the community.

In the context of natural disaster management, public response to disasters is very important to understand. While Hermon (2017) explains that disaster is detrimental to society, but despite the many and varied disasters that hit, we can still live safe and comfortable as long as it can manage the disaster well and still many efforts that can be done so that the impact of the disaster can be made to a minimum by using a way to implement a good preparedness and disaster preparedness strategy.

Environmental issues as a means of human life can not be able to restore at the original condition (Kristian and Oktorie, 2018). The existence of an environmental balance is due to existing and acceptable rules of the local community. Formally viewed the problem of rules or norms linking local wisdom values is not there, but it turns out that the community is associating with the rules of conduct relating to the environment and the local community remains alive And still firmly held the values by the people. Through this system, local wisdom can be referred to as a soul of a local culture (Erianjoni, 2018).

From some of the research above Parsons statement in AGIL theory expressed in the parts within the system are interconnected, where the perception on society, could influence the survival of the northenrn Tandikek village. There are several factors that cause people to survive in landslide in the village of north Tandikek, namely: environmental factors, economic factors, social and cultural factors, educational factors. This is overdue by the above factors that the perception relates also to the system in society so that the system can still survive. So all the causes of survivingthe community A areinfluential on the *order*, *equilibirium* and changes as well as the waiver of conflict as an emphasis of the Parson Talcott theory regarding the functional structural of the existing D nature ofthis Society (Poloma, 1998).

In this research, there are several strategies carried out in the north tandikek village Community to survive landslide prone areas, namely: finding a safe place, greening vacant land and mutual cooperation. With this strategy the community can

# **SENJOP**http://senjop.ppj.unp.ac.id/index.php/senjop

# Science and Environmental Journals for Postgraduate

Vol. 2 No. 1 (pp.30-38) December 2019 p\_ISSN 2655-5085 e\_ISSN 2655-5239

withstand disaster prone areas, community experience in the event of disaster, so that his understanding has become a capital for disaster risk reduction. With the perception in the midst of this society, the society is still enduring to its circumstances and environment (Poloma, 1998).

## **CONCLUSION**

Based on the results of the author's research on community sustainability in the area of landslide disaster prone village Tandikek North District Patamuan Padang Pariaman District. It can be concluded that the lack of understanding of society is being deployed by the public's perspective heavily influenced by educational background. The lower the level of a person's education, then their perspective on natural disasters also tends to be resigned and accept what nature afforded, seeing natural disasters as destiny is inevitable. The results of this study include: (1). People's sustainability in the area of landslide disaster prone, there are several factors that cause people to live in disaster prone areas namely: a). Environmental factors, B). Economic factors, c). Social and cultural factors, d). Educational factors. (2). The strategy of people to survive in the area of landslide disaster prone, there are some strategies that do that is: a). Look for a safe haven, b). Greening empty land, C). Mutual Cooperation. The strategy undertaken by the people of North Tandikek village is an effort to finalize the impact of disaster risk.

#### REFERENCES

- A Saidi, I Ber dan R Har. 2011. Kajian Longsor Akibat Gempa di Nagari Tandikek Kecamatan Partamuan Kabupaten Padang Pariaman Sumatera Barat, Indonesia. J. Solum Vol. VIII No. 2:78-91.
- Barlian, E dan Ernawati. 2012. Survey dan Pemetaan Daerah Rawan Banjir dengan Menggunakan Citra Penginderaan Jauh di Daerah Aliran Sungai (DAS) Batang Air Dingin Kota Padang. Laporan Penelitian. Universitas Negeri Padang.
- Basrowi dan Suwandi. 2009. Memahami Penelitian Kualitatif. Jakarta: Rineka Cipta.
- Burhan Bungin. 2012. Analisis Data Penelitian Kualitatif. Jakarta: PT Raja GrafindoPersada
- Erianjoni, E. 2018. Pengembangan Materi Ajar Sosiologi Tentang Mitigasi Bencana Berbasis Kearifan Lokal di Kota Padang. SOCIUS. https://doi.org/10.24036/scs.v4i2.24
- Hermon, D. 2010. Geografi Lingkungan: Perubahan Lingkungan Global. UNP Press.



Vol. 2 No. 1 (pp.30-38) December 2019 p\_ISSN 2655-5085 e ISSN 2655-5239

- Hermon, D. 2011. Studi Karakteristik Epipedon berdasarkan Penggunaan Lahan di Kecamatan X Koto Kabupaten Tanah Datar. Universitas Andalas.
- Hermon, D. 2012. Mitigasi Bencana Hidrometeorlogi: Banjir, Longsor, Degradasi Lahan, Ekologi, Kekeringan, dan Puting Beliung. UNP Press. Padang.
- Hermon, D. 2014. Impacts of Land Cover Change on Climate Trend in Padang Indonesia. Indonesian Journal of Geography. Volume 46. Issue 2. p: 138-142. Fakultas Geografi Universitas Gajah Mada.
- Hermon, D. 2015. Geografi Bencana Alam. Jakarta: PT RajaGrafindo Persada.
- Hermon, D. 2016. Mitigasi Perubahan Iklim. Rajawali Pers (Radjagrafindo).
- Hermon, D. 2017. Climate Change Mitigation. Rajawali Pers (Radjagrafindo).
- Hermon, D., P. Iskarni., O. Oktorie and R. Wilis. 2017. The Model of Land Cover Change into Settlement Area and Tin Mining and its Affecting Factors in Belitung Island, Indonesia. Journal of Environment and Earth Science. Volume 7 No. 6. p: 32-39. IISTE.
- Hermon, D., Ganefri., A. Putra and O. Oktorie. 2018. The Model of Mangrove Land Cover Change for the Estimation of Blue Carbon Stock Change in Belitung Island-Indonesia. International Journal of Applied Environmental Sciences. Volume 13. Issue 2. p: 191-202. Research India Publication.
- Hermon, D., A. Putra and O. Oktorie. 2018. Suitability Evaluation of Space Utilization Based on Environmental Sustainability at The Coastal Area of Bungus Bay in Padang City, Indonesia. International Journal of GEOMATE. Volume 14. Issue 41. p: 193-202. Geomate International Society.
- Hermon, D. 2019. Evaluation of Physical Development of The Coastal Tourism Regions on Tsunami Potentially Zones in Pariaman City-Indonesia. International Journal of GEOMATE. Volume 17. Issue 59. p: 189-196. Geomate International Society.
- Hermon, D. 2019. Mitigation and Adaptation: Disaster of Climate Change. Sara Book Publication. India.
- Hermon, D. 2019. Characteristics of Melanic Epipedon Based on Biosequence in The Physiography of Marapi-Singgalang, West Sumatra. IOP Conference Series: Earth and Environmental Science. Vol. 314. Issue 1.
- Hermon, D., Erianjoni, I. Dewata, A. Putra, and O. Oktorie. 2019. Liquefaction Vulnerability Analysis as a Coastal Spatial Planning Concept in Pariaman City—Indonesia. International Journal of Recent Technology and Engineering (IJRTE). Vol. 8. Issue 2. Pp 4181-4186.
- Hermon, D. 2019. Land Stability Model for Sustainable Spatial Planning in Padang City-Indonesia based on Landslide Disaster. Journal of Geography and Earth Sciences. Vol. 7. Issue 1. Pp 19-26.
- Kristian, A and O. Oktorie. 2018. Study of Coastal Mangrove Conservation in the World. Sumatra Journal of Disaster, Geography and Geography Education. Volume 2. Issue 1. p: 49-52.
- Lexy J. Moleong. 2000. Metodologi Penelitian Kualitatif. Bandung: Remaja Rosdakrya. Marfai, M.A., dkk. 2008. The Impact of Tidal Flooding on a Coastal Community in Semarang, Indonesia. Environmentalist. Vol. 28, No. 3, hlm. 237-248.
- Miles dan Huberman. 1992. Analisis Data Kualitatif. Jakarta: UI Press.



Vol. 2 No. 1 (pp.30-38) December 2019 p\_ISSN 2655-5085 e ISSN 2655-5239

- Oktorie, O. 2017. A Study of Landslide Areas Mitigation and Adaptation in Palupuah Subdistrict, Agam Regency, West Sumatra Province, Indonesia. Sumatra Journal of Disaster, Geography and Geography Education. Volume 1. Issue. 1. p: 43-49. Master Program of Geography Education.
- Oktorie, O. 2018. Model Kebijakan Responsif Pemulihan Bencana Letusan Gunung Sinabung. Jurnal Kapita Selekta Geografi. Volume 1. Issue 1. p: 15-20.
- Oktorie, O., D. Hermon, Erianjoni, A. Syarief and A. Putra. 2019. A Calculation and Compiling Models of Land Cover Quality Index 2019 uses the Geographic Information System in Pariaman City, West Sumatra Province, Indonesia. International Journal of Recent Technology and Engineering (IJRTE). Vol. 8. Issue 3 pp. 6406-6411.
- Poloma, M. 1998. Sosiologi Kontemporer. Jakarta: Rineka Cipta.
- Rohani Budi Prihatin. 2018. Masyarakat Sadar Bencana: Pembelajaran dari Karo, Banjarnegara, dan Jepang. Jurnal Masalah-masalah Sosial | Volume 9, No, 2:221-239
- Suyanto, Bagong. 1995. Metode Penelitian Sosial. Surabaya: Airlangga University Press Zein, M. 2010. A Community Based Approach to Flood Hazard and Vulnerability Assessment in Flood Prone Area: A Case Study in Kelurahan Sewu, Surakarta City, Indonesia." Tesis. Gadjah Mada University and International Institute for Geo-Information Science and Earth Observation.