# LANDSLIDE MITIGATION THROUGH SOCIO-CULTURAL APPROACH WITH POLICY OF UTILIZATION OF LOCAL WISDOM IN PANGKALAN SUB-DISTRICT OF LIMA PULUH KOTA

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**ABSTRACT:** This article is the result of research that attempts to reveal the mitigation of landslide disaster with socio-cultural approach. Seeking to see side of local wisdom of society in District of Lima Puluh Kota of West Sumatera Province conducted by mixed methode by combining data collecting technique that exist in research with approach of qualitative and qualitative, that is questionnaire, observation, interview and Focus Group Discussion (FGD), sampling with purposive sampling technique. data wetting by means of triangulation of data in both triangulation of sources, methods and time. Further data analysis with interactive data analysis model from Miles and Huberman. The results of this study successfully identified the values of local wisdom for the mitigation and adaptation of landslide disaster that actually existed in the realm of community culture in the District of Lima Puluh Kota. Those values are natural signs, social-cultural bans and powers and information media of local wisdom values in the face of natural disasters such as landslides.

Keywords: mitigation, landslide, local wisdom

## 1. INTRODUCTION

Environmental issues and natural disasters have become an urgent issue in these two decades, marked by the emergence of various environmental issues such as natural damage, nature conservation and global pro movement towards environment-based development. In the midst of the dilemma of economic development that is friendly to nature, there is also an awareness of environmental, social, cultural and economic experts to deal with natural threats in the form of natural disasters and social disasters, so the study of the problem becomes dynamic in the development of epistemology and the axiology of science especially in universities in Indonesia in viewing the problem [11] [12] [13] [14] [15].

Indonesia is one of the most vulnerable countries. According to Law No. 24 of 2007 on Disaster Management, disaster is an event or series of events that threaten and disrupt the life and livelihood of the community caused by both natural factors and/or non-internal factors and human factors resulting in the occurrence of human lives, environmental damage, property loss, and psychological impact. Disasters can be divided into three, among others, natural disasters, nonnatural disasters and social disasters.

Landslide disaster is the movement of rock or earth on a slope due to the influence of gravity. Landslides occurring in Indonesia occur on the steep topography with a slope angle of about  $15^{\circ}$  - $45^{\circ}$  and on weathered volcanic rocks with high rainfall. Factors causing natural landslide that is the surface morphology of the earth, land use, lithology, geological structure, rainfall, and seismicity. In addition to natural factors, also caused by human activity factors that affect a landscape, such as agricultural activities, slope loading, cutting [3] [16] [17] [18] [19] [20].

In this paper will be seen how the sociocultural approach with local wisdom to mitigate landslide disaster in Pangkalan District, Lima Puluh Kota District. Local wisdom is considered one of the strategies for landslide mitigation should be used as a model for future policy.

## 2. METHODS

The research conducted by mixed methode by combining the data collecting techniques that exist in the research with the approach of qualitative and qualitative, namely questionnaire, observation, interview and Focus Group Discussion (FGD), sampling with purposive sampling technique. data wetting by means of triangulation of data in both triangulation of sources, methods and time. Further data analysis with interactive data analysis model from Miles and Huberman (2009) [5] [21] [22] [23] [24] [25], in addition with Analysis Hierarcy Process (AHP) [1]

## 3. RESULTS AND DISCUSSION

Based on the research with interview technique that has been done to the public figures and traditional tokho, can be described some form of local wisdom of society in District of Lima Puluh Kota which can be made as one of landslide mitigation strategy of landslide:

1. Prevention Efforts:

Efforts to prevent natural disasters on local communities in Kabupaten Lima Puluh Kota actually has had traditions in various forms that can be used to prevent the occurrence of disaster, the tradition is shaped:

a. Tree planting culture;

in the community in Pangkalan Sub-district has always been a habit of planting trees that are considered to play a role in preventing landslides, among the trees are: tree species; banio kawang, kelampaian, kulim, pulai, kempas, binuang, bintungan, koranji, balam, marsawa, jelutung, merantih, ketaping, subayang, madang, kruing, timbalun, and siminai and bumbuang. The trees are already extinct in the forests, especially in Pangkalan Sub-district, the worst affected area in the flood and landslide in March of 2017. In addition, in some areas of the District of Lima Puluh Kota need to re-activated the culture of planting baringin tree and Jawi-jawi tree purpose to respect the natural environment, especially the existing plants that function can store water reserves in the soil.

## b. Shaped Threat or Prohibition

The threat of Inyiak parimbo that can be tangible like a tiger can disturb the people who intend or who have destroyed the forest in the form of tree felling and shifting cultivation. Inyiak parimbo will reveal the form and follow the person doing the forest destruction activity. In addition, local community strength needs to be in the form of traditional institutions such as Keratatan Adat Nagari (KAN) in conducting social control and sanction against the perpetrators of forest destruction with customary sanctions that are perpetrated against perpetrators and their people.

## 2. Signs of natural disasters

In the community in the District of Lima Puluh Kota actually they have had signs that exist in nature that is considered can be used as a sign of disaster come, such as; guruah sounds; if heard in the surrounding forest, usually marked by flying eagle or other bird species that are identical with the forest and fly massively, usually during the day. Rain Labek. Heavy rains with more than two consecutive days of turbulence, it is believed the community will come natural disaster landslide. For parimbo people (hunting or cultivating) they do not want to go to the forest because of the risk of coming in the dangers of cirrus, especially in vulnerable areas. So also for people who have rice fields close to the cliff they will not dare to come to the region.

## 3. Capital (Strength) of social disasters

Social capital is the parts of social organization such as trust, norms and networks that can improve people's efficiency by facilitating coordinated actions [4] This concept is also interpreted as a set of shared values or informal norms among members groups that allow for cooperation [2] Social capital is constrained as the ability to develop cooperative strategies within a group or association. Therefore, to strengthen capacity collectively. In this study the community has had cultural values in the face of natural disasters, which can be seen in the following table, namely:

No	Cultural Values	Mean	Function
1	Katiko ado ditahan, katiko ndak ado dimakan	Deviate goods in the form of money and food when being excessive, to dimafaatkan at a precarious moment	Anticipate the food crisis
2	Duduak basamo balapang- lapangan, duduak surang basampik-sampik	With togetherness something is easily overcome compared to the individual	The function of gotong- royong
3	Kaba baik bahimbauan, kaba buruak bahambauan	Interview each other in the joy and sorrow	Natural disaster communication function
4	Kaluak paku kacang balimbiang, tampuruang lenggang-lenggokkan, bawo manurun ka Saruaso, anak dipangku kamanakan dibimbiang urang kampuang dipatengangkan, jago nagari nan binaso	Act for the benefit of families, communities and the safety of their own regions in order not to be hit by disaster	Education function

Table 1 Identify local cultural values for mitigating natural disasters in the Lima Puluh Kota District

Source; data is processed from field interviews on several customary and community leaders on 12 to 15 September 2017.

Based on the above data shows that local communities in Lima Puluh Kota District have

anticipative power with local cultural values in the face of natural disasters. Due to the influence of

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cultural modernization and also the globalization that triggered social change had an impact on the beginning of the loss of understanding of the culture of society. According to William F. Ogburn [6-10] social change includes both the material and immaterial elements of the culture by emphasizing the great influence of the material elements of the culture on the immaterial elements. In the case of this area of research, it is proven that the theoretical explanation that the influence of including technology, in communication technology, causes the internalization of cultural values of society, especially immersil values, which cause the society no longer adopt their cultural values.

#### 4. CONCLUSION

The results of this study successfully identified the values of local wisdom for the mitigation and adaptation of landslide disaster that actually existed in the realm of community culture in the District of Lima Puluh Kota. These values are natural signs, social-cultural abstractions and powers and information media of local wisdom values in the face of natural disasters such as landslides. Finally, as a material to formulate into the model of disaster mitigation policy based on local wisdom for disaster education.

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