

## MITIGATION OF FOREST FIRE DISASTERS TRIBE ANAK DALAM MERANGIN JAMBI

\*Diana Wulandari<sup>1</sup> and Subaryanta<sup>2</sup>

<sup>1</sup>Master Program of Geography Education, Padang State University, Indonesia

<sup>3</sup>Tarbiyah Academy of Sciences Darul Ulum Sarolangun Jambi-Indonesia

Email: diana79wulandari@gmail.com

\*Corresponding Author, Received: April 10, 2020, Revised: May 8, 2020, Accepted: May 20, 2020

**ABSTRACT:** Preventing and reducing the number of fatalities and affected populations is a matter that urgently needs attention by the government in managing disaster fire risk in Merangin District. In particular, local governments play a role in reducing the risk of forest fires. Therefore the role of local government is very important to achieve this goal. Jambi Province is an area that is prone to the danger of forest fires with high density, one of which is forest and land fires. This article aims to illustrate the capacity of the local government of Jambi in the context of tackling the disaster of forest land fires. This research method used is a qualitative method with interviews, especially to local governments. The findings show that the capacity of the Jambi Regional Government still needs to be improved. In implementing this, what needs to be improved is the knowledge and skills of local government staff in disaster management of forest land fires, and village level preparedness programs and less detailed disaster maps.

*Keywords: Disaster Mitigation, Forest Land Fires*



This work is licensed under the Creative Commons Attribution-ShareAlike 4.0 International License

### 1. INTRODUCTION

Forest and land fires are burnt forest/land areas both large and small [1-3]. Forest fires are often not controlled if the fire has spread everywhere and spread in accordance with the direction of the wind. These fires can occur naturally and can also occur due to human activity itself. Forest fires are considered to occur naturally, even though the role of humans is also involved and starting fires today. With the aim of being able to open arable land in the forest [4-6-7].

Lately forest fires have increasingly attracted international attention as an environmental and economic issue especially after the 1997/98 EL Nino (ENSO) disaster which devastated 25 million hectares of forest land worldwide [7-9]. Fire is considered a potential for sustainable development because of its direct effect on ecosystems [10-11]. In 19197/98 Indonesia experienced the most severe forest fires in the entire world. The image of the city situation covered by thick fog, burning forests and suffering orangutans plastered on the pages of newspapers and television and drew public attention. Neighboring countries such as Malaysia and Singapore as well as development aid agencies are involved in efforts to extinguish the forest fires.

Jambi Province is one of the provinces which is at risk of disasters, one of which is forest fires, tornadoes, landslides and volcanoes. However, this risk has a higher level of traffic and magnitude [12-

15]. Disaster risk in each region is inseparable from natural hazards and human- caused hazards. The type and intensity of the threat are added to the socio-economic conditions of the population [16-17].

Based on the condition of the disaster that occurred in Jambi Province, especially, Merangin Jambi, it is necessary to study how the Jambi Province is one of the provinces facing disaster risk, one of which is forest fires, tornadoes, landslides and volcanoes. However, this risk has an intersection and the magnitude of the higher there are three important elements in analyzing the capacity of local government, namely (1). Policy capacity (2) implementation capacity (3) operational efficiency.

### 2. METHOD

This research was conducted in Merangin Regency, Jambi Province. This informant starts from the local government and local residents. The data collection technique used is participant observation (unstructured interview) and documentation. Data analysis uses the Spradely model which as a whole the research process consists of descriptive observations, domain analysis, focused observations [5]. The process was further simplified in four stages including: (1) domain analysis, (2) taxonomic analysis, (3) component analysis, (4) theme analysis. The

validity of a lot of data depends on the techniques used in collecting data and the guarantor of the data validity used in this study is the extension of participation, perseverance, observation, triangulation, peer examination through discussion and member checking.

### 3. RESULTS AND DISCUSSION

The problem of fire and land in Indonesia has increased in the last decade and has caused environmental, social, economic problems, both in Indonesia and neighboring countries. In 1997/1998, around 9.7 million hectares of land and forest were destroyed and the impact of the fire smoke itself affected the lives of 75 million people. The economic loss was USD 3 billion. Carbon emissions account for 13-49% of total world emission carbon production, making Indonesia the largest producer of pulses in the world.

The Ministry of Environment and Forestry of the Republic of Indonesia states that Indonesia's Forests have shrunk by two million hectares from the previous 128 million hectares to only 125.9 million hectares for the 2015-2017 period. This number will continue to decrease because forest fires continue to occur in various regions in Indonesia in 2018 and widespread fires re-occur in 2019. The area of forest burned in 1997 was 263.99 thousand hectares and in 1998 the area of forest that burned increased to reach 515.03 hectares. In 2015, the area of forest and land burnt reached million hectares, in 2018 declining although still relatively high, reaching approximately 500 thousand hectares. The area of land that was burned in 2019 still does not have the same official data from all parties, because the data continues to move. Forest and land fires continue to occur throughout the region.

The provincial government of Jambi, especially the regional government, has had a number of policies in dealing with disasters, especially forest fires. In general, disaster management regulations in Jambi province are stipulated in the 2016 Jambi Regional Regulation on the implementation of disaster management. In 2015 there was a very large forest fire, so the *Regional Leaders' Communication Forum* in the province of Jambi signed a notice on March 20, 2016, imposing sanctions for perpetrators of forest, land and garden burning.

Forests are plants that are controlled or dominated by trees and have different environmental conditions than those outside the forest. The forest is a community of plants and animals that live in layers and on the surface of the land and are located in an area, and form a single ecosystem that is in dynamic balance. Forest fires are a process of rapid reaction of oxygen with other supporting elements with the characteristics of heat, light, and flame with free distribution and

consuming burnt material in the form of vegetation both dead or alive, littering, topsoil, bush and weed. Forest fires are influenced by natural (biophysical) factors and human behavior. Biophysics include fuel, climate and topography. Meanwhile, if forest fires are caused by human behavior, it is caused by human activities themselves. The community and officials in the area still consider forest fires, including peat swamp forest fires, still often considered a natural disaster, which is a mere natural process. Land and forest fires can be caused by land tenure, land use allocation, economic incentives and disincentives, forest and land degradation, the impact of changing population characteristics and weak institutional capacity.

### 4. CONCLUSIONS

The cause of forest fires is not only from natural factors but also due to human factors themselves. Many sectors are affected by forest fires especially forestry, agriculture, health, education, transportation, tourism and business, all of which greatly affect these sectors.

### 5. REFERENCES

- [1] Almunanda, F. Karhutla in Jambi Extends 102 Hectares in Total. Jambi. 2019
- [2] Hermon, D. Mitigasi Bencana Hidrometeorologi: Banjir, Longsor, Degradasi Lahan, Ekologi, Kekeringan, dan Puting Beliung. UNP Press. Padang. 2012.
- [3] Hermon, D. 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. 2014.
- [4] Bahri, S. S. Study Causes of Forest Fires and Land. Detailed Time. 2016
- [5] Barlian, E. Research Methodology Qualitative. Padang, Sukabina Press. 2016
- [6] Hermon, D. Geografi Bencana Alam. Jakarta: PT RajaGrafindo Persada. 2015.
- [7] Hermon, D. Mitigasi Perubahan Iklim. Rajawali Pers (Radjagrafindo). 2016.
- [8] Chokalingam, S and U. Wibowo. Fires in Swamp/Peatlands Sumatra, Indonesia. Village Graphic Vocational School Son. 2014
- [9] Diana, E. When the Forest Is Lost, This Is The Effort Of The Child In Survival Life. Environment News Site Mongabay. 2017
- [10] Hermon, D. The Change of Carbon Stocks and CO2 Emission as the Result of Land Cover Change for Tin Mining and Settlement in Belitung Island Indonesia. Journal of Geography and Earth Science. Volume 4. Issue 1. p: 17-30. 2016.

- [11] Malaningrum, T., N. D. Dalijo., F. R. Siahaan and U. Widyatno. Behind the Smoke Tragedy (Forest and Fire Fires Land). Jakarta. Y. Duta Kurnia Utama. 2015
- [12] Hermon, D. Geografi Lingkungan: Perubahan Lingkungan Global. UNP Press. 2010.
- [13] Hermon, D. Dinamika Cadangan Karbon Akibat Perubahan Tutupan Lahan Permukiman di Kota Padang Sumatera Barat. Forum Geografi: Indonesian Juornal of Spatial and Regional Analysis. Volume 26. Issue 1. p: 45-52. Uniiiversitas Muhammadiyah Surakarta. 2012.
- [14] Plasmanto, G. Smoke Fog Make Asma Worse, A Child Tribe In Death. Jambi Coverage 6.Com. 2019
- [15] Rahayu, S., and P. Sari. At Behind Forest and Land Fire Disasters. 2015
- [16] Hermon, D. Estimate of Changes in Carbon Stocks Based on Land Cover Changes in the Leuser Ecosystem Area (LEA) Indonesia. Forum Geografi. Volume 29. Issue 2. p: 188-196. 2016.
- [17] Hermon, D. Climate Change Mitigation. Rajawali Pers (Radjagrafindo). 2017.