

## **The Government's Role in Dealing with West Kalimantan Forest Fires**



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**ABSTRACT:** Cases of forest and land fires have become a regular every year during the hot season. West Kalimantan is one of the places prone to forest fires. Geographically, West Kalimantan is largely covered with peat soil, which creates a significant risk of forest fires each year. Using a regional community model, local actors can have a rapid influence on policymaking. Forest fires in West Kalimantan are not a simple problem to solve. Special handlers, it is intended, would collaborate with many stakeholders, most notably the community. The method used in this study is a qualitative method with a literature study design and phenomenology. In qualitative research, the researcher should not influence the situation and social interaction between the researcher and the subject/informant being studied, even between the subjects being studied. The interactions between the individuals under study must occur in the context, not the technical researcher. The government strategies are already in place to address West Kalimantan's development challenges. West Kalimantan's development concerns have harmed the physical environment, notably decreased air quality caused by smoke density, which reduces vision. It obstructs transportation by altering the physicochemical and biological qualities of soil, altering the microclimate owing to plant loss, and even contributing to the greenhouse effect on a global scale. Several of the recommended actions for dealing with land fires and the impact of smoke for the prevention and control of land fires may be accomplished by revitalizing the KPA, including boosting community awareness, skills, and competence in fire prevention initiatives.

**KEYWORD:** Government, Forest Fires, West Kalimantan

### **I. INTRODUCTION**

Cases of forest and land fires have become a regular every year during the hot season. Fires that burn forests and land are caused by two factors, namely purely natural causes and human actions. The fire spread to the surrounding area, devouring forest wood and plants in the forest. Fire is a form of a nation's dilemma that requires serious attention. This fire event brought adverse consequences to various aspects, such as politics, natural beauty, economy, ecology. In addition, the impact of the forest and land fires is an excessive cost for state and regional revenue expenditure budget. Moreover, it also caused health threats due to air pollution.

Forest fires wreak havoc on public education by restricting students and teachers from participating in normal school activities due to health concerns, particularly those associated with upper respiratory infections [1]. Forest fires are one type of disturbance that is becoming more prevalent. The impacts of forest fires are numerous, including the destruction of forest ecosystems, specifically flora and fauna, disruption of soil fertility, disruption of public health in areas affected by forest fires, and disruption of the land, sea, and air transportation due to air pollution, most frequently caused by fire smoke. The forest fires created a smoky cloud that spread across country borders, including those of Malaysia and Singapore.

West Kalimantan is one of the places prone to forest fires. Geographically, West Kalimantan is largely covered with peat soil, which creates a significant risk of forest fires each year. According to the BNPB, 140 forest fires occurred in West Kalimantan in 2016, with the majority occurring in ten city districts, including Kota Pontianak, Mempawah, Landak, Bengkayang, Sanggau, Sekadau, Sintang, Melawi, Kapuas Hulu, and North Kayong Regencies [2]. Around 600 hectares of peatland were burned in West Kalimantan this year, with Kota Pontianak and Ketapang districts accounting for the majority of fires [3].

The fires of 2015 were started by people and worsened by El Nio's dry climate conditions [4]. Land burning is also used to clear agricultural land (for example, to plant oil palm) due to its low cost and simplicity [5]. Until 2017, 150 hotspots were spotted on the Terra, Aqua, and SNNP observation satellites [6], with the number of hotspots continuing to grow in West Kalimantan — held by private plantations, local communities, and national parks. Because peatlands are flammable and grow rapidly, they pose a hazard to the settlements of populations located near hotspots [7]. Despite these measures, forest fires continued to burn in West Kalimantan until 2018. The forest fires were particularly intense, with 887 hotspots in West Kalimantan, resulting in major smoke and material losses [8]. This can be aggravated further by the Covid-19 epidemic, which has the potential to deteriorate the

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community's predicament if forest fires continue to burn [9].

Each level of the hierarchy has a role according to its function in the elaboration of policies that will be carried out and facilitates the implementation of a policy at each agency, bureaucratic level starting from the department level (central government), to the executive level in the field [10]. The role of the West Kalimantan government in tackling forest fires already exists. This can be seen from several agencies that help in controlling forest fires.

Several obstacles hinder the West Kalimantan provincial government in resolving land fires, such as the division of tasks between the local and district governments is still unsettled, inadequate facilities in dealing with land fires, the level of people's awareness of forest fires are still shortcoming, the rules are not sufficient to solve forest fires, while the number of hotspots in West Kalimantan is increasing and expanding.

Using a regional community model, local actors can have a rapid influence on policymaking [11], [12]. Forest fires in West Kalimantan are not a simple problem to solve. Special handlers, it is intended, would collaborate with many stakeholders, most notably the community. The government has taken several measures to combat fires, including the implementation of several policies. It is simply that these approaches have not been effective in resolving the problem of forest fires in West Kalimantan. As a result, the government and neighboring communities must optimize measures to ensure that forest fires do not recur.

## II. RESEARCH METHOD

The method used in this study is a qualitative method with a literature study design and phenomenology. In qualitative research, the researcher should not influence the situation and social interaction between the researcher and the subject/informant being studied, even between the subjects being studied. The interactions between the individuals under study must occur in the context, not the technical researcher.

The qualitative research method is a research method that focuses on a more in-depth introduction to a problem in general. This research method prefers to use in-depth analysis techniques, namely examining problems on a case-by-case basis, because qualitative methodologies believe that the nature of one problem will be different from the nature of other problems. This study uses a qualitative descriptive method. The theory used is the theory of top-down implementation and is suitable to be applied to a structured bureaucracy level in a government agency.

## III. RESULT AND DISCUSSION

### III.1 Forest fires

According to the Minister of Forestry's Certificate No. 195/Kpts-II/1996, Forest Fires are defined as the occurrence of forest fires that resulted in the destruction of wood, trees, and other forest products, resulting in losses to numerous sectors such as the economy and the environment. Forest fires are a contributing factor to the growing number of natural resource destruction incidents. Forest and land fires create environmental harm by contaminating natural resources, namely water, and air, and then causing havoc on the forest's flora and fauna as ecosystems.

Government strategies are already in place to address West Kalimantan's development challenges [13]. West Kalimantan's development concerns have harmed the physical environment, notably decreased air quality caused by smoke density, which reduces vision. It obstructs transportation by altering the physicochemical and biological qualities of soil, altering the microclimate owing to plant loss, and even contributing to the greenhouse effect on a global scale. The physical environment's effects include a decline in biodiversity, disturbance of natural life, disruption of organic matter production, and disruption of decomposition processes. Additionally, the pollutants and pollution produced by forest and land fires intensify the flames' consequences on neighboring nations like Malaysia and Singapore, which share a border with Indonesia. Humans cannot control the spread of this smog because the pollution spreads following the blowing wind. The effects of this include:

#### Health and Environment

Additionally, dense fog is produced by forest fires that have spread to neighboring Southeast Asian nations, and the carbon emissions connected with these fires contribute to climate change [14]. The effects of forest and land fires on human health and the environment are numerous. Forests and burnt areas will become barren and damaged, resulting in the loss of habitat for the forest ecosystem's flora and wildlife. Along with the smoke produced, it creates a slew of concerns for human health and the environment. According to the Environmental Protection Agency in the United States of America, the air is dangerous due to fog problems if the smog exceeds the limit of 80 parts per billion (ppb) or 0.5 parts per million (ppm) ozone (the primary component of pollution), or if it exceeds 53 parts per billion (ppb) nitrogen dioxide or 80 parts per billion particulate matters. Smog pollution is harmful to humans and can even induce respiratory diseases such as emphysema, bronchitis, and asthma [15].

#### Economy and transportation sector

Meanwhile, the consequences are no less severe than those associated with the economic sector. Along with the substantial financial investment required to resolve these issues, the size of the impact on the community's social and economic situations is also rather considerable. Forest and land fires, on a theoretical level, are a negative external form of burning and land. Indirectly, the detrimental impact of these fires lowers the cost of extinguishing operations. Adverse external influences will have an indirect effect on people's

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economic actions.

The community, particularly the borderland areas, must be prepared to deal with this [16]. Providers of these services will require more funding to maintain transportation operations [17]. Due to the smoke and haze, the land, sea, and air transportation sectors have been significantly impacted. Because the primary transportation disruption is caused by a loss of visibility, it has an effect on travel safety. The primary use of visibility data is for aircraft landings and takeoffs. Thus, if forest and land fires contribute to increased fog, which impairs vision, aircraft will be delayed or perhaps canceled.

### **Transboundary Pollution**

The practically annual land and forest fires in Indonesia, as well as the haze that engulfs Malaysia and other Southeast Asian countries, have resulted in an escalating political constellation. In Malaysia, the Democratic Action Party, the country's main opposition, staged a protest outside the Indonesian embassy in Kuala Lumpur. According to the party, the haze is endangering the economy and health of millions of Malaysians. They urged ASEAN to act [18]. This also poses a threat to people, particularly to the health and economic well-being of small groups along borders and in villages [19].

### **Policy Strategy**

Lots of studies on the political economics of natural resource management in Indonesia emphasize the critical role of good forest and land governance in enhancing forest sustainability and strengthening community welfare [20]. Smog, which wreaks havoc on Indonesia and neighboring nations, is caused by forest fires. To resolve this, the root cause of the problem must be addressed first. As a result, methods and regulations for forest fire management in Indonesia must be prioritized and given specific attention in order to mitigate the deleterious impacts of smoke and haze. All relevant parties must implement a strategy and policies involving technological initiatives, which must be backed up by proper policies. Existing policies must be permanent and capable of being applied effectively. In an era of globalization, sophisticated technology can aid in the suppression of current forest and land fires, as well as the government's proactive response to these disasters.

## **III.2 Efforts That Have Been Done in Handling Forest Fires**

Cooperation to deal with forest fire cases has been carried out by the Provincial Government of West Kalimantan. Researchers conducted observations using the theory designed by Moekijat about the steps in working together.

### **Coordinate between related parties**

Coordination between related parties, for example, by conducting a meeting between the Environment Agency of West Kalimantan Province as the secretariat with the Central Forest and Land Fire Control of West Kalimantan Province. The conference aims to develop a strategic plan for handling forest and land fires in a forest and land fire control system.

### **Carry out official meetings between related parties**

Coordination meetings at the provincial level were held in detail and continually, with representatives from the Indonesian Army National Army, the Indonesian Air Force National Army, the Ministry of Forestry, the Regional Police, and the Health Service in attendance. Each agency is assigned tasks depending on their functions in responding to forest and land fires. Meanwhile, the Provincial Government of West Kalimantan and the City's Regency Government have not maximized the effectiveness of their meetings. This may be seen in the slow response to land fire situations as a result of a collaboration that has not demonstrated maximal response.

### **Make notification letters to related parties**

Make a notice letter on the Forestry Service's handling of forest and land fires to many agencies and institutions involved in the prevention and management of forest and land fires, particularly in the Regency and City areas. Additionally, notice letters are sent to firms that are associated with the forestry sector. The purpose is to inform the public of forest and land fires. Additionally, the Government of West Kalimantan and the Forestry Service sent different ads to the public, including booklets, slogans, and banners.

### **Communication through intermediaries**

The Provincial Government of West Kalimantan and the City Regency Government facilitate communication through a variety of means, including the internet, smartphones, and telephones. This was reflected in broadcast announcements issued by the central Bareskrim (Indonesian National Police-Criminal Investigation Agency) prohibiting forest and land burning. The Bareskrim Sentra socializes through posted messages and the production of jargon, adverts, and websites that include information about the prevention and management of land and forest fires, as well as photographic evidence. Additionally, the Explanation Task Force is responsible for monitoring rumor in both electronic and print media.

## **III.3 Causes of Weak Coordination between West Kalimantan Provincial Government and Regency/City Government**

### **Supervision is not optimal**

Supervision is a critical management function that plays a critical role in ensuring that work is completed in accordance with the required standards. However, maintenance has not been carried out properly because coordination between related parties is not optimal in dealing with forest and land fires, resulting in a weak government supervision system in dealing with the increase in hotspots in the Regency, if the level of supervision carried out by the Regency/City Government is taken into account. Because with oversight, the government would be aware of irregularities, fraud, waste, mismanagement, leakage, and other issues relating to the

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forest and land fire challenge.

### **Less intensive communication**

Coordination involves effective communication as well since well-established contact has a favorable effect on the implementation of operations. Nonetheless, communication between West Kalimantan's administration and district governments in coordinating the management of forest and land fires has not been optimized. This occurs as a result of a lack of instructions from the provincial government to the regional administration regarding their responsibilities for forest and land fire management. This problem contributes to the district authority's lack of connection with the West Kalimantan province government. Governments need to communicate effectively. This can also be enhanced by the use of more advanced communication technologies [21].

### **Lack of awareness level coordination**

Forest and land fire management continues to be coordinated by the Regency and City governments, as well as the West Kalimantan government. Coordination provides a place for both sides to exchange information or innovations in order to resolve the conflict at hand. However, due to a lack of cooperation between the Regency Government of the City and the Provincial Government of Kalimantan, this coordination has had little effect in overcoming forest and land fires.

### **The level of participation is not up to standard**

Participation entails taking an active position in the organization, accepting responsibility, and working toward common goals. The participant's involvement must be based on the notion of accountability and active participation in the group. The City Regency's Regency Government creates a group or institution by enabling locals to prevent forest and land fires through the formation of fire fighting groups. These institutions are concerned about flames and other hazards. Due to a lack of training, facilities, and infrastructure, as well as insufficient financial arrangements, this group has been unable to organize, resulting in the group underperforming during forest and land fires.

### **Inadequate rules, facilities, and infrastructure**

The difficulties with processes for forecasting and responding to the forest and land fires are a result of a lack of budgetary resources available to Regencies and Municipalities to address land and forest fire situations. The Environmental Impact Management Agency, as one of the authorities tasked with preventing forest and land fires in the Regency, acknowledges that funding requests to the Regional Government are always denied. Whereas the money is utilized to replace outdated firefighting equipment with more modern equipment. This has complicated field implementation since the sensors utilized lack advanced technology and have inhibited collaboration between the West Kalimantan Provincial and City Regency governments.

### **Inconsistent political policy**

The political will of the Regency and City Governments is evaluated inconsistently in handling forest and land fires and handling haze disasters that occur in Regency. This happens because the resources, facilities, and infrastructure to support forest and land fire management are very limited, causing a mismatch of political commitments in the Regency and City Governments.

### **Another problem factor that becomes an obstacle**

The Kalimantan fires are largely a consequence of the government's disorganized reaction to land use concerns [22]. Another source of contention is the provincial government of West Kalimantan's inability to coordinate with the Regency City government. Coordination is also somewhat impeded. Nonetheless, the provincial government of West Kalimantan should commit to coordinating forest and land fire protection. The article is not a significant impediment to coordinating the response to forest and land fires because the government should be required to prioritize raising and prospering citizens, which were established as the primary goals of the state in the body of the 1945 Constitution in response to the forest and land fires. There is a serious problem in the district, city district, and West Kalimantan province that must be rectified soon. Each dry season, the air quality in certain regions of West Kalimantan deteriorates more. There is constantly haze in West Kalimantan as a result of forest or field fires. This drop spread to the national and ASEAN levels as well.

This extremely concerning situation necessitates the participation of the public in order to prevent forest and land fires from reoccurring, in addition to the government's efforts, such as the zero-burning policy, so that the rules that have been established and are already effective can reduce existing deviations, making it easier to control in a patterned manner and to punish those who breach them. The fire care group is one of several grassroots initiatives backed by the government aimed at preventing forest and land fires in nine sub-districts surrounding the Pontianak airport, the incident's regional epicenter.

## **IV. CONCLUSION AND RECOMMENDATIONS**

The frequent land fires in Rasau Jaya Subdistrict are caused by locals who continue to burn their land to clear it for agricultural purposes. Unfortunately, intentionally burning on abandoned or undeveloped property is not a priority for the community, resulting in big fires. The community is expected to work together and independently on prevention and control measures, with the backing of community groups and the government. And for the purpose of forming the Fire Care Group (KPA), which is still being carried out by the community, KPA is only a formality that serves simply to carry out orders. Thus, it is believed that KPA will be able to carry out its primary responsibilities and activities related to the prevention and management of land fires in the future. Some burnt regions have economic possibilities, while others are unproductive and abandoned. At the moment, people are focused exclusively

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on battling flames on property with economic potential, ignoring the prevention and management of fires on unoccupied land. This undoubtedly requires special attention in order to raise the consciousness of all stakeholders, particularly the community. The assumption that unoccupied land is not vital for fire prevention is incorrect. The belief that unoccupied property has no economic worth, the low popularity of land ownership, and psychological ties that vacant land does not need to be conserved are all obstacles that must be addressed together.

Several of the recommended actions for dealing with land fires and the impact of smoke for the prevention and control of land fires may be accomplished by revitalizing the KPA, including boosting community awareness, skills, and competence in fire prevention initiatives. Preventing land fires and smoke through education and socialization, improving facilities and infrastructure for fighting land fires for residents, increasing residents' ability to manage land devoted to agriculture without burning (0 burning agriculture) through direct field practice in field schools, developing primary merchandise (commodity) agriculture that is suitable for and meets the requirements of peatlands, and establishing coordination between the government and the private sector.

Increasing the community's and community's role in preventing and overcoming land fires requires the government's commitment and strong coordination, particularly in the implementation of events and activities that contribute to the achievement of the required final objective, notably reduction and even extinction of this land fire event. Therefore, resolving this conflict must begin with the fight that started it, which includes increasing community awareness and education about the impact of land fires, increasing residents' ability to manage land properly, increasing residents' skills in overcoming land fires, and improving facilities and infrastructure for overcoming land fires. Additionally, the creation of agricultural goods appropriate for peatlands. Agriculture is tried on this peatland with the use of a zoning scheme. It is the conversion of peatland to productive agricultural land that is managed in accordance with the land's categorization. Its application to residential areas and agricultural activities involving seasonal food crops should be evaluated. Because peatlands are technically more beneficial as protected places, it is vital to focus agriculture toward species with high protection values, such as community rubber plantations. Finally, we need to promote and prepare together for the planning process, software development, and activity assessment, as well as the synergy of government policies that use the inherent potential of people. As a consequence, it is possible to determine what will occur that is relevant to the community's ambitions and conditions, optimizes programs, and minimizes the chance of failure while attempting to apply the severe zoning system. is the conversion of peatland to productive agricultural land that is managed in accordance with the land's categorization. Its application to residential areas and agricultural activities involving seasonal food crops should be evaluated.

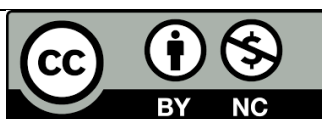
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