

# The Impact of Government Regulations on Forest Fires on the Decline in Livelihoods of Residents in Pulang Pisau

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## Article Info

### Article history:

Received June, 2024

Revised June, 2024

Accepted June, 2024

### Keywords:

Fire

Forest

Government

Community

Livelihood

## ABSTRACT

Forest fires in Indonesia, especially in peatlands such as Pulang Pisau, Central Kalimantan, are a serious problem that impacts the environment and the livelihoods of local communities that depend on agriculture and timber mining. The government has issued strict regulations based on Law Number 32 of 2009, Law Number 41 of 1999, and Government Regulation Number 10 of 2010 to prohibit forest burning to protect the environment. However, the implementation of these regulations often does not take into account local conditions, leading to a decline in livelihoods, poverty, and population migration. This study uses a descriptive qualitative method to analyze the impact of government regulations on forest fires and livelihood decline in Pulang Pisau. Data were collected through observation, interviews, and document analysis. The results of the study show that the regulation limits the traditional practices of communities in managing land, causing a decrease in income and increasing poverty. Community adaptation to these regulations includes diversification of income sources, training, use of technology, and increased community cooperation. The study recommends increased support through proper training, access to environmentally friendly agricultural technologies, and better coordination between central and local governments. A holistic approach is needed to balance environmental protection and the economic well-being of the community. Effective regulatory implementation and ongoing support are expected to reduce forest fires without sacrificing the livelihoods of local communities.

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## 1. INTRODUCTION

Forest fires have become a serious problem in Indonesia, including in Pulang Pisau Regency, Central Kalimantan, which is famous for its rich tropical forests. Forest and land fires occur due to 2 (two) main factors, namely natural factors and uncontrolled human activity factors. This problem is not

only an environmental issue, but also has a significant impact on people's daily lives, especially for those who depend on the agricultural and timber mining sectors for their livelihoods.

Government regulations related to forest fires are based on several legal foundations, such as Law Number 32 of 2009

concerning Environmental Protection and Management, Law Number 41 of 1999 concerning Forestry, and Government Regulation Number 10 of 2010 concerning Forest and Land Fire Control Procedures. The Pulang Pisau government has issued a strict regulation prohibiting total forest burning with good intentions to protect the preservation of the environment and ecosystem. However, the implementation of these regulations does not always take into account local conditions and needs, resulting in restrictions on traditional community practices in managing land and forests. Although the purpose of this regulation is to protect the environment, its implementation without taking into account the social and economic aspects of the community in Pulang Pisau can have serious negative impacts.

In Pulang Pisau, the regulation has had a complex impact on communities that depend on the agricultural and timber mining sectors. Restrictions on forest burning have hampered their traditional practices of managing land and forests, resulting in declining incomes, poverty, and even migration. Restrictions on traditional practices in managing land and forests due to the ban on burning have led to a significant decline in income, which in turn has exacerbated poverty levels in the area. In addition, the deteriorating economic impact has prompted the migration of people to other regions in search of more stable sources of livelihood, threatening the sustainability of local communities and showing the negative consequences of environmental regulations that do not take into account the overall social and economic situation.

This study has a link to previous research, which can help clarify this research. [1] He said that with the discovery of large fires in Central Kalimantan, especially in Pulang Pisau, there are efforts to deal with them, the efforts made by the Government can reduce the forest fires that occur. In addition, according to [2] Policy is a decision or choice of action that indirectly regulates the management and allocation of natural, financial, and human resources for the public

interest, namely society, population, community or citizens. According to [3] The impact caused by forest dispersion is, of course, the loss of various ecosystem benefits from forests and other potentials contained in them, including biodiversity.

This study aims to analyze the impact and factors of government regulations related to forest fires on the decline in the livelihoods of residents in Pulang Pisau, as well as to understand how people adapt and react to changes in environmental conditions and government policies. By digging into information about the impacts and factors involved, this research provides deeper insights into the complexity of this issue, with the hope of contributing ideas to formulate better and sustainable solutions in the face of environmental and social challenges in Pulang Pisau.

## 2. LITERATURE REVIEW

Human ecological theory includes the study of the complex interactions between humans and their environment. In the context of forest fires and the impact of government regulations on livelihoods, analysis of human ecological theories can provide insights into how environmental factors and government policies are interconnected and affect human life. Like human-environment interaction, human ecological theory considers how humans interact with the surrounding natural environment. In the case of forest fires, humans can affect the ecosystem through activities such as deforestation, agriculture, or other activities that affect forest conditions.

Government regulations play an important role in regulating and controlling human interaction with the environment. Government policies on forest management, environmental protection, and fire management can have a significant impact on the livelihoods of communities that depend on forest resources. Then the impact of policies on livelihoods, government regulations related to forest fires can have direct or indirect effects on livelihoods. For example, restricting access to forests or restricting land use for certain activities can

affect jobs in the agricultural or forestry sectors. On the other hand, effective fire suppression policies can also protect natural resources that are important for public health in the area. Human ecological theory also considers social and economic factors that affect human interaction with the environment. Declining livelihoods due to forest fires can worsen people's economic conditions, trigger migration, or affect social stability in affected areas.

By analyzing human ecological theories, it is possible to understand the complexity of the relationship between forest fires, government regulations, and the decline in livelihoods. This can be the basis for designing more holistic and sustainable policies in managing natural resources and protecting people's livelihoods.

### 3. METHODS

This study uses a descriptive qualitative method to analyze the impact of government regulations on forest fires on the decline of residents' livelihoods in Pulang Pisau, focusing on the concepts of resilience and community dynamics. Data were collected through observation, interviews, and analysis of documents to understand how communities are adapting to environmental changes and government policies related to forest fires. This method provides in-depth insight into the complexity of this issue, including the community's response to change and social interaction in Pulang Pisau. Our sampling technique uses rundown and open interviews with the community and is strengthened with key figures such as village heads, community leaders, PKK leaders, youth organization leaders, MPA leaders, and RT leaders.

Dr. Sri Wahyuni - Public Policy and Social Analysis Expert from Gadjah Mada University (UGM), explained that descriptive qualitative methods provide flexibility in collecting rich and contextual data. This research can explore the dynamics of the community in Pulang Pisau, understand the interaction between government regulations

and community responses, and evaluate the effectiveness of policies in the local context.

Prof. Ir. Bambang Hero Saharjo, M.Agr., Ph.D. - Forest Fire Expert from Bogor Agricultural University (IPB), argued that descriptive qualitative research is very important in the context of forest fires because it can identify people's experiences and perceptions of government policies. This approach allows for a deeper understanding of how communities develop resilience strategies and adapt to changes caused by wildfires.

## 4. RESULTS AND DISCUSSION

### 4.1 Government Regulations Related to Forest Fires

Law Number 32 of 2009 concerning Environmental Protection and Management is the legal basis in Indonesia related to environmental protection, including in terms of forest fire prevention and management. Some of the articles related to forest fires in the law include:

- a. Article 40 regulates the prohibition of planned burning of forests and land.
- b. Article 41 states that everyone is obliged to prevent forest and land fires.
- c. Article 69 contains provisions regarding administrative sanctions for violators who burn forests and land.

In addition to Law Number 32 of 2009, there are also several government regulations and regional regulations that also regulate forest fire management, including Government Regulation Number 44 of 2012 concerning the Implementation of Disaster Management, as well as Provincial and Regency/City Regional Regulations that regulate concrete actions in preventing and overcoming forest fires in accordance with local conditions and needs.

### 4.2 The Impact of Government Regulations on the Decline in Regulatory Livelihoods

Related to forest fire management, such as Law Number 32 of 2009, has a

significant impact on certain livelihoods. Some of the possible impacts are as follows.

- a. Restrictions on burning activities generally limit or prohibit planned burning of forests and land. For those whose livelihoods depend on these activities, such as farmers who use burning to clear land, these restrictions can have a direct impact on their income.
- b. Changes in agricultural and plantation practices Forest fire prevention regulations often encourage farmers and plantations to switch to more environmentally friendly practices, such as the use of sustainable farming methods that do not involve burning. This can require additional time, training, and investment, which may hurt revenue in the short term.
- c. Decrease in production If changes in agricultural or plantation practices to comply with regulations result in a decrease in production, then the income from the sector may also decrease. This can be a problem especially for those who rely on their crop produce as their primary source of income.
- d. The provision of new jobs along with the increase in regulatory enforcement, there is a possibility of new jobs in the field of environmental management and forest fire management. However, for some people whose livelihoods are directly related to activities restricted by regulations, this job change may not be immediate or easy.
- e. Government support and training can also provide support and training to relevant business actors to help them adapt to regulatory changes and transition to more sustainable practices. However, this also requires additional time and resources.

Overall, the impact of government regulations on livelihood decline can vary depending on the specific sector and context

in which the regulation is applied. Efforts to mitigate negative impacts while increasing awareness and access to sustainable alternatives are important aspects of the implementation of forest fire prevention regulations.

### **4.3 Factors Affecting the Impact of Regulation**

Some of the factors that can affect the impact of government regulations on the decline in livelihoods are:

#### **4.3.1 Strict Enforcement**

The level of regulatory enforcement by the government can greatly affect its impact on livelihoods. Regulations that are implemented without adequate enforcement tend to have a lower impact because there are still many violations that occur.

#### **4.3.2 Adaptability**

The ability of individuals or groups to adapt to new regulations is crucial. If there is access to training, technical assistance, or other resources to change the way they work, the negative impact can be minimized.

#### **4.3.3 Availability of Alternatives**

The availability of alternative jobs or ways of generating income can reduce the negative impact of regulations on livelihoods. If there are other opportunities available, people will be more likely to switch to them.

#### **4.3.4 Socio-Economic Context**

Socio-economic factors, such as poverty levels, access to resources, and local economic structures, will affect how much regulation impacts livelihoods. In areas with high poverty rates, the impact may be more felt.

In developing and implementing regulations, it is important to take these factors into account in order to minimize negative impacts on livelihoods while achieving desired environmental protection goals.

### **4.4 Adaptation and Public Reaction to Government Regulations from the Positive and Negative Side.**

People are often faced with challenges when the government enacts new regulations that impact their livelihoods. While the regulations may be intended for

long-term good, such as environmental conservation or forest fire prevention, the economic impact can be devastating. Here are some ways people are adapting to the new regulations despite their livelihoods dropping.

#### **4.4.1 Diversification of Revenue Sources**

People are starting to look for alternative livelihoods. For example, if they previously relied on land clearing by burning for farming, they may switch to other sectors such as fishing, livestock, or handicrafts. Developing a side business, such as selling household products, opening a small shop, or trading in local markets.

#### **4.4.2 Training and Education**

Attend training provided by the government or NGOs on sustainable farming techniques that do not require land burning. Education about new technologies, such as the use of organic fertilizers and no-burn planting methods, that can improve agricultural yields in an environmentally friendly way.

#### **4.4.3 Utilization of Technology and Innovation**

Adopt modern agricultural technologies such as drip irrigation, organic fertilization, and efficient agricultural tools to increase production yields without having to clear new land. Using social media and online platforms to market their products directly to consumers, reducing reliance on middlemen.

#### **4.4.4 Access to Credit and Business Capital**

Utilizing microcredit programs or capital assistance from the government or financial institutions to invest in new businesses or improve existing ones. Join a cooperative or farmer group to get better access to capital and resources.

#### **4.4.5 Development of Ecological Tourism**

Developing a nature-based tourism sector, such as ecotourism, that attracts tourists to enjoy the beauty of nature without damaging it. This can include local tour guides, homestays, and the sale of handicraft products. Creating tourist attractions that educate visitors about the importance of environmental conservation and sustainable agricultural practices.

#### **4.4.6 Increased Community Cooperation**

Forming groups or associations that strengthen their bargaining position, such as farmer cooperatives, can help in terms of marketing, joint purchase, and distribution of agricultural products. Collaborate with governments, NGOs, and companies to get the support and resources needed to adapt to the new regulations.

#### **4.4.7 Changes in Planting Patterns and Land Management**

Changing planting patterns with an intercropping or crop rotation system that can increase soil fertility and crop yields without the need to open new land. Using an agroforestry system that combines tree planting with agricultural crops to create a more sustainable ecosystem.

#### **4.4.8 Environmental Awareness and Education**

Increase public awareness of the importance of protecting the environment through educational campaigns and programs. This helps them understand the purpose of the new regulations and actively participate in environmental conservation. Involve the younger generation in environmental activities and sustainable agriculture to ensure the continuity of these good practices.

After the government regulation on the prohibition of land burning, the community will experience positive and negative impacts. The positive impacts include increased awareness of the importance of environmental conservation, reduction of air pollution levels, reduction of forest fires, and possible improvements in public health. This kind of regulation can also encourage innovation in agriculture and more sustainable land management.

However, there are also negative impacts that may occur. For example, some communities that depend on their income from land burning practices for agriculture or traditional land management may experience economic hardship. What's more, ineffective implementation of the regulation can lead to non-compliance and illegal land burning. This can be a challenge for the government in

enforcing the rules and ensuring that positive changes occur without harming some communities. Adaptation to new regulations requires collective efforts and innovation. With the right support and a willingness to change, people can find ways to survive and even thrive despite facing great challenges.

## 5. CONCLUSION

Forest fires in Indonesia, especially in peatlands such as Pulang Pisau, require decisive action from the government. Although various regulations have been put in place to reduce fires, their implementation often has a negative impact on local communities, especially smallholder farmers who depend on burning land for agriculture.

This ban leads to a decline in income and poverty due to a lack of adequate alternatives. Increased support through proper training and green agricultural technology, as well as better coordination between the central and local governments can achieve a balance between environmental protection and the economic well-being of the community. **Dr. Herry Purnomo**, Senior Researcher at CIFOR (*Center for International Forestry Research*), argues that incomplete policies and a lack of strict enforcement in forest fire regulations make local people lose access to natural resources that are their source of livelihood. He also emphasized the importance of local community participation in making regulations.

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