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DOI : https://doi.org/10.33373/jtp.v10i2.9090

JURNAL TRIAS POLITIKA

2026, Vol 10. No. 2 : 196 – 212

e-ISSN: 2597-7423 / p-ISSN: 2597-7431

Journal Homepage:

https://www.journal.unrika.ac.id/index.php/jurnaltriaspolitika



Forest and Land Fire Policy Implementation and Recurring Fires: A Marxist Political Economy Perspective in West Kalimantan, Indonesia

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Abstract: *Recurring forest and land fires remain a significant policy and environmental problem in West Kalimantan, despite the existence of regulations and government measures for prevention, suppression, and rehabilitation. This study examines the implementation of forest and land fire control policy in West Kalimantan through the lens of Marxist political economy. The study employs a qualitative case study approach based on 13 in-depth interviews with government officials, Fire Awareness Community members, plantation company representatives, and a relevant non-governmental organization, complemented by document review. The analysis uses four study-specific analytical dimensions: resource exploitation, protection, productivity, and concentration of power. The findings indicate that recurring fires are associated with land-use practices and economic incentives that can encourage the use of burning as a low-cost means of land preparation. Government institutions undertake monitoring, fire suppression, coordination, sanctions, and rehabilitation; however, limited equipment, access, budget, coordination, and enforcement capacity constrain implementation. The findings also reveal a tension between productive land use and environmental protection, while the distribution of authority between central and local governments creates an implementation asymmetry. Overall, the study shows that forest and land fire control is shaped not only by technical and institutional capacity but also by economic interests, resource use, and power relations within the policy system. The study contributes to political economy research by demonstrating how these dynamics intersect with the implementation of a regional fire-control policy in West Kalimantan.*

Keywords: *forest and land fires; policy implementation; Marxist political economy; resource exploitation; power relations.*

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1. INTRODUCTION

Forest and land fires are a recurring environmental, social, and policy problem in Indonesia, where fire occurrence is associated with human activities, land-use change, agricultural practices, and plantation expansion (Kadir et al., 2026; Nurdiati et al., 2022). Beyond ecological damage, fires generate smoke and air pollution that can affect public health and economic activities (Edwards et al., 2020; Sambodo et al., 2024). The recurrence of fires has prompted the Indonesian government to strengthen prevention, suppression, and land-management measures, including Regulation of the Minister of Environment and Forestry No. P.32/MENLHK/SETJEN/KUM.1/3/2016 on Forest and Land Fire Control (KLHK, 2023). However, the continued occurrence of fires indicates that fire control cannot be examined only as a technical problem of detection and suppression; it also involves how land and natural resources are used, valued, regulated, and governed.

Article History:
Received : (22052026)
Revised : (13092026)
Accepted : (30092026)

How to Cite This Article:
Awaluddin, M., Suwitri, S., & Santoso, R.S. (2026). *Forest and Land Fire Policy Implementation and Recurring Fires: A Marxist Political Economy Perspective in West Kalimantan, Indonesia.* JURNAL TRIAS POLITIKA, 10(2), 196-212. https://doi.org/10.33373/jtp.v10i2.9090

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West Kalimantan illustrates this policy problem because recurring forest and land fires occur in a context of peatland use, agricultural activities, and plantation development. Reporting on the province identified 7,376 hotspots across 235 oil-palm and industrial-timber concessions in 2023 (Oxtora, 2023). This phenomenon is particularly relevant to the implementation of West Kalimantan Regional Regulation No. 2 of 2022 on Forest and/or Land Fire Control, which prohibits plantation companies and industrial forest operators from clearing land by burning and establishes provisions for prevention, response, supervision, and sanctions (BPBD, 2023). At the implementation level, fire control involves challenges related to firefighting capacity, infrastructure, coordination, budgeting, monitoring, and enforcement. The policy context therefore brings environmental protection, plantation-based economic activity, and the distribution of authority between central and local governments into the same implementation process (Saputro et al., 2021; Purnomo et al., 2020).

Existing research has examined forest and land fires from environmental, institutional, governance, and socioeconomic perspectives. Biophysical studies have addressed climate, drought, fire susceptibility, and ecological consequences, while policy and governance studies have examined coordination, bureaucratic responses, law enforcement, and fire-control implementation (Aggestam, 2024; Ariska et al., 2025). Research on zero-burning policies also shows that implementation can produce uneven consequences when alternative land-preparation practices do not fit local social and economic conditions (Ekawati et al., 2024). These studies establish that fire control is shaped by interactions among environmental conditions, economic activities, institutions, and social actors.

Political-economy research adds a further explanation by examining economic incentives, resource access, institutional arrangements, and power relations surrounding fire and land conversion. Budiningsih (2017) found that actors in Riau could obtain economic benefits from burning and that patronage networks could influence decision-making, protection, and access to resources. Alisyahbana et al. (2025) identified unequal power among central government, private companies, and farmers in Indonesia's lowlands, while Nurjaman (2020) linked natural-resource extraction to Indonesia's broader political and economic order. Studies of West Kalimantan and other Indonesian regions likewise show that plantation actors, government institutions, and social networks can shape land-use decisions and environmental governance (Astuti, 2021; Juniyanti et al., 2021) . Together, these studies indicate that recurring fire may be related not only to environmental conditions or institutional capacity but also to the economic value of land and the distribution of power over resources and policy decisions (Prabowo et al., 2017).

Despite these contributions, less attention has been given to how such political-economic dynamics are expressed simultaneously in the implementation of a specific regional forest and land fire control policy in West Kalimantan. In particular, there is a need to examine how resource exploitation, the state's protective role, productive land use, and the distribution of decision-making authority interact within policy implementation. This study addresses the gap by applying a Marxist political economy perspective, with Walker (2017) as the theoretical lens. Walker perspective draws attention to the relationship between economic value, the exploitation of nature, productivity, and capitalist expansion, while also providing a basis for examining how these processes are mediated by institutional arrangements. In this study, the perspective is operationalized through four study-specific analytical dimensions (resource exploitation, protection, productivity, and concentration of power) to interpret the implementation of forest and land fire control policy in West Kalimantan.

The study contributes by connecting political-economy analysis with the implementation of a regional fire-control policy, particularly the interaction between economic interests, environmental protection, and central–local authority. It also provides an evidence-based perspective for understanding implementation challenges related to monitoring, enforcement,

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intergovernmental coordination, and the alignment of economic land use with environmental requirements. The study therefore asks: How do resource exploitation, protection, productivity, and the concentration of power shape the implementation of forest and land fire control policies in West Kalimantan Province? Accordingly, this study aims to analyze the implementation of forest and land fire control policies in West Kalimantan Province from a political economy perspective by examining these four dimensions and their implications for policy effectiveness.

2. LITERATURE REVIEW

Forest and Land Fire Management from a Political Economy Perspective

Public policy provides the institutional framework through which governments define problems, establish rules, allocate authority, and implement programs to address public issues (Mulyadi, 2016; Nugroho, 2017). In the context of forest and land fires, however, policy implementation cannot be understood only as the execution of technical measures such as monitoring, suppression, or rehabilitation. The literature shows that fire is also connected to land-use decisions, economic incentives, institutional arrangements, and the distribution of authority among state and non-state actors.

Research on forest and land fires in Indonesia has developed along several lines. Biophysical and spatial studies emphasize climate, peatland conditions, land cover, and fire susceptibility, while policy-oriented studies examine governance, coordination, enforcement, and the capacity of public institutions. These perspectives are important because they explain the environmental conditions under which fires occur and the institutional mechanisms intended to control them. At the same time, they do not always explain why economically valuable land continues to be cleared or managed in ways that create incentives for burning. Bafadal & Hestiantini (2023), for example, show that El Niño explains substantial year-to-year variation in fire, but also find relationships between regional economic growth, decentralization, poverty, and the use of fire. This suggests that environmental conditions and political-economic processes should be examined together.

A more explicitly political-economic literature examines the interests and power relations surrounding fire and land conversion. Kadir et al. (2019) found in Riau that multiple actors could obtain economic benefits from burning and that patronage networks could influence decision-making, protection, and access to resources. Their findings indicate that fire can become part of an economic network rather than merely an unintended consequence of poor land management. Greenpeace Indonesia (2021) further demonstrated that local politics affected the use of fire in Sumatra and Kalimantan, including through land transactions and the use of fire as a low-cost means of increasing land value. These studies shift the analytical focus from the occurrence of fire itself toward the actors, incentives, and political relationships that can sustain fire-related practices.

The literature on land and plantation governance reinforces this political-economic interpretation. In West Kalimantan, Sambodo et al. (2024) found evidence that oil-palm companies accumulated power that enabled them to control forestland and convert it to plantations. In Riau, Negara et al. (2020) showed that land-use control is shaped by competition among actors and their social networks, and that powerful site-level actors may exercise substantial influence even when they do not occupy the highest formal position in the administrative hierarchy. Ozga (2020) likewise found that structure, institutions, and actors jointly affect sustainability and livelihoods in Indonesia's lowlands, with substantial differences in power among central government, private companies, and farmers. Research in Journal of Political Ecology also shows that legality and environmental governance can become sites of hegemony, resistance, and power negotiation (Myers et al., 2020), while research in Environment and Planning E: Nature and Space demonstrates how palm-oil governance and

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impact-assessment processes can reproduce unequal participation and power relations (Delabre et al., 2020). Together, these studies indicate that resource use and environmental outcomes are shaped not only by formal rules but also by unequal capacities to influence decisions and control resources.

Another important debate concerns the relationship between regulation and powerful economic actors. Astuti (2021), based on research in Riau and West Kalimantan, shows that government attempts to discipline large-scale peatland users can encounter resistance and contestation from plantation industries and from actors within the state itself. Myers et al. (2020) similarly demonstrate that legality initiatives in forest governance can involve struggles over authority and hegemony. These findings are important for policy implementation research because they demonstrate that the existence of a regulation does not automatically produce compliance. Implementation is negotiated within a political and economic context in which different actors possess different resources, interests, and capacities to influence policy. Thus, the literature presents at least three complementary explanations of persistent fire: environmental and climatic conditions, institutional and implementation constraints, and political-economic incentives and power relations. The unresolved issue is how these dimensions interact within the implementation of a specific regional forest and land fire control policy in West Kalimantan.

Political Economy, Resource Use, and Power Relations

Political economy is useful for this study because it directs attention to the relationship between economic processes and political decision-making, particularly to questions of who controls resources, who benefits from their use, who bears environmental costs, and how institutional arrangements distribute authority. Risma (2018) conceptualizes forest and land fires as a political-economic problem in which actors obtain benefits from fire and use networks to influence policy and implementation. Yang et al. (2021) similarly demonstrate that political-economic conditions are relevant to the sustainability of lowland livelihoods and that actors possess unequal power. Moser et al. (2025) further show how natural-resource extraction can become embedded in the political and economic order of development. These findings are consistent with the broader political-economic concern with the allocation of resources and the distribution of power rather than treating environmental degradation as an isolated technical failure.

This perspective also helps distinguish formal authority from effective power. Formal regulations may assign responsibilities to particular institutions, but actual policy outcomes can depend on control over land, capital, information, networks, licensing processes, and enforcement resources. The literature on land-use contestation shows that powerful actors can influence resource use through social networks and strategic positions (Devian et al., 2024), while research on peatland governance shows that state regulation may be contested by plantation actors and may also encounter contradictions among government institutions (Astono et al., 2023). For forest and land fire control, these insights are relevant because prevention, monitoring, sanctions, and rehabilitation require coordination among actors whose interests and capacities are not necessarily equal.

Theoretical Lens

Walker (2017) provides a Marxian political-economy perspective that places value, labor, nature, surplus, productivity, and capitalist accumulation at the center of the analysis. Rather than treating nature as external to economic processes, Walker examines the joint exploitation of labor and nature and connects capitalist growth with productivity, cheap inputs, and geographical expansion in search of resources. This theoretical position is relevant to forest

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and land fires because land, forests, and peatlands can become objects of economic valuation and expansion, while environmental costs may be displaced onto communities and ecosystems.

Walker is therefore used in this study not as a claim that every fire is directly caused by capitalism, but as a theoretical lens for examining how the pursuit of economic value interacts with resource use, environmental protection, productivity, and power. The empirical literature provides the bridge between Walker theoretical propositions and the Indonesian case: Sinaga (2023) demonstrate economic benefits and patronage around fire; connect fire use with local political processes and land value; show the importance of political-economic structures, institutions, and actors. Log et al. (2022) demonstrate contestation surrounding state attempts to regulate large-scale peatland users; and Myers et al. (2020) show how legality and governance can be shaped by power relations. These studies establish that economic value and power are not separate from fire-control policy implementation, thereby providing a rationale for applying Walker perspective to West Kalimantan.

To make the theory analytically usable in a policy-implementation study, this research operationalizes the political-economy perspective through four analytical dimensions: resource exploitation, protection, productivity, and concentration of power. These four dimensions are treated as study-specific analytical categories informed by Walker discussion of nature, exploitation, value, productivity, and accumulation and complemented by the empirical political-economy literature on Indonesian forests and land. Resource exploitation examines how forests and land are converted or used to generate economic value; protection examines the state's efforts to protect resources and enforce rules; productivity examines the purposes and consequences of resource utilization; and concentration of power examines how decision-making authority and effective influence are distributed among central government, local government, companies, communities, and other actors.

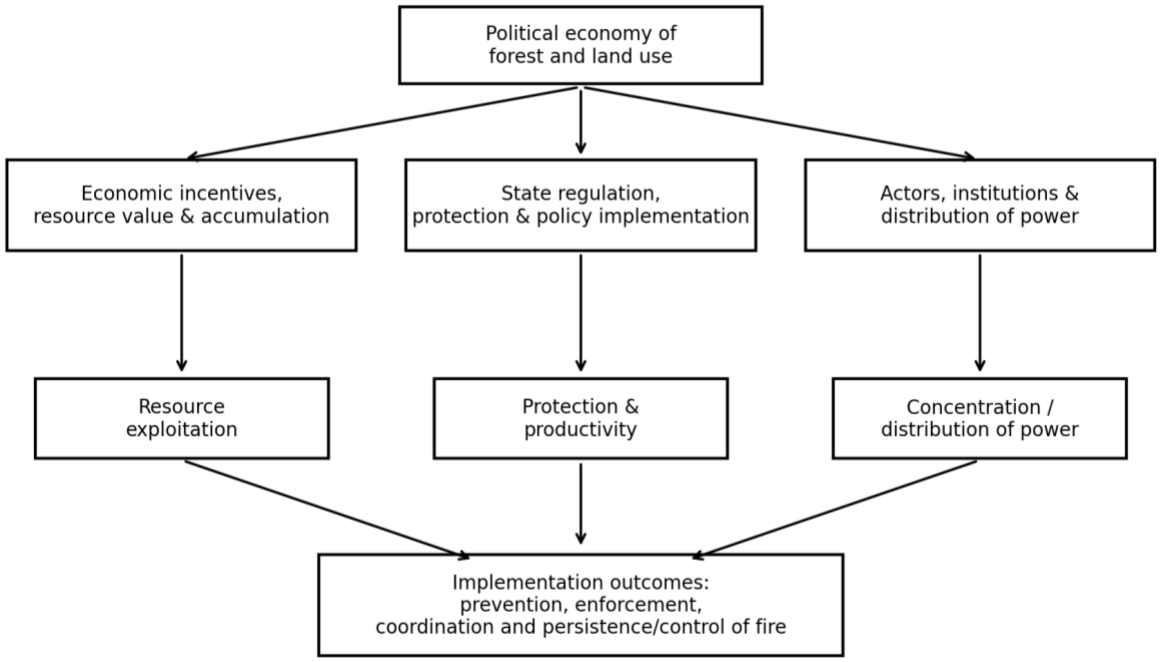


Figure 1. Analytical Mechanism Linking Political Economy to Policy Implementation

Figure 1 illustrates the analytical mechanism used in this study. Political-economic processes create incentives and constraints around resource use, while state regulation and the distribution of power shape how those incentives are translated into policy implementation. The four analytical dimensions are therefore not treated as isolated variables. They are examined as interconnected processes through which economic interests, state protection,

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productive land use, and power relations can influence the implementation and effectiveness of forest and land fire control policy.

Analytical Position of the Study

Based on the preceding literature, this study occupies a position between conventional policy-implementation analysis and political-economic analysis of environmental change. Existing studies have established that forest and land fires are associated with climatic and ecological conditions, economic incentives, local politics, institutional capacity, and unequal power relations. However, less attention has been given to how these political-economic processes are expressed simultaneously through the implementation of a provincial fire-control policy in West Kalimantan. The present study therefore uses Walker (2017) to interpret how resource exploitation, state protection, productive land use, and concentration of power interact in the implementation of West Kalimantan Regional Regulation No. 2 of 2022.

The analytical framework also establishes a direct link between the literature review and the empirical analysis. Evidence concerning land clearing, economic incentives, and resource use is examined under resource exploitation; government monitoring, suppression, sanctions, and rehabilitation are examined under protection; the intended and actual use of forest and land resources is examined under productivity; and the allocation of licensing, regulatory, enforcement, and decision-making authority is examined under concentration of power. This framework enables the findings to be interpreted in relation to the wider political-economy literature rather than being presented only as a description of policy implementation.

3. METHODOLOGY

Research Design and Case Study Scope

This study employs a qualitative research method with a case study approach to examine the implementation of forest and land fire control policies in West Kalimantan Province from a political economy perspective. A qualitative design was selected because the study seeks to understand the social, economic, political, and institutional context underlying forest and land fire control rather than to measure the phenomenon solely through numerical indicators (Huberman, 2014; Sugiyono, 2024). The case is bounded by the implementation of forest and land fire control policies in West Kalimantan, with particular attention to West Kalimantan Regional Regulation No. 2 of 2022 and the roles of the actors involved in its implementation.

West Kalimantan was selected as the case because the study examines the province's recurring forest and land fire problem and the interaction among local government implementation, plantation activities, environmental protection, and central–local authority. The scope of the case concerns the policy implementation process rather than the biophysical causes of fire alone. The research was conducted from February 2025 to September 2025, covering the fieldwork and data collection process.

Unit of Analysis and Research Informants

The unit of analysis is the implementation process of forest and land fire control policies in West Kalimantan Province. The analysis focuses on how resource use, protection measures, productivity objectives, and the distribution of authority and influence shape policy implementation. The actors involved in implementation are treated as sources of empirical information through individual in-depth interviews.

This study identifies the Department of Environment and Forestry (DLHK), the Fire Awareness Community (Masyarakat Peduli Api/MPA), and plantation companies as the principal groups involved in data collection. Informants were selected purposively based on their direct involvement, institutional authority, practical experience, or substantive knowledge

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concerning forest and land fire control. The study involved 13 informants, consisting of four officials from the Department of Environment and Forestry (DLHK) of West Kalimantan Province, four members of Fire Awareness Communities (Masyarakat Peduli Api/MPA), three representatives of plantation companies, and two representatives from a non-governmental organization (NGO) relevant to this research.

Data Sources and Data Collection

Primary data were collected through individual in-depth interviews with actors involved in forest and land fire control, particularly representatives of the Department of Environment and Forestry, the Fire Awareness Community (MPA), plantation companies, and a relevant non-governmental organization (NGO). The interviews were used to obtain information on policy implementation, institutional responsibilities, fire-control practices, economic interests, and relationships among actors. Data were collected through 13 individual in-depth interviews conducted from February 2025 to September 2025. The interviews involved 13 informants, consisting of four officials from the Department of Environment and Forestry (DLHK) of West Kalimantan Province, four members of Fire Awareness Communities (Masyarakat Peduli Api/MPA), three representatives of plantation companies, and two representatives of a relevant non-governmental organization (NGO). No focus group discussions (FGDs) were conducted in this study.

Secondary data were obtained through document review, including government guidelines and documents related to forest and land fire control. Documentary evidence included regulations, policy documents, government reports, including, where applicable, regulations and policy documents, government reports, official forest and land fire-control documents, hotspot or fire-related data, and other relevant institutional documents available to the researchers. Document analysis was used to cross-check information obtained from interviews and to establish the institutional and regulatory context of policy implementation.

Data Analysis and Operationalization of the Political Economy Perspective

Data analysis was conducted by organizing the information obtained from individual interviews and documents; identifying relevant statements and empirical evidence; grouping the evidence according to the four analytical dimensions; and interpreting the resulting patterns through the political economy perspective developed in the literature review.

Table 1. Operationalization of Political Economy Dimensions

Analytical dimension	Analytical focus	Empirical evidence examined
Resource exploitation	How forest and land resources are used or converted to generate economic value and how fire may be connected to land-use practices.	Land clearing, plantation expansion, burning practices, economic incentives, resource use.
Protection	How the state protects forest and land resources and implements prevention, suppression, sanctions, and rehabilitation.	Monitoring, hotspot identification, firefighting, sanctions, rehabilitation, government responsibilities.
Productivity	The intended and actual productive use of forest and land resources and the relationship between economic use and environmental sustainability.	Agricultural/plantation use, land-management practices, productive objectives, sustainable-use requirements.
Concentration of power	How formal authority and effective influence over resources, licensing, regulation, enforcement, and policy decisions are distributed among actors.	Central–local relations, licensing authority, enforcement authority, actor influence, institutional hierarchy, company/community position.

The four dimensions (resource exploitation, protection, productivity, and concentration of power) are treated as study-specific analytical categories informed by Walker, (2017) and

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complemented by the empirical political-economy literature discussed in Section 2.3. The analysis therefore moves from empirical evidence to analytical categories and then to theoretical interpretation, rather than treating the four dimensions as independent quantitative variables.

Data Validity and Triangulation

Data validity was strengthened through triangulation of sources and methods. Source triangulation was conducted by comparing information obtained from government actors, MPA, plantation companies, and relevant documentary sources. Method triangulation was conducted by comparing evidence from individual in-depth interviews and document review. Where accounts differed, the researchers compared them with other interview accounts and documentary evidence before using the information in the interpretation. This procedure was intended to reduce dependence on a single actor's account and strengthen the credibility of the findings.

Research Procedure

The research procedure consisted of the following stages: (1) defining the West Kalimantan case and identifying the policy and actors relevant to forest and land fire control; (2) collecting primary data through individual in-depth interviews and relevant documentary evidence; (3) organizing and coding the data according to the four political-economy dimensions; (4) triangulating evidence across sources and methods; (5) interpreting the findings through the political economy perspective and Walker (2017); and (6) drawing conclusions regarding the implementation of forest and land fire control policies.

4. RESULTS

The findings are organized according to four study-specific analytical dimensions informed by (Walker, 2017) political-economy perspective: resource exploitation, protection, productivity, and concentration of power. These dimensions are used as analytical categories for interpreting the empirical material; they are not presented as four formal indicators proposed by Walker. The results focus on how these dimensions are expressed in the implementation of forest and land fire control policies in West Kalimantan Province.

Resource Exploitation in Forest and Land Use

West Kalimantan provides extensive opportunities for plantation development, including oil-palm and industrial-forest activities. The granting of plantation permits is intended to support regional economic development and the productive use of land. At the same time, the use of peatlands and forest areas creates implementation challenges because land development must comply with environmental requirements and the prohibition on land clearing by burning under West Kalimantan Regional Regulation No. 2 of 2022 (Muliyani et al., 2023).

The secondary data compiled in this study indicate that fires continued to occur in areas associated with plantation concessions. Table 2 presents 1,005 hotspots identified among the listed concession areas in the 2025 dataset. The table does not by itself establish that every hotspot was caused by a company; rather, it identifies the spatial overlap between reported hotspots and concession areas that is relevant to the policy-implementation problem examined in this study.

The study materials further report 168,097.44 hectares of forest and land burned between 2023 and 2025. Documentary evidence cited in the manuscript links the persistence of fire to land-management practices and the use of burning in land preparation, particularly where fire is treated as a low-cost means of clearing land. WALHI West Kalimantan similarly argues that

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economic considerations can encourage land clearing through burning. These accounts indicate a tension between the economic value assigned to land and the environmental requirements governing its use.

Table 2. Tabulation of Hotspot Counts Across Company Concessions

Company Name	Concession Type	Number of Hotspots
PT Perkebunan Nusantara XIII	Palm Oil Plantation	124
PT Kapuas Palm Industri	Palm Oil Plantation	108
PT Sumatera Unggul Makmur	Palm Oil Plantation	106
PT Global Kalimantan Makmur	Palm Oil Plantation	103
Mitra Austral Sejahtera	Palm Oil Plantation	89
PT Finantara Intiga	PBPH (Forestry)	143
PT Duta Andalan Sukses	PBPH (Forestry)	102
PT Fajar Wana Lestari	PBPH (Forestry)	88
PT Kanya Resources	PBPH (Forestry)	71
Purun River Penitan	Palm Oil Plantation (Peat)	53
Mitra Andalan Sejahtera	Palm Oil Plantation (Peat)	18
Total Hotspots		1,005 hotspots

Source: Researcher-Processed Data, 2025

The government has imposed sanctions on several companies identified as violating fire-control requirements, but the documentary and institutional accounts reviewed in this study indicate that sanctions have not eliminated recurring fires. The lengthy and multi-level nature of enforcement is identified as one factor limiting deterrence. The findings therefore point to a gap between the formal prohibition of burning and the capacity of the policy system to prevent economically motivated land-use practices that generate fire risk.

Protection and Fire-Control Measures

The protection dimension concerns the actions taken by government institutions to prevent, suppress, and respond to forest and land fires. In West Kalimantan, the protection process identified in the study consists of mapping fire-prone areas, monitoring hotspots, coordinating with relevant stakeholders, responding to fire locations, extinguishing fires, and rehabilitating burned areas. Figure 2 summarizes this process.

The implementation evidence also reveals important capacity constraints. The West Kalimantan Department of Environment and Forestry identifies limited firefighting equipment, difficult access to burned areas, extensive fire-affected areas, and budget constraints for equipment and infrastructure as practical obstacles. These constraints mean that the existence of formal responsibilities and procedures does not necessarily translate into equal capacity to implement protection measures across locations.

The study also identifies uneven cooperation between government and plantation companies. Compliance with no-burn requirements may be incorporated into administrative and licensing documents, while hotspots can nevertheless remain in plantation areas. This indicates that regulatory compliance at the formal or administrative level does not always guarantee effective prevention at the operational level.

Productivity and Sustainable Land Use

The productivity dimension concerns how forest and land resources are expected to generate economic and social value while remaining within environmental limits. In West Kalimantan, plantation development and community land use are connected to regional economic objectives, while the fire-control framework requires these activities to avoid practices that damage forest, land, and peat ecosystems.

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The findings show a persistent tension between productive land use and environmental protection. On the one hand, government policy seeks to maintain agricultural and plantation productivity and regional development. On the other hand, land-clearing practices that involve burning can reduce short-term preparation costs while increasing environmental and public-health risks. The problem is therefore not the existence of productive land use itself, but the conditions under which economic productivity is pursued and the extent to which those conditions are compatible with sustainable resource use.

The study further finds that monitoring and sanctions have not fully resolved this tension. The continued occurrence of hotspots despite preventive measures indicates that policy implementation has not yet produced a stable alignment between economic incentives, productive land use, and environmental protection.

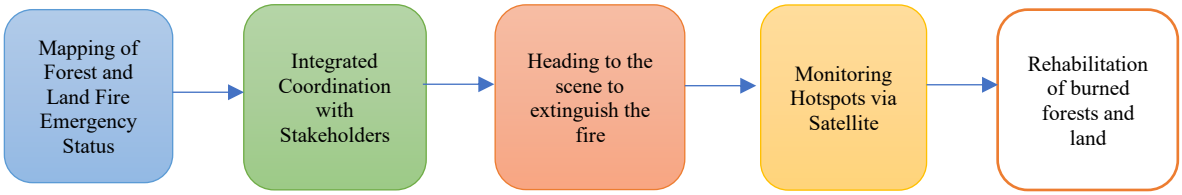


Figure 2. Forest and Land Fire Management Process
Source: Researcher-Processed Data, 2025

Concentration of Power and Central–Local Relations

The concentration-of-power dimension concerns the distribution of formal authority and effective influence over land, licensing, regulation, enforcement, and policy implementation. The findings indicate that West Kalimantan's local government and DLHK play important technical and operational roles in prevention, monitoring, suppression, rehabilitation, and public awareness, while important regulatory and licensing functions are located at the central-government level.

This distribution creates an implementation asymmetry. Local institutions are directly exposed to fires and are responsible for operational responses, but their ability to shape upstream decisions concerning permits, land allocation, and some enforcement processes is more limited. Consequently, policy implementation is influenced not only by the availability of local capacity but also by how authority is distributed across levels of government.

The results therefore show that forest and land fire control in West Kalimantan is not simply a matter of whether regulations exist. It is also a question of how economic interests, protection responsibilities, productive land-use objectives, and decision-making authority interact within the policy system.

5. DISCUSSION

Resource Exploitation, Economic Value, and Fire

The findings indicate that forest and land fire control in West Kalimantan cannot be understood only as a technical problem of detecting and extinguishing fires. The persistence of fire in areas associated with plantation development points to a political-economic relationship in which land has both environmental value and economic value. This interpretation is consistent with Walker (2017) argument that nature is incorporated into processes of value creation, productivity, and capitalist expansion. Nurjaman (2020) similarly emphasizes the political-economic significance of natural-resource extraction in Indonesia. In the present case,

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the policy problem emerges when the economic value attached to land-clearing and plantation development is pursued under conditions that can externalize environmental costs.

The West Kalimantan findings also resonate with Anwar (2022), who identified economic benefits, actor networks, and patronage relationships around forest and land fires in Riau. However, the present study differs in its emphasis. Rather than mapping the fire economy and actor network in Riau, this study examines how those political-economic pressures are expressed within the implementation of a provincial fire-control policy. This shifts the analytical question from who benefits from fire to how economic interests interact with regulatory implementation in a specific regional institutional setting.

Protection, Institutional Capacity, and Policy Implementation

The protection findings show that the state is not absent from the fire-control process. Government institutions map fire-prone areas, monitor hotspots, coordinate responses, extinguish fires, and rehabilitate burned areas. Nevertheless, equipment, access, budget, and coordination constraints limit the consistency of implementation. This finding is comparable with evidence from Central Kalimantan, where Silveira et al. (2020) found that forest-fire management units faced limited resources, complicated budget mechanisms, and participation constraints. It is also consistent with Uda et al. (2020), who found that peatland regulations in Jambi and Central Kalimantan had low-to-moderate institutional fit and that weak monitoring and law enforcement contributed to non-compliance. Phelps et al. (2021)further show that experts and resource users can hold substantially different views about solutions to peatland fires, underscoring the importance of aligning policy design with the perspectives of actors affected by implementation.

The comparison suggests that recurring fire is not necessarily evidence of an absence of policy. Instead, a policy may be formally established while its implementation remains constrained by institutional capacity and the fit between rules and local practices. In West Kalimantan, this problem is further complicated by the division of responsibilities between central and local institutions. The finding therefore extends the implementation discussion beyond organizational capacity alone by linking implementation capacity to the political and institutional distribution of authority.

Productivity, Protection, and the Contradiction of Land Use

The productivity findings reveal a contradiction between two policy objectives that are both legitimate within the state system: promoting productive land use and protecting forest and land resources. Walker (2017) perspective is useful here because it directs attention to the relationship between productivity and the exploitation of nature. The West Kalimantan case shows that the conflict is not simply between the economy and the environment as separate spheres; rather, environmental protection is implemented within an economic system that assigns value to land and expects land to contribute to production and regional development.

This interpretation also complements Hamidi et al. (2022) who show that Indonesia's fire patterns are shaped by both environmental conditions and socioeconomic factors. The present findings do not deny the role of climatic and biophysical conditions. Instead, they indicate that the policy significance of those conditions depends on how land is economically used, regulated, monitored, and protected. Thus, productivity should not be treated as an alternative to environmental protection but as a political-economic process whose environmental consequences depend on the rules and incentives governing resource use.

Concentration of Power and the Internal Contradictions of the State

The concentration-of-power findings are particularly important for interpreting the West Kalimantan case. The state cannot be treated as a single actor with a single interest. Local

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government institutions are responsible for responding to fires and protecting environmental resources, while central institutions retain important authority over land allocation, licensing, and parts of regulatory enforcement. At the same time, plantation development is associated with economic and regional-development objectives. These institutional positions can produce tensions within the state itself: the same broader governance system must facilitate economic production while also preventing environmental damage. This interpretation is consistent with critical political-economy research on Indonesia that emphasizes the interaction of developmentalism, state authority, and entrenched economic interests (Fünfgeld, 2026; Gellert, 2010).

This finding qualifies a simple interpretation in which the state is understood only as an instrument of capital. The empirical pattern instead suggests a more contradictory relationship. State institutions possess regulatory and protective functions, but those functions operate within an institutional structure in which economic development, jurisdictional authority, and environmental protection may not be fully aligned. This interpretation is consistent with Rahayu (2023) finding that attempts to discipline large-scale peatland users can involve contestation not only between government and plantation actors but also among actors within the state. The West Kalimantan case therefore highlights the importance of examining the state as an internally differentiated set of institutions rather than as a unitary actor.

The cross-case comparison clarifies the contribution of the West Kalimantan case. Riau studies have emphasized economic benefits, patronage networks, and powerful actors surrounding fire and land conversio (Listari, 2024). Studies of Jambi and Central Kalimantan have highlighted weak institutional fit, monitoring and enforcement gaps, limited resources, and coordination challenges in peatland and fire governance Nazief (2026), Pratama (2026), and Risma (2018). Research on West Kalimantan has also demonstrated that plantation actors can accumulate power in land-use conflicts (Pareja et al., 2020). The present study brings these strands together at the level of fire-control policy implementation and shows how resource exploitation, protection, productivity, and concentration of power operate simultaneously within the provincial implementation process. This contribution is consistent with political-ecology research showing that resource access, legal authority, and environmental governance are negotiated through unequal power relations (Myers et al., 2020).

The novelty is therefore not the claim that economic interests or power relations exist in West Kalimantan; those dynamics have been documented previously. The contribution lies in showing how these dynamics intersect with the implementation of a regional fire-control regulation and with central–local authority relations. In this setting, the effectiveness of fire control depends not only on the behavior of individual actors or the technical capacity to suppress fires, but also on whether regulatory authority, economic incentives, protection responsibilities, and enforcement capacity are institutionally aligned.

Taken together, the findings broadly support Walker (2017) political-economy perspective by showing that environmental outcomes are connected to the economic valuation and productive use of nature. However, the findings also extend the perspective in an important way. The West Kalimantan case demonstrates that the relationship between economic interests and nature is mediated by the institutional architecture of the state, particularly the distribution of authority between central and local governments. The four analytical dimensions used in this study therefore work as interconnected processes: resource exploitation creates economic pressures, productivity gives land-use activities their economic rationale, protection represents the state's environmental response, and concentration of power shapes whose decisions and interests can influence implementation.

The study does not provide grounds for concluding that every fire is directly caused by capitalist accumulation or that all state action serves private capital. Instead, the findings point to a more differentiated political-economic process in which economic interests, state

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protection, and institutional authority interact and sometimes conflict. This qualification strengthens the analytical usefulness of Walker framework for policy studies because it connects the exploitation of nature to the concrete institutional arrangements through which environmental rules are implemented.

The findings suggest that improving fire-control implementation requires more than expanding suppression capacity. Policy implementation should also address the institutional gap between land-use decisions and local fire-control responsibilities, strengthen monitoring and enforcement across concession areas, and improve coordination between central and local authorities. These implications follow directly from the observed interaction among resource exploitation, protection capacity, productivity objectives, and concentration of power. The emphasis is therefore on aligning economic land use with enforceable environmental requirements rather than treating fire suppression as a stand-alone technical response.

6. CONCLUSION

The practice of clearing land through uncontrolled burning is one of the causes of forest and land fires in West Kalimantan. This practice is clear evidence of exploitative behavior toward forests and land that harms the interests of the government and local communities.

Concrete actions taken by the West Kalimantan regional government to protect burned forests and land, in accordance with its duties, functions, and authority, include identifying or mapping fire-prone forests and land, extinguishing fires in burned forests and land, and subsequently carrying out rehabilitation of the burned forests and land.

The West Kalimantan Environment and Forestry Agency has been working to ensure that the use of forest and land resources in West Kalimantan complies with the objectives of local regulations, so that land clearing prioritizes sustainable environmental protection and prevents forest and land fires. However, in reality, there are still plantation companies that violate local regulations, likely due to the lack of a deterrent effect from the sanctions imposed by the government.

The multi-tiered reporting and policy structure is one of the factors hindering the enforcement of forest and land fire control policies. The concentration of power in the central government also makes it easier for investors to intervene with offers that benefit the government. This has led the public to perceive state institutions as siding with capital owners due to the slow enforcement of sanctions against several companies proven to have cleared land using burning methods.

Author Contribution

Author Contributions: Conceptualization, M.A.; Methodology, M.A.; Formal analysis, M.A., R.S.S.; Investigation, M.A.; Literature review, S.S.; Writing – original draft preparation, M.A., S.S.; Writing – review and editing, S.S., R.S.S.; All authors have read and agreed to the published version of the manuscript.

Acknowledgement (Optional)

The authors would like to thank LPDP for funding this research and Diponegoro University for providing the facilities and infrastructure needed to write this article.

Data Availability Statement

All data supporting the findings of this study are available from the corresponding author upon reasonable request.

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Declaration of Generative AI and AI-Assisted Technologies

Artificial Intelligence was used as a language and writing assistance tool during the preparation of this manuscript. AI-assisted tools were used to improve English language clarity, grammar, sentence structure, and manuscript organization, including assistance in revising the manuscript in response to reviewer comments. AI was not used to collect research data, conduct interviews, perform the primary data analysis, generate research findings, or make decisions regarding the interpretation of the research results. The authors remain fully responsible for the accuracy, originality, and integrity of the content of the manuscript

Conflict of Interest Declaration

The authors declare no conflict of interest.

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