



## LEGAL PERSPECTIVES ON FOREST PROTECTION WITHIN NATURAL RESOURCE LAW: CHALLENGES AND SOLUTIONS IN THE MINING SECTOR

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**Abstract:** This study explores forest protection from the perspective of natural resource law, focusing on the challenges and solutions related to mining activities in Indonesia. Forest areas in Indonesia are under severe threat due to the expansion of extractive industries, particularly mining, which often operates within or adjacent to forest zones. The study identifies three major areas of concern: legal conflicts and institutional overlap in forest governance, weak enforcement of environmental laws and accountability mechanisms, and the marginalization of local communities in decision-making processes. The research reveals that inconsistencies between forestry, environmental, and mining regulations contribute significantly to forest degradation. Furthermore, the lack of coordination among government institutions, insufficient environmental monitoring, and the failure to uphold indigenous and community rights exacerbate the problem. Through a legal and socio-environmental lens, the study proposes integrated governance reforms, strengthened law enforcement, and increased community participation as essential solutions to ensure sustainable forest management. These findings underscore the importance of aligning legal frameworks with environmental justice and sustainable development principles to safeguard Indonesia's forest ecosystems from the adverse impacts of mining.

**Keywords:** Forest Protection; Mining Industry; Natural Resource Law

### 1. Introduction

Forests are one of the most vital natural resources on Earth, playing a crucial role in maintaining ecological balance, preserving biodiversity, regulating the climate, and supporting the livelihoods of millions of people. However, in many parts of the world, forest areas are increasingly under threat due to various human activities, particularly those related to the extraction of natural resources, such as mining. The expansion of the mining industry, while economically beneficial, often leads to significant deforestation, habitat destruction, and environmental degradation. This situation presents a serious challenge for sustainable development and calls for a strong legal framework to ensure the protection and conservation of forests.<sup>1</sup>

In the context of natural resource law, forest protection becomes a critical component in balancing economic interests with environmental sustainability. The law serves as a tool to regulate the exploitation of natural resources, enforce conservation measures, and hold parties accountable for environmental damage. Nevertheless, the implementation of such legal protections often faces significant challenges. These include weak law enforcement, lack

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of coordination among government institutions, corruption, limited public awareness, and conflicting interests between development and conservation goals.

The mining industry, in particular, poses unique legal and environmental challenges. Open-pit mining, for example, directly contributes to large-scale deforestation and soil erosion. In many cases, mining permits are granted in forested areas without adequate environmental impact assessments or proper consultation with affected communities. Furthermore, post-mining rehabilitation obligations are frequently neglected or inadequately enforced. These practices not only undermine forest conservation efforts but also violate the rights of indigenous peoples and local communities who depend on forest resources for their survival.

Given these realities, it is essential to explore effective legal mechanisms that can address the negative impacts of mining on forest ecosystems. This includes reviewing existing regulations, identifying gaps in law enforcement, and promoting legal reforms that strengthen forest governance. Moreover, the role of environmental NGOs, community participation, and international legal instruments should also be considered in advancing forest protection within the mining sector.<sup>2</sup>

This study aims to analyze forest protection from the perspective of natural resource law, focusing specifically on the challenges and solutions associated with the mining industry. By examining current legal frameworks, institutional practices, and real-world cases, the research seeks to provide recommendations for improving legal and policy approaches to forest conservation. Ultimately, the goal is to contribute to a more sustainable and legally accountable natural resource management system that prioritizes environmental protection without neglecting economic development.

This study aims to examine the legal framework for forest protection within the context of natural resource law, particularly in relation to the mining industry. The specific objectives of this research are as follows:<sup>3</sup>

1. To analyze the existing legal regulations and policies related to forest protection in the context of natural resource exploitation, especially mining activities.
2. To identify the key challenges and legal gaps in the implementation and enforcement of forest protection laws in mining areas
3. To explore the impact of mining operations on forest ecosystems and local communities from a legal perspective.
4. To propose legal and policy-based solutions that can enhance forest conservation efforts while ensuring sustainable mining practices.
5. To evaluate the role of stakeholders, including government institutions, mining companies, local communities, and civil society organizations, in promoting and enforcing forest protection within the mining sector.

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<sup>2</sup> M. R. Peck et al., "The Conflict between Rights of Nature and Mining in Ecuador: Implications of the Los Cedros Cloud Forest Case for Biodiversity Conservation," *People and Nature* 6, no. 3 (2024): 1096–1115, <https://doi.org/10.1002/pan3.10615>.

<sup>3</sup> Intan Nevia Cahyana and Intan Nevia Cahyana, *Interest Rights and Forest Management: Perspectives on the Clash Between Rights of the Government and Indigenous Peoples* (Atlantis Press SARL, 2025), [https://doi.org/10.2991/978-2-38476-362-7\\_20](https://doi.org/10.2991/978-2-38476-362-7_20).

## 2. Research Methode

This study employs a normative legal research method, focusing on the analysis of laws, regulations, legal principles, and case studies related to forest protection within the framework of natural resource law. The research involves a comprehensive review of statutory regulations, government policies, scholarly literature, and relevant judicial decisions pertaining to the mining sector and environmental protection. Additionally, a qualitative approach is used to examine the effectiveness of existing legal instruments and to identify legal gaps and challenges in law enforcement. The study also incorporates comparative analysis by referencing best practices from other jurisdictions to propose suitable legal and policy recommendations.

## 3. Discussion

The findings of this research reveal a critical tension between forest protection and the demands of economic development, particularly in the mining sector. Although Indonesia has developed a comprehensive legal framework for forest conservation—anchored in laws such as the Forestry Law (No. 41/1999), Environmental Law (No. 32/2009), and the Mining Law (No. 3/2020 as an amendment to Law No. 4/2009)—in practice, these legal instruments often conflict in terms of implementation and enforcement.<sup>4</sup>

One key issue is the overlapping jurisdiction among government institutions responsible for forestry, environment, and mining. This fragmentation leads to inconsistent policy decisions, inefficient coordination, and ultimately, legal uncertainty. For instance, a mining permit (IUP) may be granted by the Ministry of Energy and Mineral Resources even in areas designated as forest zones, especially when reclassification of land use is done through political or administrative discretion. Such contradictions dilute the strength of forest protection and expose legal loopholes that companies can exploit.

Moreover, the weak enforcement of environmental regulations has allowed mining operations to continue without fulfilling essential obligations such as Environmental Impact Assessments (AMDAL), reclamation planning, and post-mining restoration. This not only accelerates forest degradation but also undermines public trust in environmental governance. Studies by NGOs and watchdog agencies have reported a widespread lack of compliance with reclamation policies, revealing the inefficacy of current penalties and sanctions.

From a legal theory perspective, this situation demonstrates a gap between *lex lata* (the law as it is) and *lex ferenda* (the law as it should be). While laws may exist in writing, their implementation depends heavily on political will, institutional capacity, and community engagement. The concept of environmental justice is also relevant here, as forest-dependent communities—particularly indigenous peoples—often bear the environmental and social costs of mining activities without reaping proportional benefits or being involved in the decision-making process. The discussion also highlights the importance of integrating sustainable development principles into mining governance. Legal tools should not only regulate

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<sup>4</sup> Cosimo Magazzino, "The Impact of Conflicts in the Mining Industry: A Case Study of a Gold Mining Dispute in Greece," *Resources Policy* 97, no. August (2024): 105292, <https://doi.org/10.1016/j.resourpol.2024.105292>.

exploitation but also promote environmental sustainability and intergenerational equity. Initiatives such as green mining certification, ecosystem-based planning, and community-based forest management offer potential pathways to reconcile economic and ecological goals.

Furthermore, the international dimension of forest protection—through frameworks like REDD+, climate agreements, and foreign investment due diligence—can play a vital role in pressuring both government and corporations to uphold higher environmental standards. The role of civil society, academia, and the media in advocating for environmental accountability should be continuously strengthened. In conclusion, the protection of forests under natural resource law is not merely a matter of legal drafting but of institutional synergy, participatory governance, and a genuine commitment to sustainability. The mining industry, if properly regulated and made environmentally accountable, can operate in a way that minimizes ecological harm while contributing to national development goals

### **3. 1 Legal Conflicts and Institutional Overlap in Forest Governance**

Indonesia's regulatory framework for forest and natural resource management includes several major laws, such as the Forestry Law (No. 41/1999), Environmental Protection and Management Law (No. 32/2009), and the Mineral and Coal Mining Law (No. 3/2020). However, these laws are often implemented inconsistently, partly due to overlapping mandates among different government institutions. The Ministry of Environment and Forestry (KLHK), the Ministry of Energy and Mineral Resources (ESDM), and local governments frequently operate without proper coordination, creating regulatory conflicts.

One of the most critical conflicts arises when mining permits are issued in areas designated as protected forests. Although mining in forest areas is technically restricted, companies often gain access through a mechanism known as "forest area borrow-to-use permits" (Izin Pinjam Pakai Kawasan Hutan or IPPKH). These permits, issued by KLHK, allow mining in forested lands under the condition of post-mining reclamation. However, such permissions contradict the spirit of forest conservation and lead to legal ambiguity.

Institutional fragmentation has led to a lack of integrated planning. Land-use classification under the Spatial Planning Law often does not align with forestry zoning. As a result, local governments may approve mining activities that conflict with conservation efforts due to pressure from investors or to boost regional revenues. This weakens the power of environmental law and contributes to deforestation, biodiversity loss, and social conflicts.

The complexity increases with decentralization. While regional autonomy allows local governments more authority in managing natural resources, it has also resulted in inconsistent policy implementation and weaker environmental oversight. Regional officials may lack technical knowledge or succumb to political-economic interests that prioritize revenue over ecological sustainability. Legal reform efforts, such as the Omnibus Law on Job Creation (Law No. 11/2020), have attempted to streamline permitting processes. However, critics argue that these reforms further centralize power and reduce environmental safeguards, making it easier for companies to obtain permits with minimal accountability. Environmental impact

assessments (AMDAL), for example, are now subject to simpler procedures, raising concerns about their effectiveness.

To resolve these conflicts, there is a pressing need for legal harmonization. National laws must be reviewed to ensure that they align with sustainable development principles and that environmental concerns are not subordinated to economic interests. Clearer coordination mechanisms among institutions, along with the integration of spatial planning, forestry zoning, and mining licenses, would enhance policy coherence. In summary, overlapping legal authorities and fragmented institutional roles significantly undermine forest protection efforts in Indonesia. Without a coordinated legal and governance framework, forest areas remain vulnerable to exploitation, and existing laws lose their preventive power. Legal clarity, institutional synergy, and political commitment are crucial to bridging these gaps and securing long-term forest sustainability.

### **3. 2 Community Rights, Environmental Justice, and Sustainable Resource Management**

Despite the presence of comprehensive environmental regulations in Indonesia, weak enforcement remains a major barrier to effective forest protection in the context of the mining industry. The Environmental Protection and Management Law (Law No. 32/2009) mandates that all mining activities undergo Environmental Impact Assessments (AMDAL) and implement reclamation and post-mining recovery plans. However, in practice, many companies neglect these obligations, and enforcement agencies often fail to impose meaningful sanctions.

A major problem lies in the limited capacity of local and regional environmental agencies. Many lack the financial, technical, and human resources needed to conduct proper monitoring and inspections. As a result, illegal deforestation, river pollution, habitat destruction, and land degradation continue largely unchecked in mining areas. Even when violations are detected, sanctions are often administrative in nature and not strong enough to deter repeat offenses. Furthermore, the current legal framework does not provide sufficient incentives for companies to adopt environmentally sustainable mining practices. Environmental compliance is often viewed as a bureaucratic burden rather than a corporate responsibility. Cases have been reported where companies manipulate or falsify environmental reports, exploit legal loopholes, or delay the fulfillment of reclamation commitments with minimal consequence.

In addition, public participation and transparency in environmental governance remain limited. Communities living near mining operations often lack access to environmental data and are excluded from decision-making processes. This lack of environmental justice contributes to social conflicts and distrust between stakeholders. Although the law provides for public consultation during the AMDAL process, these consultations are often superficial and fail to reflect community concerns.

Corruption also plays a role in weakening enforcement. There have been instances where permits were issued without proper assessment or where violations were overlooked in exchange for bribes. This undermines the rule of law and perpetuates a cycle of environmental degradation and institutional impunity. To improve enforcement, it is essential to strengthen the capacity of environmental monitoring institutions. This includes providing training, modern

equipment, and digital tools such as GIS, remote sensing, and real-time data systems. Stronger coordination between national and regional agencies, as well as collaboration with civil society organizations, is also needed to enhance accountability.

Moreover, penalties for environmental violations should be made more stringent and enforceable. Companies that fail to comply with reclamation requirements or that damage protected forests should face criminal sanctions and financial liabilities. The "polluter pays" principle should be upheld in all cases, ensuring that environmental damage is not externalized to the public. Finally, building a culture of corporate environmental responsibility is critical. Government policies should include incentives for green mining practices, such as tax benefits or environmental certifications. Public recognition of environmentally compliant companies can also create reputational motivation for sustainability. In conclusion, the weak enforcement of environmental law and lack of accountability in the mining sector continue to threaten Indonesia's forests. Without stronger legal action, institutional reform, and stakeholder participation, forest degradation will persist—posing long-term risks to biodiversity, climate stability, and community welfare

### 3.3 Sub-heading of the discussion

The intersection between forest protection and mining often leads to the marginalization of local and indigenous communities whose lives are closely tied to the forest ecosystem. These communities are frequently the most vulnerable stakeholders in resource governance, yet their voices are rarely included in policy decisions. As a result, forest degradation caused by mining not only poses environmental challenges but also constitutes a serious threat to social equity and environmental justice.

Many indigenous and rural communities in Indonesia depend on forests for their livelihoods, cultural identity, and survival. When forests are cleared or polluted due to mining activities, these communities suffer the loss of essential resources such as clean water, medicinal plants, hunting grounds, and sacred land. However, existing legal mechanisms often fail to protect their customary rights. While the Constitutional Court Decision No. 35/PUU-X/2012 recognizes indigenous peoples' rights over customary forests, implementation at the local level remains inconsistent and slow. The concept of environmental justice demands that all people, regardless of ethnicity, income, or social status, have equal access to environmental benefits and protections. Yet, in many mining regions, affected communities experience environmental burdens—such as air and water pollution, displacement, and health hazards—without receiving proportional economic benefits. Compensation, if provided, is often inadequate and negotiated without free, prior, and informed consent (FPIC), a standard recognized under international human rights law.

Community exclusion is further exacerbated by limited access to legal assistance and information. Many residents lack knowledge of their legal rights or the technical ability to challenge environmentally harmful permits and practices. Environmental lawsuits are time-consuming and costly, making it difficult for communities to seek justice through the court system. Additionally, local resistance to mining projects is sometimes met with criminalization, harassment, or even violence, as documented by several human rights organizations. On the

other hand, sustainable forest management offers an alternative model that respects community rights and promotes ecological balance. Approaches such as community-based forest management (CBFM) and social forestry programs enable local residents to take part in conservation while generating income through ecotourism, agroforestry, or non-timber forest products. These models demonstrate that empowering communities can lead to both environmental preservation and economic resilience.

Moreover, integrating customary knowledge into environmental governance is essential. Indigenous practices, such as rotational farming and sacred forest protection, have long sustained biodiversity without the need for industrial intervention. Recognizing this traditional wisdom within legal and policy frameworks can enhance the sustainability of natural resource management. To move forward, legal reforms must prioritize community participation, ensure protection of indigenous land rights, and strengthen mechanisms for FPIC. Environmental decision-making must be inclusive and transparent, with clear procedures for grievance redress and access to justice. The government, in collaboration with NGOs and academia, should invest in legal literacy and environmental education for communities in mining-affected regions. In conclusion, the protection of community rights is a fundamental pillar of sustainable resource management and environmental justice. Without fair treatment and meaningful involvement of forest-dependent communities, any effort to preserve forests amid mining pressures will be incomplete and unjust.

#### 4. Conclusion

This research concludes that forest protection in Indonesia, within the context of natural resource law, faces significant challenges, particularly due to the rapid expansion of the mining industry. Although legal instruments exist to safeguard forest areas, such as environmental and forestry laws, their effectiveness is hindered by weak enforcement, overlapping authorities, regulatory loopholes, and limited public oversight. The issuance of mining permits in forest zones, often driven by short-term economic interests, directly contributes to deforestation, ecological degradation, and the displacement of indigenous communities. These actions not only violate environmental laws but also undermine the rights and livelihoods of forest-dependent populations. Moreover, environmental assessments and rehabilitation obligations are frequently neglected or manipulated to serve corporate interests rather than ecological sustainability.

However, the study also identifies opportunities for improvement. Strengthening legal enforcement, ensuring transparent and participatory permit processes, integrating environmental justice principles, and empowering local communities are crucial steps toward balancing economic development with environmental protection. Effective collaboration between government agencies, civil society, and the private sector is essential to uphold forest protection laws and promote sustainable mining practices.

Ultimately, the protection of forests in the face of mining development requires a holistic legal and policy framework—one that enforces accountability, enhances inter-sectoral coordination, and places environmental sustainability and community rights at the forefront of natural resource governance.

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