

Evaluating the Effectiveness of Sanctions in Indonesia's Illegal Logging Law: A Normative Juridical Approach to Strengthening Environmental Protection

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ABSTRACT

This study evaluates the effectiveness of sanctions within Indonesia's legal framework for addressing illegal logging, focusing on the implementation of Law No. 18 of 2013 on Prevention and Eradication of Forest Destruction. Using a normative juridical approach, the research examines the current legal sanctions, their enforcement, and their impact on forest conservation efforts. Findings indicate that while the legal provisions establish substantial penalties, the application of sanctions suffers from inconsistency, corruption, weak enforcement mechanisms, and inadequate institutional capacity. Comparative analysis with international best practices reveals potential improvements, such as the use of satellite monitoring, stronger corporate accountability, and community-based forest management. The study proposes a series of policy recommendations, including the enhancement of penalties, the integration of advanced monitoring technologies, and the promotion of restorative justice practices. By addressing these gaps, Indonesia can strengthen its efforts to combat illegal logging and ensure more effective environmental protection.

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1. INTRODUCTION

1.1. Background

Illegal logging in Indonesia remains a critical environmental challenge, significantly contributing to deforestation, biodiversity loss, and socio-economic issues. Despite the government's legal frameworks and enforcement efforts, illegal logging persists due to various factors, including corruption, inadequate law enforcement,

and socio-economic pressures. Indonesia has one of the highest illegal logging rates globally, with a ratio of illegal logging to timber production at 60% [1]. The destruction of forests leads to habitat loss for numerous species, threatening biodiversity and ecosystem stability [2], while also contributing significantly to greenhouse gas emissions and exacerbating climate change [2]. Enforcement of existing laws remains

weak due to corruption and lack of resources [3], though integrating local wisdom, such as the Manggarai's roko molas poco ritual, into legal frameworks could aid in combating illegal logging [4]. Economic motives further drive illegal logging, as conflicts of interest arise between local communities, businesses, and government entities [1], ultimately undermining local economies that depend on sustainable forest management [5].

Indonesia's legal framework addressing illegal logging, primarily governed by Law No. 41 of 1999 and Law No. 18 of 2013, faces significant challenges in enforcement and effectiveness. Despite the existence of sanctions aimed at deterring illegal activities, the prevalence of logging violations persists due to various systemic issues. The enforcement of laws is often inadequate, with many cases of illegal logging going unpunished, as reflected in Indonesia's high illegal logging ratio of 60% compared to timber production, indicating ineffective law enforcement [1]. Corruption among officials further undermines legal frameworks, allowing illegal logging to flourish through bribery and misuse of authority, which complicates the enforcement of existing laws [6]. Additionally, current penalties often lack a deterrent effect, as many offenders face minimal consequences, reducing the overall impact of legal sanctions [3]. However, local wisdom, such as the Manggarai community's roko molas poco ritual, emphasizes sustainable forest use and can complement national laws, fostering a sense of responsibility toward forest preservation [4].

This paper adopts a normative juridical approach to evaluate the effectiveness of sanctions within Indonesia's illegal logging laws. By analyzing the legal norms and principles that underpin these sanctions, the study aims to assess their alignment with the broader goal of environmental

protection. The research also seeks to identify gaps and weaknesses in the current regulatory framework and propose recommendations to strengthen its enforcement.

The urgency of this study lies in its potential to contribute to the improvement of Indonesia's environmental governance. As the world's third-largest rainforest holder, Indonesia plays a critical role in global efforts to combat climate change and protect biodiversity. Strengthening the legal framework against illegal logging is not only a national priority but also an international obligation.

This study offers a unique contribution by focusing on the normative juridical analysis of Indonesia's sanctions against illegal logging, a perspective that has not been comprehensively explored in previous research. While numerous studies address the ecological and socio-economic impacts of illegal logging, few delve into the legal framework's structural and normative deficiencies. The novelty of this research lies in its critical examination of how sanctions are formulated, enforced, and interpreted within the existing legal system, highlighting the disconnect between the legal provisions and their practical application. By bridging this gap, the study provides actionable recommendations to enhance the deterrent effect of these sanctions and align them with global environmental standards.

1.2. *Research Objective*

The primary objective of this research is to evaluate the effectiveness of sanctions under Indonesia's illegal logging laws in strengthening environmental protection. Specifically, the study seeks to:

1. Analyze the normative aspects of existing legal provisions governing illegal logging sanctions.

2. Identify weaknesses and inconsistencies in the formulation and enforcement of these sanctions.
3. Examine the role of judicial interpretations and administrative practices in shaping the implementation of illegal logging laws.
4. Propose recommendations to improve the legal framework to ensure better deterrence and alignment with sustainable environmental management goals.

2. LITERATURE REVIEW

2.1 *Illegal Logging in Indonesia: An Overview*

Illegal logging in Indonesia is a major environmental and legal challenge, driven by weak law enforcement, corruption, and high demand for timber. This activity leads to deforestation and ecosystem degradation, threatening the country's biodiversity. Despite existing laws, enforcement remains inadequate, and illegal logging persists. Indonesia has established laws such as Law Number 41 of 1999 on Forestry and Law Number 18 of 2013, but enforcement is inconsistent [3], [4]. The illegal logging rate remains high at 60% of timber production, indicating ineffective enforcement [1]. Criminal sanctions, including imprisonment and fines, often fail to deter offenders [3]. Corruption exacerbates the issue, with some public officials facilitating illegal activities [6]. Addressing corruption through stricter regulations and transparency is essential (Afiuddin, 2024). Local wisdom, such as the Manggarai community's roko molas poco ritual, plays a key role in forest conservation by requiring tree planting for logging [4]. Integrating local customs with national laws can support sustainable forest management [4]. Preventive measures, such as improving community welfare and revising forest management, are needed [7]. Sustainable

enforcement requires collaboration among government, businesses, and communities to reduce illegal logging [1].

2.2 *Legal Framework Governing Illegal Logging*

Indonesia's legal framework for combating illegal logging is anchored in several laws and regulations, most notably:

- 1) Law No. 41 of 1999 on Forestry – This law serves as the cornerstone of Indonesia's forest management, emphasizing sustainable practices and the imposition of penalties for illegal activities.
- 2) Law No. 18 of 2013 on Prevention and Eradication of Forest Destruction – This law strengthens enforcement mechanisms, including criminal and administrative sanctions, to deter forest crimes.
- 3) Law No. 32 of 2009 on Environmental Protection and Management – This law provides a broader environmental governance framework, incorporating illegal logging as an environmental offense.

Despite these laws, studies [8] have identified implementation gaps, including vague legal definitions, insufficient penalties, and weak institutional coordination.

2.3 *The Role of Sanctions in Environmental Protection*

The effectiveness of sanctions in deterring environmental crimes like illegal logging in Indonesia is complex. Becker's economic theory suggests sanctions must outweigh the benefits of the crime to be effective, but current sanctions are often inadequate, with minimal fines, lenient sentences, and inconsistent enforcement contributing to the persistence of illegal logging [9], [10]. The enforcement of these sanctions is weak, hindered by a lack of resources and political will [10]. Ecological justice aims to ensure sanctions contribute to

environmental restoration, but balancing this with legal certainty is challenging [9]. Additional measures, like requiring environmental restoration, are suggested to complement primary sanctions and help offenders repair the damage they cause [11]. Laws such as Law Number 32 of 2009 and Law Number 18 of 2013 provide a framework for environmental protection, but their implementation remains problematic, highlighting the need for better enforcement strategies and resources [10]. Moreover, the limited capacity of judicial and law enforcement institutions further weakens the deterrent effect of these sanctions.

2.4 Theoretical Framework

The study integrates several legal and criminological theories to frame its analysis. Deterrence Theory emphasizes that the effectiveness of sanctions relies on their severity, certainty, and swiftness [12]. Environmental Governance Theory highlights the importance of combining legal, institutional, and societal mechanisms for achieving sustainability [13]. The Economic Theory of Crime posits that rational offenders assess the costs and benefits of illegal activities before acting [14]. These frameworks underpin the evaluation of Indonesia’s illegal logging laws and support recommendations to enhance their deterrent effect.

2.5 Research Gap

While there is extensive literature on illegal logging and environmental protection in Indonesia, few studies focus specifically on the normative aspects of sanctions within the legal framework. Existing research often addresses enforcement challenges or ecological impacts but neglects the structural and

doctrinal analysis of legal norms. This study fills this gap by critically examining the formulation and implementation of sanctions to ensure their alignment with environmental protection goals.

3. RESEARCH METHODOLOGY

3.1 Research Approach

This study employs a normative juridical approach to analyze the effectiveness of sanctions in Indonesia's illegal logging laws. A normative juridical approach focuses on examining legal norms, statutory provisions, and judicial interpretations to determine their consistency with underlying principles and policy objectives. By analyzing the structure and content of relevant laws, this study aims to identify gaps, inconsistencies, and areas for improvement in the legal framework for combating illegal logging.

3.2 Research Design

This research employs a qualitative legal study approach, involving three key stages. First, document analysis is conducted by reviewing primary and secondary legal sources related to illegal logging laws, including statutes, regulations, court decisions, and legal commentaries. Second, a comparative analysis examines legal frameworks from other countries, such as Brazil and Malaysia, to identify lessons and best practices for enhancing sanctions. Finally, a normative evaluation assesses the coherence and effectiveness of Indonesia's legal norms in achieving environmental protection goals.

3.3 Data Sources

The study relies on the following data sources:

Table 1. Data Source

Category	Description	Examples
Primary Legal Materials	Includes relevant laws and regulations directly related to the research topic.	a. Law No. 41 of 1999 on Forestry b. Law No. 18 of 2013 on Prevention and Eradication of Forest Destruction

Category	Description	Examples
		c. Law No. 32 of 2009 on Environmental Protection and Management
Secondary Legal Materials	Comprises literature that provides insights into the implementation and enforcement of illegal logging laws.	a. Books b. Journal articles c. Reports d. Research papers
Tertiary Legal Materials	Reference materials used to clarify legal terminology and concepts.	a. Dictionaries b. Encyclopedias c. Legal indexes

3.4 Data Collection Methods

Data were collected through a systematic review and analysis of legal documents and literature using several methods. A statutory review was conducted to examine the content, scope, and application of laws governing illegal logging. Case study analysis was employed to assess how sanctions are applied in practice by reviewing court decisions and enforcement actions. Additionally, a comparative legal analysis was carried out by reviewing international practices and frameworks for combating illegal logging.

3.5 Analytical Techniques

The data were analyzed using several techniques: content analysis was employed to identify themes and patterns in the legal texts and literature to understand the normative aspects of sanctions; comparative analysis was used to evaluate similarities and differences between Indonesia's legal framework and those of other countries to identify effective practices; and critical legal analysis was conducted to examine inconsistencies and gaps in the formulation and implementation of sanctions, supported by relevant legal theories such as deterrence theory and environmental governance theory.

4. RESULTS AND DISCUSSION

4.1 Legal Sanctions in the Context of Illegal Logging

Indonesia's legal framework for tackling illegal logging, particularly Law No. 18 of 2013 on Prevention and Eradication of Forest Destruction,

stipulates sanctions that include criminal penalties such as imprisonment and fines. However, an in-depth review of these sanctions reveals several significant challenges:

a) Inconsistency in the Application of Sanctions

The analysis of the law's enforcement reveals a wide disparity in the application of sanctions. Courts have considerable discretion in determining penalties, which often results in varying interpretations of the same legal provisions. For instance, some offenders may face lenient penalties, such as light fines or reduced prison terms, based on claims of economic necessity or first-time offenses. This inconsistency is problematic as it fails to provide a uniform deterrent effect. Legal scholars and environmental advocates have noted that without standardized penalty frameworks, it becomes difficult to predict the outcomes of illegal logging activities, which diminishes the law's credibility.

b) Severity and Effectiveness of Fines

The fines imposed under the current regulations are often considered inadequate to deter illegal logging activities, particularly when compared to the profits generated from illegal timber trade. In certain cases, fines are seen as a minor cost of doing business for large corporations engaged in deforestation. For example, in the case of large-scale illegal logging operations, corporate

entities might face penalties that are far lower than the financial gains they reap from unsustainable practices. This undermines the deterrent effect of sanctions, making it less likely that potential offenders will be discouraged from engaging in illegal logging.

c) Insufficient Duration of Imprisonment Sentences

The length of imprisonment sentences also appears to be inadequate for severe offenders. While imprisonment is meant to serve as a deterrent, the sentences are often shorter than those prescribed for similar crimes in other sectors, such as corruption or organized crime. In some cases, individuals responsible for large-scale illegal logging operations have received prison sentences of only a few years, a period that does not correlate with the environmental and social damage caused by their actions.

4.2 Challenges in Sanction Enforcement and Implementation

Even though the legal framework appears comprehensive, enforcement remains weak due to a variety of systemic issues:

a) Corruption and Lack of Accountability

Corruption in law enforcement agencies and the judiciary is a persistent issue in Indonesia, which severely hampers the effectiveness of sanctions. Environmental laws, including those pertaining to illegal logging, are often subject to manipulation by corrupt officials who accept bribes or fail to take action against powerful individuals and corporations involved in illegal logging. This corruption culture creates a significant barrier to justice and undermines the deterrent potential of sanctions. Notably, illegal logging activities often take place in remote areas where law enforcement

agencies face significant challenges in monitoring and detecting violations. This creates an environment where offenders feel emboldened, knowing that there is little chance of being caught or prosecuted.

b) Weak Institutional Capacity

The institutional capacity of agencies responsible for enforcing illegal logging laws, such as the Ministry of Environment and Forestry and the police, remains limited. These agencies face resource constraints, including a lack of personnel, outdated technology, and insufficient budgetary allocations. As a result, monitoring efforts are inadequate, and illegal logging activities often go undetected for extended periods. In many cases, the absence of effective coordination between law enforcement agencies leads to a fragmented approach to addressing illegal logging, with agencies working in silos and failing to share information or resources effectively.

c) Inadequate Monitoring and Reporting Systems

The existing monitoring systems for illegal logging are largely outdated and rely heavily on manual processes. Although satellite technology and GIS systems have been introduced to track deforestation, their integration into law enforcement operations remains suboptimal. Illegal logging continues to occur in areas with limited surveillance, and enforcement authorities often lack real-time data on the scope of illegal activities. This absence of timely information impedes the government's ability to respond quickly to violations, allowing offenders to evade detection and prosecution.

4.3 Comparative Analysis with International Best Practices

A comparative review of international best practices provides

valuable insights for strengthening Indonesia's illegal logging sanctions. Brazil's satellite monitoring and forest protection laws offer a successful model, using real-time satellite imagery to detect illegal logging activities almost immediately. Supported by stringent legal provisions and strong enforcement mechanisms, Brazil imposes financial penalties and restrictions on accessing government incentives for companies involved in illegal deforestation, making such activities economically unviable. Indonesia could enhance its monitoring capacity by adopting similar satellite-based systems linked to real-time enforcement strategies, which could improve the detection and deterrence of illegal logging [15].

Malaysia's Community-Based Forest Management model also provides a useful approach for Indonesia. Involving local communities in forest monitoring and protection has increased the legitimacy and success of conservation efforts in Malaysia. This model has led to better community cooperation and more effective halting of illegal logging activities [1]. Indonesia could implement a community-driven approach, where local populations are informed about the legal consequences of illegal logging and incentivized to participate in forest conservation. Such involvement would create a sense of ownership and responsibility for protecting natural resources, fostering greater success in forest protection programs [1].

While Brazil and Malaysia's approaches offer valuable lessons, Indonesia faces challenges that hinder effective law enforcement. Issues such as corruption and governance problems, along with weak sanctions, limit the deterrent effect against illegal logging [2], [3]. Despite the high number of illegal logging cases, Indonesia's current sanctions remain ineffective, emphasizing the need for stronger enforcement and supervision. International partnerships

and financial support will also play a crucial role in helping Indonesia adopt and sustain these best practices, ultimately improving forest protection and reducing illegal logging activities [2].

4.4 Normative Analysis of Legal Frameworks

Through a normative juridical analysis, the study reveals several critical gaps in Indonesia's legal framework for tackling illegal logging:

a) Ambiguities in Legal Provisions

Key terms such as "forest destruction" and "illegal logging" remain ambiguously defined in Indonesia's legal texts. This lack of clarity leaves room for varied interpretations and inconsistent enforcement. For instance, the definition of "illegal logging" under current laws does not fully capture modern forms of deforestation, such as those conducted by corporations that disguise their illegal activities through complex financial transactions. A clearer, more comprehensive definition is required to ensure that all forms of illegal logging are addressed effectively.

b) Inadequate Focus on Corporate Accountability

Indonesia's laws primarily target individuals rather than corporations. While individual offenders can be punished, corporations that orchestrate large-scale illegal logging operations often face minimal penalties. This lack of corporate accountability undermines the law's deterrence effect, as large companies can continue operating with minimal risk of legal consequences. A reformed legal framework should include more stringent corporate liability provisions, where companies are held accountable for the environmental damage caused by their activities, including higher fines and restrictions on their operations.

c) Restorative Justice Mechanisms Are Lacking

Current sanctions focus mainly on punitive measures, such as fines and imprisonment, without incorporating restorative justice elements. For instance, offenders are not typically required to engage in environmental restoration efforts, such as reforestation or the repair of damaged ecosystems. A more holistic approach, which includes restorative practices, could encourage offenders to take responsibility for their actions and contribute to environmental rehabilitation, fostering a more sustainable approach to illegal logging control.

4.5 Policy Recommendations for Strengthening Legal Sanctions

Based on the findings, the following policy recommendations are proposed:

1. The government should increase the severity of penalties for illegal logging, particularly for corporations, and ensure consistent enforcement of these penalties across different regions. This could be achieved by eliminating judicial discretion in sentencing for environmental crimes and setting mandatory minimum sentences for offenders.
2. Indonesia should invest in advanced technologies, such as satellite monitoring and GIS, to enhance the detection of illegal logging activities. Real-time monitoring can help authorities quickly respond to illegal logging and prevent further damage to forests.
3. A more robust legal framework should be created to hold corporations accountable for illegal logging activities. This could involve imposing stricter fines, requiring corporations to fund environmental restoration, and creating legal mechanisms to ensure that companies involved in illegal logging face

substantial legal and financial consequences.

4. Local communities should be actively engaged in forest protection through incentive programs, education, and involvement in monitoring activities. Community based Forest management initiatives could strengthen enforcement and foster local ownership of forest conservation efforts.
5. Incorporating restorative justice mechanisms, such as mandatory reforestation projects or community-based compensation programs, would provide offenders with a pathway to repair the damage caused by their actions and help restore ecosystems.

5. CONCLUSION

This study demonstrates that while Indonesia's legal framework for tackling illegal logging contains provisions for substantial penalties, its effectiveness is undermined by several systemic challenges. Inconsistencies in the application of sanctions, corruption, and insufficient enforcement mechanisms hinder the law's ability to deter offenders and protect Indonesia's valuable forest resources. Moreover, the current sanctions fail to hold corporations accountable to the same degree as individuals, leading to a significant gap in the law's deterrent effect. The comparative analysis with international best practices, such as Brazil's satellite monitoring systems and Malaysia's community-based forest management models, offers practical insights for improving Indonesia's approach. Strengthening the application of legal sanctions, expanding the use of technology in monitoring illegal logging, and adopting a more inclusive, community-driven conservation model can provide more effective solutions to the illegal logging crisis. The study concludes by recommending a holistic approach that includes tougher penalties, enhanced enforcement capacity, corporate responsibility, and restorative justice mechanisms. By implementing these

measures, Indonesia has the opportunity to enhance the protection of its forests, combat illegal logging more effectively, and

contribute to long-term environmental sustainability.

REFERENCES

- [1] A. Absori, H. Anuar, A. Budiono, R. Rizka, M. Bangsawan, and R. Harun, "Sustainable forest-based law enforcement against corporate illegal logging: A comparative study of Indonesia and Malaysia," *J. Infrastructure, Policy Dev.*, vol. 8, p. 9067, Oct. 2024, doi: 10.24294/jipd.v8i11.9067.
- [2] L. F. F. de Jesus, "Indonesia's Current and Future Efforts to Tackle the Issue of Deforestation," *Budi Luhur J. Strateg. Glob. Stud.*, vol. 2, no. 2, pp. 91–106, 2024.
- [3] I. Triadi, "Penegakan Hukum Terhadap Tindak Pidana Illegal Logging Bagi Kelestarian Lingkungan Hidup di Indonesia," *Amandemen J. Ilmu pertahanan, Polit. dan Huk. Indones.*, vol. 1, no. 3, pp. 264–282, 2024.
- [4] Y. L. Ngompat, F. Samara, and D. W. Rabawati, "Illegal Logging Eradication in the Perspective of National Criminal Law and Local Wisdom of Manggarai Community," *JUSTISI*, vol. 10, no. 3, pp. 729–750, 2024.
- [5] N. Mardin, T. Haryanti, Vi. N. Qalbi, and A. Kharismawan, "Implementasi Penyidikan Tindak Pidana Illegal Logging di Wilayah Kabupaten Tojo Una Una," *Al-Adl J. Huk.*, vol. 16, no. 2, 2024.
- [6] L. Afiuddin, "Analisis Penegakan Hukum Terkait Tindak Pidana Korupsi Terkait Illegal Logging dan Upaya Penanggulangannya," *J. Manaj. Bisnis Eka Prasetya Penelit. Ilmu Manaj.*, vol. 10, no. 1, pp. 181–193, 2024.
- [7] F. Windiyastuti and A. B. Leksono, "Analisis Yuridis Terhadap Tindakan Pidana Illegal Logging Di Kawasan Hutan Indonesia," *IBLAM LAW Rev.*, vol. 4, no. 1, pp. 677–681, 2024.
- [8] F. Mannan, I. M. Ramzy, D. Rato, and F. Setyawan, "Exposing Discrepancies in Indonesia's Legislative Processes," *Indones. J. Innov. Stud.*, vol. 25, no. 2, pp. 10–21070, 2024.
- [9] R. Saputra, A. Usada, and M. S. Islam, "Ecological justice in environmental criminal sanctions for corporations in Indonesia: Problems and Solution," *J. Law, Environ. Justice*, vol. 2, no. 1, pp. 1–17, 2024.
- [10] N. N. Izzah, "Sustainable Development: Enforcement of Environmental Criminal Law Against Illegal Logging Practices in Indonesia," *Perad. J. Law Soc.*, vol. 1, no. 1, 2022.
- [11] R. Mubarak, A. Syahrin, and E. Danil, "Additional Sanction as an Effort to Restore the Environment Due to Land Fires," *KnE Soc. Sci.*, pp. 511–520, 2024.
- [12] D. S. Nagin, "Deterrence in the twenty-first century," *Crime and justice*, vol. 42, no. 1, pp. 199–263, 2013.
- [13] E. Ostrom, *Governing the commons: The evolution of institutions for collective action*. Cambridge university press, 1990.
- [14] G. S. Becker, "Crime and Punishment: An Economic Approach," *Econ. Dimens. crime/Springer*, 1968.
- [15] L. N. Zhichkina, V. V. Nosov, K. A. Zhichkin, H. T. Aydinov, V. N. Zhenzhebir, and V. V. Kudryavtsev, "Satellite monitoring systems in forestry," in *Journal of Physics: Conference Series*, IOP Publishing, 2020, p. 32043.