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## Implementation Of Articles 98 And 99 Of Law Number 32 Of 2009 On Environmental Protection And Management Against Deforestation Perpetrators

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### ABSTRACT

Deforestation is one of the forms of environmental damage that has a significant impact on ecosystem balance and the sustainability of natural resources. Therefore, strict legal regulations are required to address any actions that cause environmental damage. This study aims to analyze the regulation of environmental crimes in Law Number 32 of 2009 concerning Environmental Protection and Management, examine the criminal liability of deforestation perpetrators based on Articles 98 and 99, and identify the implementation and challenges in its law enforcement. This research uses a normative legal research method with a statutory approach and a conceptual approach. The legal materials used include legislation, legal literature, and relevant scientific journals. The results of the study show that Law Number 32 of 2009 has provided a clear legal basis for law enforcement against actions that cause environmental pollution and environmental damage. Criminal liability for deforestation perpetrators can be imposed when the act is committed intentionally or due to negligence, and it can be applied not only to individuals but also to corporations. However, law enforcement against deforestation perpetrators still faces several challenges, such as difficulties in the process of proof, the complexity of corporate structures, and limited supervision. Therefore, strengthening environmental law enforcement in a more effective manner is necessary.

**Keywords:** Deforestation, environmental crime, criminal liability, environmental law enforcement.

### ABSTRAK

Deforestasi merupakan salah satu bentuk kerusakan lingkungan yang berdampak besar terhadap keseimbangan ekosistem serta keberlanjutan sumber daya alam. Oleh karena itu, diperlukan pengaturan hukum yang tegas untuk menindak setiap perbuatan yang menyebabkan kerusakan lingkungan. Penelitian ini bertujuan untuk menganalisis pengaturan tindak pidana lingkungan dalam Undang-Undang Nomor 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup, mengkaji pertanggungjawaban pidana pelaku deforestasi berdasarkan Pasal 98 dan Pasal 99, serta mengidentifikasi implementasi dan kendala dalam penegakan hukumnya. Penelitian ini menggunakan metode penelitian hukum normatif dengan pendekatan perundang-undangan dan pendekatan konseptual. Bahan hukum yang digunakan meliputi peraturan perundang-undangan serta literatur hukum dan jurnal ilmiah yang relevan. Hasil penelitian menunjukkan bahwa

*Undang-Undang Nomor 32 Tahun 2009 telah memberikan dasar hukum yang jelas dalam penegakan hukum terhadap perbuatan yang menyebabkan pencemaran dan kerusakan lingkungan hidup. Pertanggungjawaban pidana terhadap pelaku deforestasi dapat dikenakan apabila perbuatan tersebut dilakukan secara sengaja maupun karena kelalaian, serta dapat diterapkan tidak hanya kepada individu tetapi juga kepada korporasi. Namun demikian, penegakan hukum terhadap pelaku deforestasi masih menghadapi berbagai kendala, seperti kesulitan pembuktian, kompleksitas struktur korporasi, serta keterbatasan pengawasan. Oleh karena itu, diperlukan penguatan penegakan hukum lingkungan secara lebih efektif.*

**Kata Kunci:** *Deforestasi, tindak pidana lingkungan, pertanggungjawaban pidana, penegakan hukum lingkungan.*

## INTRODUCTION

Indonesia is a tropical country that possesses dense forests and one of the largest forest areas in the world after the Amazon rainforest in Brazil. For this reason, Indonesia is often referred to as one of the “lungs of the world.” Forests constitute an area that is widely utilized by communities for their daily livelihoods, and they also serve as a major source of timber used in industrial production. In addition, forests are home to various species of flora and fauna. They provide numerous benefits for living beings on earth, such as absorbing carbon dioxide produced by vehicle emissions and industrial smoke that cause pollution, mitigating climate change, regulating the water cycle, and providing vital ecosystem services for society (Ansar, S.S.A., Rahmawati, A., Arrahman, R.D., 2024). In recent years, forests in Indonesia have faced significant challenges that threaten the sustainability of their ecosystems. Large-scale land expansion for agriculture, oil palm plantations, infrastructure development, residential areas, and mining activities has contributed to deforestation, resulting in massive forest cover loss (Damiti, R.A., et al., 2025). On March 20, 2025, the Ministry of Forestry released the results of its annual monitoring report on forest conditions and deforestation rates in Indonesia. This monitoring was conducted comprehensively across Indonesia’s land area, covering approximately 187 million hectares both inside and outside forest areas, using Landsat satellite imagery provided by the National Research and Innovation Agency (BRIN). The monitoring results showed that forested land in Indonesia in 2024 reached 95.5 million hectares, or 51.1% of the total land area. Of this figure, approximately 91.9% (87.8 million hectares) is located within designated forest areas. Meanwhile, the net deforestation rate in 2024 was recorded at 175.4 thousand hectares. This figure was obtained from gross deforestation of 216.2 thousand hectares minus reforestation results of 40.8 thousand hectares. The majority of gross deforestation occurred in secondary forests, covering an area of 200.6 thousand hectares (92.8%), of which 69.3% occurred within forest areas and the remainder outside forest areas.

Deforestation refers to a condition in which forest areas decrease due to land conversion for infrastructure development, settlements, agriculture, plantations, and mining activities. The conversion of forest land into non-forest areas has extremely crucial impacts on human life as well as on existing flora and fauna. Deforestation related to logging and the conversion of forest land into mining areas, as occurred in

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2025, caused flash flood disasters in several regions on the island of Sumatra, including West Sumatra, North Sumatra, and Aceh. These disasters resulted in hundreds of fatalities and thousands of affected residents who lost their homes. The flash floods were not solely caused by heavy rainfall that occurred continuously for a week in those areas, but were also the result of deforestation carried out by irresponsible parties. This was evidenced by thousands of cubic meters of logs that were swept away by the floodwaters during the disaster. The role of environmental law in addressing deforestation is therefore highly necessary. Environmental law must be able to enforce strict regulations to prevent similar problems from recurring. Environmental law in Indonesia should provide protection for the environment while also restoring the ecological function of forests. In addition, the role of environmental law in demanding the restoration of forests affected by deforestation is crucial. Therefore, environmental law must be capable of imposing strict sanctions on individuals involved in environmental destruction. This is regulated in Articles 98 and 99 of Law Number 32 of 2009 concerning Environmental Protection and Management, which stipulate criminal sanctions for perpetrators of environmental pollution and destruction. These provisions reflect the function of environmental law in enforcing regulations and preventing environmental damage.

## METHODS

The research method used in this study is a normative juridical approach with a doctrinal legal research type to analyze environmental law regulations related to deforestation based on Articles 98 and 99 of Law Number 32 of 2009 concerning Environmental Protection and Management. The approaches used include the statutory approach, conceptual approach, and case approach, by examining the 1945 Constitution of the Republic of Indonesia, regulations in the fields of environmental protection and forestry, the concept of criminal liability including corporate liability, and by reviewing ecological disasters such as floods and landslides that occurred in several areas on the island of Sumatra in 2025 as legal events supporting the normative analysis in this research. The legal materials used in this study consist of primary, secondary, and tertiary legal materials collected through literature study and analyzed qualitatively using normative analysis with descriptive methods and systematic interpretation (Humammad, Iqbal Radhali, et al., 2025). The objective of this research is to produce legal arguments and normative recommendations to strengthen the enforcement of environmental criminal law in Indonesia.

## RESULTS AND DISCUSSION

### *Regulation of Environmental Crimes in Law Number 32 of 2009 concerning Environmental Protection and Management*

Environmental protection and management in Indonesia are comprehensively regulated through Law Number 32 of 2009 concerning Environmental Protection and Management. This law serves as the main legal foundation in regulating various aspects related to efforts to preserve environmental sustainability, including prevention, mitigation, and law enforcement against actions that cause environmental pollution and damage (Pratiwi, 2022; Nugroho, 2023). In

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this context, environmental crimes constitute one of the legal instruments used by the state to impose sanctions on parties who commit acts that damage the environment (Fisher, Lange & Scotford, 2021). In general, environmental crimes under this law include various acts that result in environmental pollution or damage, whether committed intentionally or due to negligence (Setyowati, 2021). This regulation aims to ensure that every individual, group, or corporation conducting activities that potentially impact the environment must comply with the established standards and provisions (Rahmadi, 2022). With the existence of these criminal provisions, it is expected that a deterrent effect will be created for offenders and encourage the public and business actors to be more responsible for the environment (Faure & Partain, 2020). One important aspect of this law is the regulation concerning environmental quality standards. Environmental quality standards are defined as the threshold limits or levels of living organisms, substances, energy, or other components that are allowed to exist within a particular environment (Sari, 2023). If certain activities cause the environmental quality standards to be exceeded, such actions can be categorized as environmental pollution or damage that may be subject to criminal sanctions (Prasetyo, 2021). In practice, these provisions are often associated with various activities that have significant environmental impacts, such as industrial activities, mining, and land clearing that do not consider environmental sustainability principles (Gunningham & Holley, 2022). In addition, this law also introduces a multidoor environmental law enforcement approach, which involves administrative, civil, and criminal instruments (Rahmadi, 2022). This approach allows law enforcement authorities to utilize various legal mechanisms simultaneously in addressing environmental destruction (Nugroho, 2023).

In the context of deforestation, for example, perpetrators may not only be subjected to administrative sanctions in the form of revocation of business permits, but may also be held civilly liable for environmental losses caused and be subject to criminal sanctions if the elements of environmental crimes are fulfilled (Sari, 2023; Fisher et al., 2021). The regulation of environmental crimes in this law also includes criminal liability for corporations. This is important because in many cases of environmental damage, including deforestation, the primary perpetrators are often business entities or companies engaged in the exploitation of natural resources (Faure & Partain, 2020). With the existence of provisions regarding corporate criminal liability, companies can be held accountable for actions that cause environmental damage, either through their management or parties who give orders in the activities concerned (Setyowati, 2021). These provisions aim not only to punish perpetrators but also to maintain ecosystem balance and guarantee the public's right to a good and healthy environment (Pratiwi, 2022).

### ***Criminal Liability of Deforestation Perpetrators Based on Article 98 and Article 99***

Criminal liability for perpetrators of deforestation in Indonesian environmental law can be imposed based on the provisions contained in Law Number 32 of 2009 concerning Environmental Protection and Management, particularly Article 98 and Article 99 (Rahmadi, 2022). These two articles regulate criminal sanctions for any person who commits acts that cause environmental

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pollution or environmental damage, whether committed intentionally or due to negligence (Prasetyo, 2021). These provisions serve as important legal instruments to prosecute perpetrators of environmental destruction, including acts of deforestation that result in the degradation of forest ecosystems (Gunningham & Holley, 2022). Article 98 stipulates that any person who intentionally commits an act that results in exceeding environmental quality standards may be subject to criminal sanctions in the form of imprisonment and fines (Nugroho, 2023). The element of intent in this article indicates that the perpetrator has knowledge and willingness to commit an act that has the potential to cause environmental damage (Setyowati, 2021). In the context of deforestation, intentional conduct can be observed in activities such as illegal logging, land clearing without valid permits, or forest exploitation activities carried out in disregard of applicable environmental regulations (Sari, 2023). If such activities are proven to cause environmental damage, the perpetrator may be held criminally liable under the provisions of Article 98 (Pratiwi, 2022).

Meanwhile, Article 99 regulates environmental crimes that occur due to negligence. This provision explains that any person who, due to negligence, causes environmental quality standards to be exceeded may be subject to criminal sanctions (Prasetyo, 2021). The element of negligence means that the perpetrator does not directly intend for environmental damage to occur; however, due to a lack of caution or supervision in carrying out certain activities, environmental damage nevertheless occurs (Faure & Partain, 2020). In the practice of deforestation, negligence may occur, for example, when companies or forest area managers fail to provide adequate supervision over operational activities in the field, resulting in illegal logging or uncontrolled forest destruction (Gunningham & Holley, 2022). In addition to individuals, criminal liability in cases of deforestation may also be imposed on corporations (Setyowati, 2021). This is important because in many cases of environmental damage, the primary perpetrators are often business entities engaged in the exploitation of natural resources (Rahmadi, 2022). Within the Indonesian environmental law system, corporations may be held criminally liable if actions that cause environmental damage are carried out by managers, individuals issuing orders, or parties who exercise control over company activities (Nugroho, 2023). Thus, not only direct perpetrators in the field can be subjected to sanctions, but also parties responsible for decision-making processes (Pratiwi, 2022). The application of Article 98 and Article 99 to deforestation perpetrators essentially aims to create a deterrent effect and prevent broader environmental damage (Fisher et al., 2021). Through firm criminal sanctions, it is expected that business actors as well as individuals engaged in activities related to the utilization of natural resources will pay greater attention to environmental sustainability (Sari, 2023). Furthermore, effective law enforcement plays an important role in maintaining the balance of forest ecosystems and protecting the public's right to a good and healthy environment (Rahmadi, 2022). These provisions provide a legal basis for law enforcement authorities to take action against any party responsible for environmental damage, whether committed intentionally or due to negligence, so that efforts to protect and manage the environment can be implemented more effectively (Nugroho, 2023).

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### *Implementation and Challenges in Law Enforcement Against Deforestation Perpetrators*

Law enforcement against perpetrators of deforestation is one of the important efforts to maintain environmental sustainability and prevent the increasing destruction of forest ecosystems (Pratiwi, 2022). In the context of environmental law in Indonesia, the application of criminal provisions as regulated in Law Number 32 of 2009 concerning Environmental Protection and Management, particularly Articles 98 and 99, serves as the legal basis for law enforcement authorities to take action against parties who cause environmental destruction (Rahmadi, 2022). The implementation of these provisions is carried out through law enforcement processes involving various institutions, such as the police, the prosecution service, the courts, and government agencies with authority in the environmental sector (Nugroho, 2023). In practice, the application of these criminal provisions in deforestation cases is carried out by proving the existence of actions that cause environmental damage as well as the relationship between the perpetrator's actions and the environmental impacts that arise (Fisher et al., 2021). This evidentiary process generally requires various forms of scientific evidence, such as environmental assessment results, environmental impact analyses, and expert testimony that can explain the causal relationship between the activities conducted and the environmental damage that occurs (Sari, 2023). If the elements contained in Article 98 or Article 99 can be proven, the perpetrators may be subject to criminal sanctions in the form of imprisonment and fines in accordance with applicable provisions (Prasetyo, 2021). However, the implementation of law enforcement against deforestation perpetrators still faces various challenges (Gunningham & Holley, 2022). One of the main challenges is the difficulty in the evidentiary process. Environmental damage, particularly related to deforestation, often occurs across large areas and involves multiple parties, making it difficult to determine precisely which party is most responsible for the damage (Faure & Partain, 2020). Furthermore, the evidentiary process in environmental crimes generally requires a relatively long time because it involves scientific research and in-depth technical analysis (Setyowati, 2021).

Another challenge that often arises is the involvement of corporations in activities that cause deforestation. In many cases, land clearing or forest exploitation activities are carried out by companies with complex organizational structures (Rahmadi, 2022). This condition can make it difficult for law enforcement officials to determine which parties should be held criminally responsible, particularly when decisions that lead to environmental damage are made by management who are not directly present in the field (Nugroho, 2023). In addition, limited supervision and the limited resources of law enforcement officers also affect the effectiveness of environmental law enforcement (Pratiwi, 2022). The vast forest areas in Indonesia and the limited number of supervisory personnel often result in environmentally destructive activities not being detected quickly (Sari, 2023). This situation can be exploited by certain parties to carry out illegal deforestation activities without adequate supervision (Fisher et al., 2021). Therefore, to improve the effectiveness of the implementation of Articles 98 and 99 in addressing deforestation perpetrators, comprehensive strengthening of environmental law enforcement is required

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(Gunningham & Holley, 2022). These efforts may include improving coordination among law enforcement institutions, strengthening the capacity of officers in handling environmental cases, and increasing supervision over activities that have the potential to cause forest damage (Rahmadi, 2022). With stronger and more effective law enforcement, it is expected that environmental protection and management in Indonesia can be implemented optimally and prevent wider environmental damage in the future (Nugroho, 2023).

## CONCLUSION

Based on the discussion regarding the regulation and criminal liability of deforestation perpetrators from the perspective of environmental law in Indonesia, several conclusions can be drawn. First, the regulation of environmental crimes in Indonesia has been comprehensively regulated through Law Number 32 of 2009 concerning Environmental Protection and Management. This law provides a strong legal foundation for environmental protection and management through mechanisms of prevention, control, and law enforcement against actions that cause environmental pollution and damage. The law also regulates environmental quality standards as well as law enforcement mechanisms that can be carried out through administrative, civil, and criminal approaches. This regulation demonstrates that the state gives serious attention to efforts to preserve the environment and ensures that every party conducting activities that impact the environment must be legally responsible. Criminal liability against deforestation perpetrators can be imposed based on the provisions of Articles 98 and 99 of Law Number 32 of 2009. Article 98 regulates environmental crimes committed with intent, while Article 99 regulates environmental crimes committed due to negligence. These provisions provide a legal basis for law enforcement officials to take action against any party whose activities result in exceeding environmental quality standards, including deforestation activities that damage forest ecosystems. Criminal liability may be imposed not only on individuals but also on corporations when activities causing environmental damage are carried out within the scope of corporate operations. The implementation of law enforcement against deforestation perpetrators in practice still faces various challenges. These challenges include difficulties in proving environmental damage, which requires scientific studies and technical analysis, the involvement of corporations with complex organizational structures that complicate the determination of responsible parties, and limited supervision and resources of law enforcement officials in the field. Therefore, strengthening environmental law enforcement is necessary through improved coordination among law enforcement institutions, enhanced capacity of officers in handling environmental cases, and more effective supervision of activities that have the potential to cause forest damage. With stronger and more effective law enforcement, it is expected that environmental protection and management in Indonesia can be implemented optimally and prevent wider environmental damage in the future. The authors' conclusions and recommendations are given in this section and are consistent in using the term "Conclusion". The conclusion of the study should address the main objectives of the

study in this section. This can be followed by suggesting relevant future research (Maximum 2 Paragraphs).

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