





Illegal Logging and Endangered Animals: The urgency of Establishing Independent Institutions in Environmental Management and Protection

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Abstract

This paper aims to analyse the urgency of establishing independent institutions in environmental management and protection in Indonesia, especially in dealing with illegal logging and the preservation of endangered animal habitats. Using normative juridical methods as well as conceptual and comparative approaches, this study highlights the weaknesses of the OSS-RBA-based licensing system. This research uses a comparative study with Brazil, which has a civil law system. Indonesia also uses a civil law system. The results of the study show that gaps in the licensing system open opportunities for illegal logging practices that increasingly threaten the sustainability of the ecosystem and cause a decline in the population of endangered animals. Compared to other developed countries, Indonesia does not yet have an independent institution specifically supervising licensing. This study confirms that policies in Brazil can provide a deterrent effect for illegal logging perpetrators by applying strict sanctions in the form of large fines, asset confiscation, and prison sentences of up to 10 years. The establishment of independent institutions in Indonesia is urgently needed to ensure strict

supervision and the application of strict sanctions to protect ecosystems and prevent unsustainable exploitation.

KEYWORDS *Illegal Logging, Environmental Protection, Independent Institution*

Introduction

The richness of flora and fauna in Indonesia plays a significant role in maintaining the balance of the global ecosystem. However, high rates of deforestation caused by *illegal logging*, poaching, and unsustainable land-use change threaten the survival of endangered animals. Deforestation damages natural habitats, reduces animal populations, and pushes some species to the brink of extinction. Although various policies have been implemented to tackle such illegal activities, the effectiveness of supervision is still weak, due to the complexity of the licensing system in place.

Of the twenty-one principles in the Stockholm Declaration, there are two fundamental things related to legal developments that need to be considered. First, the development of laws related to *sovereign rights* over natural resources, which raises legal problems that are cross-border (international law). Second, the relationship between the exploitation of natural resources (as part of development activities) and environmental management policies that are the responsibility of the state.¹ These two aspects affirm that the state has the authority to manage natural resources and is responsible for preserving the environment globally. International law regulates the sustainable use of resources through various treaties, such as the Convention on Biological Diversity (CBD) and the Kyoto Protocol. In addition, the principles of prudence and sustainable development are also emphasized in environmental policies to balance the economy and ecosystem.

The Government of Indonesia has made efforts to simplify the licensing process through the implementation of *the Online Single Submission Risk-Based Approach (OSS-RBA)* which is regulated in Government Regulation Number 5 of 2021. This system aims to simplify the business licensing process by considering the level of risk. However, even though the OSS-RBA system has been implemented, its implementation still faces obstacles, such as procedural uncertainty and corruption in the issuance

¹ Aulia, "Hukum Pembangunan Dari Mochtar Kusumaatmadja: Mengarahkan Pembangunan Atau Mengabdikan Pada Pembangunan?"

of permits, which open loopholes for *illegal logging practices*. As a result, environmental protection through licensing control is difficult to achieve.

Based on previous research conducted by² it was highlighted that the main factor that causes the difficulty of eradicating the illegal timber trade is because this activity is classified as "organized crime." Several factors causing *illegal logging* were also identified, including the high demand for timber that is not proportional to the availability, as well as the discontinuity of laws and regulations related to forest concessions so that accountability must be firm by taking preventive and repressive preventive measures to be the main focus to provide a deterrent effect for perpetrators and prevent injustice.

Based on research, according to Irwan³, the government, it has played an active role in tackling illegal logging activities, but in practice the perpetrators are released so that in this case there is indecisiveness and no deterrent sanctions that ensnare the perpetrators. It is illustrated by Irene Intan⁴, the fact that Indonesia's forest area is shrinking, and population growth and human civilization threaten the sustainability of animal life. From this perspective, the Government has conducted various programs to protect and preserve conservation areas, but they are still ineffective.

Developing countries such as Indonesia face major challenges due to development that is not accompanied by effective oversight. Without sufficient oversight, development can damage the environment and worsen ecosystem damage. Illegal *logging activities* have negative impacts such as:⁵ 1) floods and landslides, 2) decreased spring water sources in forest areas, 3) reduced soil fertility, 4) extinction of various species of flora and fauna, as well as erosion and social conflicts. In addition, there are other impacts such as corruption, tax evasion, money laundering, and human rights violations. The practice of *illegal logging* poses a complex problem, involving various economic, social, cultural, and environmental aspects.

The Ministry of Forestry noted that the area of forest depleted by illegal logging has reached 7.2 million hectares, which has contributed to

² Situmorang and Zarzani, "Aspek Hukum Terhadap Pertanggung Jawaban Pelaku Tindak Pidana Illegal Logging."

³ Triadi and Arazid, "Penegakan Hukum Terhadap Tindak Pidana Illegal Logging Bagi Kelestarian Lingkungan Hidup Di Indonesia."

⁴ Tyas, "Kajian Terhadap Kebijakan Pemerintah Dalam Perlindungan Satwa Langka Di Indonesia."

⁵ Joni, *Penegakan Hukum Pembalakan Liar Menuju Kelestarian Lingkungan Hidup*.

significant state losses.⁶ Forest destruction further exacerbates the situation, with forest destruction caused by forest encroachment, conversion to mining and plantations, and unclear authority between central and local governments. In addition, timber smuggling has also accelerated forest degradation. The practice of *illegal logging* is now increasingly dominating forest management in Indonesia, with losses caused reaching tens of trillions of rupiah every year.

Further problems arise because permits granted in the forestry and mining sectors often have a negative impact on the environment. Many business licenses are controlled by large companies that operate hundreds of thousands of hectares of land, without regard for the sustainability of the ecosystem. In addition, sectoral egos in each field cause ambiguity in the authority and supervision mechanism for the implementation of permits, which further complicates the control of environmental destruction.⁷ As a result, the exploitation of natural resources often occurs without responsible management, resulting in deforestation, environmental pollution, and habitat loss for various species. The lack of transparency in the licensing process also opens loopholes for corrupt practices and abuse of authority, which further exacerbates environmental degradation.

The Job Creation Law abolishes environmental permits previously regulated in Law No. 32/2009 and replaces them with environmental approvals. This change gives the impression that there is a weakening of the function of permits as a tool to control pollution and environmental damage. On the other hand, the implementation of licensing through OSS-RBA still faces various problems in its implementation, which further exacerbates the supervision of activities that damage the environment.⁸

The establishment of independent institutions in Indonesia is urgent to address these challenges. This institution must have full authority to supervise and enforce laws related to business licenses, especially in activities that can damage the environment and threaten the habitat of endangered animals. Without focused institutions, effective and objective

⁶ Wirmayanti, Widiati, and Arthanaya, "Akibat Hukum Penebangan Hutan Secara Liar."

⁷ Helmi, "Sistem Pengawasan Perizinan Bidang Lingkungan Hidup Terhadap Perizinan Berusaha Bidang Kehutanan Dan Pertambangan Di Indonesia."

⁸ Nirboyo, "Potensi Korupsi Dalam Perizinan Lingkungan Melalui Sistem Online Single Submission Pasca Peraturan Pemerintah Nomor 5 Tahun 2021 Tentang Penyelenggaraan Perizinan Berusaha Berbasis Risiko."

oversight becomes difficult to achieve, as existing institutions such as the Ministry of Environment and Forestry (MoEF) are often hampered by limited resources and political influence. The absence of a specialized independent institution in Indonesia that has full authority to oversee the licensing and practice of *illegal logging* is a major weakness in the current environmental protection system. Strengthening institutions that have a clear and independent supervisory focus will support transparency, accountability, and effectiveness in risk-based permit management.

The institution that is also authorized to conduct forest management is the Forest Police. Forest police have several mandatory duties such as; prepare, conduct, develop, supervise, and evaluate, conduct reports on all forest protection activities and supervise the circulation of forest resource products.⁹ The forest police are tasked with protecting and securing forest areas that are authorized in the forestry sector. Weak law enforcement makes people underestimate and do not care about the welfare of animals as a companion to human life. This results in rampant poaching, illegal wildlife trade, and exploitation of forest resources without considering the impact on the ecosystem.¹⁰ In addition, the limited number of forest police personnel and the lack of support for facilities and infrastructure cause supervision of forest areas to be suboptimal. As a result, many violations occur without decisive action, making forest destruction and the extinction of endangered species increasingly difficult to control.

With the establishment of independent bodies with adequate autonomy, supervision of illegal permits and practices can be more consistent and firmer. This will help prevent further environmental damage, as well as provide better protection for endangered species. In addition, the institution will strengthen national and international agendas related to biodiversity conservation, while ensuring a balance between economic growth and environmental sustainability.

This research uses a type of normative juridical (*doctrinal*) research. It is referred to as doctrinal law research because it focuses on the study of written laws and regulations and relevant legal materials.¹¹ Its focus is on analysing laws and regulations related to *illegal logging*, the protection of endangered animals, and the urgency of establishing independent institutions in environmental management in Indonesia. This is relevant

⁹ Putri, "Penegakkan Hukum Pidana Bagi Pelaku Illegal Logging Di Indonesia Dan Cara Menanggulangnya."

¹⁰ Ismantara et al., "Kajian Penegakan Hukum Terhadap Tindakan Penganiayaan Hewan Dan Eksploitasi Satwa Langka."

¹¹ Muhaimin, *Metode Penelitian Hukum*.

because the research relies on the study of legal documents, legal theories, and comparisons of regulations with other countries to identify weaknesses and provide recommendations for improvement in the environmental protection system in Indonesia. The data used in this study was obtained through *library research*.

The approaches used in this study are conceptual *approach*, and comparative *approach*. The conceptual approach helps clarify the legal concepts and theories relevant in the formation of independent institutions. Meanwhile, a comparative approach is conducted by comparing the institutional models of environmental protection in other countries that have been successful in overcoming similar challenges. The selection of Brazil, the United States, the United Kingdom, and Sweden as the object of comparison is based on the characteristics and success of each country in dealing with environmental issues.

Brazil was chosen because it has an Amazon rainforest that faces a high threat of deforestation but has implemented a strict satellite monitoring system. The United States has the *Environmental Protection Agency* (EPA) which has broad authority in enforcing environmental laws. The UK is known for its strict regulatory and highly transparent environmental policies, while Sweden has a sustainability-based environmental management system as well as advanced technology. By comparing policies and institutions in these countries, this study can identify best practices that can be implemented in Indonesia. The results of this analysis are expected to provide comprehensive recommendations related to strengthening environmental protection policies in Indonesia.

A. The Urgency Of Establishing An Independent Environmental Protection Institution In Indonesia

The Unitary State of the Republic of Indonesia (NKRI) implements a state of law system based on the principle of legality. This principle requires that every action of the ruler be based on the rule of law, and every step taken by the government must be in accordance with the established legal regulations. Therefore, all authority owned by the government must have a clear legal basis. One example of government authority that must be based on legal regulations is related to the issuance

of permits.¹² Licensing has a role in regulating and regulating an activity. In its function as a regulatory tool, licensing aims to ensure that the permits granted are used in accordance with their designation, to prevent abuse. In other words, this regulatory function is part of the authority owned by the government.¹³

The implementation of legal policies by the government through *the Online Single Submission* (OSS) system aims to increase the integration and digitization of business licensing, but this also poses recent problems. This policy is based on Government Regulation No. 24 of 2018 concerning Electronically Integrated Business Licensing Services. The concept conducted in the PP is a change from the old licensing regime by issuing Business Identification Numbers (NIB), Business Licenses, and Location Permits at first without commitment. Then, basic commitments such as IMB, Environmental Permits (EIAs), and other permits are fulfilled in stages according to the time frame set in the Government regulations about Online Single Submission (OSS).¹⁴ With the implementation of the OSS system, the licensing process becomes more integrated, transparent, and efficient, so that it can support the investment climate and ease of doing business in Indonesia. This digitalization also encourages the acceleration of bureaucratic transformation in the licensing sector, which was previously known to be complicated and convoluted. In addition, the OSS system allows the government to monitor and supervise business activities that have obtained licenses, to create a more orderly and structured business ecosystem more easily.

In practice, business licensing often only focuses on formal legality without considering ecological and social impacts, thus risking damaging the environment and local communities. This approach prioritizes short-term economic growth at the expense of ecological balance, which ultimately exacerbates social injustices and hinders sustainable development.¹⁵ The purpose of environmental permits is to protect environmental sustainability, control the negative impact of business,

¹² Sabila Rizki Mahadewi Putri et al., "Analysis of Environmental Licensing Violations of Oil Palm Companies in Boven Digoel Regency," *Innovative: Journal Of Social Science Research* 3, no. 2 (2023), <https://doi.org/https://doi.org/10.31004/innovative.v3i2>.

¹³ Pudyatmoko, *Perizinan : Problem Dan Upaya Pembenahan*.

¹⁴ Permatasari and et.al, "Analisis Kebijakan Pemerintah Dalam Perlindungan Satwa Langka Di Indonesia."

¹⁵ Fajri et al., "Peran Kajian Lingkungan Hidup Strategis (KLHS) Dalam Kegiatan Perizinan Berusaha Di Indonesia."

clarify licensing procedures, and provide legal certainty in the implementation of business activities.¹⁶

The issuance, implementation, and enforcement of laws in environmental licensing function as an instrument to protect and preserve community forests. In the management of natural resources and their impact on the environment, it is necessary to apply the principles of good governance as a standard for the government.¹⁷ The evaluation of large-scale deforestation policies in Indonesia, as stipulated in Government Regulation No. 6 of 2007, is important to maintain ecosystem balance, environmental protection, and socio-economic sustainability. The success of this policy depends on compliance with regulations, supervision, and law enforcement. To reduce negative impacts, measures such as moratoriums, deforestation monitoring, sustainable forest management, forest area restrictions, social forestry policies, and environmental law enforcement are needed.¹⁸

The establishment of an independent institution in environmental management and protection in Indonesia is an urgent need given the complexity of the environmental problems faced. One of the main problems is the important level of *illegal logging* which threatens the sustainability of forests and endangered species in Indonesia. Independent institutions are expected to be able to fill the gaps in supervision and law enforcement that have not been optimally conducted by conventional government institutions.

The establishment of an independent authority on environmental protection in Indonesia is an urgency that cannot be ignored, given the rampant *illegal logging* activities that destroy forests and threaten endangered species. Until now, environmental protection is still constrained by weak coordination between agencies, lack of law enforcement, and centralized systems. Independent institutions can be a strategic solution by ensuring strong oversight, clear accountability, and a focused focus.

These institutions must have full autonomy and be supported by a strong legal framework to operate effectively without political intervention

¹⁶ Santhi and Tololiu, "Tinjauan Konseptual Dan Yuridis Izin Lingkungan, Pelestarian Fungsi Lingkungan Hidup, Dan Peranan AMDAL Dalam Penegakan Hukum Lingkungan Di Indonesia."

¹⁷ Bilal and Santoso, "Analisis Dampak Perizinan Lingkungan Dalam Omnibus Law Terhadap Lingkungan Kegiatan Usaha."

¹⁸ Ansar, Rahmawati, and Arrahman, "Peninjauan Bencana Alam Akibat Deforestasi Hutan Dan Tantangan Penegakkan Hukum Mengenai Kebijakan Penebangan Hutan Berskala Besar Di Indonesia."

or conflicts of interest. In practice, this institution is tasked with independently supervising, managing, and restoring the environment, overcoming overlapping regulations, and strengthening the implementation of environmental protection policies. In addition, a transparent and sustainable funding system is needed so that these institutions do not depend on government budgets that are often limited. Constructive collaboration with civil society and non-governmental organizations is also important to ensure public participation in environmental policy monitoring and implementation.

The biggest challenge in the establishment of this independent institution is the resistance of those with economic interests to the exploitation of natural resources. Therefore, strong political will and public education are needed regarding the importance of environmental protection for ecosystem sustainability and community welfare. Without the support of various parties, the establishment of independent institutions will only become a discourse without real implementation.

Independent agencies should have broad authority in the investigation, enforcement of sanctions, and lawsuits against environmental violations, with transparency and accountability as key to public support. In addition to being a supervisor, this institution acts as a facilitator that encourages the involvement of local communities in conservation and bridges the interests of the community and government policies. To be effective, adequate resources are needed, including funding and technology such as satellites and drones to monitor *illegal logging* as well as technology-based data systems to strengthen surveillance and law enforcement.

In its implementation, it must also include aspects of prevention through education and community involvement. Consistent environmental awareness campaigns can reduce illegal forest exploitation as well as encourage public participation in conservation. By adopting a comprehensive approach based on international standards, Indonesia can build an independent authority that is not only able to adapt to local challenges, but also effective in protecting the environment and endangered species in a sustainable manner.

Specifically, independent institutions can adopt similar institutional models in other countries that have successfully managed environmental protection effectively, including:

1. United States (*Environmental Protection Agency – EPA*)¹⁹

¹⁹ Universitas Brawijaya, "Superfund Follies," Universitas Brawijaya, 2015, <https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=htt>

The United States Environmental Protection Agency (EPA) is an independent agency responsible for protecting human health and the environment. Established on December 2, 1970, by President Richard Nixon, the EPA is authorized to set pollution standards, oversee hazardous waste management, and enforce environmental regulations based on laws passed by Congress. In addition, the EPA plays a role in coordinating environmental protection efforts at the federal, state, and local levels. Indonesia needs an independent institution that can oversee and enforce environmental laws without interference in economic interests to reduce the impact of industry on the environment.

One of the EPA's key strengths is its ability to operate independently of political and economic pressures, allowing for scientific data-driven decision-making and long-term interests. According to Benneer & Coglianese,²⁰ the EPA can implement a *command and control-based approach* that ensures the industry complies with environmental regulations through permitting, inspection, and fining mechanisms for violators. This approach has proven effective in reducing greenhouse gas emissions and industrial pollutants in the United States.

Indonesia can learn from the EPA's success in establishing an independent environmental protection agency. The establishment of an independent agency such as the EPA in Indonesia can improve the effectiveness of environmental oversight and enforcement. This institution can be given the authority to set strict environmental standards, conduct inspections, and impose sanctions without interference from political or economic interests. Environmental conservation efforts can run more optimally, in line with the principles of sustainable development proclaimed in various global policies.

2. UK (*Environmental Agency – EA*)²¹

p://mizu.lecture.ub.ac.id/files/2015/09/SUPERFUND-FOLLIES.pptx&ved=2ahUKEwjA3cic5JqLAXWee2wGHTdGLV8QFnoECBQQAQ&usg=AOvVaw1nGo2eckylRizy5YHZPP__.

²⁰ Benneer and Coglianese, "Measuring Progress: Program Evaluation Of Environmental Policies."

²¹ DEFRA (Department for Environment, "Environmental Protection in the UK."

In the UK, the Environment Agency is an independent agency tasked with protecting the environment and managing natural resources. This institution oversees water quality, air pollution, waste management, and the impact of climate change. Its role includes the regulation and supervision of environmental permits, the enforcement of sanctions for violators, the monitoring of water quality, the protection of wildlife, and the restoration of damaged ecosystems. Indonesia needs to adopt a similar model to strengthen environmental permit oversight and natural resource management policies. The existence of independent institutions can prevent pollution and overexploitation, ensuring sustainable development.

One of the important aspects of the *Environment Agency* is the implementation of a transparent and risk-based licensing system. This approach allows governments to allocate surveillance resources more efficiently, focusing on the sectors that have the most significant environmental impacts. In addition, *the Environment Agency* also plays a role in mitigating environmental disasters, such as floods and industrial pollution, by implementing real-time monitoring and early warning systems.²²

Indonesia can take inspiration from the British model to improve the optimal monitoring of the environment. The existence of an independent agency such as *the Environment Agency* in Indonesia can help address this problem by strengthening the licensing system, increasing transparency in natural resource management, and enforcing environmental laws more effectively. This institution can be given the authority to oversee the entire licensing process, from environmental impact analysis to periodic evaluation of business activities that have the potential to damage the ecosystem. In addition, the application of technology in environmental monitoring, such as satellite mapping systems and artificial intelligence, can improve the accuracy and effectiveness of monitoring against pollution and exploitation of nature.

By establishing an independent institution that has strong authority and is based on scientific data, Indonesia can ensure more sustainable development and protect ecosystems from the threat of overexploitation.

²² Jordan, Wurzel, and Zito, *New Instruments of Environmental Governance?: National Experiences and Prospects*.

This is in line with the global commitment to achieving the *Sustainable Development Goals* (SDGs), especially in the field of environmental protection and equitable natural resource management.

3. Sweden (*Swedish Environmental Protection Agency – Naturvardsverket* (NV))²³

Naturvardsverket is an independent government agency in Sweden responsible for environmental protection and management. This institution focuses on climate change policy, waste management, and nature conservation. Its role includes drafting environmental policies, providing guidance for sustainable development, and ensuring that all economic sectors operate in accordance with sustainability principles. Indonesia can learn from Sweden in creating sustainable environmental policies and integrating environmental protection in national development policies.

The institute uses scientific evidence in decision-making to ensure that the environmental policies made can run effectively and sustainably. In addition, *Naturvardsverket* plays a role in supporting Sweden's carbon neutrality policy by targeting the reduction of greenhouse gas emissions through strict regulation of industry and transport.²⁴

Indonesia can emulate Sweden in improving monitoring and evaluation of environmental policies, especially through a digital licensing system and strict supervision of high-impact industries. Sweden has also successfully integrated environmental policies in national development through the concept of *green economy*. To implement this, Indonesia needs to strengthen coordination between the Ministry of Environment and Forestry, the industrial sector, and local governments and increase public participation in environmental monitoring. With a science-based approach and the integration of environmental policies in economic planning, Indonesia can strengthen environmental governance, maintain ecosystem sustainability, and increase global competitiveness in the face of climate change and sustainable development.

²³ Naturvardsverket, "About The Swedish Environmental Protection Agency."

²⁴ Hardono, "Strategi Swedia Dalam Mengurangi Emisi Gas Rumah Kaca Melalui Ratifikasi 'Paris Agreement' Pada Tahun 2016-2021."

John Austin's theory of legal positivism emphasizes that law is an order from a sovereign ruler and must be obeyed without regard to morality or substantive justice.²⁵ This approach is relevant in strengthening the legitimacy of the law that governs business licensing and natural resource management. The government's OSS system, while aimed at simplifying licensing, often ignores environmental aspects because it focuses more on administrative legality without considering ecological and social impacts.²⁶ With the approach of legal positivism, the establishment of an independent environmental authority can be based on strict and binding legal regulations, so that supervision and law enforcement of environmental violations become more effective and do not depend on government policies that tend to change according to political or economic interests.

The law must be enforced through clear sanctions so that it has coercive force against the community and business actors. In the case of *illegal logging* and forest exploitation, weak law enforcement is often due to the lack of authority of institutions tasked with overseeing the environment. By basing the establishment of independent institutions on the principle of legal positivism, environmental regulation can be strengthened with stricter sanctions and a transparent supervisory system. This institution must have full autonomy to conduct the law without political interference or business interests, so that it can act as a sovereign ruler in the realm of environmental protection.

According to the author, there are several aspects that are the reason why the establishment of an independent environmental protection institution in Indonesia is very *urgent*: (1) Weak enforcement of environmental laws; (2) High Levels of Illegal Logging and Natural Resources Exploitation; (3) Overlapping authority between government agencies; (4) Dependence on political and economic interests; (5) Lack of transparency and accountability in environmental management; (6) Threats to biodiversity and ecosystem sustainability; (7) The need for a

²⁵ Husni et al., "Kajian Mazhab Dalam Pemikiran Filsafat Hukum."

²⁶ Rokhman et al., "Penyelenggaraan Perizinan Berusaha Berbasis Risiko Melalui Sistem Online Single Submission (OSS)."

technology-based surveillance system; and (8) Commitment to sustainable development.

B. Supervision of illegal logging practices on endangered animal habitats in indonesia

Indonesia is one of the major countries in Asia and the most extensive in the Southeast Asian region. Geographically, its position is very strategic because it is located between two continents, namely Asia and Australia, and is flanked by two oceans, namely the Indian Ocean and the Pacific Ocean. The country consists of more than 17,000 islands stretching from western Sumatra to eastern Papua, as well as from northern Borneo to southern Nusa Tenggara. Papua is the island with the largest forest in Indonesia.

Forests in Indonesia have a vital role as one of the pillars of the global ecosystem, as well as a source of livelihood for local communities and a habitat for biodiversity. In 2022, the total forest area in Indonesia was recorded at 102.53 million ha, with Papua accounting for around 32.2% of the total figure, which reached 33.12 million ha. In second place, Kalimantan has a forest area of 31.1 million ha, followed by Sumatra with 16 million ha, Sulawesi with 10.8 million ha, Maluku with 6.4 million ha, Java with 2.8 million ha, and Bali-Nusa Tenggara as the region with the smallest forest area, which is 2.3 million ha.²⁷

Forestry law, which began with the enactment of the Forest Regulations in 1865, has evolved over a century and a half to adapt to social, economic, and environmental changes. In forestry law enforcement, *illegal logging* is defined as illegal logging that is contrary to applicable regulations, be it the theft of timber in state forests or forest rights, or logging that exceeds the permit quota.²⁸ In recent years, forest destruction in Indonesia has increased rapidly, with about two million hectares of forests being degraded every year. Some of the factors that contribute to this problem include forest fires, land conversion, and

²⁷ Yonatan, "Berapa Luas Hutan Di Indonesia Pada 2024?"

²⁸ Mudzalifah, Priyana, and others, "Implikasi Regulasi Tindak Pidana Illegal Logging Terhadap Kelestarian Lingkungan Hidup Ditinjau Dalam Perspektif Hukum Lingkungan."

uncontrolled exploitation of forest resources.²⁹ One of the main causes of deforestation is *illegal logging*. If not *stopped*, *illegal logging* will accelerate forest destruction, damage ecosystems, and threaten biodiversity in Indonesia.

The term "*Illegal Logging*" in laws and regulations is not explicitly defined. However, etymologically, this term is of English origin. In *The Contemporary English Indonesian Dictionary*, "*illegal*" means illegal, prohibited, or contrary to the law. Meanwhile, in *Black's Law Dictionary*, "*illegal*" is defined as "*forbidden by law, unlawful*," meaning something that is prohibited by law or illegal. The word "*log*" in English refers to logs or logs, while "*logging*" means the activity of cutting down wood and bringing it to a processing site such as a sawmill.³⁰ According to the results of a meeting held by the NGO Indonesia Telapak in 2002, *illegal logging* is defined as forestry activities that take place without permits and have a destructive impact. Meanwhile, *Forest Watch Indonesia* (FWI) and *Global Forest Watch* (GFW) classify *illegal logging* into two types. First, it is carried out by an official permit holder who violates the provisions of his license. Second, it is carried out by perpetrators who do not have the legal right to cut down trees, or who are often referred to as wood thieves.³¹

Suriansyah Murhaini in the journal³² argues that *illegal logging* is a well-organized network that involves various parties, ranging from illegal timber producers to consumers or end users. The process includes logging, processing, screening, shipping, and export, all of which are done illegally. In addition, the practice of *log laundering* often occurs, namely efforts to legalize illegal timber through cooperation with officials or forestry agency officials. In short, illegal logging can be defined as illegal logging (timber) activities in forests that are carried out without permits that cause deforestation and cause loss of animal habitat. This causes many

²⁹ Fadliah, "Problematika Penanganan Illegal Logging."

³⁰ Bawono and Mashdurohatun, "Penegakan Hukum Pidana Di Bidang Illegal Logging Bagi Kelestarian Lingkungan Hidup Dan Upaya Penanggulangannya."

³¹ Wibowo, "Tinjauan Tentang Putusan Hakim Terhadap Tindak Pidana Illegal Logging."

³² Ammri, Jaya, and Hurairah, "Juridical Review of the Crime of Illegal Logging in the Utilization of Private Forest Timber in the Perspective of Law Number 18 of 2013 Concerning the Prevention and Eradication of Forest Destruction."

negative impacts that make the environmental ecosystem worse and unsustainable.

The crime of *illegal logging* has several elements that are the main characteristics in its practice. These elements include various activities related to the exploitation of forest resources, such as illegal logging, illegal tree felling, transportation of illegally harvested timber, to the process of buying and selling timber that does not have legal documents. These activities not only significantly damage forest ecosystems, but also contrary to the provisions of the law in force in Indonesia, which expressly prohibit such practices to preserve the environment and forest resources.

In Indonesia's economic sector, illegal logging causes losses of up to thirty trillion rupiah every year. In addition to its impact on the economy, illegal logging also results in the loss of forest function as a resource that should be used by future generations, as well as causing losses for new generations later.³³

The problem of *illegal logging* is closely related to violations of forestry and environmental regulations. Therefore, the settlement is often carried out through administrative legal mechanisms, which include the imposition of administrative sanctions for the perpetrators. These sanctions can be in the form of revocation of business licenses, administrative fines, or other actions aimed at providing a deterrent effect and preventing the recurrence of illegal logging practices in the future. However, in certain cases, if *illegal logging* contains elements of more serious crimes, such as involving organized networks or causing environmental damage on a large scale, then a criminal law approach can also be applied to provide stricter sanctions to the perpetrators.³⁴

Deforestation that results in the loss of natural habitats in forests is a serious threat to biodiversity. Rare and endemic species, even those that have not yet been discovered, are at risk of extinction. The destruction of these habitats disrupts the balance of ecosystems, affects the food chain, and reduces the ability of ecosystems to survive external pressures, which

³³ Fransiska Novita Eleanora, "Tindak Pidana Illegal Logging Menurut Undang-Undang Nomor 32 Tahun 2009 Tentang Perlindungan Dan Pengelolaan Lingkungan Hidup."

³⁴ Rondo, "Quo Vadis Penegakan Hukum: Kewenangan Pemerintah Terhadap Lingkungan Hidup Dalam Kasus Illegal Logging Di Indonesia."

undermines ecosystem services that benefit humans.³⁵ Human survival is highly dependent on the availability of sufficient and quality natural resources. However, the way humans utilize natural resources, and the environment still tends to lack consideration of safety and environmental sustainability aspects. The strategy for the conservation of biological natural resources and their ecosystems includes three main aspects, namely³⁶: protection of life support systems, preservation of biodiversity including flora, fauna, and ecosystems, and sustainable use of natural resources.

As a country that crosses the equator, Indonesia has extensive tropical forests and is the owner of the third largest wet tropical forest in the world. Its natural wealth, especially its biodiversity, has been recognized globally. According to Bappenas data in 1993, Indonesia has about 10% of the total types of flowering plants in the world (25,000 species), 12% of the world's mammals (515 species, of which 36% are endemic), 16% of reptiles, 17% of birds (1,531 species, 20% of which are endemic), and about 20% of the world's total fish species.³⁷

Based on data from the *World Conservation Monitoring Centre*, Indonesia has a rich biodiversity that includes 3,305 species of amphibians, birds, mammals, and reptiles. Of these, 31.1% are endemic species, meaning they can only be found in Indonesia, and the other 9.9% are endangered.³⁸ Illicit *logging* practices that are not properly supervised also contribute to the destruction of the broader ecosystem, such as soil erosion, deterioration of water quality, and climate change. This damage has a direct impact on the balance of the ecosystem, which affects the survival of endangered species.

³⁵ Jainuddin, "Dampak Deforestasi Terhadap Keanekaragaman Hayati Dan Ekosistem."

³⁶ Puspitasari, "Maraknya Perdagangan Satwa Langka Di Era Pandemi COVID-19 Di Indonesia."

³⁷ Ministry of Environment and Forestry of the Republic of Indonesia, "Dalkarhutla," [menlhk.go.id](https://www.menlhk.go.id/program/dalkarhutla/), 2024, <https://www.menlhk.go.id/program/dalkarhutla/>.

³⁸ Hanif, "Upaya Perlindungan Satwa Liar Indonesia Melalui Instrumen Hukum Dan Perundang-Undangan."

Table 1 Data on protected animals

No.	Group	Kind	Number of Animals
1.	Xiphosura	1	3
2.	Insect	2	26
3.	Krustasea	2	1
4.	Moluska	4	5
5.	Fish	7	20
6.	Reptile	12	37
7.	Amphibian	1	1
8.	Bird	72	552
9.	Mmamalia	31	137

Source: Attachment to the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number P.20/Menlhk/Setjen/Kum.1/6/2018 concerning the Determination of Protected Plant and Animal Species

This significant population decline is straightforward evidence that Indonesia's biodiversity and forest ecosystem balance are in critical condition and require stricter protection measures to prevent the extinction of these species.³⁹ The categories of clarification of endangered animals are as follows:⁴⁰

- a. Almost Extinct, that is, animals that are at critical levels or their habitats have narrowed so that their populations are in a very threatened state.
- b. Leading to Extinction, namely animals whose populations have decreased drastically due to overexploitation and habitat destruction.
- c. Rarely the population, namely animals whose number is reduced due to natural factors and human activities.

³⁹ Kusuma and Surakusumah, "Perlindungan Hutan Dari Tindakan Pembalakan Liar (Illegal Logging) Menurut Peraturan Perundang-Undangan Serta Dampaknya Terhadap Prinsip Pengelolaan Hutan Yang Berkelanjutan."

⁴⁰ Aristides, Purnomo, and Samekto, "Perlindungan Satwa Langka Di Indonesia Dari Perspektif Convention on International Trade in Endangered Species of Flora and Fauna (Cites)."

The term "endangered animal" is commonly referred to as "*endangered species*." *Endangered species* are species that have experienced significant population declines in nature and are at considerable risk of extinction if there is no conservation intervention. According to the IUCN *Red List (International Union for Conservation of Nature)*, the level of rarity of the species is divided into several indicators: *Extinct* (EX: Extinct), *Extinct in the Wild* (EW: Extinct in the Wild), *Critically Endangered* (CR: Critical), *Endangered* (EN: Endangered), *Vulnerable* (VU: Vulnerable), *Near Threatened* (NT: Almost Endangered), *Least Concern* (LC: Low Risk), *Data Deficient* (DD: Less Data), *Not Evaluated* (NE: Not Evaluated).⁴¹ The other term referred to as "*protected species*" is a species of plants or animals that are legally protected by national and international regulations, regardless of their population status in nature. However, not all *protected species* are *endangered species*, but all *endangered species* are included in the *protected species* category. *Endangered species* need extra protection because they can go extinct at any time so they must be fully protected so that they do not become extinct.

Brazil can be an example of Indonesia in monitoring and protecting the environment, especially forests because in Brazil there is an Amazon forest managed by several institutions.⁴² (1) IBAMA (*Brazilian Institute of Environment and Renewable Natural Resources*) is responsible for environmental law enforcement, deforestation monitoring, and the application of fines for environmental violators. (2) ICMBio (*Chico Mendes Institute for Biodiversity Conservation*): manages conservation areas and protects endangered species from extinction. (3) *Federal Police and Environmental Military Police*: Assist in operations against illegal logging and other illegal logging activities.

The comparison of animal protection applied in Indonesia and Brazil is as follows:

Table 2 Animal protection in Indonesia and Brazil

⁴¹ Humaero, Candri, and Suana, "Status Konservasi Burung Yang Diperdagangkan Di Pulau Lombok."

⁴² Philipe P Barbeiro and Fernanda C P Inojosa, "Assessing The Actions Of The Brazilian Federal Government To Respond To The 2019 Mysterious Oil Spill: A Perspective Of the National Environmental Agency," *Annals of the Brazilian Academy of Sciences* 94 (2022).

Aspects	Indonesia	Brazil
Responsible board	KLHK, Direktorat General, KSDAE, Direktorat general Gakkum, BKSDA	IBAMA, ICMBio
Regulation	Law No. 5 of 1990 concerning the Conservation of Biological Natural Resources and Their Ecosystems	Environmental Crimes Law (1998), Amazon Protection Plan
Field Surveillance	Still weak, dependent on BKSDA and NGOs	More powerful, using satellites and drones
Penalty	Maximum penalty of 5 years in prison and fine (often not strictly enforced)	Penalties of up to 10 years in prison, hefty fines, and asset forfeiture
Cases of Illegal Wildlife Trade	Tall, Indonesia is one of the main source countries for wildlife trade in Asia	Dominated by aquatic animals and large mammals
Technology Used	Limited monitoring, LAPAN satellites and ground patrols	DETER & PRODES satellites, the use of drones for forest surveillance

Source: Results of the research, 2025

In tackling *illegal logging*, Brazil has taken significant steps to crack down on *illegal logging* and endangered animal trade to provide a deterrent effect. Recently, in Operation Maravalha, Brazilian environmental agencies seized more than 5,000 illegal timber trucks in the Amazon rainforest, shut down nearly a dozen sawmills, and imposed fines of 15.5

million real (about \$2.7 million).⁴³ The operation targets illegal logging on protected lands and customary lands that have high levels of deforestation. In addition, in October 2024, Paraguayan authorities, with the support of Interpol, arrested twenty-six individuals involved in illegal deforestation on the border with Brazil and Argentina, confiscating about 1,000 logs, including the high value quebracho type. The operation identified two criminal networks involved in illegal logging, timber trade, and the use of forged documents.⁴⁴ This decisive step demonstrates the commitment of Brazil and its neighbors to enforcing environmental laws and imposing heavy sanctions on environmental criminals to create a deterrent effect.

According to Mochtar Kusumaatmadja in development law theory, law functions not only as a tool of social control but also as a means to support community development, including development in environmental aspects.⁴⁵ Against *illegal logging*, the weakness of oversight shows that the law has not fully functioned as an effective development tool to protect the environment and biodiversity. This inefficiency of supervision can be seen in several aspects, such as weak law enforcement, lack of sanctions against perpetrators, and low coordination between relevant institutions.

In addition to habitat loss, *illegal logging* also has an impact on forest fragmentation, which is the separation of forest areas into small, isolated areas. This fragmentation results in rare animals having difficulty migrating or finding mates, thus reducing the chances of reproduction, and increasing the risk of *inbreeding*. Another impact that is no less important is the increase in conflicts between humans and wildlife. When their habitats are destroyed by *illegal logging* practices, many animals are forced out of the forest to forage in residential areas. This often leads to conflict, where animals are considered a threat and are eventually hunted or killed. Weak oversight of these activities shows that the law has not succeeded in balancing economic interests and environmental conservation needs.

⁴³ Marcelino, "Brazil Targets Illegal Logging In Major Amazon Raids."

⁴⁴ Grattan, "26 People Arrested In Crackdown on Illegal Deforestation Along Paraguay, Brazil And Argentina Border."

⁴⁵ Yudha et al., "Kajian Deskriptif Analitis Tentang Teori Hukum Pembangunan Prof. Dr. Mochtar Kusumaatmadja, SH, LL. M."

Susan Smith defines *sustainable development* as an effort to improve the quality of life of the current generation without sacrificing the availability of natural resources for future generations. This concept emphasizes the balance between resource utilization and environmental sustainability to ensure the long-term sustainability of the ecosystem. According to him, in this way it can achieve four things, namely the maintenance of results achieved in a sustainable manner on renewable resources; Conserving and replacing exhaustible natural resources; Maintenance of ecological support systems; Preservation of biodiversity.⁴⁶ The development of *illegal logging* crime and the impact it has not only affected the economic aspect, but also includes ecological, social, and cultural aspects. Likewise, in its law enforcement efforts, which not only aim to uphold legal justice, but also must pay attention to social and economic justice simultaneously.⁴⁷

Conclusion

Independent institutions are needed to ensure transparency, accountability, and stricter oversight of activities that risk damaging the environment. With clear authority and free from political intervention, this institution can take strict action against *illegal logging* and unsustainable exploitation of natural resources. The existence of this institution is crucial to maintain environmental sustainability and ensure sustainable development for future generations. There are several factors that make the reason: 1) Weak enforcement of environmental laws; (2) High Levels of *Illegal Logging* and Natural Resources Exploitation; (3) Overlapping authority between government agencies; (4) Dependence on political and economic interests; (5) Lack of transparency and accountability in environmental management; (6) Threats to biodiversity and ecosystem sustainability; (7) The need for a technology-based surveillance system; and (8) Commitment to sustainable development. Forest destruction has an impact on habitat loss, a decline in the population of endangered animals, and a threat to the balance of ecosystems. Law enforcement against *illegal logging* is still weak, with sanctions that provide less deterrent effect and limited supervision. Compared to Brazil, the environmental protection system in Indonesia still needs to be strengthened. To maintain

⁴⁶ Nugraha, Handayani, and Najicha, "Peran Hukum Lingkungan Dalam Mencegah Kerusakan Dan Pencemaran Lingkungan Hidup."

⁴⁷ Hasrul, Yunus, and Baharuddin, "Kebijakan Hukum Pidana Dalam Menanggulangi Tindak Pidana Illegal Logging."

the sustainability of natural resources, it is necessary to improve coordination between institutions, use more sophisticated monitoring technology, and implement more effective policies to ensure forest sustainability for future generations. Strong regulations and clear authority must support the establishment of independent institutions to operate effectively without political or economic intervention. The government needs to ensure that this institution has adequate resources, both in terms of funding, experts, and technological infrastructure to conduct data-based supervision in *real-time*. In addition, collaboration with the community, academics, and environmental organizations needs to be improved to create a more transparent and accountable participatory supervision system. Strengthening sanctions against *illegal logging* and natural resource exploitation must also be a priority, with a stricter approach, such as the use of *big data* and *artificial intelligence* to detect illegal activities. With a comprehensive strategy and constructive interaction between stakeholders, it is hoped that efforts to preserve the environment and protect endangered species can run more optimally and sustainably.

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