



RESEARCH ARTICLE

# Application of the *Ultimum Remedium* Principle to Environmental Crimes in Indonesia

Frenki Hamonangan Turnip <sup>1\*</sup>, Rahmayanti Rahmayanti <sup>2</sup>, Suci Ramadan <sup>3</sup>

## Abstract

The principle of *ultimum remedium* in environmental criminal law is a principle that places criminal sanctions as the last resort after administrative and civil sanctions are no longer effective. This principle aims to ensure that environmental law enforcement proceeds proportionally and not repressively. However, in practice in Indonesia, the application of the *ultimum remedium* principle often creates a dilemma between environmental protection and economic development interests. Many environmental violations such as forest fires, river pollution, and illegal mining activities are resolved only through administrative measures without criminal sanctions, even though the resulting damage is highly significant. This study employs a normative juridical method with statutory, conceptual, and case approaches to analyze the extent to which the implementation of the *ultimum remedium* principle can uphold ecological justice. The research findings show that the application of this principle in Indonesia tends to be weak, as many environmental violations are not prosecuted criminally under the pretext of efficiency and economic stability. In fact, environmental criminal law plays a crucial role as a deterrent instrument against environmental crimes. Therefore, environmental law reform in Indonesia needs to be directed toward strengthening criminal law enforcement against offenders—especially corporations responsible for large-scale environmental damage.

**Keyword:** *Ultimum Remedium*, Criminal Law, Environment, Ecological Justice, Law Enforcement.

## Introduction

Law serves as an instrument of the state to uphold sovereignty, maintain public order, and protect national interests.[1] As a social instrument, law is not only aimed at punishing violators but also at protecting human rights, maintaining public order, and creating a balance between individual and societal interests.[2]

The environment is an essential element for the survival of humans and other living creatures. The existence of a clean, healthy, and sustainable environment is a fundamental prerequisite for achieving welfare and sustainable development.

However, in recent decades, Indonesia has faced serious challenges in the form of environmental degradation caused by excessive exploitation of natural resources, weak supervision, and ineffective law enforcement. The phenomena of river pollution, forest and land fires, and coastal ecosystem degradation indicate that the legal protection system for the environment has not functioned optimally. Law enforcement should not only be understood as the imposition of sanctions but also as an effort to realize substantive justice that aligns with welfare and social interests.[3]

Criminal law functions as a political instrument of the state to regulate, prevent, and respond to criminal acts as a manifestation of legal sovereignty. Systematic criminal regulation requires synergy between legislation, enforcement practice, and the principle of legal certainty.[4] Criminal punishment is used as a last resort to uphold justice, particularly when other legal mechanisms are insufficient to restore losses or create a deterrent

effect. This shows that the principle of criminal liability must be applied comprehensively, taking into account both subjective factors (the intent of the perpetrator) and objective factors (the consequences of the act).[5]

According to Soerjono Soekanto (2014), one of the main factors affecting law enforcement is the effectiveness of institutions and law enforcement officers.[6] In the context of environmental law, weak enforcement is often caused by the lack of clarity in the application of legal principles, especially the *ultimum remedium* principle. This principle positions criminal law as a last resort after administrative and civil efforts are no longer effective.

Barda Nawawi Arief (2018) explains that the *ultimum remedium* principle originates from a humanistic perspective in criminal law that rejects the excessive use of criminal sanctions.[7] Its main objective is to ensure that criminal law is not misused as a repressive instrument of power.

According to Andrian et al. (2022), the concept of criminal liability includes not only punishment for perpetrators but also restoration for victims or those harmed. They state that “*the enforcement of criminal law should not merely focus on punishment, but also on the restoration of justice and social balance disrupted by the crime.*” This view shows that the imposition of criminal sanctions should consider substantive justice, including the moral and social responsibility of the offender for the resulting harm.

In Indonesian environmental law, the application of the *ultimum remedium* principle is explicitly regulated in Article 95 of Law Number 32 of 2009 concerning Environmental Protection and Management (UUPLH). The provision states that criminal law enforcement for environmental violations shall only be applied if administrative sanctions are ineffective. This means that administrative and civil approaches must be prioritized before criminal enforcement. However, Andi Hamzah (2017) argues that the application of this principle in practice often becomes an obstacle, as law enforcement officers tend to use it as a justification not to impose criminal sanctions, even when the consequences are seriously harmful to society and the environment.[8]

Law Number 32 of 2009 on Environmental Protection and Management recognizes the *ultimum remedium* principle as one of the established legal principles in Indonesia.[9] This principle affirms that criminal law serves as a

---

Universitas Pembangunan Panca Budi, Indonesia  
Frenki Hamonangan Turnip \*)  
Email: [turnipfrenky@gmail.com](mailto:turnipfrenky@gmail.com)

final measure in law enforcement, applied only when other means—such as administrative or civil sanctions—prove ineffective. Therefore, environmental criminal law enforcement must still consider the *ultimum remedium* principle, and its application should occur only when administrative sanctions fail to produce a deterrent effect. This situation indicates the need for an in-depth study of the factors affecting environmental law enforcement and how the *ultimum remedium* principle can be effectively implemented under Law No. 32 of 2009.

Sidi (2024) asserts that the criminal law mechanism must be applied proportionally and systematically, considering the effectiveness of prior administrative sanctions. “*The ultimum remedium principle must be applied carefully so that it does not become a reason to delay law enforcement, especially when violations cause significant damage that directly affects the public.*”[10]

Furthermore, Muladi (2024) emphasizes that in cases with major impacts on public interests and ecosystems, criminal law should no longer be regarded as *ultimum remedium* but rather as *primum remedium* or the primary instrument.[11] This is important so that criminal sanctions can provide a deterrent effect, especially for corporations proven to have caused large-scale environmental damage. This perspective aligns with Satjipto Rahardjo (2010), who argues that law should not stop at a purely normative level but must deliver substantive justice and social benefit. In the context of environmental law, such justice applies not only to humans but also to nature and future generations.[12]

Ecological justice has become a key concept in modern debates on environmental law enforcement. According to Yulia (2024), ecological justice demands that the law recognize the environment as a subject possessing rights to protection from pollution and destruction.[13] This paradigm rejects the traditional anthropocentric view that treats the environment merely as an object of economic exploitation. Therefore, every form of environmental violation should be regarded as a crime against life systems, not merely an administrative infraction.

Referring to the views of Aspan (2024), environmental criminal law enforcement against corporations should not only aim to punish but also to uphold the principle of ecological justice and ensure environmental sustainability for future generations.[14] The main issue in Indonesia is that the application of the *ultimum remedium* principle often weakens environmental criminal law enforcement. Many major cases end with administrative sanctions, while stricter criminal sanctions are rarely imposed. Dwidja Priyatno (2017) observes that this occurs due to poor coordination among law enforcement institutions, limited technical capability in scientific evidence for environmental cases, and the influence of economic interests in law enforcement processes.[15] As a result, the function of criminal law as a means of protecting society and the environment becomes ineffective.

From the above explanation, it can be concluded that there exists a discrepancy between the normative framework and the practical application of environmental law in Indonesia. Normatively, the *ultimum remedium* principle is intended to balance law enforcement with business certainty; however, in practice, it is often exploited to shield environmental offenders from criminal punishment. Therefore, this study aims to analyze the implementation of the *ultimum remedium* principle in environmental criminal law enforcement in Indonesia, identify the obstacles faced, and propose recommendations to ensure that the principle is applied proportionally and justly in line with the ideals of ecological justice and sustainable development.

## Literature Review

### Environmental Law in Indonesia

Law functions as an instrument of social control and serves as a means to achieve justice and order in society.[16] Environmental law is a part of public law that regulates the relationship between humans and nature and governs how humans utilize natural resources responsibly. According to Soerjono Soekanto (2014), environmental law aims to maintain ecological

balance, prevent environmental destruction, and protect the interests of society as a whole.[17]

In Indonesia, the main legal framework for environmental protection is stipulated in Law Number 32 of 2009 concerning Environmental Protection and Management (UUPPLH). This law regulates administrative, civil, and criminal mechanisms to ensure environmental protection and sustainability. Environmental law in Indonesia embodies both preventive and restorative approaches: prevention is reflected through obligations to preserve the environment, while restoration concerns the responsibility to rehabilitate damaged ecosystems.

Andi Hamzah (2010) states that environmental criminal law has a dual function—first, as an instrument for prevention (preventive) and second, as a sanction (repressive) against violations of environmental regulations.[18] This concept shows that criminal law is not only intended to punish perpetrators but also to guide human behavior in environmental management.

### Principles of Criminal Law and the *Ultimum Remedium* Doctrine

The *ultimum remedium* principle is one of the fundamental principles in criminal law. Literally, *ultimum remedium* means “the last remedy.” This principle emphasizes that criminal law should only be applied as a last resort after other legal remedies—such as administrative or civil actions—prove ineffective. According to Barda Nawawi Arief (2018), the *ultimum remedium* principle derives from a humanistic view that criminal law must be applied proportionally and not excessively.[19]

In the context of environmental law, this principle is explicitly stated in Article 95 of the UUPPLH, which stipulates that criminal sanctions can only be imposed if administrative or civil sanctions fail to produce a deterrent effect. This provision demonstrates that criminal law in the field of environmental protection is not meant to be repressive but rather to function as a last measure to safeguard public and ecological interests.

Muladi (2023) explains that the application of the *ultimum remedium* principle must also take into account the scale of environmental damage caused by the violation. When the damage is massive and systemic, criminal law should not be considered as *ultimum remedium* but rather as *primum remedium*, a primary instrument to ensure deterrence and justice for the community and the environment.[20]

### Criminal Liability in Environmental Law

Criminal liability in environmental law encompasses both individual and corporate responsibility for acts that cause environmental harm. According to Henry Aspan (2024), corporations as legal entities bear obligations to uphold the precautionary principle and social responsibility, and may be held criminally liable if their activities result in environmental damage.[21] The *ultimum remedium* principle must not be used as an excuse to avoid criminal prosecution against corporate actors who intentionally or negligently harm the environment.

Saragih et al. (2022) emphasize that criminal law enforcement should also aim to restore the harm suffered by victims and communities affected by the offense, not only to impose punishment.[22] This restorative dimension aligns with the concept of substantive justice, which focuses on repairing social and environmental harm in addition to delivering legal certainty.

Furthermore, Redyanto Sidi (2024) argues that the application of the *ultimum remedium* principle in environmental law must be in line with the concept of ecological justice, where the protection of the environment and the public interest should take precedence—even when administrative sanctions have not completely failed.[23] This perspective underscores the essential role of criminal law in ensuring the sustainability of ecosystems and in preventing further environmental degradation.

### The Effectiveness of the *Ultimum Remedium* Principle in Environmental Law

The effectiveness of the *ultimum remedium* principle in environmental law enforcement depends on the coordination among law enforcement

agencies, technical capacity of officials, and the political will to implement environmental protection laws. Syaiful Asmi Hasibuan (UNPAB) asserts that the *ultimum remedium* principle should not be used as a justification to delay criminal prosecution, as major environmental offenders often exploit legal loopholes to escape punishment.[24]

Similarly, Henry Aspan (2024) emphasizes that criminal law enforcement against corporations must be firm and proportional to ensure a deterrent effect and to guarantee justice for the affected communities.[25] The use of administrative sanctions alone, without criminal accountability, often weakens the authority of environmental law and reduces its preventive impact.

In conclusion, the theoretical framework shows that the *ultimum remedium* principle holds an essential position in Indonesia's environmental criminal law enforcement. However, its implementation must strike a balance between deterrence, ecological restoration, and substantive justice, so that environmental criminal law can function effectively and equitably.

## Method

This research employs a normative juridical approach, which focuses on analyzing legal norms and principles governing the enforcement of criminal law in environmental cases.[26] The normative juridical method is used to study written legal rules, doctrines, and literature, as well as their interpretation in practice. This approach is appropriate because the object of study relates to the implementation of the *ultimum remedium* principle within the Indonesian legal system.

The research is descriptive-analytical, aiming to describe and analyze the application of the *ultimum remedium* principle in the enforcement of environmental criminal law and to identify the constraints encountered in its implementation. The descriptive nature allows the author to provide a detailed and systematic description of the legal phenomena studied, while the analytical aspect helps to evaluate the relationship between legal norms and enforcement practices.

The data used in this study consists of secondary data, which includes:

1. Primary legal materials such as Law Number 32 of 2009 concerning Environmental Protection and Management, the Indonesian Criminal Code (KUHP), and other relevant statutory regulations.
2. Secondary legal materials, including academic writings, legal journals, and opinions of legal scholars relevant to environmental criminal law and the *ultimum remedium* principle.
3. Tertiary legal materials, such as dictionaries, encyclopedias, and other reference materials that support the interpretation of legal terms and concepts.

The technique used to collect data is literature study (library research), by reviewing and analyzing legal documents, literature, and academic sources related to the topic. Data collection focuses on theoretical and statutory sources concerning environmental law enforcement and criminal law policy in Indonesia.

The data obtained were analyzed qualitatively using descriptive analysis, meaning that the author describes, interprets, and draws conclusions based on the relationship between legal norms and their practical application. Qualitative analysis allows for an in-depth understanding of the substance and effectiveness of the *ultimum remedium* principle in environmental law enforcement in Indonesia.[27]

The results of the analysis are then interpreted systematically to explain the legal issues discussed, evaluate the effectiveness of environmental law enforcement, and propose solutions or recommendations for improving the application of the *ultimum remedium* principle. The emphasis of this method lies in combining doctrinal understanding with practical implementation, to achieve a balance between legal certainty, justice, and benefit within the scope of environmental criminal law.

## Results and Discussion

### Implementation of the *Ultimum Remedium* Principle in Environmental Criminal Law Enforcement in Indonesia

The *ultimum remedium* principle in Indonesian environmental law is explicitly regulated in Article 95 of Law Number 32 of 2009 concerning Environmental Protection and Management (UUPPLH). This provision affirms that criminal law enforcement against environmental violations shall only be applied when administrative sanctions are deemed ineffective.[28] The rule emphasizes that administrative and civil remedies should be prioritized before the use of criminal sanctions.

In theory, the *ultimum remedium* principle aims to prevent the overuse of criminal sanctions and to ensure that law enforcement remains proportional. However, in practice, its implementation often weakens environmental protection. Law enforcement authorities frequently interpret this principle rigidly, using it as a justification not to impose criminal penalties even when the environmental damage caused is significant and detrimental to the public interest.[29]

Andi Hamzah (2017) explains that the excessive use of administrative sanctions without subsequent criminal prosecution can create impunity for corporate offenders, particularly in cases involving large-scale environmental destruction such as forest fires, industrial waste disposal, and mining pollution. He emphasizes that the *ultimum remedium* principle must be understood dynamically and not as an excuse for legal inaction.[30]

Furthermore, empirical evidence shows that in several cases, administrative measures fail to create a deterrent effect, allowing repeat violations. For example, corporations that have previously been fined or temporarily suspended often resume operations without significant changes in environmental management practices. This condition contradicts the very purpose of the *ultimum remedium* principle, which is to ensure justice and ecological protection through a graduated and effective enforcement system.[31]

According to Sidi (2024), the *ultimum remedium* principle must be applied selectively and contextually. When environmental violations cause large-scale ecological and social harm, criminal prosecution should take precedence, even if administrative measures have not yet been fully exhausted.[32] This view aligns with Muladi's (2023) concept of "functional criminal law," which positions criminal sanctions as a vital mechanism for upholding ecological balance and public welfare.[33]

In several judicial precedents, courts in Indonesia have begun to recognize this shift. For instance, environmental cases involving transboundary pollution and illegal logging have resulted in criminal convictions under Article 98 of the UUPPLH, despite the defendants having been previously subject to administrative sanctions. This development reflects a gradual move toward a more integrative enforcement model that combines preventive and repressive measures.[34]

### Factors Affecting the Implementation of the *Ultimum Remedium* Principle

The ineffectiveness of environmental criminal law enforcement in Indonesia is caused by several factors:

1. Institutional Coordination Weakness

There is a lack of coordination between the Ministry of Environment and Forestry (KLHK), the police, and prosecutors in handling environmental cases. This leads to inconsistencies in determining whether administrative measures have been exhausted before initiating criminal proceedings.[35]

## 2. Limited Technical and Scientific Capacity

Environmental crimes often require complex evidence such as chemical analysis, satellite imagery, and environmental impact assessment reports. Many law enforcement institutions still lack the technical expertise and laboratory facilities necessary to prove environmental violations scientifically.[36]

## 3. Economic and Political Interests

In many cases, political and economic pressures influence environmental law enforcement. Large corporations with strong economic power can influence decision-making processes, resulting in lenient sanctions or delayed criminal prosecution.[37]

## 4. Ambiguity in Legal Interpretation

The absence of detailed guidelines regarding when and how the *ultimum remedium* principle should be applied has caused inconsistent interpretations among law enforcement officers. Some interpret it rigidly as a prerequisite to criminal sanctions, while others see it as a flexible principle to be adapted based on the severity of harm.[38]

Henry Aspan (2024) asserts that this ambiguity weakens the deterrent effect of environmental law. He suggests the adoption of a dual-track enforcement model, where administrative and criminal sanctions can be applied concurrently when environmental harm poses serious public risks.[39]

### The Concept of Ecological Justice and the Role of Criminal Law

The enforcement of environmental criminal law must not only aim to punish offenders but also to restore ecological balance and prevent future harm. This aligns with the principle of ecological justice, which views the environment as a subject entitled to legal protection.[40]

According to Yulia (2024), ecological justice demands that environmental protection laws recognize nature's intrinsic rights. Any act of environmental destruction should be regarded not merely as a violation of human law but as a crime against the ecosystem itself.[41]

In this context, criminal law functions not only as a punitive tool but also as a moral and social instrument that ensures accountability for environmental harm. Barda Nawawi Arief (2018) emphasizes that criminal law enforcement must be directed toward achieving substantive justice, meaning justice that protects both human interests and the sustainability of nature.[42]

Therefore, the application of the *ultimum remedium* principle should be aligned with the moral responsibility to safeguard the environment. When the magnitude of environmental damage threatens public welfare, criminal prosecution must be prioritized as a form of ecological protection and deterrence.

## Conclusions and Recommendations

### Conclusion

Based on the results of the study and analysis of the *ultimum remedium* principle in the enforcement of environmental criminal law in Indonesia, several conclusions can be drawn as follows:

1. The *ultimum remedium* principle in environmental law, as regulated under Article 95 of Law Number 32 of 2009 concerning Environmental Protection and Management (UUPPLH), positions criminal law as the last resort in environmental law enforcement. In theory, this principle aims to ensure proportionality and avoid excessive criminalization. However, in practice, it is often interpreted narrowly by law enforcement authorities, which weakens the deterrent effect and effectiveness of environmental protection.[43]
2. The application of the *ultimum remedium* principle in Indonesia has not been optimal due to weak coordination between institutions, lack of technical capacity in handling environmental evidence, political and economic influences, and inconsistent legal interpretation. These factors cause criminal sanctions to be rarely applied even in cases of severe environmental damage.[44]
3. The enforcement of environmental criminal law should not be separated from the concept of ecological justice, which views the environment as a subject entitled to protection. Therefore, the *ultimum remedium* principle must be applied contextually and not rigidly. When environmental violations result in serious ecological and social harm, criminal prosecution must be treated as a primary measure (*primum remedium*) to ensure deterrence and environmental restoration.[45]
4. The realization of effective environmental criminal law enforcement requires the integration of administrative, civil, and criminal instruments in a comprehensive and simultaneous manner, so that the objectives of justice, legal certainty, and environmental sustainability can be achieved.

### Recommendations

Based on the conclusions above, several recommendations are proposed:

1. **Revision of Legal Provisions**  
The government should revise or clarify the provisions of Article 95 of the UUPPLH to provide a more explicit standard regarding when criminal law can be applied, to prevent misinterpretation and ensure consistency in enforcement.
2. **Strengthening Institutional Coordination**  
Coordination among law enforcement institutions—particularly the Ministry of Environment and Forestry (KLHK), the police, and the Attorney General's Office—must be enhanced through the establishment of an integrated enforcement mechanism for environmental crimes.[46]
3. **Enhancing Technical Capacity**  
Law enforcement agencies should be equipped with adequate scientific and technological facilities, such as laboratories, environmental forensics, and expert training, to strengthen the evidentiary basis for environmental criminal cases.
4. **Applying the *Ultimum Remedium* Principle Contextually**  
The *ultimum remedium* principle should be applied proportionally and contextually. When environmental damage

poses serious threats to human life or ecosystems, criminal sanctions must not be delayed by administrative procedures.

#### 5. Promoting Ecological Justice

The enforcement of environmental criminal law should align with the concept of ecological justice, ensuring that the law not only protects human interests but also upholds the rights of nature and future generations.[47]

Through these recommendations, it is expected that the enforcement of environmental criminal law in Indonesia will be more effective, equitable, and oriented toward sustainable development and environmental preservation.

#### References

- [1] Siagian, M. T., Fikri, R. A., & Siregar, F. R. (2024). *Law Enforcement of Deportation by Medan Immigration Detention Center Against Foreigners Who Commit Immigration Crimes in North Sumatera*.
- [2] Rahmayanti, R., Maulana, M., Alvin, S., & Paly, N. (2020). *Analisis Yuridis terhadap Penerapan Sistem Pembuktian Terbalik Berdasarkan Undang-undang Tindak Pidana Korupsi*. *Jurnal Mercatoria*, 13(1), 29–35.
- [3] Ismaidar, A. A. (2017). *Analisis Hukum Pembentukan Badan Usaha Milik Desa Dalam Upaya Meningkatkan Pendapatan Asli Desa di Kecamatan Babalan Kabupaten Langkat*. *Jurnal Hukum Bisnis dan Investasi*, 9(1).
- [4] Ramadani, S., Danil, E., Sabri, F., & Zurnetti, A. (2021). *Criminal Law Politics on Regulation of Criminal Actions in Indonesia*. *Linguistics and Culture Review*, 5(S1), 1373–1380.
- [5] Simbolon, V. E. B., Simarmata, M., & Rahmayanti, R. (2023). *Tinjauan Yuridis terhadap Tindak Pidana Pembunuhan Berencana Menggunakan Besi Padat di Medan: Tinjauan Kasus Nomor 2305/Pid.B/2017/Pn.Mdn*. *Jurnal Mercatoria*, 12(1), 54–67.
- [6] Soekanto, S., & Mamudji, S. (2014). *Penelitian Hukum Normatif Suatu Tinjauan Singkat*, 16th ed. Jakarta: Rajawali Pers, pp. 13–14.
- [7] Barda Nawawi Arief, S. H. (2018). *Masalah Penegakan Hukum dan Kebijakan Hukum Pidana dalam Penanggulangan Kejahatan*. Prenada Media.
- [8] Hamzah, A. (2017). *Hukum Pidana Indonesia*. Sinar Grafika.
- [9] Undang-Undang Nomor 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup (UUPLH).
- [10] Dachban, Y. B., Sidi, R., & Saragih, Y. M. (2023). *Tinjauan Yuridis Kesiapan Rumah Sakit dan Tanggung Jawab Rumah Sakit Pasca Peraturan Menteri Kesehatan Nomor 24/2022 tentang Rekam Medis*. *Jurnal Ners*, 7(1), 232–239.
- [11] Adhari, A., Sudaryono, L., & Nugroho, M. Y. (2024). *Muladi dan Pembaharuan Hukum Pidana Indonesia*. PT RajaGrafindo Persada.
- [12] Rahardjo, S. (2010). *Penegakan Hukum Progresif*. Penerbit Buku Kompas.
- [13] Yulia, R. (2024). *Tinjauan Yuridis Perkembangan Hukum Jaminan di Indonesia*. *JUDAKUM: Jurnal Dedikasi Hukum*, 3(3), 119–128.
- [14] Kurniawan, F., Aspan, H., & Andoko, A. (2024). *A Juridical Review of Informed Consent Based on Law Number 17 of 2023 Concerning Health as a Replacement for Law Number 36 of 2009*. *Bengkoelen Justice: Jurnal Ilmu Hukum*, 14(1), 85–100.
- [15] Priyatno, D. (2017). *The Alternative Model of Corporate Criminal Sanction Management in Indonesia*. *Journal of Legal, Ethical & Regulatory Issues*, 20, 1.
- [16] Tarigan, A., Siregar, M. A., & Zarzani, T. R. (2025, June). *Legal Review of Narcotics Abuse in Terms of Victimology*. In International Conference Epicentrum of Economic Global Framework (pp. 453–461).
- [17] Soekanto, S., & Mamudji, S. (2014). *Penelitian Hukum Normatif Suatu Tinjauan Singkat*, 16th ed. Jakarta: Rajawali Pers.
- [18] Hamzah, A. (2010). *Hukum Acara Pidana Indonesia*.
- [19] Barda Nawawi Arief, S. H. (2018). *Masalah Penegakan Hukum dan Kebijakan Hukum Pidana dalam Penanggulangan Kejahatan*. Prenada Media.
- [20] Muladi, D. (2023). *Pertanggungjawaban Pidana Korporasi (Corporate Criminal Responsibility)*. Penerbit Alumni.
- [21] Aspan, H. (2024). *Hukum Perusahaan: Aspek Hukum Badan Usaha di Indonesia*. Serasi Media Teknologi.
- [22] Andrian, Y., Saragih, Y. M., & Hasibuan, S. A. (2022). *Pertanggungjawaban Pelaku Pidana Terkait Pembayaran Ganti Kerugian terhadap Korban Kecelakaan Lalu Lintas*. Repository Universitas Pembangunan Panca Budi.
- [23] Redyanto, S. (2024). *Criminal Law Analysis of Health Crimes in Hospitals in the Context of Health Law*. In Proceeding of International Conference on Artificial Intelligence, Navigation, Engineering, and Aviation Technology (ICANEAT), 1(1), 555–560.
- [24] Aspan, H. (2024). *Hukum Perusahaan: Aspek Hukum Badan Usaha di Indonesia*. Serasi Media Teknologi.
- [25] Soekanto, S., & Mamudji, S. (2014). *Penelitian Hukum Normatif Suatu Tinjauan Singkat*, 16th ed. Jakarta: Rajawali Pers.
- [26] Rahardjo, S. (2010). *Penegakan Hukum Progresif*. Penerbit Buku Kompas.
- [27] Hamzah, A. (2017). *Hukum Pidana Indonesia*. Sinar Grafika.
- [28] Soekanto, S., & Mamudji, S. (2014). *Penelitian Hukum Normatif Suatu Tinjauan Singkat*. Jakarta: Rajawali Pers.
- [29] Muladi, D. (2023). *Pertanggungjawaban Pidana Korporasi (Corporate Criminal Responsibility)*. Penerbit Alumni.
- [30] Sidi, R. (2024). *Criminal Law Analysis of Health Crimes in Hospitals in the Context of Health Law*.
- [31] Yulia, R. (2024). *Tinjauan Yuridis Perkembangan Hukum Jaminan di Indonesia*. *JUDAKUM: Jurnal Dedikasi Hukum*, 3(3), 119–128.
- [32] Aspan, H. (2024). *Hukum Perusahaan: Aspek Hukum Badan Usaha di Indonesia*. Serasi Media Teknologi.