

**CRIMINAL LAW ENFORCEMENT AGAINST ENVIRONMENTAL
DAMAGE DUE TO ILLEGAL GOLD MINING
(Study in Mandailing Natal Regency)**

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ABSTRACT

The environment is crucial for human survival and therefore must be protected and managed sustainably. However, in practice, illegal gold mining activities often cause serious environmental damage. Mandailing Natal Regency is one of the regions with significant gold potential, but many mining activities are carried out without permits and without due regard for environmental aspects. These activities cause various impacts, such as river pollution, forest destruction, and landscape changes. Based on these conditions, this study formulates the problem of environmental damage caused by illegal gold mining, criminal law enforcement against perpetrators, and obstacles faced in the law enforcement process.

This study employs an empirical legal research approach with a descriptive analytical approach. Data were obtained through fieldwork and literature review. Data collection was conducted through interviews with relevant parties and a review of primary, secondary, and tertiary legal materials, which were then analyzed qualitatively using a deductive approach.

The research results show that illegal gold mining activities in Mandailing Natal Regency have caused various forms of environmental damage, both physical and chemical. This damage includes changes in the landscape due to land clearing, the formation of former mining pits, erosion and landslides around rivers, and water pollution due to the use of hazardous chemicals such as mercury. Furthermore, mining activities also damage forest areas and disrupt the balance of the ecosystem. Criminal law enforcement against perpetrators of illegal gold mining has essentially been carried out by law enforcement officials through preventive and repressive efforts. However, in practice, law enforcement still faces various obstacles, such as limited apparatus resources, weak oversight, and socio-economic factors of communities that depend on mining activities for their livelihoods.

Keywords: Law Enforcement, Environment, Illegal Mining, Damage, Mandailing Natal

A. Introduction

The environment is a gift and blessing from God Almighty to the people, nation, and state of Indonesia. It must be protected and managed sustainably for the survival of the nation and present and future generations. Human life is inextricably linked to the environment. Human life is highly dependent on it. The environment provides various human needs, which are essential for sustaining life.¹

Indonesia's natural resources are extremely rich and abundant, as evidenced by its abundant and diverse mining resources, including oil, coal, tin, iron ore, gold, copper, and more. Therefore, optimal, efficient, transparent, and sustainable management is essential, ensuring environmental balance is maintained to significantly benefit the well-being of Indonesian citizens in the future.²

Natural resources, especially non-renewable ones such as minerals and coal, play an important role in the existence of a nation, both in the past, present and future.³ Therefore, it requires optimal, efficient, transparent, and sustainable management that must truly pay attention to environmental balance so that it can provide significant benefits for the welfare of Indonesian citizens now and in the future.

Law enforcement against illegal mining operators faces numerous challenges. Limited law enforcement resources, overlapping regulations, and corrupt practices are serious obstacles to eradicating these illegal activities. Field conditions indicate that existing law enforcement is still less than optimal in mitigating environmental impacts and preventing illegal mining activities.⁴ Article 33 paragraph (3) of the 1945 Constitution of the Republic of Indonesia states that "the earth and water and the natural resources contained therein are controlled by the state and used for the greatest prosperity of the people."

Legally, Indonesia already has a strong legal framework to address environmental damage caused by mining. Law No. 32 of 2009 concerning Environmental Protection and

¹Suparto Wijoyo and A'an Efendi. 2017. *International Environmental Law*. Jakarta: Sinar Grafika, page 1.

²Szyva Silviana Putri (2022), *State Control and the Role of Society in the Mineral and Coal Mining Sector*. SIBATIK Journal, 1 (7), page 1121.

³Ahmad Redi, 2016, *Law on Settlement of Mineral and Coal Mining Disputes*, Jakarta: Sinar Grafika, page 1.

⁴Afrillo, H., & Yusuf, H. (2025). Analysis of the role of criminal law in handling economic crimes through evaluation of regulations and practices. *Journal of Law and Public Policy Studies* | E-ISSN: 3031-8882, 2(2), page 796.

Management, Law No. 3 of 2020 concerning Mineral and Coal Mining, and the Criminal Code (KUHP) provide a clear legal basis for prosecuting perpetrators of environmental damage. These laws stipulate that all mining activities must have an official permit and must implement the principles of sustainable and environmentally conscious development. This means that gold miners must have permits and must be able to restore the environment after mining.⁵

Gold miners must have permits and be able to improve the environment. Through clear regulations and strict criminal sanctions, illegal mining activities can be minimized and perpetrators of environmental destruction can be deterred. The reality on the ground shows the opposite. Illegal mining activities remain rampant, and are even increasing in various regions, including areas that should be protected forests or river basins, which often become targets for illegal gold mining.

This phenomenon demonstrates the gap between expectations and reality. On the one hand, the law provides environmental protection and establishes criminal liability for perpetrators of destruction. However, on the other hand, criminal law enforcement in practice remains weak and suboptimal. Many illegal mining cases never reach the courts, or enforcement stops at the investigation stage. Furthermore, many perpetrators return to similar activities after serving their sentences, indicating that criminal sanctions have not yet had a deterrent effect.⁶

The issue of criminal law enforcement regarding environmental destruction becomes even more complex when linked to social and economic factors. Illegal gold mining activities are often carried out by local communities who depend on mining for their primary livelihood. Limited employment opportunities, poverty, and dependence on mining products are factors that drive communities to continue engaging in these activities, despite their awareness of the negative impacts on the environment.⁷

Mandailing Natal Regency itself is one of the regions with significant potential for mineral resources, particularly gold. This potential should be managed legally and sustainably, thus providing economic benefits to the region and its communities without harming the environment. However, on the ground, many mining activities in this region are carried out

⁵Nugraha, T. (2024). Law Enforcement in Combating Illegal Coal Mining. *Savana: Indonesian Journal of Natural Resources and Environmental Law*, 1(01), page 2.

⁶Ananta, AE (2024). Law enforcement against perpetrators of illegal sand mining. *Savana: Indonesian Journal of Natural Resources and Environmental Law*, 1(01), Page 61

⁷Ranggalawe, GN, Susanti, I., & Fahmi, K. (2023). The dilemma of law enforcement in resolving illegal mining. *Marwah Hukum*, 1(1), 29-40. Page 32

without permits and in environmentally damaging ways, such as the use of mercury to separate gold from rock materials, illegal logging, and excavation along rivers.⁸

Data obtained from the BPS of Mandailing Natal Regency, this area consists of 23 sub-districts, namely Batahan, Sinunukan, Batang Natal, Lingga Bayu, Ranto Baek, Kotanopan, Ulu Pungkut, Tambangan, Sorik Marapi Valley, Sorik Marapi Peak, Muara Sipongi, Pakantan, Panyabungan, South Panyabungan, West Panyabungan, North Panyabungan, East Panyabungan, Huta Bargot, Natal, Muara Batang Gadis, Siabu, Malintang Hill, and Naga Juang.⁹

Illegal gold mining activities in Mandailing Natal Regency are spread across several areas, including Kota Nopan District, Huta Bargot District, Lingga Bayu District, Ranto Baek District, Sinunukan District, Muara Batang Gadis District, Naga Juang District, and Batang Natal District. Batang Natal District has substantial potential gold reserves, which have long been managed by the community using traditional and very simple techniques, such as wooden pans. However, in 2004, gold mining here began to be managed more modernly, using machines operated by individuals or groups.¹⁰

Environmental damage in Mandailing Natal Regency is worsening year by year. Watersheds are severely polluted, agricultural land is damaged, and public health is even affected. This damage not only affects watersheds but also areas within protected forest areas. Forest areas are beginning to experience deforestation and damage due to mining activities for gold ore, leaving behind scars that cause landslides and environmental damage, resulting in loss of life.

This situation indicates that criminal law enforcement is ineffective. Law enforcement agencies, such as the police and local governments, should be able to take decisive action against perpetrators of environmental destruction. However, in practice, obstacles often arise, including weak coordination between institutions, a lack of human resources with expertise in

⁸Aritonang, RA, & Simanjuntak, D. (2019). Analysis of the impact of illegal gold mining on the environment in North Sumatra. *Journal of Law and Development*, 49(3), 455–472, page 244.

⁹Central Statistics Agency of Mandailing Natal Regency <https://mandailingnatakab.bps.go.id/> accessed on Tuesday, November 25, 2025 at 20.28 WIB

¹⁰Putra, YYA, & Zulkarnain. (2025). Controlling illegal gold mining activities (PETI) in Mandailing Natal Regency. *Journal of Village Government Administration*, 6(2), 1–10, page 2

environmental law, a lack of monitoring facilities and infrastructure, and allegations of compromise or certain economic interests that hinder optimal law enforcement.¹¹

Criminal law should serve as a primary and decisive measure to prevent further damage.¹² This research is interesting to examine the extent of the role of criminal law in overcoming environmental damage due to illegal gold mining, especially in Mandailing Natal Regency.

This study aims to explore and analyze in depth the forms of environmental damage caused by illegal gold mining activities in Mandailing Natal Regency, examine how criminal law is enforced against perpetrators of illegal gold mining, and what obstacles and constraints are faced by law enforcement officers in the process of supervision, investigation, enforcement and environmental recovery efforts effectively in the field today.

Based on the above description, there are issues related to criminal law enforcement regarding environmental damage caused by illegal gold mining activities. This issue is important to investigate given its detrimental impact on the environment, society, and the state. Therefore, the author will conduct a study entitled "Criminal Law Enforcement Regarding Environmental Damage Due to Illegal Gold Mining (A Study in Mandailing Natal Regency)."

B. Research Methods

A study cannot be called research if it does not have a research method.¹³ Research methods are one of the factors of a problem that will be discussed. The study was conducted using secondary data which was analyzed qualitatively using the Desk Research Method. The literature materials used in writing this research are several references originating from research results, studies, and reviews of several writings which are then summarized into a scientific paper.¹⁴

C. Discussion

1. Forms of Environmental Destruction Caused by Illegal Gold Mining Activities

¹¹Haspada, D. (2023). Challenges and Solutions: Overcoming Weak Law Enforcement in Indonesia. *Journal of Social and Economics Research*, 5(1), 298-310. Page 300

¹²A. Djoko Sumaryanto, 2019, *Criminal Law Textbook*, Surabaya: Ubhara Press, page 16.

¹³ Hanifah, I., Hariyanto, H., Ginting, L., Koto, I., & Syafriana, R. (2026). Legal Protection of Indonesia's Fisheries from Foreign Investment: A Social-State Approach. *Jurnal IUS Kajian Hukum dan Keadilan*, 14(1).

¹⁴ Simatupang, R. S. A., Hanifah, I., & Mansar, A. (2025). The Concept of Restitution as Legal Accountability in the Crime of Human Trafficking. *Pena Justisia: Media Komunikasi dan Kajian Hukum*, 24(1), 3554-3462.

Illegal gold mining is a major cause of serious environmental damage. Mining carried out without official permits not only damages ecosystems but also significantly degrades the natural balance. For example, large-scale land clearing for mining activities results in the loss of forest cover, which is crucial for the survival of various species. Furthermore, the methods used in illegal mining often include the use of heavy equipment and hazardous chemicals, such as mercury, which contribute to environmental pollution.

The impacts of these activities are far-reaching, ranging from the loss of flora and fauna habitats to the pollution of rivers and groundwater. This pollution not only impacts the environment but also the health of the communities that depend on these water resources. When rivers are polluted, water quality drastically declines, which in turn affects the daily lives of surrounding communities. Therefore, it is crucial for us to understand how these illegal gold mining activities cause irreparable damage to our environment.

Finally, we need to recognize that environmental damage resulting from illegal mining activities is a complex issue that requires serious attention. Efforts to address this issue must involve various parties, from the government and the community to environmental organizations. Without appropriate action, this damage will continue and threaten the survival of future generations.

The impacts of illegal gold mining are diverse and can be categorized into physical and non-physical. One of the most striking physical impacts is water pollution due to the use of mercury in the gold processing process. Laboratory tests show that heavy metal levels in the Batang Natal River have exceeded established thresholds, directly impacting water quality and public health. When water is polluted, it threatens not only aquatic life but also the communities that rely on that water for their daily lives.

Furthermore, the clearing of vegetation around mining areas causes severe erosion and increases the risk of landslides. Without vegetation to hold the soil together, riverbanks become unstable and prone to collapse, posing a danger to surrounding communities. These landslides have resulted in loss of life and damage to agricultural land, further worsening the socioeconomic conditions of the communities. Therefore, it is important to recognize that the physical impacts of illegal mining threaten not only the environment but also the safety and well-being of communities.

From a non-physical perspective, the impacts are also quite significant. Government revenue from the mining sector is reduced, and social conflicts between mine workers often

arise due to intense competition. This creates tension within the community and can trigger larger social problems. All of this demonstrates that the impacts of illegal gold mining extend beyond environmental damage to encompass social and economic aspects that affect the lives of communities as a whole.

Addressing the environmental damage caused by illegal gold mining requires a comprehensive management strategy. One possible step is reclaiming former mined land. Reclamation can restore the soil and restore lost ecosystem functions. Furthermore, educating the public about the impacts of illegal mining is crucial to raising awareness of the importance of environmental protection.

The government also plays a crucial role in enforcing the law against illegal miners. By enforcing strict laws, it is hoped that violators will be deterred. The development of more effective environmental protection policies is also needed to provide a clear framework for managing natural resources sustainably. Without firm law enforcement, environmental damage will continue and threaten the survival of communities.

Community involvement in environmental monitoring is also crucial. By involving the public, we can create a more effective monitoring system and support environmental protection efforts. Communities that are aware of the importance of environmental protection will be more committed to protecting natural resources and preventing illegal mining practices. With collaboration between the government, communities, and various stakeholders, we can create a better and more sustainable future for the environment and future generations.

2. Criminal Law Enforcement Against Illegal Gold Miners Causing Environmental Damage

Law enforcement is the foundation of social justice in society. This process involves not only law enforcement officials such as police, prosecutors, and judges, but also all levels of society. Every individual has a role to play in complying with applicable legal norms, thereby creating order. In law enforcement, we can see two important perspectives: the subject's perspective and the object's perspective. From the subject's perspective, law enforcement involves all parties involved in legal relations, both directly and indirectly.

From an objective perspective, law enforcement encompasses the values of justice found in both formal and informal law. This means that law should not be viewed solely from written texts but should also reflect the values inherent in society. For example, when we talk

about justice, we are not only referring to written regulations but also to the justice perceived by society. Therefore, law enforcement must be able to address society's need for justice.

By understanding the concept of law enforcement from these two perspectives, we can see the crucial role of every individual in creating a law-abiding society. Law enforcement is not a sole responsibility, but a shared responsibility. In the context of illegal gold mining, this is particularly relevant because every action taken by law enforcement officers must be supported by public awareness of the importance of protecting the environment and complying with the law.

In efforts to combat illegal gold mining, the police employ two primary approaches: preventive and repressive. Preventive measures are a crucial initial step. Routine patrols are conducted in areas suspected of being prone to illegal activity. Furthermore, public education about the dangers and negative impacts of illegal mining is essential. The public needs to understand that this activity not only violates the law but also damages the environment and can endanger their safety.

When preventative measures fail to halt illegal activities, repressive measures become the next step. This includes taking action against illegal gold mining (PETI). In some cases, police have confiscated heavy equipment used in these illegal activities. This action is part of a broader law enforcement effort to ensure that legal norms are upheld and violations are not allowed to go unpunished.

It's important to note that law enforcement isn't solely focused on taking action after a violation has occurred. It also involves efforts to prevent future violations. Combining these two approaches is expected to raise public awareness and encourage compliance with the law, while preserving the environment.

Law enforcement through repressive measures, namely Law Number 3 of 2020 concerning Mineral and Coal Mining and Law Number 32 of 2009 concerning Environmental Protection and Management, is undeniably worthy of scrutiny by all mining business actors. This is inseparable from the new regulations in the Law that grant absolute authority to the Ministry of Environment to issue permits above other permits. The obligation to obtain these permits is one of the things that has caused quite a bit of panic in the mining industry. This is in addition to the fact that environmental permits seem to be permits above permits, where environmental permits are made a requirement for obtaining business and/or activity permits.

Illegal gold mining has a very serious impact on the environment and communities. The environmental damage caused by this activity cannot be underestimated. For example, landslides often occur due to mining operations that ignore safety considerations. Furthermore, water pollution caused by the use of hazardous chemicals such as mercury can endanger the health of people living near mining areas.

To address this problem, the law has established strict legal sanctions for those involved in illegal mining. Articles 158 and 161 of Law Number 3 of 2020 stipulate criminal sanctions for those who mine without a permit. Violators can be subject to up to five years in prison and fines of up to one hundred billion rupiah. These sanctions aim to deter perpetrators and prevent similar violations from occurring in the future.

By implementing strict sanctions, it is hoped that the public will be more aware of the importance of obeying the law and protecting the environment. Consistent and sustainable law enforcement is key to creating a law-abiding society that cares about environmental sustainability. Therefore, all parties, including the government, law enforcement officials, and the community, need to work together to achieve this goal.

3. Obstacles or Constraints in Enforcing Criminal Law Against Environmental Damage Caused by Illegal Gold Mining

Law enforcement can be interpreted as an effort to make the rulesThe laws written in the constitution become a reality in everyday life. However, it's important to remember that law enforcement is not solely the responsibility of law enforcement officials such as the police and prosecutors, but also involves the community. In this context, the community has the right and obligation to ensure that the law is obeyed, thus creating order and justice.

Illegal gold mining, or PETI, is a serious problem. This phenomenon not only harms the country economically but also triggers massive environmental damage. This damage threatens public health and the sustainability of ecosystems. Therefore, understanding the obstacles to law enforcement against PETI is crucial to finding effective solutions.

We need to recognize that the effectiveness of law enforcement is determined not only by the existence of regulations, but also by community involvement. With synergy between law enforcement officials and the community, we can create a safer and more orderly environment and protect our natural resources from further damage.

One of the main obstacles to law enforcement against illegal gold mining is limited facilities and infrastructure. The Mandailing Natal Police, for example, often encounters

difficulties mobilizing personnel and equipment to remote locations. This reduces the effectiveness of law enforcement, as many perpetrators can escape before authorities arrive.

Furthermore, difficult-to-access terrain presents a unique challenge. Many illegal mining operations are located in protected forest areas, which lack adequate transportation routes. This situation forces authorities to walk for tens of kilometers, which is naturally time-consuming and energy-consuming. As a result, evidence is often difficult to secure, and the investigation process is hampered.

Social factors also play a significant role in law enforcement. Many communities engage in illegal mining because they consider it their primary source of income. When law enforcement officers attempt to shut down illegal mining sites, they often encounter resistance from the community. Fearing the loss of their livelihoods, they choose to support the continued activity, which in turn complicates law enforcement efforts.

To overcome the obstacles to law enforcement against illegal gold mining, we need to adopt a more integrated approach. Law enforcement is crucial, but it is insufficient without community empowerment efforts. Communities need to be provided with viable economic alternatives to eliminate their reliance on illegal gold mining activities. Skills training programs and the development of alternative economic sectors such as agriculture and tourism could be a solution.

Inter-agency coordination is also crucial in addressing this issue. Local governments, police, and other relevant agencies need to work together to create consistent and effective policies. With effective collaboration, we can ensure that law enforcement against illegal mining (PETI) is not merely reactive, but also proactive in preventing environmental damage.

Ultimately, transparency and public trust must be built to ensure public support for law enforcement efforts. Through clear and consistent publicity regarding actions taken against illegal mining (PETI), we can raise public awareness and encourage their active participation in protecting the environment. With these steps, we hope to create a safer and more sustainable environment for future generations.

D. Conclusion

Illegal gold mining in Mandailing Natal Regency has caused serious environmental damage, both physically and chemically. Physically, this activity creates pits, riverbank erosion, river channel siltation, and the risk of landslides and flooding. It also damages protected forest areas and the Batang Gadis National Park. Chemically, the use of mercury has polluted the Batang

Natal and Batang Gadis Rivers, damaging aquatic ecosystems and endangering public health. Therefore, illegal gold mining threatens environmental sustainability and community livelihoods. Criminal law enforcement against illegal gold miners in Mandailing Natal Regency is carried out through preventive and repressive measures by the Mandailing Natal Police, specifically the Criminal Investigation Unit of the Specific Crimes Unit. Preventive measures include routine patrols, monitoring vulnerable areas, and community outreach. Meanwhile, repressive measures are carried out through arrests of perpetrators, confiscation of heavy equipment, and legal proceedings. In practice, law enforcement often utilizes Law Number 3 of 2020 concerning Minerals and Coal, specifically Articles 158 and 161, as a crucial step to prevent environmental damage and maintain public safety. Criminal law enforcement against environmental damage caused by illegal gold mining in Mandailing Natal Regency still faces various complex obstacles. These obstacles include limited facilities and infrastructure, the difficult geographical location of the mine, and the social and economic factors of communities who still rely on illegal gold mining for their livelihoods. Furthermore, weak inter-agency coordination, overlapping authority, intervention by certain parties, and low public trust in government policies also hamper the law enforcement process. Therefore, addressing illegal gold mining requires a comprehensive approach, encompassing not only criminal law but also social, economic, and institutional aspects.

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