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# Legal Certainty in Investor Liability for Environmental Rehabilitation: The Role of Environmental Cost Allocation in the Coal Mining Sector

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***ABSTRACT***

*The coal mining sector contributes significantly to the Indonesian economy, but also leaves serious environmental impacts. This research aims to examine the legal certainty of investor responsibility in environmental restoration through an environmental costing mechanism. The research method used is normative juridical with statutory and conceptual approaches. The results show that there are discrepancies between legal norms and their implementation in the field. Investor responsibility is often not carried out substantially, and there is no binding long-term accountability system after the expiry of the mining licence. This research provides novelty by proposing regulatory reconstruction based on the principles of strict liability, environmental justice, and digital-based transparency. In conclusion, it is necessary to strengthen the environmental law system that is more substantial and oriented towards ecological sustainability and intergenerational justice.*

***Keywords:*** *Legal Certainty, Mining, Environmental Remediation, Environmental Cost, Investor Responsibility*

## Introduction

The coal mining sector is one of the backbones of Indonesia's national economy. Based on data from the Ministry of Energy and Mineral Resources (MEMR), by 2023 Indonesia will produce 710 million tons of coal, 75% of which will be exported to the global market(Naryono, 2023) The sector contributes significantly to state revenues and employment, but also poses serious environmental problems. The Mining Advocacy Network (JATAM) notes that more than 3,000 ex-mining pits are scattered across Kalimantan and Sumatra, many of which have not been reclaimed, causing soil and water pollution and even threatening the safety of local residents (Pratiwi et al., 2021).

The main problem lies in the weak realization of investors' responsibility for environmental restoration, especially in the context of post-mining environmental costs. In fact, the legal framework has regulated this through Law Number 32 of 2009 concerning Environmental Protection and Management and Law Number 3 of 2020 concerning Mineral and Coal Mining.(Jaelani et al., 2022; Sutrisno et al., 2024; Wicaksono & Rahmawati, 2024; Wicaksono & Triasari, 2024). In these regulations, investors are required to provide reclamation and post-mining guarantees as a form of legal responsibility for environmental damage caused. Unfortunately, the implementation of this policy is still administrative and procedural, not yet touching the substance aspects that ensure accountability and sustainability of environmental protection (Arifin et al., 2024; Khaidar & Nurrahman, 2023).

This phenomenon shows the dualism between norms and practices. On the one hand, regulations are available, but on the other hand, their implementation does not show adequate legal compliance from mining businesses. This problem raises important questions about the extent to which the law can guarantee ecological justice, as well as how the environmental costing instrument can truly become an effective and equitable recovery mechanism.

The urgency of this research becomes even more important in the midst of increasing global awareness of climate change and environmental protection. Indonesia as the largest

coal producing country in ASEAN has a moral and juridical responsibility to ensure that the resource extraction process does not harm future generations. Therefore, it is important to evaluate the effectiveness of the law in ensuring that investors' responsibilities do not stop at the permit stage, but are actually realized in concrete forms of environmental restoration.

The research gap on this issue lies in the lack of studies that comprehensively review the relationship between legal certainty and the realization of investors' responsibilities in the context of environmental costing. Most previous studies tend to focus on the technical or ecological aspects of the environment, without deeply analyzing the normative aspects of law and the urgency of legal reconstruction that emphasizes the principles of justice and legal certainty.

This research aims to analyze the concept of legal certainty in the context of investor responsibility for environmental restoration, as well as assess the realization of environmental cost burdens in the coal mining sector in Indonesia. This research also aims to provide theoretical contributions through a normative approach based on Gustav Radbruch's legal theory, as well as practical contributions in the form of policy recommendations and regulatory reconstruction that can guarantee legal certainty and environmental sustainability.

This research aims to examine in depth the legal certainty of investors' responsibilities in environmental restoration, particularly in the context of the realization of environmental cost burdens in the coal mining sector. The main focus of this research is to analyze how applicable laws and regulations, such as Law No. 32/2009 on Environmental Protection and Management and Law No. 3/2020 on Mineral and Coal Mining, regulate the legal obligations of investors in carrying out reclamation and post-mining as part of their responsibility for the environment damaged by mining activities.

Furthermore, this study aims to evaluate the effectiveness of the implementation of environmental cost burdens by investors based on the existing legal framework, as well as to assess the extent to which these legal instruments are able to guarantee real, measurable and legally accountable environmental restoration. The research also aims to identify normative and implemented constraints that lead to weak legal compliance and oversight of the use of reclamation and post-mining funds, and examine weaknesses in the current regulatory structure and control mechanisms.

Thus, this research is expected to make a theoretical contribution to the development of the concept of legal certainty in the context of environmental law, and provide practical recommendations in the form of proposals for regulatory reconstruction that are more adaptive to the principles of sustainability and ecological justice. The ultimate goal of this research is to support the realization of a legal system that not only guarantees certainty for business actors, but also protects the public interest and environmental sustainability in a sustainable manner.

## Methods Research

This research uses a normative juridical approach, which is an approach that focuses on the study of legal norms contained in various laws and regulations, legal doctrines, and legal principles relevant to the subject matter (Negara, 2023; Taekema, 2018). This approach was chosen because the main focus of the research is to analyze the legal certainty of investor responsibility in environmental restoration through an environmental costing mechanism, which is basically a study of the norm system in Indonesian positive law.

Within the framework of this normative juridical approach, the research is conducted with two main approaches, namely the statute approach and conceptual approach. The statutory approach is used to examine legal provisions governing investor obligations in the

mining sector, such as Law No. 32/2009 on Environmental Protection and Management, Law No. 3/2020 on Mineral and Coal Mining, and implementing regulations such as Government Regulation No. 78/2010 on Reclamation and Post-mining. Meanwhile, a conceptual approach is used to explore legal doctrines and theories related to the concepts of legal certainty, environmental responsibility, and ecological justice, including the application of the theory of legal certainty developed by Gustav Radbruch.

The data sources used in this research consist of primary legal materials, namely applicable laws and regulations; secondary legal materials, in the form of legal literature, scientific journal articles, research reports, and academics' views; and tertiary legal materials such as legal dictionaries and legal encyclopedias as complementary and supporting analysis.

The technique of collecting legal materials is carried out through document study, which is carried out systematically on written sources that are relevant to the legal issues under study (Hamzani et al., 2023; Linos & Carlson, 2017). The data obtained is then analyzed qualitatively-descriptively, with the aim of finding patterns of legal thinking, normative inconsistencies, and regulative weaknesses in regulating investor responsibility for environmental restoration. The analysis is carried out by describing the content of the norms, connecting them with legal theories and principles, and assessing their applicability in practice through case studies and review of available empirical literature.

With this method, it is expected that the research results can provide a comprehensive and argumentative picture of the position and effectiveness of the law in ensuring the fulfillment of investor responsibilities for environmental sustainability in the coal mining sector.

## Results and Discussion

### Legal Certainty for Investor Responsibility in Environmental Restoration

The principle of legal certainty in the Indonesian legal system refers to clarity, consistency, and the ability of the law to be implemented fairly and predictably(Cammack, 2023; FAUZIAH LUBIS, 2023; Gellert & Andiko, 2015; Geofrey & Samekto, 2021). Gustav Radbruch in his theory places legal certainty as one of the three main values of law in addition to justice and expediency (Alexy, 2021; Hildebrandt, 2015; Leawoods, 2000). In the context of environmental responsibility by investors, legal certainty should guarantee that every business actor has a definite, measurable, and unavoidable obligation to environmental restoration.

However, based on the normative analysis of Law No. 32 of 2009 and Law No. 3 of 2020, it is found that although there are norms governing reclamation and post-mining guarantees, there are still gaps in terms of technical arrangements, sanctions, and integrated supervision (Listiyani et al., 2023; Rohmadanti et al., 2023). This reinforces the relevance of Institutional Legal Theory, which states that legal effectiveness depends not only on the text of the norm, but also on the power of institutions to implement and supervise the norm. The absence of effective coordination between the Ministry of Energy and Mineral Resources and the Ministry of Environment and Forestry is a clear form of weak legal institutions in ensuring the effectiveness of environmental norms.

Furthermore, the Corporate Legal Responsibility Theory states that corporations as legal subjects must have responsibilities not only to shareholders, but also to the environment and surrounding communities(Horrigan, 2010; Ratner, 2001). However, in practice, many mining corporations use the excuse of limited funds, license changes, or liquidation status to avoid legal responsibility for environmental restoration. This reinforces the finding that the

existence of legal norms that are not accompanied by an adequate enforcement system actually reduces the effectiveness of the law itself.

The section lies in the effort to link classical legal certainty theory with the need to reformulate investor legal responsibility based on long-term liability, which is a long-term legal responsibility that is not interrupted even though the business license has expired(Horrigan, 2010; Simkovic, 2018). This research suggests an integration between the concept of environmental justice and the principle of strict liability as a basis for strengthening environmental norms in Indonesian positive law.

## Realization of Environmental Costing in Coal Mining Practice

The realization of environmental cost burdens in coal mining practices in Indonesia has not been optimal, both in terms of legal substance and implementation(Risman et al., 2016; Setiawan et al., 2021; Syofiarti et al., 2021). Laws and regulations mandate that companies set aside reclamation and post-mining guarantee funds prior to mining activities. However, in practice, many cases show that these funds are not used as intended, or are not even available at all when needed.

Literature studies and reports from environmental advocacy organizations show that of the thousands of ex-mining pits scattered across Kalimantan and Sumatra, most are not reclaimed by mining permit holders(Meutia et al., 2023; Pratiwi et al., 2021; Rini, 2020). Several cases that have surfaced to the public show that the responsibility is delegated to local governments or even left without completion. This phenomenon shows a failure in the realization of environmental cost burdens, as well as a weak investor accountability system.

In terms of regulations, there are no strict provisions governing progressive or criminal sanctions for companies that are negligent or absent from environmental responsibilities, especially after the expiration of operating licenses. In addition, there is no legal mechanism that allows tracking and transparency of the use of environmental guarantee funds, either by the public or by independent auditors. This makes the environmental costing system not only unaccountable, but also creates moral hazard in the world of mining investment.

Theoretically, these findings strengthen the argument that the concept of corporate environmental responsibility must be supported by strong and binding legal instruments. In the context of Indonesian law, regulatory reconstruction is needed so that the obligation to impose environmental costs is not only administrative, but also legally attached to business actors, even after the mining license expires.

## Discussion

This research offers a number of scientific novelties that enrich the discourse on environmental law in Indonesia, especially in the context of coal mining and investor responsibility for environmental restoration. The first novelty lies in strengthening the concept of legal certainty which is not only seen as norm clarity, but also as a guarantee of the sustainability of long-term legal liability, even after the mining license expires. This approach is different from previous studies that tended to limit investor responsibility only during the validity of mining licenses.

The next novelty is the integration of the principles of environmental justice and strict liability as the basis for reformulating the environmental costing system in the mining sector. So far, the charging system is still administrative and does not have strong coercive power, making it prone to abuse. This research proposes that every mining business bear absolute

responsibility for the environmental impacts caused, without having to prove the element of fault, as applied in the concept of strict liability.

Furthermore, this research also offers a digital-based and participatory monitoring and reporting model for reclamation and post-mining funds. This innovation is intended to encourage transparency, accountability and public involvement as a form of social control over the implementation of environmental obligations by investors. This model is also a breakthrough in responding to the weak conventional supervision that has been carried out by state institutions in a limited manner.

In addition, the novelty of this research is also evident from the use of complementary theoretical approaches. This research simultaneously combines Gustav Radbruch's legal certainty theory, corporate responsibility theory, and Karl Llewellyn's law in action theory. The incorporation of these approaches not only strengthens the conceptual analysis, but also enables the tracing of the ineffectiveness of norms from upstream to downstream in Indonesia's environmental legal system.

Thus, this research not only contributes criticism of existing conditions, but also offers normative and structural solutions that can be used as the basis for developing environmental law policies that are more just, certain, and oriented towards sustainability.

## Conclusion

This research shows that the environmental law system in Indonesia, particularly in relation to investor responsibility for environmental restoration in the coal mining sector, has not yet provided substantial legal certainty. Normatively, Law No. 32/2009 and Law No. 3/2020 have established reclamation and post-mining obligations that become a legal burden for business actors. However, their implementation has not been effective due to weak monitoring mechanisms, lack of strict sanctions, and the absence of a sustainable accountability system after the expiration of mining licenses.

This discrepancy between norms and implementation confirms the gap between law in the books and law in action. The concept of legal certainty as theorized by Gustav Radbruch has not been fully realized in the reality of environmental law, because there is still neglect of ex-mining pits and the failure of companies to fulfill recovery obligations. This situation is exacerbated by the limited public involvement and transparency in the reporting and use of reclamation funds.

This research confirms that a legal approach that is not only administrative but also substantive and sustainability-oriented is needed. Environmental responsibility must be a legal obligation that is attached in the long term to the investor, and not cut off with the expiration of the business license. Thus, the law can truly play a strategic role in ensuring ecological justice for present and future generations.

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