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RECONSTRUCTING CORPORATE LIABILITY FOR ENVIRONMENTAL POLLUTION CAUSED BY INDUSTRIAL WASTE UNDER ENVIRONMENTAL PROTECTION AND MANAGEMENT LAW

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Abstract. *This study analyzes corporate legal liability for environmental pollution caused by industrial waste based on Law Number 32 of 2009 concerning Environmental Protection and Management. The research focuses on the forms of corporate liability, legal provisions related to liability, as well as sanctions and law enforcement mechanisms. Using a normative juridical design and a descriptive-analytical approach, this study examines primary legal materials in the form of the Environmental Protection and Management Law and secondary legal materials. Descriptive-analytical analysis was conducted to explain legal norms, the relevance of implementation, and the impact of legal practices on the effectiveness of environmental enforcement and protection. The results show that the Environmental Protection and Management Law provide a comprehensive framework with the polluter pays principle, making corporations legal subjects obliged to comply with environmental quality standards and prohibitions on illegal waste disposal. Sanctions can be cumulatively administrative, criminal, and civil, with enforcement mechanisms through inter-agency coordination, central government intervention, and community involvement. However, practical obstacles in the field, such as limited apparatus capacity, weak regulatory harmonization, and low public participation, indicate the need for capacity-building strategies, regulatory harmonization, and integration of community participation to increase legal certainty and the effectiveness of corporate accountability.*

Keywords: *Corporate Accountability; Enforcement Mechanisms; Environmental Pollution; Legal Sanctions.*

1. Introduction

The environment is a fundamental asset for the sustainability of human, flora, and fauna life. Rapid economic development and industrialization often result in environmental

degradation and pollution from industrial waste (Rifa & Hossain, 2022; Basrawi et al., 2025). In Indonesia, this problem is increasingly complex due to weak oversight, low corporate legal awareness, and limited law enforcement capacity (Kurniawan & Disemadi, 2020; Hasyim & Aprita, 2021). Environmental pollution by corporations not only harms ecosystems but also impacts public health and social welfare more broadly (Yahman & Setyagama, 2023). In response to increasing environmental threats, the Indonesian government enacted Law Number 32 of 2009 concerning Environmental Protection and Management (*Undang Undang Perlindungan dan Pengelolaan Lingkungan Hidup*/UU PPLH). This regulation emphasizes principles such as the polluter pays principle, strict liability, and the precautionary principle as the basis for enforcing environmental law (Lisdiyono & Asyhar Assalmani, 2017). The Environmental Management and Management Law stipulates that corporations can be subject to criminal, civil, and administrative law for actions that cause environmental pollution or damage. However, in practice, law enforcement against corporations as perpetrators of environmental crimes still faces serious challenges, from establishing evidence to implementing sanctions (Afriansyah et al., 2025).

Law enforcement against environmental crimes is often disproportionate to the extent of the damage caused. A study by Waspiah et al. (2023) shows that the legal approach to corporations remains largely symbolic, with light or merely administrative sanctions. This contradicts the spirit of the Environmental Management and Management Law, which places corporate criminal liability as the primary instrument in preventing environmental crimes. This problem is exacerbated by the lack of understanding of the characteristics of corporate crime among law enforcement officials, as well as the inconsistency between national legal principles and court practices (Adhari, 2024). Corporations, as subjects of criminal law, play a central role in pollution cases because their industrial activities produce waste that has the potential to pollute land, water, and air (Chandra & Sobirov, 2023; Rohman et al., 2024; Handayani & Hardiyanti, 2025). In practice, proving corporate fault (mens rea) remains a major obstacle. Ali et al. (2022) highlight that the mechanism of punishment without culpability can be applied in environmental cases to ensure the effectiveness of environmental criminal law. This view aligns with the principle of strict liability stipulated in Article 88 of the Environmental Management and Management Law, which holds corporations responsible for pollution even without direct fault.

On the other hand, the implementation of the ultimum remedium principle in the Environmental Management and Management Law is also still a matter of debate. Some experts argue that this principle should be applied selectively, given the systemic and massive impacts of environmental crimes (Suryawan et al., 2025). Adhari (2024) added that criminal law policies against corporations are often partial and fail to fully encourage changes in corporate behavior. As a result, criminal penalties are often imposed only after damage has occurred, rather than as a preventative measure. Several studies also reveal that the Indonesian legal system is not fully prepared to address the complexity of corporate environmental crimes. Akhmaddhian (2020) emphasized the importance of establishing a dedicated environmental court to ensure prompt and professional dispute resolution. Furthermore, Alfakar et al. (2023) outlined that the criminal liability model in the New Criminal Code remains adaptive to corporations, but requires harmonization with sectoral laws, such as the Environmental Management and Management Law, to avoid overlapping norms.

Another issue of concern is the weak coordination between law enforcement agencies and environmental oversight institutions (Kurniawan & Disemadi, 2020). Louhenapessy (2021) found that despite the existence of Supreme Court Regulation (*Peraturan Mahkamah Agung*/PERMA) Number 13 of 2016 concerning Procedures for Handling Criminal Cases by Corporations, its implementation is not optimal because officials do not have clear technical guidelines. This condition leads to disparities in law enforcement, where large corporations often escape criminal prosecution, while small perpetrators are subject to severe sanctions (Putra, 2024; Natsir et al., 2024). Law enforcement against environmental crimes by corporations in Indonesia still faces normative gaps and implementation weaknesses, indicating a research gap. Although Law Number 32 of 2009 concerning Environmental Protection and Management (*Undang Undang Perlindungan dan Pengelolaan Lingkungan Hidup*/UU PPLH) affirms criminal and civil liability for corporations, its implementation has been inconsistent due to weak inter-agency coordination and limited technical guidelines (Akhmaddhian, 2020; Natsir et al., 2024). The criminal liability model in the New Criminal Code also requires harmonization with sectoral laws to avoid overlapping norms (Alfakar et al., 2023).

Furthermore, regulations such as PERMA Number 13 of 2016 concerning Procedures for Handling Criminal Cases by Corporations have not been able to address the challenges of complex judicial practices, particularly in proving large-scale industrial environmental crimes (Sjawie, 2018; Afriansyah et al., 2025; Dewi et al., 2025). Recent studies highlight that corporations in the chemical and tanning sectors are still often only subject to administrative sanctions without adequate environmental recovery efforts (Pamuji et al., 2023; Aldyan et al., 2024; Aridhayandi et al., 2025).

From a policy perspective, law enforcement often still positions criminal sanctions as the ultimum remedium, rather than as the primary means of preventing pollution (Adhari, 2024; Handayani & Hardiyanti, 2025; Suryawan et al., 2025). The gap between norms and practices is also evident in post-pollution recovery, which often fails due to weak compensation and oversight mechanisms (Deslita & Ginting, 2020). On the other hand, policies based on local wisdom and community participation can be an alternative to strengthening environmental governance, especially in areas with weak legal oversight (Waspiah et al., 2023; Aldyan et al., 2024). The multi-door approach applied to forest fires and industrial pollution shows positive potential, although its implementation remains limited (Dermawan et al., 2023).

From these various studies, several important research gaps can be identified. First, there is a lack of uniformity in the application of the principles of strict liability and vicarious liability to corporations in environmental pollution cases. Second, there is weak harmonization between the Environmental Management Law (*Perlindungan dan Pengelolaan Lingkungan Hidup*/PPLH), the New Criminal Code, and the Omnibus Law regarding corporate accountability. Third, there is a need to strengthen the institutions and capacity of law enforcement officials to understand the evidentiary characteristics of corporate environmental crimes. Fourth, there is a need to evaluate the effectiveness of criminal sanctions in encouraging corporate compliance.

Based on this background, this study focuses on analyzing corporate legal liability for environmental pollution caused by industrial waste under Law Number 32 of 2009. Based on this background, the research questions are formulated as follows:

RQ1: What is the legal liability of corporations for environmental pollution caused by industrial waste under Law Number 32 of 2009?

RQ2: What are the legal provisions regarding corporate liability for environmental pollution under Law Number 32 of 2009?

RQ3: What are the sanctions and law enforcement mechanisms for corporations that commit environmental pollution?

Thus, this study aims to analyze the legal liability of corporations for environmental pollution caused by industrial waste, outline the legal provisions governing corporate liability under Law Number 32 of 2009, evaluate administrative, civil, and criminal sanctions and their enforcement mechanisms, and provide strategic recommendations to strengthen legal certainty, enforcement effectiveness, and environmental protection.

2. Research Methods

This research uses a normative legal design with a descriptive-analytical approach to analyze corporate legal liability for environmental pollution caused by industrial waste. The normative legal design method with a descriptive-analytical approach was used because it allows researchers to systematically examine statutory provisions while also describing their actual implementation practices, resulting in a comprehensive and measurable analysis. The primary focus of the research is Law Number 32 of 2009 concerning Environmental Protection and Management (*Undang Undang Perlindungan dan Pengelolaan Lingkungan Hidup*/UU PPLH), which serves as a reference in determining the form of corporate liability, law enforcement mechanisms, and sanctions that can be imposed. In addition to the PPLH Law, this research also considers supporting regulations such as the New Criminal Code, the Omnibus Law, and Supreme Court Regulation Number 13 of 2016, to examine the alignment of legal provisions and their implementation in practice.

The primary legal materials used in this research include the regulations that form the basis of the analysis, specifically Law Number 32 of 2009 concerning Environmental Protection and Management, the new Criminal Code, the Job Creation Law, and Supreme Court Regulation Number 13 of 2016 concerning Procedures for Handling Criminal Cases by Corporations. Meanwhile, secondary legal materials consist of legal literature, open books, scientific journals, previous research results, expert opinions, and various related academic sources that serve to enrich interpretations and provide theoretical and empirical context. All of this data is analyzed descriptively and analytically, starting with an explanation of the substance of norms in laws and regulations, followed by a review of their relevance and implementation in law enforcement practices, and finally an assessment of their guarantees for environmental protection and the effectiveness of corporate accountability.

3. Results and Discussion

3.1. Forms of Liability and Legal Provisions Regarding Corporate Responsibility for Environmental Pollution

Based on Law Number 32 of 2009 concerning Environmental Protection and Management (*Undang Undang Perlindungan dan Pengelolaan Lingkungan Hidup*/UU PPLH), corporations are included in the category of "every person" as regulated in Article 1 number 32, which makes business entities, both legal entities and not, legal subjects that can be held accountable (Mujiono & Tanuwijaya, 2019; Adhari, 2024; Afriansyah et al., 2025). Corporate legal responsibility is comprehensive, including obligations to prevent, mitigate, and restore pollution caused by industrial waste (Chandra & Sobirov, 2023). This regulation positions corporations as the primary actors in maintaining ecosystem balance, where failure to comply can result in irreversible environmental impacts, such as water and soil pollution from toxic waste (Lisdiyono & Asyhar Assalmani, 2017; Widiartana et al., 2025).

Corporations are required to undertake preventative measures by preparing an Environmental Impact Analysis (*Analisis Mengenai Dampak Lingkungan*/Amdal) or Environmental Management Efforts-Environmental Monitoring Efforts (*Upaya Manajemen Lingkungan-Upaya Pemantauan Lingkungan*/UKL-UPL), complying with environmental quality standards, and obtaining environmental permits before operating (Arifin et al., 2025; Handayani & Hardiyanti, 2025; Kurniawan et al., 2025). These provisions are designed to ensure that all industrial activities do not exceed established pollution thresholds, thereby preventing environmental damage from occurring (Listiyani & Said, 2018). If pollution occurs, corporations are obliged to address and restore environmental functions, including providing a restoration guarantee fund as stipulated in Article 55 (Rakasiwi et al., 2021; Ramadhan et al., 2024). This fund serves as a financial guarantee for restoration, emphasizing that corporations are not only legally but also economically responsible for the impacts of their activities (Hendriana et al., 2025).

This accountability rests on the polluter pays principle (Article 2 letter j), which requires businesses to bear the costs of the negative impacts of their industrial activities. This principle emphasizes that corporations, as entities that profit from the exploitation of natural resources, must internalize environmental costs into their operations, thereby encouraging sustainable business practices (Suryawan et al., 2025). Furthermore, in cases involving hazardous waste, corporate responsibility is based on strict liability, where proof of fault is not required if pollution is proven (Lisdiyono & Asyhar Assalmani, 2017; Mujiono & Tanuwijaya, 2019; Chandra & Sobirov, 2023; Hansen, 2025). Thus, corporations cannot avoid responsibility for activities that risk polluting the environment, even if no malicious intent is proven (Ali et al., 2022).[1] This strict liability provision strengthens the position of corporations as legal subjects equal to individuals, ensuring that the impacts of pollution, as often occurs with toxic industrial waste, can be handled quickly without relying on subjective evidence (Hendriana et al., 2025).

According to the Environmental Management and Management Law, a corporation is considered "any person," including both legal and unincorporated business entities

(Article 1, paragraph 32). Corporate legal liability for environmental pollution caused by industrial waste is direct and comprehensive, encompassing prevention, mitigation, and recovery. Pollution is defined as the entry of substances or components that exceed environmental quality standards (Article 1, paragraph 14), while industrial waste includes potentially harmful Hazardous and Toxic Materials/Waste (*Bahan Berbahaya dan Beracun*/B3 waste) (Article 1, paragraphs 20-22). This definition provides a clear framework for identifying violations, where corporations that discharge waste without proper treatment can be directly held liable.

In addition, the forms of accountability include several types, namely, prevention, companies are required to comply with environmental quality standards, conduct Environmental Impact Analysis (Amdal) or Environmental Management Efforts - Environmental Monitoring. (*Upaya Manajemen Lingkungan-Upaya Pemantauan Lingkungan*/UKL-UPL), and obtain an environmental permit before operating (Article 20, paragraph (3), Article 36). They must also manage B3 waste through reduction, storage, and landfill with a permit (Article 59). These provisions aim to integrate environmental considerations from the business planning stage, preventing pollution before it occurs. Then there is Mitigation and Recovery, If pollution occurs, companies are obliged to carry out mitigation (Article 53) and restore environmental functions (Article 54). In addition, they must provide a guarantee fund for recovery (Article 55 paragraph (1)). This includes restoring damaged ecosystems, such as cleaning rivers polluted by chemical waste.

Finally, there are General Obligations, Companies are obliged to maintain environmental sustainability, provide accurate information, and comply with quality standards (Articles 67 and 68). Explicit prohibitions include disposing of waste without a permit (Article 60) and disposing of hazardous materials (B3) into the environment (Article 69 paragraph (1) letters e-f). These obligations emphasize the transparency and accountability of companies to the public and the government.

This accountability is based on the "polluter pays" principle (Article 2 letter j), where corporations must bear the costs of the negative impacts of their industrial activities. This principle aligns with the global approach to ensuring that economic actors are responsible for environmental externalities, thereby encouraging environmentally friendly technological innovation (Lisdiyono & Asyhar Assalmani, 2017; Chandra & Sobirov, 2023).

Legal provisions in the Environmental Management and Management Law emphasize the responsibility of corporations as those responsible for businesses/activities. Article 1 paragraph 32 explicitly equates corporations with individuals, allowing them to be directly sanctioned (Lisdiyono & Asyhar Assalmani, 2017; Mujiono & Tanuwijaya, 2019). This strict liability applies to cases of hazardous and toxic materials (B3) pollution, where proof of fault is not always required if the impact is proven. This approach facilitates law enforcement against corporations, which often have complex structures that make it difficult to prove individual intent (Chandra & Sobirov, 2023).

Specific regulations include: Industrial waste management must meet quality standards and require permits from the Minister, governor, or regent/mayor (Article 20 paragraph (3), Article 59 paragraph (4)). This ensures that every stage of production is monitored to prevent pollution. Furthermore, companies are prohibited from discharging waste that causes pollution (Article 69). This prohibition includes direct discharge into rivers or land,

which are often the main source of ecosystem damage. Finally, civil liability includes compensation and restitution (implied in Articles 87-92), while administrative and criminal liability are applied cumulatively (Article 78). This cumulative nature means companies can face multiple sanctions, increasing the deterrent effect.

This provision aims to prevent pollution through preventive and restorative controls, with community participation in monitoring (Article 65) (Pamuji et al., 2023; Afriansyah et al., 2025; Aridhayandi et al., 2025; Yusuf et al., 2025). In the context of industries such as mining or leather processing, where toxic waste is often an issue, the Environmental Management Law emphasizes that corporations must integrate environmental management as a core part of their operations (Lisdiyono & Asyhar Assalmani, 2017; Andesgur, 2019). For example, in the leather tanning industry, production produces liquid waste with a high organic content and pollutants such as chromium, which requires strict management in accordance with Article 59 to avoid pollution (Aridhayandi et al., 2025).

Furthermore, the strict liability provisions in Article 88 strengthen the legal position of corporations, where the impact of pollution alone is sufficient to trigger liability, without the need to prove negligence (Suryawan et al., 2025; Widiartana et al., 2025). This aligns with the trend of legal reform in Indonesia, where corporations are recognized as full criminal subjects, as stipulated in environmental sector regulations (Rohmy et al., 2021). In cases of hazardous and toxic pollution, corporations cannot claim lack of evidence of fault, as their focus is on environmental restoration (Salim & Palullungan, 2021). This approach also supports the principle of ecological justice, where corporations, as the primary perpetrators of pollution, must be held accountable for the damage caused, including to indigenous peoples or local communities that depend on a clean environment (Rohman et al., 2024).

The Environmental Management and Management Law also integrates corporate responsibility within the context of sustainable development, where industrial activities must be aligned with environmental protection. Article 2 emphasizes the principle of fairness, stating that corporations must not sacrifice the environment for the sake of mere economic gain. This provision reinforces that corporations, as legal entities, have an ethical and legal obligation to prevent pollution, such as through advanced waste treatment technologies. In practice, this provision encourages corporations to conduct internal environmental audits, ensure compliance with quality standards (Article 20), and avoid dumping prohibitions (Article 60).

Overall, the legal provisions in the Environmental Management and Management Law create a robust framework for corporate accountability, with a focus on prevention and restoration (Mujiono & Tanuwijaya, 2019; Louhenapessy & Salampak, 2021; Mangkunegara, 2024). Articles 87-92 implicitly emphasize civil compensation, while Article 78 allows for cumulative sanctions, ensuring that corporations do not escape responsibility (Rakasiwi et al., 2021; Natsir et al., 2024). This regulation not only protects the environment but also ensures that industrial activities contribute to sustainability, requiring corporations to internalize environmental costs (Pamuji et al., 2023; Ramadhan et al., 2024). Thus, the Environmental Management and Management Law is a key instrument in regulating corporate responsibility for pollution, making them fully accountable legal subjects (Rohman et al., 2024).

3.2. Types of Sanctions That Can Be Imposed on Corporations Proven to Have Committed Environmental Pollution

Law Number 32 of 2009 concerning Environmental Protection and Management (*Undang Undang Perlindungan dan Pengelolaan Lingkungan Hidup*/UU PPLH) stipulates multiple sanctions against corporations found guilty of environmental pollution, encompassing administrative, criminal, and civil penalties (Lisdiyono & Asyhar Assalmani, 2017; Louhenapessy & Salampak, 2021). This multi-layered approach is designed to ensure a deterrent effect, encourage compliance with environmental regulations, and ensure environmental restoration and ecological justice for affected communities (Mujiono & Tanuwijaya, 2019; Mangkunegara, 2024). This provision reflects a commitment to holding corporations, as legal entities, fully responsible for the environmental impacts of their industrial activities, such as water, land, or air pollution caused by industrial waste (Hamdi et al., 2023).

Administrative sanctions are regulated in Articles 76 to 80 of the Environmental Management and Management Law and are imposed by authorized officials, such as the Minister of Environment, governors, or regents/mayors, without requiring a court process. These sanctions include written warnings, government coercion (such as temporary suspension of production activities or confiscation of production equipment), freezing of environmental permits, and revocation of environmental permits (Article 76 paragraphs (1)-(2)). Administrative sanctions are swift and direct, allowing the government to halt polluting activities as quickly as possible, for example in cases of dumping hazardous and toxic waste (B3) into rivers without a permit (Chandra & Sobirov, 2023). Article 80 explicitly stipulates that government coercion can include confiscation of production equipment used to commit violations, providing a direct deterrent effect by disrupting corporate operations.

It is important to note that administrative sanctions do not exempt corporations from criminal or civil liability (Article 78), emphasizing the cumulative nature of the sanctions system in the Environmental Management and Management Law. For example, a mining company that disposes of tailings waste without processing may receive a written warning, be temporarily suspended from operations, and still be required to pay civil compensation (Handayani & Hardiyanti, 2025). These administrative sanctions are designed to encourage compliance from the outset and prevent further environmental damage, particularly in high-risk industries such as mining and industries with hazardous waste, where toxic waste is often a source of pollution (Hamdi et al., 2023; Aridhayandi et al., 2025).

Furthermore, criminal sanctions are regulated in Chapter XIII of the Environmental Management and Management Law, specifically Articles 98 to 103, and are intended for serious violations, such as the unauthorized disposal of hazardous waste or violations of environmental quality standards that cause ecosystem damage or harm to human health. Penalties include imprisonment and significant fines, which can be imposed on both corporate administrators and the corporation itself as a legal entity. Article 98, for example, stipulates that perpetrators who intentionally commit acts that cause environmental pollution can be punished with imprisonment of up to three years and a fine of up to IDR 3 billion. For violations related to hazardous waste, Article 102 stipulates a penalty of up to seven years' imprisonment and a fine of up to IDR 7 billion, reflecting the seriousness of the violation.

The strict liability approach in Article 88 of the Environmental Management and Management Law strengthens the application of criminal sanctions in hazardous waste cases, where corporations can be sanctioned without the need to prove fault or intent (Chandra & Sobirov, 2023). This simplifies law enforcement against corporations, which often have complex organizational structures, making it difficult to prove individual intent (Dewi et al., 2025). In cases such as land burning by plantation companies, criminal sanctions can be imposed on corporations based on proven environmental impacts, such as smoke that harms public health or damage to peat ecosystems (Deslita & Ginting, 2020; Hayatuddin & Saputra, 2021).

Furthermore, Article 119 letter c allows for the imposition of additional sanctions, such as orders to restore environmental functions, which strengthens the restorative aspect of criminal sanctions (Widiartana et al., 2025). These criminal sanctions aim not only to provide a deterrent effect but also to encourage changes in corporate behavior toward more environmentally friendly practices. However, challenges in implementing criminal sanctions often arise due to a lack of coordination between law enforcement agencies and limited capacity in environmental impact investigations (Handayani & Hardiyanti, 2025). Nevertheless, the recognition of corporations as subjects of criminal law in the Environmental Management and Management Law represents a step forward in legal reform in Indonesia, in line with global developments in addressing corporate crime (Alfakar et al., 2023; Mariane, 2024).

Finally, civil sanctions are regulated in Article 87 of the Environmental Management and Management Law, which requires corporations to pay compensation, carry out environmental restoration, and provide compensation to affected communities. Civil lawsuits can be filed by the government, the community, or environmental organizations, thus providing space for public participation in demanding ecological justice (Lisdiyono & Asyhar Assalmani, 2017; Natsir et al., 2024). Article 87 paragraph (1) emphasizes that any business actor causing environmental pollution or damage is obliged to pay compensation and/or undertake certain actions, such as environmental cleanup or ecosystem rehabilitation.

Furthermore, Article 54 regulates the obligation of corporations to restore environmental functions, which can include technical efforts such as remediation of contaminated land or water (Widiartana et al., 2025). In practice, civil sanctions are often used to address major cases, such as pollution by the mining or plantation industries, where the impact is felt by the wider community (Afriansyah et al., 2025). For example, in the case of river pollution due to waste from the leather tanning industry, corporations may be required to pay compensation to fishing communities who lose their livelihoods, while also cleaning the river (Aridhayandi et al., 2025). This approach aligns with the polluter pays principle (Article 2 letter j), which emphasizes that corporations must bear the full costs of their environmental impacts (Suryawan et al., 2025).

However, the implementation of civil sanctions faces challenges, such as lengthy civil court procedures and limited adequate compensation mechanisms. To address this, the Environmental Management and Management Law (*Undang Undang Perlindungan dan Pengelolaan Lingkungan Hidup*/UU PPLH) allows for class action lawsuits by communities or environmental organizations, as stipulated in Article 91, to advocate for the rights of affected communities (Imamulhadi & Kurniati, 2019; Kurniawan et al., 2025). However, the effectiveness of class action lawsuits is often hampered by strict formal requirements,

such as those stipulated in Supreme Court Regulation Number 1 of 2002, which sometimes lead to lawsuits being rejected in court.

All three types of sanctions (administrative, criminal, and civil) are cumulative, meaning they can be applied simultaneously according to the severity of the violation and the impact of the pollution (Lisdiyono & Asyhar Assalmani, 2017; Ali et al., 2022; Chandra & Sobirov, 2023). For example, a corporation that dumps hazardous waste without a permit can be subject to a written warning (administrative sanction), fines and imprisonment for its management (criminal sanction), and the obligation to pay compensation and restore the environment (civil sanction) (Afriansyah et al., 2025; Widiartana et al., 2025). This approach ensures that the corporation faces comprehensive consequences, not only to stop the violation but also to repair the damage that has occurred (Suryawan et al., 2025).

This cumulative nature also reinforces the principle of ecological justice, where corporations are not only punished for violations but also held accountable for their long-term impacts on the environment and society (Aridhayandi et al., 2025). In the context of environmental crimes such as forest fires or mining pollution, cumulative sanctions allow for stricter law enforcement, especially when violations involve significant ecosystem damage (Hamdi et al., 2023; Afriansyah et al., 2025). However, the implementation of these sanctions requires strong coordination between law enforcement agencies, such as the police, prosecutors, and environmental agencies, to ensure their effectiveness (Ali et al., 2022; Suryawan et al., 2025).

Overall, the sanctions system in the Environmental Management and Management Law is designed to create a maximum deterrent effect for corporations, while ensuring environmental restoration and compensation for injured parties (Lisdiyono & Asyhar Assalmani, 2017; Ali et al., 2022; Chandra & Sobirov, 2023). By integrating administrative, criminal, and civil sanctions, the Environmental Management and Management Law provides a robust legal framework for addressing environmental pollution by corporations, making them fully accountable legal subjects (Natsir et al., 2024; Afriansyah et al., 2025). This approach emphasizes the principles of ecological justice and the polluter pays principle, so that corporations are not only punished but also required to bear the full costs of their environmental impacts (Aridhayandi et al., 2025).

3.3. Law Enforcement Mechanisms and Integration of Provisions in Support of Corporate Accountability

Environmental law enforcement under Law Number 32 of 2009 concerning Environmental Protection and Management (*Undang Undang Perlindungan dan Pengelolaan Lingkungan Hidup*/UU PPLH) is designed through a coordinated mechanism, involving administrative, civil, and criminal approaches (Waspiah et al., 2023; Adhari, 2024). This approach aims to ensure corporate accountability for environmental pollution, such as toxic industrial waste or ecosystem damage due to mining activities, by prioritizing preventive, restorative, and participatory principles (Mangkunegara, 2024; Arifin et al., 2025). This mechanism involves the central government, regional governments, and the community, with inter-agency coordination key to ensuring effective law enforcement (Triana et al., 2022; Pamuji et al., 2023). The integration of provisions in the Environmental Management and Management Law, including tiered

supervision, strict liability enforcement, and community participation, strengthens corporate accountability and protects the public's right to a healthy environment (Akhmaddhian, 2020; Saputra & Dhianty, 2022; Weningtyas & Widuri, 2022).

Supervision is the initial stage in the environmental law enforcement mechanism, as stipulated in Articles 71 to 72 of the Environmental Management and Management Law. Supervision is carried out by the Minister of Environment, governors, or regents/mayors, who have the authority to audit corporate compliance with environmental permits, environmental quality standards, and waste management requirements, including hazardous and toxic waste (B3). Supervisory officials are authorized to monitor industrial activities, take waste samples, and immediately stop violations (Article 74). For example, in the case of a leather tanning industry that produces chromium waste, supervisory officials can take river water samples to verify compliance with environmental quality standards.

This oversight is preventative, aiming to prevent pollution before it occurs. Corporations are required to prepare an Environmental Impact Analysis (Amdal) or Environmental Management Plan-Environmental Monitoring Plan (*Upaya Manajemen Lingkungan-Upaya Pemantauan Lingkungan*/UKL-UPL) before commencing operations (Article 36), and oversight ensures that these documents are properly implemented. If violations are discovered, such as unlicensed waste disposal, authorized officials can immediately impose administrative sanctions, such as written warnings or temporary suspension of activities (Article 76). This approach allows for a swift response to violations, particularly in cases that have the potential to damage ecosystems, such as land burning by plantation companies.

If local governments fail to carry out oversight or enforce the law, the Environmental Management Law authorizes the Minister of Environment to take over these duties, as stipulated in Articles 73 and 77. This intervention is crucial to ensure consistent law enforcement across Indonesia, particularly in regions with limited resources or enforcement capacity. For example, if a local government fails to address river pollution caused by industrial waste, the Minister can take corrective action, such as ordering the corporation to cease operations or revoke its environmental permit.

This central government intervention is also relevant in cases with transboundary impacts, such as haze pollution caused by forest fires involving corporations. In such cases, coordination between the central and regional governments is crucial to ensure that perpetrators, both individuals and corporations, are held accountable. This provision demonstrates that the Environmental Management and Management Law (*Undang Undang Perlindungan dan Pengelolaan Lingkungan Hidup*/UU PPLH) is designed to create a flexible yet firm law enforcement system, with a clear hierarchy of authority to address negligence at the local level.

From a criminal perspective, law enforcement is carried out through investigations by Civil Servant Investigators (*Penyidik Pegawai Negeri Sipil*/PPNS) for the environment, as stipulated in Article 74 paragraph (2). PPNS have the authority to confiscate production equipment, examine documents, and report to the prosecutor's office for further processing. These investigations focus on serious violations, such as the unauthorized disposal of B3 waste or violations of environmental quality standards that cause ecosystem damage (Articles 98–103). For example, in cases of land burning by

corporations, Civil Servant Investigators can confiscate the heavy equipment used and gather evidence to support criminal proceedings.

The application of strict liability in Article 88 of the Environmental Management and Management Law (*Undang Undang Perlindungan dan Pengelolaan Lingkungan Hidup*/UU PPLH) strengthens criminal investigations, as corporations can be held accountable without needing to prove fault or intent (Ali et al., 2022; Chandra & Sobirov, 2023). This approach facilitates law enforcement against corporations, which often have complex organizational structures, making it difficult to prove the intent of individuals within them (Louhenapessy & Salampak, 2021; Alfakar et al., 2023). However, challenges in investigations often arise due to limited capacity of the Public Order Agency, such as a lack of environmental expertise or budget support for in-depth investigations (Arimurti & Najicha, 2023; Hasyim & Aprita, 2021). Coordination with the police is also crucial to ensure effective investigations, particularly in high-impact cases such as toxic waste pollution (Deslita & Ginting, 2020; Handayani & Hardiyanti, 2025).

Environmental dispute resolution, as defined in Article 1 paragraph 25 of the Environmental Management and Management Law, can be carried out through alternative mechanisms such as mediation and arbitration, or through the courts, as stipulated in Article 84 (Akhmaddhian, 2020; Triana et al., 2022). The government has a role to facilitate dispute resolution, including through mediation involving relevant parties, such as corporations, affected communities, and environmental organizations (Article 63 paragraph (1) letter q) (Weningtyas & Widuri, 2022; Afriansyah et al., 2025). This mediation approach has proven effective in cases such as river pollution in industrial areas, where local communities can negotiate with corporations to obtain compensation and guarantees of environmental restoration (Pamuji et al., 2023; Mangkunegara, 2024).

However, if mediation is unsuccessful, disputes can be brought to court, either through a civil lawsuit for compensation and restoration (Article 87) or through criminal proceedings for serious violations (Articles 98–103). In class action cases, communities or environmental organizations can file lawsuits on behalf of affected communities, as stipulated in Article 91 (Handayani & Hardiyanti, 2025; Kurniawan et al., 2025). However, the effectiveness of these lawsuits is often hampered by strict formal requirements, such as those stipulated in Supreme Court Regulation Number 1 of 2002. To address this, some experts recommend the establishment of a dedicated environmental court to handle environmental disputes more efficiently (Akhmaddhian, 2020; Louhenapessy & Salampak, 2021).

The integration of provisions in the Environmental Management and Management Law emphasizes the application of preventive, restorative, and participatory principles as key pillars of law enforcement. The preventive principle is reflected in the obligation to monitor and prepare an Environmental Impact Analysis (EIA) or Environmental Management and Environmental Impact Assessment (*Upaya Manajemen Lingkungan-Upaya Pemantauan Lingkungan*/UKL-UPL) (Article 36), which ensures that potential pollution is identified early. The restorative principle is realized through the obligation to restore the environment (Article 54) and the imposition of civil sanctions for compensation (Article 87). Meanwhile, the participatory principle is emphasized through community involvement in monitoring (Article 65) and dispute resolution, providing space for communities to assert their right to a healthy environment.

The application of strict liability in Article 88 of the Environmental Management and Management Law is a key element in supporting corporate accountability, as it enables swift and effective law enforcement without relying on proof of wrongdoing (Mujiono & Tanuwijaya, 2019; Kurniawan & Disemadi, 2020; Alfakar et al., 2023; Waspiah et al., 2023). This principle is particularly relevant in cases of hazardous and toxic pollution, such as toxic industrial waste, where environmental impacts can be readily detected (Deslita & Ginting, 2020; Afriansyah et al., 2025). Furthermore, transparency of public information, as stipulated in Articles 67 and 68, ensures the public has access to corporate compliance data, thereby strengthening community-based oversight (Pamuji et al., 2023; Widiartana et al., 2025).

Coordination between institutions, such as the Ministry of Environment and Forestry (*Kementerian Lingkungan Hidup dan Kehutanan*/KLHK), the police, and the prosecutor's office, is a crucial element for effective law enforcement (Handayani & Hardiyanti, 2025). Challenges, including limited capacity of the National Civil Service Agency (*Penyidik Pegawai Negeri Sipil*/PPNS) and a lack of coordination, often hamper law enforcement, particularly in cases of trans-regional pollution (Salim & Palullungan, 2021; Ali et al., 2022). To address this, the Environmental Management and Management Law (*Undang Undang Perlindungan dan Pengelolaan Lingkungan Hidup*/UU PPLH) encourages a multi-door approach, integrating administrative, criminal, and alternative mechanisms such as mediation to create a more holistic law enforcement system (Rohmy et al., 2021; Triana et al., 2022; Dermawan et al., 2023).

The law enforcement mechanisms in the Environmental Management and Management Law provide a comprehensive framework to ensure corporate accountability for environmental pollution. By integrating multi-level supervision, criminal investigations, dispute resolution, and community participation, the Environmental Management and Management Law creates a system that supports ecological justice and sustainable development (Akhmaddhian, 2020; Louhenapessy & Salampak, 2021; Waspiah et al., 2023). Successful implementation depends on interagency coordination and increased law enforcement capacity to handle increasingly complex environmental cases (Mangkunegara, 2024; Hendriana et al., 2025).

4. Conclusion

Based on the analysis, the legal liability of corporations for environmental pollution caused by industrial waste under Law Number 32 of 2009 is comprehensive and multidimensional, encompassing prevention, mitigation, and environmental restoration through the "polluter pays" principle. The Environmental Management and Management Law affirms corporations as legal entities obligated to comply with environmental quality standards, possess valid operational permits, and are prohibited from illegally dumping waste. The sanctions are multi-layered and can be imposed cumulatively, including administrative sanctions such as written warnings, suspension of activities, and permit revocation; criminal sanctions in the form of fines and imprisonment for corporate managers found responsible; and civil sanctions in the form of obligations to pay compensation and undertake environmental restoration. Law enforcement mechanisms rely on coordination between supervisory agencies, intervention from the central government, and multi-party dispute resolution, including community and private sector involvement in monitoring and restoration. Despite the existing legal framework, implementation in the field still faces obstacles such as limited capacity of law

enforcement officers, weak harmonization between the Environmental Management and Management Law and sectoral regulations, and suboptimal public participation. Therefore, strengthening supervisory capacity, increasing regulatory harmonization, and integrating public participation are strategic steps to increase the effectiveness of corporate accountability.

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