

Implementation of the *Strict Liability* Principle in Civil Liability for Industrial Waste Pollution

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Abstract : *This study examines the implementation of the strict liability principle under Article 88 of Law Number 32 of 2009 on Environmental Protection and Management in civil liability for industrial waste pollution in Rembang Regency. Using an empirical descriptive-analytical legal research method with statutory and fact approaches, data were collected through semi-structured interviews and document study. The results show that the implementation of strict liability is not optimal. Environmental dispute resolution is still dominated by administrative mechanisms such as coaching and warning letters, while civil lawsuits are almost never used. The main obstacles do not lie in the weakness of the norm, but rather in the limited scientific evidence to prove causation, low public understanding of the right to sue, the dominance of administrative approaches, and the absence of technical guidelines for implementing Article 88 at the regional level. Changes to the phrasing in the Job Creation Law also create interpretive uncertainty. In conclusion, the effectiveness of the strict liability principle requires strengthening institutional capacity, supporting scientific evidence, increasing public legal awareness, and progressive regional policies in order to function optimally as an instrument for environmental recovery and protection of pollution victims.*

Keywords : *Industrial Waste Pollution; Civil Liability; Strict Liability.*

Abstrak : Penelitian ini melihat bagaimana penerapan prinsip tanggung jawab mutlak berdasarkan Pasal 88 Undang-Undang No. 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup dalam kasus perdata terkait pencemaran limbah industri di Kabupaten Rembang. Dengan menggunakan metode penelitian hukum deskriptif-analitis empiris yang menggabungkan pendekatan normatif dan faktual, data dikumpulkan melalui wawancara semi-terstruktur dan analisis dokumen. Hasil penelitian menunjukkan bahwa penerapan tanggung jawab mutlak belum optimal. Penyelesaian sengketa lingkungan masih sebagian besar dilakukan melalui jalur administratif seperti pembinaan dan surat peringatan, sementara gugatan perdata jarang digunakan. Hambatan utama bukan karena kelemahan hukum itu sendiri, tetapi lebih karena bukti ilmiah yang terbatas untuk membuktikan hubungan sebab-akibat, kesadaran masyarakat yang rendah untuk mengajukan gugatan, dominasi pendekatan administratif, serta kurangnya pedoman teknis untuk pelaksanaan Pasal 88 di tingkat daerah. Perubahan pada frasa dalam Undang-Undang Cipta Kerja juga menimbulkan ketidakpastian dalam penafsiran. Kesimpulannya, efektivitas prinsip pertanggungjawaban mutlak membutuhkan penguatan kapasitas kelembagaan, dukungan bukti ilmiah, peningkatan kesadaran hukum masyarakat, dan kebijakan regional yang progresif agar dapat berfungsi secara optimal sebagai instrumen pemulihan lingkungan dan perlindungan korban pencemaran.

Kata kunci : Pencemaran Limbah Industri; Tanggung Jawab Perdata; Pertanggungjawaban Mutlak.

INTRODUCTION

Industrial development in Indonesia is an important part of the government's efforts to drive national economic growth. Industrialization is considered capable of increasing productivity, creating employment, and accelerating the equitable distribution of regional economic development (Mulyadi, 2018). Rapid industrial development has various impacts on the environment, particularly in the form of pollution from production waste. Improper disposal of industrial waste can contaminate water, soil, and air, thereby endangering environmental protection and the health of surrounding residents. Industrial development must adhere to the principles of sustainable development in order to maintain a balance between economic interests and environmental protection.

The application of *strict liability* in environmental dispute resolution can strengthen the position of victims by reducing the burden of proving fault, thereby enabling the environmental recovery process to proceed more effectively (Akib dkk., 2023). In addition, the success of environmental law enforcement is determined not only by the existence of normative regulations, but also by the consistent application of liability principles against polluters (Kurnia dkk., 2023).

Environmental protection is a fundamental human right guaranteed by Article 28H, Paragraph (1) of the 1945 Constitution of the Republic of Indonesia, which states that everyone has the right to a good and healthy environment. To guarantee this right, the government has enacted Law Number 32 of 2009 on Environmental Protection and Management (UUPPLH) as the primary legal instrument for preventing and combating pollution. One of the main instruments regulated by this law is the principle of strict liability, as stipulated in Article 88 of the UUPPLH. This provision affirms that any person whose actions, business, and/or activities use hazardous and toxic materials (B3), generate or manage B3 waste, or pose a serious threat to the environment shall bear full responsibility for the resulting damage, without the need to prove fault. Through this principle, victims of environmental pollution do not need to prove that the polluter was at fault; it is sufficient to demonstrate the damage and its relationship to the high-risk activity. This concept is an implementation of the precautionary principle and the polluter pays principle, which have developed within international environmental law (Mahardika, 2022).

In environmental law, the application of the principle of *strict liability* has not yet run optimally. Various environmental pollution disputes still face obstacles in the form of differing interpretations of Article 88 of the UUPPLH, limited scientific evidence, the dominance of administrative settlements, and the still-suboptimal use of civil lawsuits as an instrument of environmental recovery. Regulatory changes through Law Number 11 of 2020 on Job Creation, which was subsequently enacted as Law Number 6 of 2023, have also sparked debate regarding the removal of the phrase "without the need to prove fault," thereby creating uncertainty in the practice of environmental law enforcement.

Although the principle of strict liability provides a strong legal basis for environmental law enforcement, its practical implementation still faces various obstacles. Several studies indicate that the application of the strict liability principle in environmental disputes in Indonesia has not been optimal, and note that judges in several environmental court rulings still consider fault, even though Article 88 of the UUPPLH explicitly removes this burden of proof.

This inconsistency is also evident in the case of industrial pollution in Rembang Regency. Rembang Regency is one of the regions experiencing rapid industrial growth, particularly in seafood processing, cement manufacturing, general manufacturing, and related sectors. On the other hand, complaints from local residents regarding alleged pollution caused by industrial activities still frequently occur. These complaints typically concern foul odors, declining water quality, and health problems allegedly caused by industrial activities. However, these cases are primarily handled through administrative mechanisms such as monitoring, consultation, on-site inspection, and the imposition of administrative fines by the local government. The use of civil liability mechanisms based on the strict liability principle remains very limited. This situation indicates an empirical gap between the objectives of Article 88 of the UUPPLH and its practical implementation.

Unlike previous research, which has largely examined the principle of *strict liability* from a normative perspective, this study concludes that the obstacles to implementing Article 88 of the UUPPLH in Rembang Regency lie not in the weakness of the legal regulation, but rather in the dominance of administrative settlements, limited scientific evidence, the low utilization of civil lawsuits, and the absence of technical guidelines for applying *strict liability* at the regional level. These findings point to an implementation model that shows the relationship among legal substance, institutional capacity, scientific evidence, and community legal culture in determining the effectiveness of civil liability for industrial pollution.

The urgency of this study is further heightened by the growing demand for effective, fair, and environmentally regenerative environmental law enforcement. The results of this study are expected to contribute academically to the further development of environmental law and, at the same time, serve as a basis for assessment for local governments, law enforcement agencies, and economic actors in optimizing the application of the strict liability principle as an instrument of environmental protection.

RESEARCH METHOD

This study relies on an empirical, descriptive-analytical legal research method, using a statutory approach (*statute approach*) and a fact approach (*fact approach*). Empirical legal research aims not only to examine the legal norms governing the principle of strict liability in civil law in cases of pollution caused by industrial waste, but also to analyze its application in the practice of environmental law enforcement in Rembang Regency.

The research subjects included the Rembang Regency Environmental Protection Agency, companies whose activities have the potential to cause industrial waste pollution, and affected communities or individuals with knowledge of environmental pollution issues. Participants were selected using a purposive sampling method, meaning they were chosen based on their knowledge of and direct relevance to the research topic.

The data used in this study consist of primary and secondary data. Primary data were obtained through semi-structured interviews with informants who have expertise and experience in applying the strict liability principle in cases of industrial wastewater pollution. Secondary data were obtained through a literature review encompassing laws and regulations, legal textbooks, scientific journal articles, and other documents relevant to environmental civil liability.

Data collection was conducted through interviews. Interviews were conducted to gather information on the application of the *strict liability* principle in handling waste decontamination cases. The collected data were then analyzed qualitatively using a descriptive-analytical method. This analysis involved data reduction, data presentation, conclusion drawing, and triangulation between primary and secondary data. Using this method, this study aims to explain the effectiveness of applying the strict liability principle in civil liability for industrial pollution and to identify the factors influencing its implementation.

RESULTS AND DISCUSSION

Regulation of the Principle of *Strict Liability* under Article 88 of Law Number 32 of 2009 on Environmental Protection and Management

The principle of *strict liability* is one form of legal liability that has developed in modern environmental law in response to the growing risk of environmental damage caused by industrial activities. Unlike the concept of fault-based liability (*fault liability*), the principle of *strict liability* imposes liability on business actors without requiring proof of fault. This concept arose from the need to provide more effective legal protection to victims of environmental pollution, since proving fault in environmental legal proceedings is often difficult, as it requires complex scientific evidence of the causal relationship between a company's activities and environmental damage. Therefore, *strict liability* has become a legal instrument aimed at accelerating the environmental recovery process while guaranteeing legal certainty for affected communities.

Historically, the principle of *strict liability* was first developed in England through the ruling in *Rylands v. Fletcher* (1868), which established that any party engaged in a hazardous activity is

liable for the resulting damage, even if negligence cannot be proven. This doctrine was subsequently further developed in various international legal instruments, including the 1992 Rio Declaration on Environment and Development, which emphasized the importance of holding business actors accountable for the impacts of activities with the potential to damage the environment. This development influenced the Indonesian environmental legal system, which ultimately adopted the principle of *strict liability* in Law Number 23 of 1997 on Environmental Management and subsequently retained it in Law Number 32 of 2009 on Environmental Protection and Management (UUPPLH). Article 88 of the UUPPLH, prior to its amendment through Law Number 6 of 2023, stated: "Any person whose actions, business, and/or activities use B3, generate and/or manage B3 waste, and/or pose a serious threat to the environment shall bear strict liability for the resulting harm without the need to prove fault."

This provision shows that the legislature has created an exception to the general principle of civil liability set out in Article 1365 of the Indonesian Civil Code (KUHPPerdata), which requires the presence of an unlawful act, fault, harm, and a causal relationship. Under the strict liability regime, fault is no longer the primary requirement, so that the aggrieved party need only prove the harm, the existence of an activity posing a serious threat to the environment, and the causal relationship between this activity and the harm suffered. *strict liability*, fault is no longer the primary requirement, so that the aggrieved party need only prove the harm, the existence of an activity posing a serious threat to the environment, and the causal relationship between this activity and the harm suffered.

Under the Risk Liability theory, a party that derives economic benefit from a high-risk activity must also bear the risk if that activity causes harm to another party. In the context of industrial waste pollution, companies are the parties that derive economic benefit from the production process, and are therefore legally obligated to bear the cost of environmental recovery if their activities cause pollution. This approach is also consistent with the *polluter pays principle*, under which the party bears all costs of prevention, control, and environmental recovery. The rule of strict liability is grounded not only in risk theory but also reflects the application of the theory of justice formulated by John Rawls. Rawls argued that the legal system must provide fair protection to everyone, particularly those in a weaker position.

From the perspective of international environmental law, the application of *strict liability* is part of the principle of *sustainable development*. This principle requires that every development activity not only pursue economic growth, but also take into account the sustainability of environmental functions for present and future generations. Strict liability is thus not merely a law enforcement instrument, but also a preventive mechanism that encourages business actors to improve compliance with environmental management standards.

Regulatory developments following the enactment of Law Number 6 of 2023 on Job Creation have sparked academic debate. The amendment to Article 88 of the UUPPLH no longer includes the phrase "without the need to prove fault," giving rise to various interpretations regarding the continued existence of the principle of *strict liability*. Some experts argue that the removal of this phrase does not eliminate the existence of *strict liability* because the term "strict liability" is still retained in the legal provision. Others, however, consider that the amendment has the potential to weaken protection for pollution victims, as it opens the door for judges to once again apply proof of fault as under the liability regime based on Article 1365 of the KUHPPerdata.

Regulatory changes following the Job Creation Law regime have created uncertainty regarding the scope of application of *strict liability*, which has the potential to reduce the effectiveness of environmental law enforcement (Kusuma, 2023). Although the principle of *strict liability* is recognized within the Indonesian legal system, its application in the courts still faces various obstacles. Judges generally continue to require proof of the causal relationship through scientific evidence, such as laboratory test results, expert testimony, and other technical data (Rachma & Triwibowo, 2023).

The effectiveness of the principle of *strict liability* is heavily influenced by the quality of environmental law enforcement. It has been asserted that the success of applying strict liability depends not only on the formulation of the legal norm, but also on the capacity of law enforcement

officers, the quality of investigations, the availability of environmental laboratories, and inter-agency coordination in gathering evidence (Elfi Tumangger dkk., 2024).

In civil law, the application of *strict liability* benefits pollution victims because the burden of proof is lighter than in a lawsuit based on Article 1365 of the KUHPerdata. However, victims must still prove the existence of actual harm and a causal relationship between the business activity and the pollution that occurred. Consequently, environmental impact assessment (AMDAL) documents, environmental monitoring reports, laboratory test results, and expert testimony continue to play an important role in the evidentiary process in court.

Implementation of the Principle of *Strict Liability* in Civil Liability for Industrial Waste Pollution in Rembang Regency

Implementation of the principle of *strict liability* in civil liability for industrial waste pollution is one of the key instruments in achieving effective environmental protection. Article 88 of Law Number 32 of 2009 on Environmental Protection and Management (UUPPLH) provides the legal basis for applying strict liability to business actors who use hazardous and toxic materials (B3), generate B3 waste, or carry out activities that pose a serious threat to the environment. This regulation aims to reduce the burden of proof for pollution victims, thereby enabling dispute resolution to proceed more effectively than under fault-based liability mechanisms (*fault liability*).

Based on interviews with the head of a neighborhood association (RT) living near the industrial area, industrial activities continue to cause disturbances in the form of foul odors and concerns about environmental quality. However, the response from the government and related parties has been very slow and appears to turn a blind eye to the situation. Although residents had already filed a report with the Environmental Agency (DLH), there had been no follow-up action. Residents hope the government will promptly investigate the situation; they only know that in the event of pollution, they should report it to the local government. They are unaware that they may file a lawsuit for compensation if pollution actually occurs. During the complaint process, residents were accompanied by the Rembang Coastal Environmental Concern Community Forum, owing to the community's limited understanding of how to address this pollution issue.

This statement indicates that the dispute-resolution mechanism chosen by the community is still dominated by administrative channels and complaints to the local government. Low understanding of the community's legal rights to obtain compensation for environmental pollution has resulted in the civil liability instrument under Article 88 of the UUPPLH not yet being utilized optimally.

This study also shows that the community still views the local government as the primary actor in resolving alleged environmental pollution. On the other hand, limited knowledge of environmental lawsuit mechanisms, litigation costs, and the evidentiary process makes the community reluctant to pursue litigation. This condition indicates that the effectiveness of applying the principle of *strict liability* is not only influenced by the quality of regulation, but also by the level of the community's legal awareness and ease of access to environmental dispute resolution mechanisms.

In addition to obtaining information from the head of a neighborhood association living near the industrial area, this study also examined the perspective of the Rembang Regency Environmental Agency. Based on interviews with a First Expert Environmental Supervisor at the Rembang Regency Environmental Agency, the resolution of alleged industrial waste pollution is generally carried out through coaching, periodic supervision, the issuance of written warnings, and requirements to repair the Wastewater Treatment Plant (IPAL). This approach was chosen because it is considered more effective in resolving pollution quickly compared to court proceedings, which require a relatively long time.

The interview results show that the local government prioritizes its supervisory function over civil law enforcement. Although the administrative approach has the advantage of restoring environmental conditions quickly, on the other hand it has resulted in the *strict liability* mechanism not yet being utilized as an instrument of legal protection for communities suffering harm from

environmental pollution. As a result, the objective of Article 88 of the UUPPLH to ease the burden of proof for pollution victims has not been fully achieved.

This study differs from that of Rachma & Triwibowo (2023) which states that the main obstacle lies in the regulatory aspect. In the context of Rembang Regency, the greatest obstacle actually stems from the dominance of administrative settlement. This difference indicates that the effectiveness of *strict liability* is influenced by the institutional characteristics of the local government.

This condition reveals a gap between the law in the books (*law in the books*) and law in action (*law in action*). Normatively, Article 88 of the UUPPLH has provided an adequate legal basis for applying the principle of *strict liability* to allow pollution victims to file claims for compensation without having to prove company negligence. In practice, however, local governments continue to rely on administrative solutions, so that civil liability mechanisms are rarely applied.

In addition to the dominance of the administrative approach, this study also reveals that scientific evidence is one of the main obstacles to applying strict liability. Although this principle eliminates the burden of proving fault, plaintiffs must still demonstrate environmental pollution, the harm suffered, and the causal relationship between the company's activities and that harm. Such evidence requires laboratory results, environmental documentation, and expert opinions, which are not always easily accessible to the public.

This limitation contributes to the low effectiveness of environmental civil lawsuits. In many cases, communities prefer to file complaints with local authorities rather than pursue litigation, citing cost, time commitment, and the complexity of proving their case. As a result, strict liability has not yet been fully realized as a tool for protecting citizens' rights.

An analysis based on Soerjono Soekanto's theory of legal effectiveness reveals that the implementation of the strict liability principle in Rembang Regency is influenced by five factors. From a legal perspective, the provisions of Article 88 of the UUPPLH provide an adequate legal basis. However, in terms of law enforcement, the local government's focus remains on administrative action. In terms of resources, limited laboratory capacity and a lack of supporting scientific evidence hinder the establishment of the causal relationship between industrial activities and pollution. From the community's perspective, awareness of the legal options available through civil litigation remains relatively low. Regarding legal culture, dispute resolution through consultation and mediation is still more commonly chosen than resolution through the courts.

The results of this study also indicate that the effectiveness of applying strict liability is influenced not only by the quality of the legislation, but also by the local government's institutional capacity to oversee its implementation, its ability to provide scientific evidence, and the community's access to law enforcement mechanisms. Therefore, the successful implementation of Article 88 of the UUPPLH requires synergy among local governments, law enforcement agencies, economic actors, academics, and the community.

Implementation of this principle depends not only on the existence of the legal norm, but is also influenced by the effectiveness of local government oversight, business actors' compliance, and the ability of law enforcement officers to gather scientific evidence. Rembang Regency, as a region experiencing fairly rapid industrial sector development, faces challenges in maintaining a balance between economic growth and environmental protection. The presence of seafood processing industries, cement industries, timber processing industries, and various manufacturing activities has the potential to generate liquid waste, solid waste, air emissions, and B3 waste if not managed in accordance with statutory provisions.

In the practice of environmental law enforcement in Indonesia, environmental law enforcement is still dominated by administrative instruments for prosecuting environmental violations, while civil action based on strict liability has not been utilized optimally. This situation is influenced by the complexity of proving the causal relationship between industrial activities and environmental damage, as well as limited institutional capacity to support the scientific evidentiary process. Thus, even though the legal framework already exists, the effectiveness of applying *strict liability* depends heavily on the willingness of law enforcement agencies and the quality of environmental monitoring (Al Fikri, 2022).

The application of *strict liability* has a strategic function in accelerating the environmental recovery process, because the burden of proof is directed at the existence of pollution, harm, and a causal relationship, rather than at company negligence. This approach strengthens the position of affected parties, who often face difficulty obtaining justice due to the heavy burden of proof in environmental cases (Wijaya, 2024).

Furthermore, the implementation of *strict liability* in Rembang Regency must also be linked to companies' obligation to carry out environmental management as set out in their Environmental Impact Assessment (AMDAL) or Environmental Management and Monitoring Efforts (UKL-UPL) documents. These documents are not merely an administrative requirement for obtaining a business operating permit, but also constitute a legal instrument establishing a company's obligation to prevent pollution and limit environmental impact. Consequently, any violation of the obligations set out in environmental documents can serve as initial evidence of negligence in environmental management and provide a basis for the government to take further legal action.

Regarding the effectiveness of AMDAL implementation, it has been shown that weak implementation of the recommendations in AMDAL documents is one of the main causes of environmental pollution resulting from industrial activities. Therefore, monitoring of AMDAL implementation must be carried out continuously through field inspections, periodic report evaluations, and environmental quality sampling. The results of this monitoring also serve as important evidence in environmental disputes requiring resolution through the civil mechanism under Article 88 of the Environmental Protection and Management Law (Novenna Tarigan, 2023).

In addition to the local government, the community plays an important role in the implementation of *strict liability*. Community reports on changes in water, air, or soil quality often serve as the initial information prompting inspection by the Environmental Agency (DLH). Community participation is therefore part of an environmental oversight system that supports effective law enforcement. The higher the community's awareness of its right to a good and healthy environment, the greater the opportunity to expose environmental violations by business actors.

Companies that generate industrial waste should be responsible not only for administrative aspects, but also for the full impact of pollution, in accordance with the *polluter pays principle*. This principle requires every business actor to bear the costs of prevention, mitigation, and environmental recovery if its business activities are proven to cause pollution. *strict liability* and the *polluter pays principle* are thus two complementary principles within the environmental liability system (Nugroho dkk., 2024).

The First Expert Environmental Supervisor at the Rembang Regency Environmental Agency explained that the resolution of alleged industrial waste pollution in Rembang Regency is more commonly directed toward administrative mechanisms, such as coaching, written warnings, and requirements to repair wastewater treatment installations, rather than civil lawsuits. This approach was chosen because the local government's objective is to ensure that companies promptly repair their waste treatment installations so that the environmental impact does not continue.

This statement indicates that the local government still prioritizes a preventive approach over a repressive one. This condition has resulted in the *strict liability* instrument under Article 88 of the UUPPLH not yet being utilized as a means of obtaining compensation for affected communities. The application of *strict liability* within the Indonesian legal system still faces differing interpretations regarding the scope of strict liability, particularly following the regulatory changes brought about by the Job Creation Law. As a result, law enforcement officers tend to use conventional evidentiary approaches, meaning the benefits of *strict liability* have not yet been felt optimally by the community (Faid dkk., 2026).

In addition to evidentiary obstacles, the implementation of *strict liability* is also influenced by the local government's capacity to supervise companies. Rembang Regency has a fairly large number of industries with diverse business characteristics. This condition requires an adequate number of environmental supervisors, support from accredited environmental laboratories, and coordination with other technical agencies. If institutional capacity is inadequate, the process of proving alleged pollution will require a longer period, thereby reducing the effectiveness of law enforcement.

The effectiveness of applying the *polluter pays principle* is heavily influenced by the government's ability to conduct oversight, evaluate corporate compliance, and enforce the law consistently. The stronger the environmental oversight system, the greater the opportunity for *strict liability* to be applied effectively, since adequate scientific data is available to support the evidentiary process in court (Hermawan dkk, 2026).

Based on the results of this study, the implementation of the principle of *strict liability* in Rembang Regency can be analyzed through several indicators, as presented in the following table.

Table 1. Comparison of Strict Liability Implementation among Companies in Rembang Regency

Comparison Aspect	PT. Indoseafood Rembang	PT. Parkland World Indonesia
Type of Business	Fishery product processing	Footwear manufacturing
Type of Waste	Organic liquid waste, solid waste, strong odor	Liquid waste from the production process, B3 waste (used oil, chemicals, used lamps), solid production waste
Alleged Pollution	Alleged air pollution due to waste odor and potential water pollution if the wastewater treatment plant (IPAL) does not function optimally	Alleged pollution from the production process and industrial waste management, which is a concern in environmental oversight
Government Oversight	Monitoring by the Rembang Regency Environmental Agency (DLH) and the Ministry of Environment and Forestry (KLHK), IPAL inspection, evaluation of environmental documents	Periodic inspection of the IPAL, B3 waste management, and compliance with quality standards
Sanctions	Coaching and administrative oversight based on inspection results, temporary suspension of operations	Coaching, administrative oversight, obligation to make repairs if non-compliance is found
Implementation of the principle of <i>strict liability</i>	No civil lawsuit has been filed	No civil lawsuit has been filed
Obstacles	Difficulty in proving the causal relationship, minimal community lawsuits, dominance of administrative settlement	Scientific evidence, limited environmental data, dominance of administrative settlement
Improvement Efforts	Optimization of the IPAL, improved DLH oversight, transparency in waste management	Improved B3 waste management, strengthened environmental monitoring, compliance with quality standards and periodic reporting

The table shows that the implementation of the principle of *strict liability* in Rembang Regency is still more supported by administrative instruments than civil instruments. This condition indicates that although the legal basis is already in place, its application still requires strengthened

institutional capacity, improved oversight quality, and the courage of both government and community to utilize civil lawsuit mechanisms when pollution occurs that causes real harm.

Overall, the implementation of the principle of *strict liability* in Rembang Regency cannot yet be considered optimal, due to three main factors. First, the local government still prioritizes administrative sanctions over civil lawsuits. Second, proving the causal relationship requires laboratory support that is not yet fully available. Third, the community does not yet understand environmental lawsuit mechanisms and therefore prefers non-litigation resolution. Its successful implementation continues to be influenced by the quality of environmental oversight, the availability of scientific evidence, inter-agency coordination, and law enforcement officers' understanding of the characteristics of strict liability. Strengthening the oversight and evidentiary systems is therefore necessary so that the objective of Article 88 of the UUPPLH as an instrument for community protection and environmental recovery can be achieved effectively.

Challenges in Implementing the Principle of *Strict Liability* in Rembang Regency

Application of the principle of *strict liability* in environmental law involving civil liability for industrial waste pollution in Rembang Regency continues to face various challenges. Although Article 88 of Law Number 32 of 2009 on Environmental Protection and Management has established the legal basis for strict liability of companies whose business activities pose a serious threat to the environment, its implementation at the local level has not been optimal. This situation is influenced by regulatory and institutional factors, scientific evidence, legal culture, and low community participation in the environmental law enforcement process.

According to Soerjono Soekanto's theory of legal effectiveness, the success of implementing a legal provision is influenced by five factors. If any one of these factors does not function optimally, it becomes difficult to achieve the intended objective of embodying legal norms in practice. In the context of Rembang Regency, these five factors continue to pose challenges in the application of the principle.

First, regarding the amendment to the wording of Article 88 of the UUPPLH following the enactment of Law Number 6 of 2023, particularly the removal of the phrase "without the need to prove fault," academic debate has arisen as to whether the principle of *strict liability* is still applied in its pure form or has shifted back toward fault-based liability. This issue has led law enforcement officers to allow room for interpretation that could affect the resolution of environmental disputes. As a result, civil lawsuits based on strict liability are relatively rare, owing to concerns about the standard of proof applied by the courts. This situation reduces legal certainty for communities as victims of environmental pollution.

According to Widodo (2023), the effectiveness of environmental law is heavily influenced by the clarity of the legal norm underlying its enforcement. Ambiguity in a norm can lead to differing interpretations, which ultimately reduces legal certainty and the effectiveness of environmental protection. The removal of the phrase should not be interpreted as the elimination of the principle of *strict liability*, since the concept of strict liability remains inherent in Article 88 of the UUPPLH. However, without clear interpretive guidelines, inconsistent implementation in practice is likely to occur (Subadi dkk., 2026).

Second, there is a symptom of "norm degradation," in which law enforcement officers do not apply Article 88 of the UUPPLH consistently even though its provisions are clear. This indicates that in several industrial pollution cases, officers still demand proof of fault or even shift the burden of proof onto the victim. Such proof requires scientific data in the form of laboratory test results, measurements of water, air, or soil quality, and AMDAL documents. In Rembang Regency, the scientific evidentiary process remains a major obstacle. Not all alleged pollution can be promptly tested due to limited laboratory capacity, testing costs, and expert personnel. As a result, community reports often take a considerable amount of time to verify.

This practice runs counter to the essence of strict liability, which is precisely intended to simplify the evidentiary mechanism. Moreover, the weakness of the scientific evidentiary system is one of the causes of the low effectiveness of environmental law enforcement in Indonesia. AMDAL

oversight is often not supported by a sustainable monitoring system, making it difficult to establish the causal relationship when environmental disputes arise (Zahroh & Najicha, 2022).

Third, the local government's limited capacity to oversee industrial activities. There is a shortage of environmental supervisors relative to the number of companies operating in Rembang Regency. Oversight of corporate compliance must be conducted periodically through review of environmental documents, field inspections, and environmental quality evaluations. In practice, however, the number of environmental supervisory officials remains relatively limited, meaning that monitoring tends to be reactive to community complaints rather than proactive through routine inspection. Weak oversight capacity is one of the causes of the low effectiveness of environmental law enforcement in Indonesia. Suboptimal oversight means that environmental violations are often discovered only after damage has occurred, rendering preventive efforts less effective (Dewantara & Larasati, 2022).

Fourth, resolution of environmental problems in Rembang Regency continues to be dominated by administrative approaches, such as written warnings, government compulsion, temporary suspension of activities, and requirements to repair the IPAL.

Although this approach adheres to the "ultimum remedium" principle, in several cases it has prevented civil claims based on strict liability from being pursued at all. In addition, environmental law enforcement in Indonesia remains overly dependent on administrative approaches, resulting in a deterrent effect that is less than optimal for companies. Strengthening civil liability is needed to make environmental protection more effective (Antunez dkk., 2025).

Fifth, regarding proof of the causal relationship between industrial activities and the damage suffered by residents. Although the strict liability principle eliminates the burden of proving fault, affected parties must still demonstrate a relationship between the commercial activity and the resulting damage. In environmental pollution cases, officers frequently require complex technical evidence, such as toxicology tests, waste-flow tracing, or comparative analysis of water quality from various points. Yet it is precisely this kind of technical complexity that constitutes the fundamental reason for applying strict liability, so that the community is not burdened by a convoluted evidentiary process.

Sixth, low legal awareness and community participation regarding the right to a good and healthy environment as guaranteed under Article 28H, Paragraph (1) of the 1945 Constitution of the Republic of Indonesia. Some members of the community prefer to resolve pollution issues through negotiation with companies rather than pursuing legal channels. In addition, those affected often lack access to legal aid or technical assistance for preparing civil lawsuits. As a result, the application of Article 88 of the Environmental Protection and Management Law (UUPPLH) remains very limited, even though the provision exists.

Preventive Efforts and Solutions for Optimizing the Implementation of *Strict Liability* in Rembang Regency

Faced with these various challenges, comprehensive efforts involving the government, business actors, the community, and law enforcement officers are needed so that the principle of *strict liability* can function effectively as an instrument of environmental protection and a means of recovering community losses caused by industrial waste pollution. Accordingly, various comprehensive efforts and solutions are required to ensure that the principle of *strict liability* can function optimally in providing legal protection to the community while also ensuring the sustainability of the environment in Rembang Regency.

The first effort is to strengthen regulations and clarify the scope of application of the principle of *strict liability*. Changes to Article 88 of the UUPPLH following the enactment of Law Number 6 of 2023 have given rise to various differing interpretations regarding the scope of application of *strict liability*. This condition has the potential to reduce legal certainty in resolving environmental disputes, as law enforcement officers tend to be cautious in applying strict liability.

Rokhim (2022), explains that a degradation of the norm of *strict liability* has occurred following changes in environmental policy, which has the potential to weaken protection for pollution victims in the absence of clear implementation guidelines. In addition, regulatory harmonization is needed through the development of technical guidelines on evidentiary standards,

criteria for serious threats, and mechanisms for calculating environmental damage compensation, in order to avoid multiple interpretations in the application of Article 88 of the UUPPLH.

In addition to strengthening regulations, the next effort is to strengthen local government capacity for environmental oversight. Given that various industrial sectors in Rembang Regency generate liquid waste, solid waste, and air emissions, oversight is becoming increasingly important. Oversight should be conducted periodically through review of AMDAL documents, evaluation of Wastewater Treatment Plant (IPAL) performance, and environmental quality monitoring to ensure business actors' compliance with environmental provisions.

A comparative study between Indonesia and Australia shows that successful environmental protection depends heavily on a sustainable oversight system, periodic evaluation, and inter-agency coordination. Australia's experience demonstrates that consistent oversight can curb environmental violations before they escalate into legal disputes (N. L. Nugraheni, 2022).

This approach is worth adopting by local governments, including Rembang Regency, particularly for industries with high pollution potential. In practice, it is not enough to begin oversight only after a community complaint has been received. Local governments should implement *risk based environmental supervision*, i.e., oversight tailored to each company's specific pollution risk, to ensure more effective use of oversight resources.

The next effort is to strengthen the system of scientific evidence in environmental pollution cases. Although the principle of *strict liability* does not require proof of fault, victims must still demonstrate that the harm they suffered is related to the activities carried out by the business actor. Therefore, local governments must cooperate with universities, environmental laboratories, and research institutions to ensure adequate scientific support for law enforcement. The availability of accurate scientific data will facilitate the establishment of the causal relationship between industrial activities and the damage suffered by residents. In addition, the government must provide a financial assistance mechanism for citizens wishing to file environmental lawsuits. This underscores that *applying the principle of* still requires proof of the existence of pollution, harm, and a causal relationship supported by scientific evidence, so that legal liability can be applied appropriately (Rachma & Triwibowo, 2023).

In connection with administrative oversight, civil lawsuit mechanisms for environmental recovery must also be further optimized. Lawsuits based on Article 88 of the UUPPLH give the state and the community the opportunity to obtain compensation and recovery costs without having to prove the business actor's negligence. Environmental law enforcement through civil lawsuits plays an important role in achieving ecological justice. Judges must focus not only on formal legal certainty, but also take into account aspects of environmental protection and the interests of communities affected by pollution (P. D. Nugraheni & Aime, 2022).

Another equally important effort is to strengthen community participation in environmental oversight. Community participation is an essential component of the environmental protection system. Communities are often the first party to become aware of alleged pollution, so their involvement in monitoring must be strengthened. Community involvement not only helps expose environmental violations but also increases the transparency and accountability of industrial activities. The local government, together with the Rembang Regency Environmental Agency, can hold periodic public awareness programs on environmental law. This program aims to improve community understanding of the right to a good and healthy environment as well as environmental dispute resolution mechanisms.

The First Expert Environmental Supervisor at the Rembang Regency Environmental Agency explained efforts to improve oversight of companies through routine inspections and stronger coordination with environmental laboratories. In addition, the community is also encouraged to actively submit complaints upon finding indications of pollution, so that handling can proceed more quickly.

This statement indicates that the success of applying *strict liability* is determined not only by the legal norm, but also by synergy among the government, business actors, and the community in maintaining environmental quality.

In the context of industrial waste pollution in Rembang Regency, this principle can be implemented by strengthening requirements for companies that pose a high pollution risk to provide environmental guarantee funds. Such funds can be used to finance environmental repair measures in the event of pollution, thereby avoiding a dispute-resolution process that often drags on. This enables environmental damage to be repaired quickly and minimizes the impact on local residents.

CONCLUSION AND RECOMMENDATIONS

This study found several factors that hinder the still-suboptimal implementation of the principle of *strict liability* in Rembang Regency. These obstacles include a lack of understanding regarding the application of Article 88 of the UUPPLH following the regulatory amendment, dispute resolution still being dominated by administrative mechanisms, limited scientific evidence for establishing the causal relationship between industrial activities and environmental pollution, low utilization of civil lawsuits, and the absence of technical guidelines for applying Article 88 of the UUPPLH. Therefore, the effectiveness of *strict liability* requires strengthening institutional capacity, supporting scientific evidence, raising community legal awareness, and adopting more progressive regional policies in environmental law enforcement.

This study also shows that the greatest obstacle to implementing *strict liability* in Rembang Regency does not stem from weaknesses in the legal norm, but rather from the dominance of administrative settlement, which has meant that Article 88 of the UUPPLH has never been applied through a civil lawsuit.

This study has limitations, as it focuses solely on the implementation of the principle of *strict liability* in civil liability for industrial waste pollution in Rembang Regency, so its findings cannot yet describe the application of this principle in other regions with different industrial characteristics, oversight capacity, and law enforcement dynamics. In addition, this study places greater emphasis on the civil law aspect and therefore does not extensively discuss the relationship between the application of in other regions with different industrial characteristics, oversight capacity, and law enforcement dynamics. In addition, this study places greater emphasis on the civil law aspect and therefore does not extensively discuss the relationship between the application of *and administrative or criminal environmental law enforcement. These limitations open opportunities for further research to develop a more comprehensive analysis of the effectiveness of environmental law enforcement in Indonesia.* and administrative or criminal environmental law enforcement. These limitations open opportunities for further research to develop a more comprehensive analysis of the effectiveness of environmental law enforcement in Indonesia.

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