

Mitigating water depletion through wastewater management law in Indonesia's textile sector: Evaluating compliance and alignment with national environmental standards

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Abstract. This study argues that the compliance of mandatory wastewater management regulations in Indonesia's textile industry sector is low, which consequently amplifies environmental pollution, water scarcity due to depletion and the changing climate. This study addresses two research question(s): How does Indonesian law regulate wastewater management in the textile industry sector? Based upon the current practice, what challenges hinder its implementation? This study utilizes normative legal research methodology by analyzing Indonesian legal instruments and relevant case laws. It highlights the significant challenges arising from the unwillingness of various stakeholders to enforce environmental regulations, including government entities holding licensing instrument authority and companies non-compliance. In conclusion, the current framework for defining wastewater contamination thresholds requires substantial improvement by adopting more stringent, ambitious, climate conscious standards. It is recommended to: 1) incentivize companies demonstrating interest in environmental compliance but lacking necessary financial resources; 2) reward companies that have become exemplary leaders in wastewater management; and 3) encourage a reevaluation of existing legal frameworks regarding wastewater quality standards, with a view to adopting ambitious and measurable environmental standards.

1 Introduction

It is evident that the changing climate resulting from excessive greenhouse gas (GHG) emitted to the atmosphere poses substantial damage to multiple areas of the ecosystem and human life[1], including freshwater that reduced water security due to slow-onset phenomenon[2]. This includes availability to access of, and meeting the balance between demand and supply of quality water[3]. For small islands and developing states (SIDS) including Indonesia, its existing climate impact risks will be further amplified due to the

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unsustainable use of water[4]. A part of those ongoing environmental pollution also covers the water area, where certain practices continue releasing toxic substances into the waterways, further depleting the water quality and disrupting aquatic ecosystems[5,6]. In certain cases, a maximum contaminant level (MCL) is established such as the prohibition of more than 10 mg/L methane contaminants, which if dissolved in the water, it will not only hazardous to human, but also evaporates to the atmosphere which further exacerbates the changing climate[7]

There are certain pathways to conduct actions that address water depletion and simultaneously mitigate climate change. These actions range from climate responses and adaptation options including by improving water use efficiency and sustainable resource management[4]. Thus if these actions are being synergized with mitigation options such as reducing hazardous chemicals concentration from water and/or wastewater, then it will be highly feasible that these actions complement the pathway to net emission reduction in 2030 and maintain the global temperature to no higher than 1.5 degrees celsius[4]. Therefore, these ideal visions and alternatives are adapted and incorporated into provisions of introduced wastewater management laws that perform as a tool to regulate and enforce compliance in achieving the goal. It sets specific standards of wastewater management including level of chemical concentration tolerance to be considered safe disposal.

Enforcing regulations and compliance can only be met if the responsible sectors are willing to act within the rule of law, which includes the industries and companies that utilize water as primary components for industrial operation (particularly the textile industry)[8]. Certain challenges that become barriers include weak enforcement monitoring of whether the enacted environmental management standards such as wastewater management installation infrastructure (IPAL) have been met, which portrays the practice of wastewater dumping as a financially cheaper alternative than building IPAL[9], and other identified roadblocks that will be emphasized in the analysis. By mirroring upon specific domestic cases of noncompliance to wastewater management law, it is argued that the compliance of mandatory wastewater management regulations in Indonesia's textile industry sector is low, which has to be addressed with the strategic solution that this writing offers.

This writing provides three major parts. The first part lies in the fundamentals by focusing on analyzing types of mandatory wastewater management regulation as a legal basis to further analyze the current condition. Second, an analysis upon the status quo of industry compliance is performed to observe whether such statutory regulations are being enforced. This includes cases which portray best practices and lessons learnt for future improvements. In the third part, the above mentioned set of analysis will then be synthesized to suggest types and strategies of legal reform that strengthens environmental compliance.

2 Method

This research applies the normative legal research method, which establishes an inventory of legal rules and principles that will be utilized as legal standards to conduct analysis in a descriptive manner[10]. The legal sources are composed of two classifications: 1. Primary source including statutory regulations comprising laws, ministerial regulations, presidential regulations, and others under the Indonesian hierarchy of laws[11]; 2. Secondary sources that consist of case laws, books and journals of legal scholars, and other supplementary instruments. The result of the research will provide legal prescriptions pursuant to the mandatory legal regulations in addressing the presented legal issue.

To perform the analysis, this research utilizes cases in demonstrating concrete situations in connection to the positive laws prescribed under the regulation which require compliance to be categorized as the law being enforced. There are three options of legal analysis framework which are applicable to this research[12].

Table 1. Options of Legal Analysis Framework

No	Type of Framework	Description
1	IRAC	Issue, Rules, Analysis, Conclusion
2	CRAC	Conclusion, Rule, Analysis, Conclusion
3	CREAC	Conclusion, Rule, Explanation, Application, Conclusion
4	CCREAC	Conclusion, Case, Rule, Explanation, Application, Conclusion

To provide the clarity of research in a concise manner, the CCREAC framework will be utilized by introducing the conclusion in the initial part of the research result. Furthermore, an analysis upon cases and applicable rules are being conducted. These analyses shall explain the linkage of normative rules and the occurred concrete phenomenon, thus providing a detailed emphasis on whether compliance upon regulations has been achieved. At the end of the section, the reiterated conclusion will complement the performed legal research.

3 Results and Discussion

The results section aims to explain the argument of this article that the compliance of mandatory wastewater management regulations in Indonesia’s textile industry sector is low by providing an insight upon mandatory wastewater management regulations in Indonesia, that sets the basis to examine industries compliance based upon the application by analyzing three cases: PT. How Are You Indonesia (HAYI) in the case of *Ministry of Environment and Forestry v. PT How Are You Indonesia (MoEF v. HAYI)*, PT. Bintang Warna Mandiri (BWM) under the case of *Ministry of Environment and Forestry v. PT Bintang Warna Mandiri (MoEF v. BWM)*, and PT. Kahatex in the case of *Indonesian Forum for Environment (WALHI) & Environmentally Conscious Society Group (Paguyuban Warga Peduli Lingkungan (PAWAPELING)) v. PT Kahatex et. al.*

The analysis of selected cases are synthesized to iterate challenges in enforcing compliance to Mandatory Wastewater management Regulation. Furthermore, the discussion section will reveal proposed pathways on strengthening environmental compliance through incentives and legal reform. The two sections will be concluded in the conclusion section which affirms the necessity to improve compliance with wastewater management regulations in Indonesia's textile industry by incentivizing financially constrained companies, rewarding leaders in wastewater management, and reassessing existing legal frameworks to align with ambitious environmental targets.

3.1 Results

The Government of Indonesia has put regulations in place, such as Law No. 32/2009 and various Ministry of Environment and Forestry guidelines. However, the implementation of these laws has been inadequate, prompting the need for additional provincial initiatives. This section will iterate the challenges faced by textile industries to comply with environmental management standards pertaining to wastewater.

3.1.1 Indonesia Mandatory Wastewater Management Regulation

Indonesia is confronted with significant challenges in the domain of wastewater management, with only an estimated 1% of the total wastewater volume undergoing effective treatment[13]. The lack of adequate wastewater management facilities and effective sewer systems has led to the improper disposal of wastewater, resulting in environmental degradation in various areas, including river and groundwater pollution[14]. Despite the implementation of regulatory measures, these measures have proven inadequate for effectively addressing the increasingly sanitation crisis[15].

The textile industry in Indonesia in particular is a dilemma in terms of waste management management, on the one hand the textile industry is a contributor to the economic sector, but at the same a significant contributor to environmental pollution. The high volume of wastewater generated during the production process is not matched by an effective wastewater management process. Textile wastewater is characterized by high levels of color, Chemical Oxygen Demand (COD), and various toxic compounds[16]. Its complex composition often includes dyes, heavy metals, and organic pollutants, which can lead to severe ecological damage, including the degradation of aquatic ecosystems and negative effects on human health[16,17].

Table 2. Indonesia Mandatory Wastewater Management Regulation

Regulation	Subject of Concern	Article(s)
Constitution of Indonesia	Right to Healthy Environment	28H; 33(4)
Law No. 32 Year 2009	Environmental Protection and Management	14; 60; 88; 104;
MoEF Regulation No. 7 Year 2014	Environmental Losses Due to Pollution and/or Environmental Damage	3(a)
MoEF Regulation No. 16 Year 2019	Wastewater Quality Standard	Annex II
Government Regulation No. 101 Year 2014	Environmental Protection and Management Implementation	1 (67), (68), and(69)

In response to these challenges, Indonesia has implemented a series of mandatory wastewater management regulations for the textile industry. The primary legal framework governing wastewater management in Indonesia includes the Environmental Protection and Management Law (Law 32/2009) and its implementing regulations, such as. Ministry of Environment and Forestry Regulation No. 7/2014 on Environmental Losses Due to Pollution and/or Environmental Damage (MoEF Regulation 7/2014), and Government Regulation (GR) No. 101/2014 on hazardous and toxic waste management (GR 101/2014). In addition to national regulations, there are also programs and initiatives at the provincial level, such as the Decentralized Wastewater Management System (DEWATS) initiative, which is part of the Program for the Acceleration of Sanitation Development for Settlements (PPSP)[18].

3.1.2 Textile Industry Compliance to Indonesia Mandatory Wastewater Management Regulation

To examine the compliance dynamics of Indonesia's textile industry, a qualitative, case study-based research design was employed. The study analyzed several court decisions to assess the role of law enforcement in evaluating the industry's compliance with wastewater management regulations, from production through discharge. Three cases were selected based on their relevance to compliance challenges in effluent management. The aim was to gather a diverse sample, ranging from cases of environmental damage caused by effluent discharge to those involving issues with licensing for textile industry effluent disposal.

A. PT. HAYI

In the case of the *MoEF v. HAYI* [19], The MoEF sued PT HAYI for environmental damage caused by illegal discharge of hazardous waste into the Cihujung River. The court had to decide whether PT HAYI's actions constituted unlawful environmental degradation under Indonesian environmental laws. The case primarily relied on several key laws and regulations, such as: Law No. 32 of 2009, GR 101/2014, Civil Code (BW) Article 1365 and, GR No. 82 of 2001 on Water Quality Management (GR 82/2001)

MoEF, represented by Dr. Ir. Siti Nurbaya, M.Sc as a Plaintiff, filed the lawsuit against PT HAYI, a textile company, claiming that the company discharged hazardous industrial waste directly into the Cihujung River without proper treatment. According to environmental inspections, PT HAYI's wastewater management system (IPAL) was either bypassed or non-functional, leading to direct discharges of wastewater containing high levels of hazardous chemicals.

The plaintiff argued that results of Inspections showed that sludge and wastewater generated by PT HAYI's textile production were not processed correctly. Samples from the wastewater revealed high levels of heavy metals, including arsenic (As), chromium (Cr), lead (Pb), and other toxic substances. Moreover, based on the The MoEF reports indicated that PT HAYI failed to meet water quality standards as outlined in GR 82/2001. The wastewater from the facility exceeded permissible levels for Biological Oxygen Demand (BOD), COD, and Total Suspended Solids (TSS). MoEF stated that these pollutants caused significant environmental harm, violating both Law 32/2009 and other regulations pertaining to hazardous waste. Furthermore, MoEF claimed that the company had breached the legal requirements for operating an industrial facility by not properly managing its waste output.

In defense, PT HAYI argued that they had complied with regulations and maintained that their waste treatment processes were adequate. However, the evidence, including field inspections and laboratory analyses, showed significant non-compliance. However, the court finding shows that it agreed with MoEF that PT HAYI's discharge of untreated hazardous waste into the river violated Article 69 of Law 32/2009 and GR 101/2014, both of which prohibit the discharge of hazardous waste into the environment without proper treatment, Laboratory results indicated that water from the Cihujung River downstream from the factory exceeded safe limits for various pollutants, in violation of GR 82/2001. Ultimately, under BW Article 1365, the court found that PT HAYI's actions caused significant harm to the environment and constituted an unlawful act. The company's failure to operate its treatment system (IPAL) correctly and its decision to bypass the system resulted in direct contamination of the river, affecting the local ecosystem.

In consequence, The court in its verdict ruled in favor of MoEF, finding that PT HAYI violated multiple environmental laws, including Law 32/2009, by discharging untreated hazardous waste into the river. The company was held liable for environmental damage and ordered to cease its harmful activities immediately and ordered PT HAYI to pay material damages of Rp. 12,013,501,184.

B. *PT. BWM*

The case of *In the case of the MoEF v. BWM* centers around the illegal discharge of untreated textile dye waste into the Citarum River[20]. PT BWM was found liable under Indonesian environmental laws for causing severe pollution. The court ruled that PT BWM's actions violated both environmental protection laws and regulations regarding the management of hazardous industrial waste, leading to significant environmental harm. The court applied the doctrine of strict liability, holding the company accountable without requiring proof of negligence.

The case is governed by several key legal provisions and environmental regulations, including: Law 32/2009, under Article 88, a principle of strict liability applies to businesses dealing with hazardous materials (B3), meaning that companies are automatically liable for environmental harm, regardless of fault, GR 82/2001 and MoEF Regulation 7/2014.

PT BWM, a textile company involved in dyeing and fabric processing, discharged untreated liquid dye waste directly into the Citarum River. Textile dyeing processes often use chemical dyes with heavy metals and toxic substances, including arsenic (As), chromium (Cr), and lead (Pb), which are hazardous to aquatic ecosystems. Inspections revealed that the company bypassed its Wastewater Management Plant (IPAL), discharging untreated waste into the river through concealed pipelines. This waste exceeded the legally allowable limits for COD and BOD, indicating severe pollution. Moreover, analysis of the river water downstream from the plant showed dangerous levels of contaminants, significantly degrading water quality and damaging the ecosystem. This discharge violated both GR 82/2001 and MoEF Regulation 7/2014 which regulate water pollution and hazardous waste management.

The Law 32/2009 strict liability provision was applied, meaning that PT BWM was responsible for the environmental damage caused by its activities, without any proof of negligence necessary. The company failed to comply with the Indonesian Basic Environmental Standards and was deemed to have violated Article 60 of the Law 32/2009, which prohibits the dumping of waste into the environment without proper treatment.

In its defense, PT BWM argued that it had an IPAL in place, suggesting that the pollution was unintentional. However, the inspections and analysis provided by the MoEF demonstrated that the company's waste treatment was either insufficient or deliberately bypassed, as indicated by the presence of hidden pipes and the direct discharge into the river.

The court found that PT BWM did not have the proper permits or mechanisms in place to manage its hazardous waste appropriately, violating Government Regulation No. 82/2001 and other relevant environmental standards. Furthermore, the strict liability doctrine under Article 88 of Law 32/2009 placed the burden of proof on the company, which failed to demonstrate that it was not responsible for the pollution.

The court also ruled that PT BWM violated the rights of the public to a clean and healthy environment, as guaranteed by Article 28H of the Indonesian Constitution. The uncontrolled release of harmful substances into the river constituted a violation of these rights, resulting in both administrative penalties and financial compensation under MoEF Regulation 7/2014. Ultimately, The court held PT Bintang Warna Mandiri liable for causing environmental pollution through its improper disposal of industrial waste into the Citarum River. The application of strict liability under Law 32/2009 meant that the company was held accountable regardless of whether the pollution was intentional or negligent. The court ordered the company to stop its illegal activities and pay compensation for the environmental damage caused.

C. *PT Kahatex*

In the case of *WALHI & PAWAPELING v. PT Kahatex et. al*[21,22], The Indonesian Supreme Court ruled on a dispute involving three major textile companies and two environmental

organizations. The decision addresses the legality of wastewater discharge permits granted by local authorities, and their compliance with environmental laws. The case registered as No. 187 K/TUN/LH/2017, The Indonesian Supreme Court had to determine whether the permits issued by the Regent of Sumedang, allowing three textile companies to discharge wastewater into the Cikijing River, violated environmental standards. The Court's decision reaffirmed the role of environmental organizations in challenging administrative decisions that negatively impact public interests and environmental sustainability.

The central legal question revolved around the validity of the permits for wastewater disposal issued under Law No. 5 of 1986 concerning Administrative Court Procedures (Law 5/1986), which provides a framework for challenging government administrative decisions. Furthermore, Law 32/2009 on Environmental Protection and Management was used, particularly its provisions allowing non-governmental organizations (NGOs) such as WALHI and PAWAPLING to act as legal claimants in cases concerning environmental damage. Additionally, GR 82/2001 was referenced to establish water quality standards, which the plaintiffs argued were breached by the continuous discharge of wastewater from the defendant companies into the Cikijing River.

The plaintiffs, WALHI and PAWAPLING, argued that the permits issued to PT Kahatex, PT Five Star Textile Indonesia, and PT Insan Sandang Internusa allowed the companies to discharge industrial effluent into the Cikijing River, causing severe environmental degradation. The river flows through both Sumedang and Bandung districts, and was traditionally used for irrigation and aquaculture. Over time, however, pollution from industrial wastewater had significantly impacted local agriculture, leading to a sharp decline in crop yields and the abandonment of farmland.

The plaintiffs cited numerous scientific studies and environmental assessments, showing that the water quality of the Cikijing River failed to meet the standards set by GR 82/2001. Parameters such as Biological Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and heavy metal concentrations regularly exceeded permissible levels. For example, tests showed BOD levels far above the regulatory limit of 3 mg/L, with samples recording values up to 55 mg/L in certain months. These findings indicated that the river's water was no longer suitable for irrigation or fish farming, affecting the livelihoods of local farmers and fishermen.

Furthermore, the plaintiffs argued that the government, by issuing the permits, had failed to uphold its obligations under Law 32/2009, which mandates the protection and management of the environment for the public good. They contended that the issuance of such permits without adequately assessing the cumulative environmental impact was not only a violation of the law but also posed a risk to public health and the local ecosystem.

In applying the law, the Court first assessed the legality of the permits. The Regent of Sumedang had issued the permits in accordance with local administrative procedures. However, the plaintiffs argued that these permits were flawed because they did not consider the deteriorating condition of the Cikijing River. The Court agreed, citing that the government failed to account for the final, concrete, and individual impacts of the permits, as required under Law 5/1986.

Moreover, the environmental standards set by GR 82/2001 were critical in determining the legality of the permits. The plaintiffs demonstrated that the companies had repeatedly violated the water quality standards by discharging wastewater with high levels of pollutants, including hazardous chemicals such as *chromium* and *lead*, further confirming that the companies were contributing to the contamination of the river. The Court recognized that the discharge of untreated or inadequately treated wastewater had rendered the Cikijing River unfit for its traditional agricultural and aquacultural uses, causing significant harm to local communities.

Finally, the Court examined the government's responsibility. Although the permits were signed by the local environmental authority on behalf of the regent, the Court noted that under the principle of mandate, the responsibility for the permits ultimately rested with the Regent. The Court ruled that the government had failed to exercise proper oversight and due diligence in issuing the permits, which resulted in widespread environmental harm.

The Supreme Court ruled in favor of the plaintiffs, WALHI and PAWAPELING, and annulled the permits granted to the textile companies. The Court held that the government's failure to consider the environmental impacts violated both administrative law and environmental protection laws. However, despite the court rulings, PT Kahatex's permit was reinstated six months later, with the company asserting that the local government never officially revoked it. The uncertainty around enforcing the decision was partly due to concerns over the potential layoff of tens of thousands of PT Kahatex employees if operations were halted.

The three cases have demonstrated various challenges which roadblocks industries to comply with the mandatory legal instruments pertaining wastewater. Amidst weak enforcement remains an issue, other technical, socio-economic factors play a role in the implementation of regulations. Given that industries including PT HAYI in *MoEF v. HAYI* and PT BWM in *MoEF v. BWM* may experience technical system failure that results in discharge of wastewater to the waterways, it is important to re-evaluate regulations and set a minimum wastewater management system standards, particularly for textile industries.

The status quo highlights the application of regulations which tends to be reactive and/or curative. Although *WALHI & PAWAPELING v. Kahatex* illustrates the important role of society to monitor and safeguard industrial operations impact on the environment; it is pivotal to also ensure that such noncompliance is mitigated and prevented. Therefore, the aforementioned prescribed suggestions aim to promote compliance from industries, leading to actions that comply with the regulations, preventing legal infringement, and contributing to mitigating climate change. Once these challenges have been addressed, it is encouraged for policymakers to adopt ambitious and stringent measures of international environmental standards such as the SBTi.

3.1.3 Challenges in enforcing compliance to Mandatory Wastewater Management Regulation

Based on the analysis of the cases discussed, several significant challenges arise in enforcing compliance with wastewater management regulations. These challenges stem from a combination of regulatory, technological, economic, and social factors that hinder effective implementation and adherence to environmental standards.

A. Economic Efficiency

One of the primary challenges in enforcing wastewater management regulations is the tension between economic efficiency and environmental protection[23]. This is evident in cases like BWM and HAYI, where the costs of installing, upgrading, and maintaining wastewater management systems such as filtering hazardous materials and adhering to stringent regulations prove prohibitive for many textile manufacturers. As a result, some businesses prioritize profitability by cutting corners on environmental compliance, viewing non-compliance or bypassing treatment systems as a cost-saving strategy.

This economic burden is further exacerbated by the rising costs of freshwater and the increasing demand for sustainable practices, which call for more efficient wastewater management solutions. Without financial incentives or government support, companies may focus on short-term gains rather than long-term sustainability, contributing to ongoing

environmental damage[24]. In the BWM case, the decision to bypass legal treatment methods was likely motivated by economic concerns, despite the clear legal risks involved.

B. Lack of Enforcement of Domestic Laws on Wastewater Management

The inadequacy of both regulatory frameworks and enforcement mechanisms has also contributed to many textile industry non-compliance. While laws such as Law 32/2009 and GR 82/2001 establish clear standards for wastewater management, their enforcement is often inconsistent[25]. This inconsistency stems from weak monitoring and insufficient resources within regulatory bodies, resulting in a largely reactive approach to compliance[24]. For example, inspections in cases like PT BWM and PT HAYI were triggered only after significant environmental damage had occurred, rather than through proactive oversight[26].

The absence of stringent penalties for non-compliance exacerbates this issue, leading to widespread violations and diminishing the incentive for industries to invest in necessary treatment technologies. Many developing countries, including Indonesia, lack comprehensive guidelines that are adaptable to local conditions, further weakening enforcement. As a result, companies may bypass wastewater management systems for years without detection, continuing to pollute the environment. Strengthening the MoEF proactive monitoring and conducting more frequent, unannounced inspections would improve early detection and intervention, helping to prevent environmental damage before it occurs.

C. Limited Technical and Financial Resource

Technological limitations also become a major challenge to effective wastewater management in Indonesia's textile industry. The complex wastewater produced by textile manufacturing, with high concentrations of organic pollutants and dyes, is difficult to treat using conventional methods. While advanced treatment technologies such as advanced oxidation processes and membrane bioreactors offer promising solutions, their adoption is often hindered by high costs and the need for specialized knowledge and infrastructure[27]. Many textile manufacturers lack the financial resources and technical expertise to implement these systems, leading to continued reliance on outdated and ineffective treatment methods.

D. Lack of Public Engagement and Community Reporting

The lack of public engagement and awareness is also one of the factors in the non-compliance of the textile industry. Public awareness play a crucial role in driving compliance with wastewater management regulations, Many communities are unaware of the harmful effects of untreated wastewater on public health and the environment, leading to insufficient pressure on industries to follow regulations, they often become the first to suffer from environmental pollution, have limited involvement in reporting violations or pressuring industries to comply with regulations[28]. Educating these communities about environmental laws, their legal rights, and reporting mechanisms could empower them to identify and report violations earlier, aiding regulatory bodies in enforcing compliance.

While reforming the existing regulations, promoting technological transfer and best practices on wastewater management is necessary. However, another barrier to address is industries' economic ability that differs, which affects the capability of adopting or purchasing better wastewater management systems. In response, an incentive-disincentive policy mechanism may be applied[29]. This would enable a scheme that provides incentive to companies aiming to repair wastewater systems and applying reward to industries (examples of this may be observed from MoEF PROPER certification mechanism) emerging as leading companies practicing environmentally conscious industrial operation, examples include Pan Brothers which ambitiously adopts Science Based Target Initiatives (SBTi) as

an international standard that stringently evaluates whether the company complied to a proper wastewater management and conducting decarbonization action from operational activities that requires water[30]. In contrast, companies not complying to mandatory regulations and standards shall be imposed with disincentive in various forms including (but not limited to) fines.

4 Conclusion

The compliance of Indonesia's textile industry with mandatory wastewater management regulation remains inadequate, leading to increased environmental pollution, water scarcity from depletion, and challenges posed by climate change. To address this issue, it's essential to adopt more stringent and internationally recognized climate-conscious standards. Recommendations include: 1) providing incentives for companies interested in environmental compliance but lacking the necessary financial resources; 2) rewarding companies that excel in wastewater management; and 3) encouraging a reassessment of current legal frameworks concerning wastewater quality standards to adopt ambitious and measurable environmental targets.

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