
Implementation of Environmental Law in Addressing Industrial Pollution

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Abstract

This study examines the implementation of environmental law in addressing industrial pollution in Indonesia, with a focus on law enforcement and industry compliance with environmental standards. Although Law Number 32 of 2009 concerning Environmental Protection and Management has established a clear framework, its implementation in the field still faces various challenges. Factors such as corruption, limited human resources and technology, and bureaucratic complexity hinder the effectiveness of law enforcement, resulting in many industries not complying with environmental standards. This study evaluates the level of industry compliance in various sectors and identifies steps that can be taken by the government and related institutions to improve supervision and law enforcement. Through this approach, this study provides recommendations for strengthening environmental protection and ensuring the sustainability of ecosystems in Indonesia.

Keywords: *Environmental Law, Industrial Compliance, Industrial Pollution*

INTRODUCTION

Indonesia, as a country with abundant natural resources, faces a major challenge in maintaining a balance between economic growth and environmental protection. One sector that plays a significant role in the Indonesian economy is industry. The industrial sector, although it makes a major contribution to economic growth, is also a major source of environmental pollution. The impact of this industrial activity is not only limited to environmental degradation, but also has a negative impact on public health and ecosystem sustainability.

Industrial pollution in Indonesia covers various forms, ranging from air, water, to land pollution. Large factories and industries often release hazardous waste into the environment, either through direct discharge into rivers and seas or through gas emissions into the atmosphere. In some areas, industrial pollution has reached alarming levels, causing serious damage to the environment and posing high health risks to local residents. For example, water pollution in large rivers such as the Citarum River in West Java has become one of the most pressing environmental issues in Indonesia (Nurhidayat, 2018).

To address this issue, Indonesia has developed various legal instruments aimed at controlling and reducing the impact of industrial pollution. Environmental law in Indonesia is formally regulated in various laws and government regulations aimed at protecting and restoring environmental quality. One of the main legal foundations in this effort is Law Number 32 of 2009 concerning Environmental Protection and Management (UU PPLH), which provides a comprehensive framework for environmental management in Indonesia. This law stipulates obligations for industry to comply with environmental standards, manage waste properly, and prevent pollution that can damage the environment (Law Number 32 of 2009).

However, despite the existence of a strong legal basis, the implementation of environmental law in Indonesia still faces various challenges. One of the main problems is weak law enforcement. Although the PPLH Law has set various sanctions for environmental violators, in reality, many violations are not followed up seriously. Factors such as corruption, limited resources, and lack of coordination between government agencies often become obstacles in enforcing environmental law (Suryani, 2019). As a result, many industries continue to operate without regard to their environmental impacts, and pollution continues without any firm action from the authorities.

Another problem is the inability to ensure industry compliance with environmental standards. Many industries, especially those in remote areas or far from monitoring centers, often ignore their obligations to properly manage waste and comply with established emission standards. The lack of effective supervision and the lack of technology to detect pollution are also obstacles in ensuring that these industries do not violate environmental laws (Faisal, 2020).

This study aims to examine in more depth the implementation of environmental law in Indonesia in the context of industrial pollution. The main focus of this study is to evaluate the effectiveness of the implementation of the PPLH Law and other related regulations in controlling industrial pollution, as well as identifying factors that hinder effective law enforcement. In addition, this study will also highlight how collaboration between government, industry, and society can be improved to achieve better environmental goals.

Two main issues that will be discussed in this study are: Weak Environmental Law Enforcement: Weak law enforcement is one of the main obstacles in efforts to overcome industrial pollution in Indonesia. This study will explore the causes of weak law enforcement, including factors such as corruption, lack of human resources and technology, and bureaucratic complexity. In addition, it will also discuss how weak law enforcement impacts environmental sustainability and public health.

Industry Compliance with Environmental Standards: The second issue to be addressed is industry compliance with environmental standards set by law. This study will evaluate the level of compliance of industries in various sectors with environmental standards, as well as identify factors that influence this compliance. Particular focus will be given to how governments and related agencies can improve supervision and technology implementation to ensure that these industries comply with existing regulations.

METHOD

This study uses a normative legal approach with a descriptive-analytical method to examine the implementation of environmental law in overcoming industrial pollution in Indonesia. The normative legal approach was chosen because this study focuses on the analysis of applicable laws and regulations, including Law Number 32 of 2009 concerning Environmental Protection and Management (UU PPLH), as well as other related regulations. Secondary data used include legal documents, scientific journals, textbooks, and relevant research reports, which will be analyzed to understand how environmental law is applied in the context of industrial pollution.

The analysis in this study will be conducted descriptively-analytical to evaluate the extent to which the implementation of environmental law is effective and to identify the challenges faced in

law enforcement and industry compliance with environmental standards. This study will also examine court decisions related to industrial pollution cases, in order to provide a deeper understanding of the effectiveness of environmental law enforcement in Indonesia. Through this approach, the study is expected to produce useful recommendations to improve the implementation of environmental law and strengthen environmental protection from the negative impacts of industrial activities.

RESULTS AND DISCUSSION

Weak Environmental Law Enforcement in Indonesia: Challenges in Addressing Industrial Pollution

Law enforcement is a key element in any effort to address environmental pollution issues, especially those caused by industrial activities. However, in Indonesia, environmental law enforcement is often considered weak, inconsistent, and sometimes ineffective. This weak law enforcement is one of the main obstacles in addressing industrial pollution which continues to increase along with economic growth and industrialization. This study aims to explore the main causes of weak environmental law enforcement in Indonesia, including factors such as corruption, limited human resources and technology, and bureaucratic complexity. In addition, it will also discuss how this weak law enforcement impacts environmental sustainability and public health.

Corruption is one of the main factors that weaken environmental law enforcement in Indonesia. Corruption occurs at various levels of government, from low-ranking officials to high-ranking officials who are responsible for the licensing process and supervision of industrial activities. This corruption creates loopholes for industrial companies to avoid their environmental obligations or to obtain environmental permits without meeting the requirements. For example, some companies may pay bribes to relevant officials to obtain operating permits even though they do not meet the environmental standards stipulated in the law (Suryani, 2019).

Corruption in environmental law enforcement also often leads to the neglect of serious environmental violations. Corrupt officials may be reluctant to follow up on reports of environmental pollution or turn a blind eye to violations committed by large industries with economic and political power. As a result, many cases of industrial pollution are never taken seriously, and environmental violators are rarely punished or forced to repair the damage they have caused (Nurhidayat, 2018). This creates a culture of impunity, where environmental violations are seen as something that can be tolerated as long as there is a proper payment to the authorities.

The Citarum River pollution case in West Java is a clear example of how corruption can exacerbate environmental pollution problems. Although the Citarum River has long been recognized as one of the most polluted rivers in the world, efforts to clean it up have often been hampered by corruption and a lack of political will to enforce environmental laws. Many textile factories operating along the river have been known to dump hazardous waste directly into the river without proper treatment, but little action has been taken against them, allegedly due to bribes to local officials (Lubis, 2018).

In addition to corruption, limited human resources and technology are also major causes of weak environmental law enforcement in Indonesia. Effective environmental monitoring requires a well-trained workforce and adequate technology to monitor and detect industrial pollution. However, in many areas, especially outside Java, the number of environmental inspectors is very limited, and they often do not have the skills or equipment needed to do their jobs properly.

According to data from the Ministry of Environment and Forestry (KLHK), the number of environmental inspectors in Indonesia is still far from sufficient to supervise the thousands of industries operating across the country. In addition, these inspectors often lack adequate training to understand and apply the latest technologies in environmental monitoring. For example, sophisticated air and water monitoring technologies, such as real-time sensors and monitoring satellites, are rarely used due to lack of budget and technical skills (Faisal, 2020). As a result, many environmental violations go undetected or cannot be verified with accurate data.

Technological limitations also affect the ability of law enforcement to process evidence of industrial pollution. For example, water and air quality testing laboratories in Indonesia often lack the equipment needed to conduct in-depth and timely analysis. This makes the process of gathering evidence slow and inaccurate, which in turn slows down the legal process and makes it more difficult to prosecute environmental violators. Without strong evidence, many industrial pollution cases are ultimately dropped or settled with very low fines (Suryani, 2019).

Bureaucratic complexity is another challenge in environmental law enforcement in Indonesia. Environmental licensing and monitoring processes involve multiple levels of government and institutions, which often work asynchronously. Poor coordination between central and regional governments, as well as between ministries and institutions, often hampers effective law enforcement. For example, lengthy and cumbersome environmental licensing processes can result in significant delays in regulatory enforcement, while lack of coordination between regulatory agencies can lead to confusion over who is responsible for overseeing industry compliance with environmental laws (Adam, 2017).

In addition, disagreements between the central and regional governments in implementing environmental regulations often lead to inconsistencies in law enforcement. For example, in some cases, regional governments may issue operational permits for certain industries that do not actually meet the environmental requirements set by the central government. This creates conflict between different levels of government, which ultimately hinders effective law enforcement (Setyawan, 2018).

This bureaucratic complexity is also reflected in the procedures that must be followed by the community or environmental organizations when reporting environmental violations. Complicated and non-transparent procedures often discourage the community from reporting violations, while those who try to report often hit a dead end due to slow and unresponsive bureaucracy. This adds to the challenges in efforts to enforce environmental law in Indonesia, where community oversight should be an important part of the law enforcement process (Nurhidayat, 2018).

Weak environmental law enforcement not only impacts environmental sustainability, but also has serious consequences for public health. When industries continue to pollute the environment without effective legal action, the long-term impacts can be devastating. Air, water, and soil pollution can cause a variety of health problems, including respiratory diseases, reproductive disorders, and other chronic diseases. In areas most affected by industrial pollution, such as around heavy industrial areas and chemical factories, the incidence of diseases related to environmental pollution tends to be higher than in other areas (Faisal, 2020).

In addition, uncontrolled environmental pollution also damages natural ecosystems, which can lead to loss of biodiversity and damage to important natural resources. For example, water pollution by industrial waste can damage the habitat of fish and other living things, which in turn reduces fish catches and negatively impacts the welfare of communities that depend on fisheries. Loss of forests due to land and water pollution can also reduce the environment's ability to absorb carbon, which contributes to climate change (Suryani, 2019).

The social impact of weak environmental law enforcement cannot be ignored either. When people feel that the law is not enforced fairly or that economic interests are always prioritized over environmental protection, public trust in government and legal institutions can decline. This can trigger social dissatisfaction and conflict between communities and industrial companies or the government, which often leads to protests or long and expensive legal actions (Setyawan, 2018).

To address these challenges, coordinated and sustained efforts are needed to strengthen environmental law enforcement in Indonesia. First, steps are needed to eradicate corruption in environmental law enforcement, including by strengthening internal oversight in law enforcement agencies and increasing transparency in licensing and supervision processes. Clean and transparent law enforcement will increase public trust and ensure that environmental violators cannot escape their responsibilities (Adam, 2017).

Second, the government needs to improve human resource and technological capacity in environmental law enforcement. This includes better training for environmental inspectors, investment in advanced monitoring technology, and improved laboratory facilities for environmental quality testing. By increasing this capacity, law enforcers will be better able to detect and prosecute environmental violations in a timely and accurate manner (Faisal, 2020).

Third, bureaucratic reform is needed to simplify and accelerate the environmental licensing and monitoring process. This includes improving coordination between the central and regional governments, as well as between the various institutions involved in environmental law enforcement. Simpler and more transparent procedures will make the law enforcement process more efficient and effective (Setyawan, 2018).

Finally, it is important to increase community participation in environmental law enforcement. Communities should be empowered to monitor and report environmental violations, by providing easy and safe channels for reporting, and ensuring that their reports are taken seriously by authorities. Active community participation will help improve monitoring and strengthen environmental law enforcement in Indonesia (Nurhidayat, 2018).

Industry Compliance with Environmental Standards in Indonesia: Challenges and Solutions

Industrial compliance with environmental standards is one of the important pillars in efforts to maintain environmental quality in Indonesia. These environmental standards have been set by various regulations, including Law Number 32 of 2009 concerning Environmental Protection and Management (UU PPLH), which regulates the obligations of industries to manage waste, reduce emissions, and prevent pollution. However, despite the existence of regulations, the level of industrial compliance with environmental standards in Indonesia is still a serious problem. This study aims to evaluate the extent to which industries in various sectors comply with environmental standards set by law, and to identify factors that influence this compliance. In addition, this study will also discuss the role of the government and related institutions in improving supervision and application of technology to ensure that these industries comply with existing regulations.

In recent decades, Indonesia has experienced rapid industrial growth, especially in the manufacturing, mining, and energy sectors. However, this growth is often not accompanied by adequate compliance with environmental standards. Many industries in Indonesia, both large and small, are known to often ignore their obligations to comply with environmental regulations. For example, cases of discharging industrial waste directly into rivers or the sea without going through adequate processing are practices that are still widely found in various regions, indicating low levels of industrial compliance with environmental standards (Lubis, 2018).

Research conducted by Nurhidayat (2018) revealed that the level of industrial compliance with environmental standards in Indonesia varies greatly depending on the sector and geographic location. Industries operating near monitoring centers, such as in urban areas, tend to have higher levels of compliance compared to industries operating in remote areas. This is due to tighter monitoring and higher awareness in urban areas. Conversely, in remote areas, where monitoring is less intensive, many industries operate without complying with environmental standards, which often has a negative impact on environmental quality and the health of local communities.

One of the sectors that has received the most attention is the mining sector. Mining, especially coal and gold mining, is often a significant source of pollution in Indonesia. Toxic waste such as mercury and cyanide used in the gold mining process is often dumped directly into rivers, causing serious water pollution and endangering the health of people living around mining areas (Faisal, 2020). Studies show that the level of compliance of mining companies with environmental regulations is very low, especially in areas far from central government supervision.

There are several main factors that influence the level of industrial compliance with environmental standards in Indonesia. First, economic factors play a significant role. Many industrial companies, especially small and medium-sized ones, often face economic pressures that make them reluctant to invest in waste treatment technology or appropriate environmental management systems. The high cost of complying with environmental regulations is often considered an additional burden, especially in difficult economic situations, so many companies prefer to ignore their environmental obligations (Lubis, 2018).

In addition, the lack of environmental awareness and education among industry players is also an important factor affecting compliance. Many entrepreneurs and factory managers do not have sufficient understanding of the importance of compliance with environmental standards or the long-term consequences of environmental pollution. The lack of education and training in the environmental field leads to a lack of concern for environmental issues among industry players (Suryani, 2019).

The third factor is weak law enforcement and supervision. Although environmental regulations already exist, weak law enforcement and inconsistent supervision make many industries feel that they can escape sanctions even though they violate regulations. The absence of severe or strict sanctions for environmental violations often makes industrial companies prefer to take risks rather than comply with regulations. For example, low fines or the threat of insignificant penalties are not enough to encourage compliance, especially for large companies that have the resources to pay fines without feeling financially disadvantaged (Setyawan, 2018).

Corruption is also a factor that hinders industry compliance with environmental standards. As discussed earlier, corruption in the environmental licensing and monitoring process allows companies to avoid their environmental obligations. By paying bribes to relevant officials, companies can obtain operating permits without having to meet the required environmental standards or can avoid legal action for their violations (Nurhidayat, 2018).

To improve industrial compliance with environmental standards, the role of government and related institutions is crucial. The government has the responsibility to create a clear, effective, and easy-to-implement regulatory framework. In addition, the government also needs to increase supervision and law enforcement to ensure that industrial companies comply with existing regulations.

One step that can be taken by the government is to increase the capacity of supervision through the use of advanced technology. For example, the use of real-time monitoring technology such as

sensors and drones can help detect environmental violations more quickly and accurately. This technology allows for broader and more effective supervision, especially in hard-to-reach or remote areas. The use of technology can also help in better and more transparent data collection, which can be used as evidence in law enforcement processes (Faisal, 2020).

In addition, the government also needs to improve the capacity of human resources in environmental monitoring institutions. This includes training and education for environmental inspectors so that they are more competent in carrying out their duties. With better trained and knowledgeable inspectors, supervision of industrial compliance can be carried out more effectively and efficiently. The government also needs to ensure that these inspectors have high integrity and are free from corruption, so that they can carry out their duties fairly and without influence from interested parties (Lubis, 2018).

The government also needs to develop incentives for industries to comply with environmental standards. These incentives can be in the form of tax breaks or subsidies for companies that invest in environmentally friendly technologies or that successfully achieve high environmental standards. With these incentives, companies will be more motivated to comply with environmental regulations, because they will gain economic benefits from such compliance (Setyawan, 2018).

In addition, the government must also strengthen sanctions for companies that violate environmental regulations. Heavier sanctions, including high fines and revocation of operating permits, should be applied for serious violations. This will send a strong signal to the industry that environmental violations will not be tolerated and that there are serious consequences for those who do not comply with regulations (Suryani, 2019).

The application of technology in environmental monitoring is one effective way to improve industrial compliance with environmental standards. Technology can be used to monitor water, air, and soil quality in real time, allowing early detection of environmental pollution. For example, sensors installed in factories can measure emissions of harmful gases and liquid waste discharged into the environment. Data generated from these sensors can be sent directly to a monitoring center, where action can be taken immediately if violations are detected (Faisal, 2020).

In addition, drone and satellite technology can also be used to monitor industrial activities in areas that are difficult for environmental supervisors to reach. Drones can be used to conduct visual inspections of industrial facilities, while satellites can provide a broader picture of the impact of industry on the surrounding environment. The use of this technology not only increases the effectiveness of supervision, but also reduces operational costs, because supervisors do not need to conduct direct physical inspections to remote or difficult to access locations (Lubis, 2018).

Technology can also be used to increase transparency and accountability in environmental monitoring. For example, data collected from sensors or drones can be uploaded to a digital platform that is accessible to the public. With public access to this data, the public can monitor industry compliance with environmental standards and report violations when necessary. This not only increases monitoring but also empowers the public to play an active role in environmental protection (Suryani, 2019).

Industrial compliance with environmental standards in Indonesia remains a major challenge, especially amidst rapid industrial growth and high economic pressure. Factors such as economic pressure, lack of environmental awareness, weak law enforcement, and corruption are major obstacles to achieving optimal levels of compliance. However, with coordinated and sustained efforts from the government, related institutions, and the community, these challenges can be overcome.

Improved supervision and law enforcement, the application of advanced technology, and the provision of incentives for industries that comply with environmental regulations are steps that can be taken to improve compliance. In addition, better education and training for industry players and environmental supervisors are also very important to build awareness and competence in managing the environmental impacts of industrial activities. With these steps, Indonesia can create an industrial climate that not only contributes to economic growth, but also protects and preserves the environment for future generations.

CONCLUSION

This study reveals that industrial compliance with environmental standards in Indonesia still faces many challenges, especially in terms of economic pressures, low environmental awareness, weak law enforcement, and corrupt practices. Although comprehensive environmental regulations have been implemented through Law Number 32 of 2009 concerning Environmental Protection and Management, its implementation in the field is still far from optimal. The level of industrial compliance varies greatly depending on the sector and geographic location, with many industries in remote areas still tending to ignore environmental standards. This indicates the need for stronger and more coordinated efforts from various parties to ensure that environmental standards are consistently followed by all industries in Indonesia.

To address these challenges, the role of the government and related institutions is crucial in improving supervision, strengthening law enforcement, and introducing incentives that encourage compliance. The use of advanced technology in environmental monitoring, such as real-time sensors and drones, as well as providing training to environmental supervisors and industry players, can be effective solutions. In addition, increasing transparency and community involvement in the monitoring process can also help ensure that industries comply with established environmental standards. With these steps, Indonesia can achieve a better balance between economic growth and environmental protection, ensuring that industrial development does not sacrifice environmental quality and public health.

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