

Legal Position Of Environmental Management As An Instrument For Preventing Environmental Damage And Pollution

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Abstract.

Indonesia faces a dilemma between economic development and environmental conservation, where the exploitation of natural resources has resulted in significant environmental degradation. The weakness of the legislation system and the lack of supervision in environmental management are the main challenges that require comprehensive legal instruments to prevent environmental damage and pollution. This research aims to examine the position of environmental law in the Indonesian legal system as an instrument to prevent environmental damage and pollution, analyze the effectiveness of preventive legal instruments, identify implementation obstacles, and formulate recommendations for strengthening the role of environmental law. The research uses normative legal methods with statutory, conceptual, and comparative approaches. The data collection technique uses library research with secondary data from primary, secondary, and tertiary legal materials. Data analysis uses descriptive-analytical qualitative method through systematic interpretation of environmental law norms with inductive reasoning. The results show that environmental law occupies a vital position as a pollution prevention mechanism that prioritizes anticipation rather than handling after damage. Environmental law is interdisciplinary in nature, combining administrative, criminal and civil law based on the principles of prudence and polluter pays. The main instruments include environmental quality standards, EIA, licensing system, and economic tools. However, implementation faces obstacles of inter-agency coordination, overlapping authority, limited resources, and low public participation. It is concluded that environmental law has a strategic position as an instrument of prevention through an integrated preventive approach.

Keywords: Environmental Law; Preventive Instrument and Environmental Damage.

I. INTRODUCTION

The environment is a unity of space with all objects, power, conditions, and living things including humans and their behavior that affect the continuity of life and the welfare of humans and other living things. In the context of sustainable development, the environment becomes a vital foundation that determines the quality of life of present and future generations. Along with population growth and the intensification of human activities, pressure on natural resources and the environment is increasing, thus requiring effective control mechanisms to prevent environmental damage and pollution. Environmental problems today have developed into complex issues involving various dimensions. According to Daud Silalahi's perspective, environmental problems can be categorized into five main aspects, namely the scientific aspect related to controlling nature, the technological aspect that is developing rapidly but has the potential to be damaging, the economic aspect that makes the environment a commodity, the philosophical aspect that questions the way humans view nature, and the social aspect related to demographic changes and limited natural resources (Silalahi, 2001). Meanwhile, Takdir Rahmadi identified five dominant factors causing environmental problems, including uncontrolled technological factors, exponential population growth, economic factors that prioritize the exploitation of natural resources, political factors that influence resource management policies, and the global crisis described as the "Three-Faced Environmental Crisis" which includes an environmental crisis, a development/economic crisis, and a population crisis that interact and interlock (Rahmadi, 2012).

Indonesia as a developing country faces a dilemma between the needs of economic development and environmental preservation. The massive exploitation of natural resources has resulted in significant environmental degradation, including damage to marine ecosystems, deforestation, natural disasters such as floods and landslides, and various other forms of environmental pollution. This condition shows the urgency of the need for comprehensive and effective legal instruments in preventing environmental damage and

pollution. In the context of a state based on the rule of law, Indonesia requires an environmental legal system that is not only responsive to damage that has occurred, but also proactive in preventing environmental damage and pollution. Environmental law has a strategic position as a preventive instrument that regulates the relationship between humans and their environment through the principles of caution, prevention, and responsibility. The aspect of the right to a healthy environment has been recognized internationally through the 1998 Aarhus Convention and has been adopted in the Indonesian legal system.

This right includes two fundamental aspects, namely the procedural aspect which is a derivative of the procedural right to the environment as a supporting element for the fulfillment of environmental rights substantially, and the substantive aspect which refers to the material right to obtain a decent standard of living and intra and intergenerational justice (Rahayu et al., 2017). As stated by Rahayu et al. (2017), the social movement of legal empowerment is important in preserving environmental functions through an approach that integrates local wisdom with the formal legal system. The weaknesses of the applicable legal regulatory system and the lack of supervision in environmental management are the main challenges in enforcing environmental law in Indonesia. Therefore, an in-depth analysis is needed regarding the position of environmental law as a preventive instrument that not only regulates aspects of sanctions and recovery, but also emphasizes preventive aspects through licensing, environmental quality standards, environmental impact analysis, and community participation mechanisms. This study aims to examine the position of environmental law in the Indonesian legal system as an instrument for preventing environmental damage and pollution, analyze the effectiveness of existing preventive legal instruments, identify challenges and obstacles in their implementation, and formulate recommendations for strengthening the role of environmental law in realizing environmentally sustainable development.

II. METHODS

This study uses a normative legal research method (normative juridical) that focuses on the analysis of the position and function of environmental law in the Indonesian legal system as a preventive instrument against environmental damage and pollution. This normative juridical research examines the structure of legal norms, the hierarchy of laws and regulations, and the effectiveness of environmental legal instruments in preventing environmental degradation. The approaches used in this study include the statute approach to analyze the consistency and coherence of environmental law regulations at various levels of regulation, the conceptual approach to understand fundamental concepts about preventing environmental damage through environmental law instruments, and the comparative approach to compare the effectiveness of various preventive legal instruments that have been applied in environmental management practices. The data collection technique in this study uses a doctrinal research method that explores comprehensive information regarding the legal status of environmental management, environmental damage prevention instruments, and environmental protection mechanisms through various sources of legal literature, scientific journals, and environmental policy documentation (Hutchinson, 2013). The data collected is secondary data consisting of three categories of legal materials. Primary legal materials include Law Number 32 of 2009 concerning Environmental Protection and Management, Law Number 11 of 2020 concerning Job Creation, especially the environmental cluster, Government Regulation Number 22 of 2021 concerning the Implementation of Environmental Protection and Management, as well as various ministerial regulations and regional regulations that regulate environmental damage prevention instruments.

Secondary legal materials consist of academic literature on environmental law, journal articles on pollution prevention instruments, dissertations and theses discussing the effectiveness of environmental management law, and research reports on the implementation of environmental policies. Tertiary legal materials include environmental law dictionaries, environmental encyclopedias, and various other supporting reference sources that are relevant to the problem of the legal status of environmental management. Data analysis in this study uses a qualitative analysis method with a descriptive-analytical approach that aims to describe and analyze in depth the position of environmental law in the national legal system and its effectiveness as a preventive instrument (Soekanto, 2007). The analysis process is carried out through systematic interpretation of environmental law norms, identification of the relationship between preventive

legal instruments, and evaluation of the implementation of legal provisions in environmental management practices. This study applies an inductive reasoning method that starts from an analysis of specific cases of the implementation of environmental law in preventing environmental damage, then developed into a general conclusion about the position and effectiveness of the legal instrument in the Indonesian environmental protection system (Ibrahim, 2006). This inductive reasoning method allows researchers to build a comprehensive understanding of how environmental law functions as an effective preventive instrument in preventing environmental damage and pollution in Indonesia.

III. RESULT AND DISCUSSION

A. Position and Function of Environmental Legal Instruments in Pollution Prevention Efforts

Environmental legal instruments occupy a very vital position in the national legal framework as a mechanism for preventing environmental pollution that prioritizes anticipatory measures rather than handling after damage occurs. The idea of prevention in the field of environmental law refers to a set of legal mechanisms designed to anticipate and avoid pollution before adverse effects occur (Rangkuti, 2020). This anticipatory strategy is in line with the basic philosophy of environmental protection which emphasizes that preventive measures are more effective than recovery, considering that environmental degradation is often permanent and requires very large recovery investments. Within the framework of the national legal system, environmental legal instruments have an interdisciplinary nature that combines elements of administrative law, criminal law, and civil law to provide comprehensive protection for the environment. The diversity of these instruments allows for the implementation of flexible and responsive strategies according to the characteristics and level of pollution threats faced. Constitutional recognition of the right to a healthy environment as stipulated in Article 28H of the 1945 Constitution provides a solid basis of legitimacy for the development of comprehensive preventive legal instruments. The philosophical foundation of environmental legal instruments in pollution prevention is built on fundamental principles that recognize the close correlation between environmental health and human health.

The concept of sustainable development is the main pillar that unites the economic, social, and environmental dimensions in every development policy (Soemarwoto, 2018). The application of this concept in environmental legal instruments is realized through regulations that require every development activity to consider the carrying and holding capacity of the environment, so that the needs of the current generation can be met without sacrificing the rights of future generations to a healthy environment. The concept of prudence (precautionary principle) is an important basis in the development of environmental pollution prevention tools. This concept emphasizes that uncertainty in the scientific field should not be an excuse to delay efforts to prevent environmental degradation (Hardjasoemantri, 2017). In its implementation, the precautionary concept is realized through the establishment of rigorous environmental standards, the implementation of environmentally friendly technology, and the obligation to conduct environmental risk evaluations before carrying out activities that have the potential to pollute the environment. The polluter pays principle concept complements the prevention framework by creating economic incentives for business actors to avoid activities that have the potential to pollute the environment. The success of environmental legal instruments as a pollution prevention tool is highly dependent on consistent implementation and strict supervision. The main obstacles faced are weak coordination between institutions, overlapping authority, and limited resources for supervision (Wijoyo, 2019).

This situation results in many environmental violations going undetected or not being followed up optimally, so that the preventive function of environmental legal instruments has not been able to operate optimally. In the context of government decentralization, coordination between the central and regional governments has become increasingly complicated, especially regarding the division of environmental management authority involving various sectors and levels of government. Environmental Quality Standards as Prevention Criteria Environmental quality standards are basic tools in the pollution prevention system that act as reference criteria to determine the presence or absence of environmental pollution. Based on Law Number 32 of 2009 concerning Environmental Protection and Management (UUPPLH), environmental

quality standards are defined as parameters of limits or levels of living things, substances, energy, or components that exist or must exist and/or pollutant elements that are permitted to exist in a particular resource as an environmental element. The application of environmental quality standards that include water quality standards, ambient air, emissions, and disturbances provides a firm framework for environmental quality monitoring and early detection of potential pollution.

From a legal perspective, the role of environmental quality standards in environmental management is to determine whether or not there is environmental pollution based on the definition of pollution according to the UUPPLH. Environmental pollution is defined as the entry or introduction of living things, substances, energy, and/or other components into the environment by human activities so that its quality decreases to a certain level which causes the environment to be unable to function according to its intended use. Determining the occurrence of environmental pollution is measured through environmental quality standards as explicitly stated in Article 20 paragraph (1) of the UUPPLH. The categorization of environmental quality standards consists of ambient quality standards and liquid waste quality standards or emission quality standards. Ambient quality standards function to determine or measure changes in environmental quality and contain the quality of environmental components or certain parts of the environment, such as water bodies in river basins, lakes, seas, and certain air areas. Meanwhile, liquid waste quality standards or emission quality standards relate to waste originating from individual pollution activities or sources. The existence of these two types of quality standards provides a comprehensive approach to environmental quality monitoring, both in terms of general environmental conditions and pollution contributions from specific sources.

a. AMDAL as a Comprehensive Prevention Tool

Environmental Impact Analysis (AMDAL) serves as the most comprehensive preventive tool in Indonesia's environmental law system. AMDAL functions as an in-depth study of the major and significant impacts of a planned business or activity on the environment, which is necessary for the decision-making process regarding the implementation of the business and/or activity. Through the AMDAL mechanism, every planned activity that has the potential to cause significant impacts on the environment is required to identify, predict, and evaluate environmental impacts from the planning stage, so that mitigation and prevention measures can be designed appropriately. Important impact parameters that require the preparation of an AMDAL include various aspects, including the number of people who will be affected, the area of impact distribution, the intensity and duration of the impact, the number of other environmental components that will be affected, the cumulative nature of the impact, and the reversibility or irreversibility of the impact. These parameters provide objective guidance in determining which activities require an AMDAL study, so as to prevent subjective or discriminatory assessments. AMDAL is basically a procedural effort to prevent environmental pollution that is internalized in the implementation of environmental licensing. As an environmental safeguard tool, AMDAL needs to be strengthened in the implementation of national development (Maisa and Purnawati, 2023).

The significance of AMDAL as an environmental pollution prevention tool is also stated in Principle 17 of the Rio Declaration which states that environmental impact assessment, as a national instrument, must be carried out for proposed activities that are likely to have significant adverse impacts on the environment and are subject to the decision of the competent national authority. Licensing System and Economic Instruments The environmental licensing system, including the environmental permit introduced in the UUPPLH, serves as an administrative control mechanism that allows the government to monitor and control activities that have the potential to cause pollution. The basic concept of the licensing system is "prohibited except with a permit" which gives the government the authority to set strict requirements before granting a permit to a business actor. This system allows the government to control society by issuing permits, where basically something is prohibited except with a permit. Environmental permits as regulated in the UUPPLH are defined as permits granted to any person who carries out a business and/or activity that requires AMDAL or UKL-UPL in the context of environmental protection and management as a prerequisite for obtaining a business and/or activity permit. This concept shows an effort to integrate environmental aspects into the business licensing system, where environmental permits are a mandatory prerequisite before obtaining a business permit (Sukanda and Nugraha, 2020).

If the environmental permit is revoked, the business and/or activity permit will be canceled, showing a close relationship between the two types of permits. Environmental economic instruments, as regulated in Article 42 of the UUPPLH, are realized through development planning and economic activities, environmental funding, and incentive and disincentive systems that implement the polluter pays principle (polluter pays principle). The use of economic devices in environmental management is an effort to realize the polluter pays principle, where polluters must bear the costs of preventing environmental pollution which are manifested in the form of economic devices with the main aim of financing pollution prevention efforts. This principle implies that polluters must be responsible for the costs arising from the pollution they cause, both for prevention, mitigation, and environmental recovery.

B. Barriers to Implementation and Strategies for Strengthening the Effectiveness of Environmental Legal Instruments

a. Identification of Structural and Operational Barriers

The implementation of environmental legal instruments as a means of preventing pollution faces various structural and operational obstacles that require serious attention. The main weakness lies in the weak inter-agency coordination system, where overlapping authority between the central and regional governments and between sectors causes ineffectiveness in environmental law supervision and enforcement (Subekti et al., 2018). This institutional fragmentation is exacerbated by limited human resources with technical competence in the environmental field, limited budget for monitoring and evaluation activities, and a weak integrated environmental information system. The complexity of rapidly developing environmental problems is not balanced by the speed of regulatory adaptation, thus creating a gap between the need for environmental protection and the available legal instruments.

The environmental legislation system still faces various weaknesses, including inconsistency between various levels of regulations, the slow process of harmonization of regulations at the central and regional levels, and the unclear division of authority in environmental management. This condition creates legal uncertainty that can hinder the effectiveness of the implementation of prevention instruments and provide loopholes for business actors to avoid environmental obligations. Technical obstacles in the implementation of AMDAL include inadequate quality of studies, weak supervision of the implementation of environmental management plans (RKL) and environmental monitoring plans (RPL), and lack of community participation in the AMDAL preparation process. Many AMDAL documents are prepared only to meet administrative requirements without providing an in-depth analysis of environmental impacts and preventive measures (Yakin, 2017). This is exacerbated by the limited capacity of AMDAL consultants and the weak certification and supervision system for the quality of environmental consultants.

b. Evaluation of Community Participation and Access to Information

Another significant obstacle is the low level of community participation in monitoring the implementation of environmental legal instruments. Limited access to environmental information, low public awareness of environmental rights, and the lack of effective participation mechanisms have resulted in suboptimal social control functions. This condition is exacerbated by the weak reporting and complaint system of the community, as well as the lack of legal protection for whistleblowers in cases of environmental violations. Limited access to environmental information is a serious obstacle in efforts to increase community participation. Although the UUPPLH has regulated the community's right to obtain environmental information, its implementation still faces various technical and administrative obstacles.

The environmental information system that has not been integrated, limited digital platforms for accessing information, and resistance from several agencies to open environmental data are factors that hinder the transparency of environmental information. The capacity of the community to understand and analyze environmental information is also a challenge. Much environmental information is technical and requires special knowledge to be understood and utilized optimally. This limitation causes community participation to often be reactive to impacts that have already occurred, rather than proactive in efforts to prevent environmental pollution.

c. **Comprehensive and Sustainable Strengthening Strategy**

To overcome these various obstacles, a comprehensive and sustainable strengthening strategy is needed. Institutional reform is a top priority through strengthening coordination between agencies, harmonization of laws and regulations at various levels, and development of an integrated environmental information system. Investment in human resource capacity development, both at the government and community levels, needs to be carried out systematically through training programs, certification, and environmental education. Strengthening community participation mechanisms can be done through providing transparent access to information, developing digital complaint platforms, and empowering civil society organizations in environmental monitoring. Regulatory reforms should include simplifying administrative procedures without reducing the effectiveness of environmental supervision, aligning authority between agencies, and strengthening sanctions for environmental violations. The development of an integrated environmental licensing system is an urgent need to overcome the fragmentation of licensing that has been an obstacle for the business world and weak government supervision (Herlina, 2017). This integrated licensing system must be supported by a digital platform that allows *services one stop service and real-time monitoring of environmental compliance*.

Utilization of information and communication technology for systems *real-time monitoring can improve the effectiveness of supervision and enable rapid response to potential environmental pollution. Development of an early warning system based on sensor and satellite technology can provide early information on changes in environmental quality. Integration of big data and artificial intelligence technology in environmental data management can improve the accuracy of environmental impact predictions and the effectiveness of decision making.* Strengthening the economic apparatus through the development of schemes *Payment for environmental services (PES), emission trading systems, and green bonds can provide stronger incentives for businesses to adopt clean technologies and environmentally friendly practices. The implementation of the polluter pays principle must be supported by an accurate and transparent monitoring system, as well as a consistent law enforcement mechanism. The development of environmental fiscal instruments such as carbon taxes and pollution levies can be a source of funding for environmental conservation and rehabilitation programs.*

Increasing the capacity of environmental institutions in the regions is the key to the successful implementation of environmental legal instruments in the era of decentralization. Program *Capacity building must include improving the technical competence of the apparatus, developing regional environmental management systems, and strengthening cooperation between regions in environmental management across administrative boundaries. Developing a network of cooperation between the government, business world, academics, and civil society can create stronger synergy in efforts to prevent environmental pollution.*

IV. **CONCLUSION**

Based on the discussion above, it can be concluded that environmental law occupies a strategic position as an instrument for preventing environmental damage and pollution through a preventive approach that integrates environmental quality standards, AMDAL, licensing systems, and economic instruments. This interdisciplinary environmental legal instrument combines aspects of administrative, criminal, and civil law by applying the precautionary principle and the polluter pays to provide comprehensive protection for the environment. However, the effectiveness of implementation still faces structural obstacles in the form of weak coordination between agencies, overlapping authority, limited resources, and low community participation. Therefore, a comprehensive strengthening strategy is needed through institutional reform, regulatory harmonization, development of monitoring technology, strengthening of economic instruments, and increasing the capacity of the apparatus and community participation to realize environmentally friendly sustainable development.

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