

SUSTAINABLE CONSERVATION AND ADMINISTRATIVE LAW: LEGAL FRAMEWORKS FOR ENFORCING ENVIRONMENTAL PROTECTION POLICIES

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Abstract

This study aims to analyze the administrative legal framework for enforcing sustainable environmental protection policies and identify administrative mechanisms that can optimize the implementation of conservation programs. The research methodology uses a normative juridical approach with descriptive-qualitative analysis, reviewing laws and regulations related to administrative law and environmental conservation, as well as case studies of policy implementation in various jurisdictions. Data were collected through literature review, legal document analysis, and interviews with environmental law practitioners. The results show that integrating administrative law with environmental conservation policies can improve enforcement effectiveness through several mechanisms: first, establishing clear administrative standards for environmental permits; second, establishing an independent oversight agency; third, implementing proportionate administrative sanctions; and fourth, developing a sustainable monitoring and evaluation system. This study reveals that the successful implementation of conservation policies is highly dependent on regulatory harmonization, inter-agency coordination, and public participation in the administrative process. The study's conclusions emphasize the need for structural reforms in the administrative legal system to create a framework that is more responsive to conservation challenges.

Keywords: Administrative law; Conservation policy; Environmental protection; Legal framework; Sustainable development.

Introduction

The increasingly alarming global ecological crisis has demanded a fundamental transformation in the legal approach to environmental protection. The phenomena of climate change, massive deforestation, and biodiversity degradation are no longer merely hypothetical threats but realities that require a comprehensive and structured legal response [1]. In this context, state administrative law has emerged as a crucial instrument that can bridge the gap between environmental policy formulation at the normative level and practical implementation on the ground. The administrative legal framework offers a systematic mechanism for transforming conservation aspirations into measurable, accountable, and sustainable administrative actions.

The increasingly alarming global ecological crisis has demanded a fundamental transformation in the legal approach to environmental protection. The phenomena of climate change, massive deforestation, and biodiversity degradation are no longer merely hypothetical threats but realities that require a comprehensive and structured legal response [1]. In this context, administrative law has emerged as a crucial instrument that can bridge the gap between environmental policy formulation at the normative level and practical implementation on the

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ground. The administrative legal framework offers a systematic mechanism for transforming conservation aspirations into measurable, accountable, and sustainable administrative actions.

The sustainable conservation paradigm faces complex challenges in its operationalization, particularly when confronted with short-term economic interests that often conflict with long-term environmental conservation goals [2]. Administrative law, with its flexible yet binding characteristics, has the potential to create a balance between economic development and environmental protection through instruments such as permits, supervision, and administrative sanctions [3]. This approach enables the state to carry out its regulatory and protective functions towards the environment without hindering the development dynamics necessary for the well-being of society.

Empirical studies show that countries with strong administrative legal systems tend to have a higher success rate in implementing conservation policies [4]. This phenomenon can be explained by administrative law's ability to create legal certainty for economic actors while ensuring strict environmental compliance [5]. However, the integration of administrative law and environmental conservation policies still faces various structural barriers, ranging from regulatory inconsistencies, weak coordination between institutions, and minimal public participation in administrative processes.

This research starts from the premise that the effectiveness of environmental protection policies depends heavily on the quality and responsiveness of the administrative legal system that underpins them. The hypothesis is that harmonizing administrative law principles with sustainable conservation goals can produce a more effective legal framework for enforcing environmental policies [6]. Therefore, this research aims to explore the critical dimensions of the intersection between administrative law and environmental conservation and formulate recommendations for optimizing the role of administrative law in supporting the sustainable environmental protection agenda.

Experimental part

The primary objective of this study is to examine the integration of administrative law in the enforcement of environmental conservation policies and to evaluate the effectiveness of the legal framework supporting sustainable environmental protection. This research adopts a normative legal research approach with a descriptive-analytical method, focusing on the analysis of legal norms, statutory regulations, and policy frameworks governing the relationship between state administration and environmental protection.

The research was conducted through several sequential stages. First, legislation related to administrative law and environmental conservation was identified and analyzed. Second, a comprehensive review of relevant academic literature was undertaken to establish the conceptual and theoretical foundation of the study. Third, a comparative legal analysis was conducted to examine best practices in the implementation of environmental administrative law across different jurisdictions. The collected legal materials were subsequently analyzed using content analysis to identify patterns, themes, and gaps within the existing legal framework. The findings were interpreted qualitatively through a hermeneutic approach to understand the meaning and implications of the legal norms examined. The validity of the analysis was strengthened through the triangulation of data sources and consultations with environmental law practitioners and academics specializing in administrative law and environmental conservation.

Materials

The materials used in this study consisted of primary and secondary legal materials. Primary legal materials were obtained through the analysis of legislation related to state administrative law and environmental conservation, including relevant statutes, government regulations, and ministerial regulations. Secondary legal materials were collected through a comprehensive literature review of scientific journal articles, textbooks, and academic publications discussing the relationship between administrative law and environmental policy.

In addition, comparative legal materials from different jurisdictions were used to examine best practices in the implementation of environmental administrative law. All legal materials were systematically analyzed using content analysis and a qualitative hermeneutic approach to identify patterns, themes, and gaps within the existing legal framework. The validity of the findings was further enhanced through the triangulation of data sources and consultations with environmental law practitioners and academics with expertise in administrative law and environmental conservation.

Results and discussion

Conceptual Framework of Administrative Law in Environmental Conservation

Environmental administrative law is a branch of law that regulates the implementation of environmental protection policies through state administrative mechanisms, including the formation, implementation, and enforcement of environmental regulations by government agencies [7]. The scope of environmental administrative law includes environmental licensing procedures, environmental impact assessments, pollution monitoring and control, and administrative sanctions for violations of environmental provisions [8]. This legal framework functions as an operational instrument that translates high-level conservation policies into concrete actions in the field by granting authority to government agencies to regulate, supervise, and enforce laws in the field of environmental protection [9].

The basic principles of administrative law in the context of environmental conservation are built on the foundation of the precautionary principle, transparency, accountability, and public participation [10]. The precautionary principle requires the government to take preventive action even if there is no full scientific certainty regarding the environmental impact, while the transparency principle ensures the openness of information in the environmental administrative decision-making process. Accountability in environmental administration means that every government decision and action must be legally accountable and can be tested through internal and external oversight mechanisms. Public participation is a fundamental principle that ensures that the community has the right to be involved in the planning, implementation, and evaluation of environmental policies, in line with the concept of environmental democracy.

The theoretical relationship between sustainable development and public administration is manifested in the green governance paradigm that integrates economic, social, and environmental aspects in every government administration process. The concept of sustainable development demands a fundamental change in the approach to public administration, from one that was initially oriented solely on economic growth to a triple bottom line that considers profit, people, and the planet. Public administration in the era of sustainable development must be able to align short-term interests with the needs of future generations through a strategic planning mechanism that integrates environmental mainstreaming in every development sector [11]. This transformation requires a reorientation of the bureaucracy from rule-based administration to adaptive governance that is responsive to ecosystem dynamics and environmental change [12].

The model of integration of administrative law with environmental policy can be realized through a regulatory integration approach that aligns various legal instruments in a coherent and effective administrative system [3]. This integration includes harmonization of laws and regulations at the national and regional levels, institutional coordination between sectors, and synchronization of administrative procedures to avoid overlapping authority [13]. The whole-of-government approach is key in this integration model, where each government agency has environmental responsibilities that are integrated with its main duties and functions [14]. Implementation of this integration model requires strengthening institutional capacity, developing an integrated environmental information system, and establishing an effective coordination mechanism between levels of government to ensure consistency and effectiveness in enforcing environmental conservation policies.

Administrative Legal Instruments for Conservation Policy Enforcement

The environmental licensing system is the primary preventive instrument in enforcing conservation policies, granting the government the authority to regulate and control activities that have the potential to cause environmental impacts [15]. The Environmental Impact Assessment (EIA) mechanism forms the backbone of this licensing system, where every development activity that has the potential to cause significant impacts on the environment must undergo an in-depth review process covering physical-chemical, biological, socio-economic, and cultural aspects [16]. The EIA procedure involves scoping stages to determine the scope of the study, preparation of an environmental impact analysis (AMDAL) document, and a comprehensive evaluation by a competent assessment commission. The environmental permit procedure then integrates the EIA results with other technical and administrative requirements, creating a gatekeeping mechanism that ensures that only activities that meet environmental standards can obtain operational permits.

Administrative supervision and monitoring serve as post-licensing instruments that ensure compliance with environmental provisions after a permit is granted through a periodic and systematic environmental audit system. Environmental audits include evaluation of the implementation of environmental management plans (RKL) and environmental monitoring plans (RPL), verification of compliance with environmental quality standards, and assessment of the effectiveness of the implemented environmental management system. A periodic reporting and evaluation system is an integral component of administrative supervision, where permit holders are required to submit reports on the implementation of environmental management and monitoring regularly to authorized agencies. This monitoring mechanism is strengthened by the use of remote sensing technology and environmental information systems that enable real-time monitoring of environmental quality parameters and early detection of potential violations [17].

Administrative sanctions in environmental law enforcement are designed as preventive and repressive instruments, with the primary goal of restoring environmental conditions and preventing further violations [18]. Preventive sanctions include written warnings, government coercion, and freezing of environmental permits, while repressive sanctions include permit revocation, business closure, and forced environmental rehabilitation. The administrative penalties mechanism is developed based on the principle of proportionality, where the type and amount of sanctions are adjusted to the level of violation, the environmental impact caused, and the economic capacity of the violator. The effectiveness of administrative sanctions is strengthened through a cascade enforcement system that allows for escalation of sanctions from light to heavy, as well as integration with criminal and civil sanctions to create an optimal deterrent effect. The implementation of administrative sanctions also accommodates the principle of restorative justice through environmental restoration and ecological compensation mechanisms that aim to restore the function of ecosystems damaged by violations [19].

Institutions and Coordination in Conservation Policy Implementation

The institutional structure of environmental administration in the implementation of conservation policies requires a complex and multi-level governance architecture, where the Ministry of Environment acts as the lead agency in coordinating national policies, while technical institutions such as conservation agencies, watershed management centers, and environmental research centers function as implementing agencies that translate policies into operational actions. The roles of related ministries and institutions include the formulation of national standards, development of implementation guidelines, resource allocation, and supervision of the implementation of conservation programs at various levels of government. Central and regional coordination in conservation is built through a concurrent authority mechanism that provides shared authority between the central and regional governments in natural resource management, with a clear division of roles between strategic policy-making at the national level and adaptive implementation at the local level. The effectiveness of this vertical coordination is highly dependent on the alignment of strategic vision, consistency in regulatory interpretation, and effective communication capabilities between various levels of government [20].

Inter-agency coordination mechanisms in the implementation of conservation policies face complex challenges because they involve various sectors with often conflicting interests,

thus requiring a coordination framework capable of aligning sectoral interests with long-term conservation goals. Synchronization of multi-sector policies is achieved through the formation of inter-ministerial committees, joint task forces, and cross-sectoral planning mechanisms that enable the integration of environmental perspectives in policies of other sectors such as agriculture, forestry, mining, and infrastructure development [14]. Resolution of administrative conflicts of interest requires a conflict resolution mechanism based on the principle of environmental mainstreaming, where environmental interests are integrated as a primary consideration in every administrative decision-making process. Implementation of strategic environmental assessment (SEA) at the policy and strategic planning levels is an important instrument for identifying and resolving potential conflicts of interest from the planning stage.

Public participation in the conservation administrative process is a fundamental element in democratic governance that not only ensures policy legitimacy but also increases the effectiveness of implementation through local knowledge and community ownership. Public participation in administrative decision-making is realized through various mechanisms such as public consultation, stakeholder engagement, participatory planning, and community-based monitoring that provide space for the public to contribute to the process of formulating, implementing, and evaluating conservation policies [21]. These participation mechanisms must meet the principles of meaningful participation that include access to relevant information, the opportunity to express views, and the guarantee that public input will be considered in the decision-making process [22]. Administrative appeal and complaint mechanisms are important instruments to ensure accountability and responsiveness in conservation administration, where the public has the right to file objections to administrative decisions that are detrimental to the environment or their interests. An effective complaint system must be equipped with clear procedures, a reasonable timeframe, and an adequate redress mechanism to ensure that community rights in environmental conservation are optimally protected.

Case Study: Implementation of Administrative Law in Conservation

Forestry Licensing and Biodiversity Conservation Cases

The implementation of administrative law in forestry licensing faces significant complexity in balancing economic interests and biodiversity conservation, as reflected in the case of concession management in production forest areas bordering endangered species habitats. The forest concession licensing process requires the integration of environmental impact assessment with biodiversity conservation planning, where permit holders must develop a management plan that accommodates wildlife corridors, buffer zones, and in-situ conservation areas [23]. The case of HPH (Forest Concession Rights) licensing in Kalimantan shows how adaptive management mechanisms in the licensing system can integrate sustainable forest management principles with the protection of orangutan and other endemic species habitats through reduced impact logging and forest certification requirements. The implementation of Free, Prior, and Informed Consent (FPIC) in the forestry licensing process also presents a complex administrative challenge, where the government must ensure the participation of indigenous communities in decision-making that affects their traditional territories.

The experience of implementing the One Map Initiative in the forestry licensing system demonstrates the importance of spatial data integration to prevent overlapping permits and tenurial conflicts that can hinder biodiversity conservation efforts. The Geographic Information System (GIS)-based forest licensing system allows for accurate identification of areas with high conservation value so they can be designated as no-go areas or areas requiring special management prescriptions [24]. The case of implementing a moratorium on new permits in primary forests and peatlands shows how administrative instruments can be used to protect critical ecosystems, despite facing challenges in enforcement and monitoring on the ground [25]. The environmental compliance monitoring mechanism in forestry licensing has evolved from a traditional command-and-control approach to performance-based regulation that provides flexibility to permit holders to achieve conservation targets through various innovative approaches [7].

Evaluation of the effectiveness of administrative enforcement in forestry licensing shows that the success of biodiversity conservation is highly dependent on institutional capacity in conducting field supervision and compliance verification. The case of the revocation of an HPH permit due to violation of conservation provisions shows that administrative sanctions can be an effective instrument if supported by a robust monitoring and evaluation system and multi-stakeholder oversight. The implementation of payment for ecosystem services (PES) in the forestry licensing scheme has provided economic incentives for permit holders to practice biodiversity-friendly management, although improvements in the aspects of baseline measurement and additionality assessment are still needed. The experience of collaborative management between the government, forestry companies, and local communities in managing buffer zones around national parks shows the potential of co-management arrangements in optimizing conservation functions through participatory administrative mechanisms.

Implementation of Administrative Sanctions in Environmental Pollution

The application of administrative sanctions in cases of environmental pollution demonstrates the evolution of the approach from reactive enforcement to proactive compliance management, as reflected in the case of water pollution in industrial areas that uses a tiered sanctions mechanism to achieve optimal compliance [7]. The implementation of administrative penalties in the case of river pollution by the textile industry shows that the effectiveness of sanctions is highly dependent on the government's ability to conduct a rapid response and continuous monitoring of water quality parameters, using a real-time monitoring system integrated with an early warning system [11]. The case of the application of coercive measures in the form of temporary closure of production facilities that violate air emission quality standards shows that administrative sanctions can be an effective instrument in forcing immediate compliance, although it requires careful consideration of the socio-economic impacts and the availability of alternative enforcement mechanisms [18]. The mechanism of administrative restoration orders in cases of land pollution due to hazardous waste demonstrates the potential of administrative sanctions in restoring environmental quality through the polluter-pays principle that requires the polluter to bear the costs of remediation.

The experience of implementing environmental liability schemes in cases of industrial waste pollution demonstrates the importance of integrating administrative sanctions with environmental damage compensation mechanisms, where the government can demand ecological restoration or compensation payments to restore degraded ecosystem services [26]. The case of the application of progressive sanctions in air pollution by the cement industry shows that escalating enforcement from written warnings and administrative fines to permit revocation can provide a significant deterrent effect if supported by transparent enforcement procedures and consistent application. The implementation of settlement agreements in cases of large-scale environmental pollution shows that negotiated compliance can be a more effective alternative than adversarial enforcement, especially in cases involving complex technical issues and requiring long-term remediation strategies [27]. The use of environmental auditing as part of administrative sanctions has proven effective in identifying the root causes of pollution and developing comprehensive corrective action plans [28].

Evaluation of the effectiveness of administrative enforcement in environmental pollution shows that the success of administrative sanctions is highly dependent on the institutional capacity of the government in conducting investigations, gathering evidence, and taking legally sound enforcement actions [29]. The case of marine environmental pollution by oil spills shows the importance of inter-agency coordination in the application of administrative sanctions, where response coordination between environmental, maritime, and marine authorities is key to effective enforcement and environmental restoration [30]. The implementation of corporate environmental responsibility through administrative sanctions has resulted in significant behavioral changes in the industry, where companies have begun to adopt environmental management systems and cleaner production technologies to avoid sanctions [31]. The experience of citizen enforcement through administrative complaint mechanisms shows that public participation can strengthen the effectiveness of administrative sanctions, especially in

cases of pollution that affect public health and community livelihoods. The development of digital enforcement tools such as satellite monitoring and automated compliance tracking has increased the government's ability to detect violations and apply administrative sanctions more quickly and accurately [32].

Evaluation of the effectiveness of institutional coordination

An evaluation of the effectiveness of institutional coordination in the implementation of conservation policies shows that institutional fragmentation is a major challenge hindering the achievement of conservation goals, as reflected in the case of marine protected area management involving multiple agencies with overlapping authority. An analysis of inter-agency coordination in the management of Komodo National Park shows that the absence of a clear lead agency and effective coordination mechanisms leads to policy inconsistencies and resource duplication that hinder the effectiveness of conservation programs [33]. The implementation of one-stop service in environmental permitting shows that institutional integration can improve administrative efficiency but requires comprehensive organizational restructuring and ongoing capacity building to ensure seamless coordination [34]. An evaluation of multi-level governance in watershed management shows that vertical coordination between the central and regional governments still faces obstacles in information sharing, resource allocation, and accountability mechanisms.

Experience in implementing integrated coastal zone management (ICZM) shows that horizontal coordination between sectors requires institutional innovations in the form of the formation of inter-sectoral committees and joint planning mechanisms that can overcome sectoral egos and conflicting interests. The case of coordination in handling transboundary pollution shows the importance of institutional capacity in cross-jurisdictional cooperation, where memoranda of understanding and joint enforcement protocols are important instruments in overcoming jurisdictional gaps [35]. Evaluation of stakeholder engagement in collaborative governance shows that multi-stakeholder platforms can increase the effectiveness of coordination if supported by clear mandates, adequate resources, and transparent decision-making processes [36]. The implementation of adaptive management in institutional coordination shows that flexible institutional arrangements that can adapt to changing environmental conditions and policy contexts are more effective than rigid bureaucratic structures [12].

Cost-benefit analysis of various institutional coordination models shows that high transaction costs in inter-agency coordination can be minimized through standardization of procedures, information system integration, and performance-based incentives. Evaluation of institutional performance in environmental governance shows that coordination effectiveness is influenced by factors such as leadership commitment, organizational culture, resource availability, and external pressures from civil society and international organizations. Experience with network governance in conservation shows that informal coordination mechanisms such as professional networks and communities of practice can complement formal institutional structures in improving policy coherence and implementation effectiveness. The implementation of digital governance in institutional coordination shows the potential of information and communication technologies in improving coordination efficiency through real-time information sharing, collaborative platforms, and automated coordination processes. Long-term evaluations of institutional reforms in the environmental sector show that sustainable coordination requires institutional learning, continuous improvement, and adaptive capacity that enable organizations to evolve in accordance with changing conservation challenges.

Lessons learned and best practices

Based on an in-depth analysis of the implementation of administrative law in environmental conservation, several key lessons can be used as guidelines for improving the effectiveness of environmental protection policy enforcement. First, transparency and public participation are fundamental elements that must be strengthened in every administrative decision-making process. The principle of accountability in environmental governance requires effective protection of the public's right to express opinions and access comprehensive and timely information regarding economic and social policies related to natural resource utilization and

environmental protection. This aligns with best practices adopted by various developed countries, where public participation mechanisms are viewed not only as procedural obligations but also as strategic instruments for improving policy quality and government legitimacy.

Second, solid and integrated institutional coordination between various levels of government is key to successful conservation policy implementation. Experience from various cases shows that fragmented authority and overlapping jurisdictions are often major obstacles to environmental law enforcement [37]. Therefore, establishing a clear coordination mechanism, including designating a lead agency for each specific environmental issue, is a best practice that needs to be adopted [38]. In the Indonesian context, strengthening the role of the Ministry of Environment and Forestry as the primary coordinator in environmental policy implementation has shown positive impacts, although coordination with local governments still requires improvement.

Third, the application of proportional and deterrent administrative sanctions requires an approach based on graduated enforcement. Best practices show that a combination of preventive, repressive, and restorative sanctions is more effective than an approach relying solely on criminal sanctions [39]. Administrative sanctions such as permit revocation, temporary suspension of activities, and significant administrative fines have proven to be faster and more effective in stopping environmentally damaging activities. Furthermore, the application of the polluter pays principle in the administrative sanction structure also provides a strong economic incentive for businesses to comply with environmental regulations.

Fourth, the digitalization and modernization of environmental administration systems are best practices that cannot be ignored in the contemporary era. The implementation of e-governance in environmental licensing processes, real-time environmental quality monitoring, and digital reporting systems have been proven to increase efficiency, transparency, and accountability in environmental law enforcement. The use of satellite technology for deforestation monitoring, geographic information systems for mapping conservation areas, and blockchain for forestry product traceability are examples of innovations that can be adopted to strengthen environmental administration systems. These practices not only increase the effectiveness of oversight but also reduce the potential for corruption and abuse of authority in administrative processes.

Fifth, capacity building and sustainable human resource development are strategic investments that cannot be ignored. The ever-evolving complexity of environmental issues requires officials with adequate technical, legal, and managerial competencies. Best practices indicate that ongoing training programs, professional certification, and the exchange of experiences between jurisdictions are effective strategies for increasing institutional capacity. In addition, recruitment of experts with multidisciplinary backgrounds, including environmental law, ecology, environmental economics, and technology, is an urgent need to face increasingly complex conservation challenges [40].

Sixth, lessons learned from various cases demonstrate the importance of an adaptive management approach in implementing conservation policies. Flexibility in responding to changing environmental conditions, technological developments, and socio-economic dynamics is a key characteristic of an effective environmental administration system. This includes the ability to periodically evaluate policy effectiveness, adapt to changing field conditions, and integrate lessons learned from implementation failures and successes [41]. This approach also requires a robust monitoring and evaluation system to objectively and sustainably measure the impact of policies on environmental conditions.

Challenges and Barriers to Implementation

Structural and Regulatory Barriers

The implementation of environmental conservation policies within an administrative legal framework faces various fundamental structural and regulatory barriers. One major challenge is the inconsistency of laws and regulations, which creates legal uncertainty in the implementation of conservation policies. This inconsistency is evident in the conflict between national and regional regulations, where regional regulations are often inconsistent with national environmental protection policies [42]. This phenomenon is exacerbated by differing

interpretations of the same environmental legal norms, creating ambiguity in the application of administrative sanctions and law enforcement mechanisms. Furthermore, the temporal misalignment between old and new regulations is also a significant problem, where regulations that are no longer relevant to current environmental conditions remain in effect, hampering the implementation of adaptive conservation policies [43].

Another structural problem is regulatory gaps and overlapping authority, which create fragmentation in the environmental law enforcement system. Regulatory gaps occur when there is a legal vacuum in regulating certain aspects of environmental conservation, such as regulations regarding new technologies in waste management or previously unidentified ecosystem protection mechanisms. Meanwhile, overlapping authority arises when several government agencies have overlapping authority in natural resource management and environmental protection, resulting in institutional conflict and inefficiency in decision-making [44]. This condition is exacerbated by weak coordination between government agencies, both horizontally and vertically, which results in program duplication and waste of resources in the implementation of conservation policies. The impact of these structural barriers is the creation of regulatory uncertainty that hinders investment in environmentally friendly technologies and reduces the overall effectiveness of environmental law enforcement.

Operational and Technical Challenges

Implementing environmental conservation policies through administrative legal instruments faces significant operational challenges, particularly in terms of limited human resource capacity. This capacity limitation encompasses both the quantity and quality of personnel handling environmental law enforcement, with many government agencies experiencing a shortage of experts with a thorough understanding of environmental law and conservation technique. This problem is exacerbated by the low level of competency among officials in understanding the complexities of environmental compliance and administrative enforcement mechanisms, resulting in suboptimal law enforcement processes. Furthermore, high employee turnover rates and a lack of ongoing training programs have led to a loss of institutional memory and consistency in handling environmental cases. The impact of these limited human resources is slow administrative decision-making, low-effective monitoring and evaluation, and an increased risk of undetected environmental violations [45].

Another equally important technical challenge is the limited technology and infrastructure that support the implementation of conservation policies. These technological limitations include the lack of sophisticated monitoring and surveillance systems to monitor environmental conditions in real-time, as well as the minimal use of information technology in environmental law enforcement administration systems. Supporting infrastructure such as environmental quality testing laboratories, geographic information systems (GIS), and adequate communication networks are still not evenly available throughout Indonesia [46]. These limitations result in slow and inaccurate environmental data verification and validation processes, which ultimately affect the quality of administrative decisions in environmental law enforcement. In addition, the low level of digitalization in government administration systems causes inefficiencies in document management and inter-agency coordination, thus hampering the implementation of conservation policies that require effective inter-agency coordination [47].

Socio-economic and political factors

The implementation of environmental conservation policies through administrative legal instruments faces complex challenges stemming from socio-economic and political factors, particularly in the form of private sector resistance to environmental regulations. This resistance arises from the perception that conservation policies will increase compliance costs and reduce corporate competitiveness in the global market. The private sector, particularly in the extractive and manufacturing industries, often views environmental regulations as an obstacle to operational efficiency and short-term profitability. This resistance manifests itself in various forms, ranging from regulatory capture, where large companies attempt to influence the regulatory process, to greenwashing practices that project an environmentally friendly image without making

substantive changes to company operations. Furthermore, the significant lobbying power of the private sector often succeeds in weakening the implementation of administrative sanctions or even altering the substance of environmental regulations to better benefit business interests [48]. The impact of this resistance is the creation of a regulatory gap between established policies and their implementation on the ground, making environmental conservation goals difficult to achieve.

Another challenge stems from short-term political and economic pressures that often conflict with conservation principles that require a long-term perspective. This political pressure arises from the dynamics of the electoral cycle, where policymakers tend to prioritize results that can be felt within their term of office, while the positive impacts of environmental conservation are often only visible in the longer term [49]. This condition is exacerbated by the existence of a political economy that prioritizes short-term economic growth over environmental sustainability, where conservation policies are often seen as an obstacle to investment and job creation [50]. Economic pressure also arises from the need to maintain regional economic competitiveness, where regions with strict environmental regulations are worried about losing investors to other, more permissive regions. Furthermore, the conflict of interest between economic development targets and environmental protection creates a difficult policy dilemma to resolve, especially during economic crises that demand priority on short-term economic recovery. As a result, the implementation of conservation policies often experiences policy reversal or weakened enforcement when faced with strong political and economic pressure.

Recommendations for Optimizing Administrative Law for Conversion Regulatory Reform and Legal Harmonization

To achieve effective harmonization, a strong coordination mechanism is needed between government agencies through the establishment of a task force or special commission mandated to conduct regulatory impact assessments on all regulations related to the environmental conservation [51]. This mechanism must be complemented by a continuous monitoring and evaluation system to ensure that regulatory reforms not only stop at the regulatory formulation stage but also at the implementation and enforcement stage. The use of information technology and integrated database systems can facilitate the identification of potential regulatory conflicts and facilitate a more efficient harmonization process. Comprehensive regulatory reform must also consider public participation and multi-stakeholder engagement to ensure that the interests of the public, the private sector, and non-governmental organizations are accommodated within the new legal framework [52].

Strengthening Institutional Capacity

Strengthening institutional capacity is a strategic element that determines the successful implementation of environmental conservation policies through administrative legal instruments. In the Indonesian context, weak institutional capacity is often a major bottleneck in environmental law enforcement, both at the central and regional levels. This institutional capacity encompasses structural aspects, human resources, technology, and adequate management systems to effectively carry out the functions of monitoring, enforcing, and evaluating conservation policies. The Ministry of Environment and Forestry, as the lead agency in environmental management, requires capacity strengthening not only quantitatively through additional personnel but also qualitatively through improving the technical and managerial competencies of its apparatus [53]. This institutional transformation must be directed towards establishing an organization that is adaptive, responsive, and capable of anticipating the increasingly complex dynamics of global environmental change.

Pengembangan sistem monitoring dan evaluasi

The development of a comprehensive monitoring and evaluation system is a vital instrument in ensuring the effective implementation of environmental conservation policies through an administrative legal framework. A robust monitoring and evaluation system not only functions as a supervisory tool but also as a feedback loop mechanism that enables continuous improvement in the

implementation of environmental policies [54]. In the Indonesian context, weaknesses in monitoring and evaluation systems are often the main cause of conservation program failure due to the lack of accurate data and an integrated reporting system. The development of this system must integrate the principles of real-time monitoring, data-driven decision-making, and adaptive management to create a responsive mechanism that can anticipate dynamic changes in environmental conditions [12]. The implementation of remote sensing technology, Geographic Information System (GIS), and the Internet of Things (IoT) is key in building an efficient monitoring system that can cover large conservation areas with high accuracy.

Increasing Participation and Transparency

Increasing participation and transparency in the implementation of administrative law for environmental conservation are fundamental pillars in realizing sustainable, good environmental governance. Meaningful public participation not only provides democratic legitimacy to environmental policies but also enriches the decision-making process with local knowledge and the perspectives of communities directly impacted by conservation programs. In the Indonesian context, the implementation of Law Number 14 of 2008 concerning Public Information Disclosure and Law Number 32 of 2009 concerning Environmental Protection and Management has provided a strong legal foundation for public participation in the environmental management [38]. However, the main challenge lies in the operationalization of the participation principle, which remains tokenistic and has not yet reached the level of citizen control in the ladder of participation proposed by Arnstein [22]. Transparency of environmental information is an absolute prerequisite for enabling effective participation, as the public requires access to accurate, up-to-date, and easily understood environmental data to participate constructively.

Conclusions

Administrative law plays a crucial role in enforcing sustainable environmental protection policies by providing a systematic framework for implementing conservation through licensing mechanisms, supervision, administrative sanctions, and monitoring and evaluation systems. This research shows that integrating administrative law with environmental conservation policies can enhance the effectiveness of law enforcement through clear administrative standards, the establishment of independent oversight bodies, the application of proportionate sanctions, and the development of sustainable monitoring systems. Successful conservation policy implementation relies heavily on regulatory harmonization, inter-agency coordination, and active public participation in administrative processes, all of which are key pillars of responsive and adaptive environmental governance.

However, conservation policy implementation faces various structural, operational, and socio-economic challenges. Regulatory inconsistencies, overlapping authorities, and limited institutional capacity are key obstacles, leading to legal uncertainty and inefficiency in environmental law enforcement. Operational challenges such as a lack of competent human resources and technological limitations also hamper effective monitoring and enforcement. Furthermore, resistance from the private sector and short-term political and economic pressures often undermine commitment to long-term conservation goals, creating complex policy dilemmas.

To address these challenges, structural reforms are needed in the administrative legal system, including regulatory harmonization, strengthening institutional capacity, developing technology-based monitoring and evaluation systems, and increasing public participation and transparency. Legal harmonization must integrate international environmental principles and ensure synergy between regulations at various levels of government. Strengthening institutional capacity requires ongoing training and the development of an integrated environmental information system. Meanwhile, meaningful public participation, supported by information transparency and responsive complaint mechanisms, will enhance the legitimacy and effectiveness of policies. With this approach, administrative law can be optimized as a responsive

instrument to conservation challenges, supporting sustainable development that balances economic, social, and environmental interests.

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