BIS HUMANITIES AND SOCIAL SCIENCE

Volume 4 2026 | DOI: 10.31603/bishss.608
7th Borobudur International Symposium on Humanities and Social Science (BIS-HSS) 2025

UNIMMA PRESS
UNIVERSITAS MUHAMMADIYAH MAGELANG

The principle of good environmental governance in the formulation of environmental legislation in Indonesia

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Abstract

The principle of Good Environmental Governance (GEG) is defined as the application of good governance principles in the context of environmental management. These principles are important pillars in creating transparent, participatory, and accountable environmental governance. The complexity of environmental issues in various sectors involving many parties, ranging from the government, the community, to business actors, makes the application of these principles very important in the Indonesian context. Indonesian environmental legislation should not only emphasize formal rules, but also ensure that everyone is aware of and involved in environmental governance. This context is in line with the constitutional mandate as stated in Article 33 paragraph (4) and Article 28H paragraph (1) of the 1945 Constitution, as well as the provisions in Law Number 32 of 2009 concerning Environmental Protection and Management. This paper aims to analyze the application of the principle of Good Environmental Governance in the formulation of environmental legislation, identify challenges in its implementation, and formulate efforts to strengthen the principle of Good Environmental Governance in the formulation of environmental legislation in Indonesia. This research uses normative juridical research with the use of secondary data, which includes primary and secondary legal materials. The research data is analyzed inductively to answer the research questions. The results show that the principle of Good Environmental Governance has not been fully implemented in the formulation of environmental legislation in Indonesia. In reality, there are quite a number of legal and non-legal challenges that hinder the application of the principles of Good Environmental Governance in the formulation of environmental legislation. Therefore, it is necessary to strengthen the principles of Good Environmental Governance in the formulation of environmental legislation in Indonesia through the internalization of strategic environmental studies and ensuring public access at every stage of the formulation process.

Keywords

Principles of good environmental governance, Establishment, Legislation, Environment

Published:
May 04, 2026

Selection and Peer-review under the responsibility of the 7th BIS-HSS 2025 Committee

Introduction

The concept of Indonesia as a country based on the rule of law has fundamental consequences, namely that governance and development must be based on the law, including aspects of environmental protection and management. This constitutional mandate places the state as the primary responsible party in ensuring that the formation of legislation related to the environment and natural resources must be oriented towards the preservation of environmental functions, sustainability, and intergenerational justice [1].

Environmental issues in Indonesia are becoming increasingly complex and multidimensional, in line with the rise in development activities across various sectors. Environmental degradation, pollution, conflicts over natural resources, and recurring ecological crises indicate that formalistic regulatory approaches are not yet fully capable of addressing the challenges of sustainable environmental protection and management. This situation calls for environmental governance that is not only oriented towards legal compliance, but also ensures public participation, transparency, and accountability in the policy-making process [2].

Environmental protection and management are constitutional obligations and responsibilities of the state. Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia guarantees the right to a good and healthy environment as a fundamental right of every citizen. Article 33 paragraph (4) of the 1945 Constitution of the Republic of Indonesia emphasizes that the national economy must be organized based on the principles of sustainability and environmental awareness. This provision indicates that environmental protection is an integral part of human rights as well as a basic principle of national development.

As a form of mandate of the two articles in the constitution, Law Number 32 of 2009 concerning Environmental Protection and Management was enacted as an umbrella act for environmental issues in Indonesia. Article 2 of Law Number 32 of 2009 concerning Environmental Protection and Management normatively regulates the main principles of environmental protection and management, including: state responsibility, sustainability, precautionary principle, participation, transparency, and justice.

These principles are in line with Good Environmental Governance (GEG), which has developed within the concept of international environmental law. In this context, the principle of GEG is an extension of the concept of good governance applied specifically to environmental management. GEG emphasizes the importance of integrating legal, institutional, public participation, and intergenerational justice aspects in every environmental policy. This principle views the environment not merely as an object of economic exploitation, but as a life-support system that must be protected through democratic and sustainable governance mechanisms [3]. The principle of GEG is defined as the application of good governance principles in environmental protection and management [4]. The principles of GEG are important pillars in creating transparent, participatory, and accountable environmental governance.

However, the existence of progressive environmental legal norms in Indonesia does not always correlate with the quality of the environmental legislation process. In practice, the formulation of environmental legislation still often faces problems such as minimal public participation, limited transparency, and the dominance of sectoral and economic interests. This situation has the potential to weaken the social legitimacy of environmental regulations and cause conflicts between the state, business actors, and affected communities.

Law Number 13 of 2022 concerning the Second Amendment to Law Number 12 of 2011 concerning the Formation of Legislation actually emphasizes the principles of openness, clarity of purpose, and effectiveness and efficiency as normative guidelines in the legislative process. The principle of openness, in particular, requires meaningful participation by the public from the planning stage to the enactment of regulations.

Although the principle of GEG has been recognized as urgent in normative terms, its implementation in the process of environmental law formation still faces challenges. These challenges include weak coordination between institutions, limited institutional capacity, low environmental law literacy among the public, and economic interests' resistance to the principle of sustainability [5]. In the context of environmental legislation, the internalization of these principles is still partial and inconsistent [6]. Indonesian environmental legislation should not only emphasize formal rules but also ensure that every citizen is involved in environmental governance [7]. Within this framework, the integration of Strategic Environmental Assessment (SEA) should be the main instrument in the formulation of environmental policies and legislation [8]. Based on this description, the application of the principle of GEG in the formulation of environmental legislation is fundamental and strategic. The novelty of this article lies in the placement of the principle of GEG as a normative legal parameter in the formulation of environmental legislation, rather than merely as a concept of administrative governance.

This study systematically examines the relationship between environmental law principles, the principles of law formation, and environmental legal policy in order to formulate a model for strengthening the principle of GEG that is oriented towards sustainable and equitable environmental protection. Based on the above description, a study on the application of the principles of GEG in the formulation of environmental legislation is important and relevant. This article analyzes the application of the principles of GEG in the formulation of environmental legislation, identifies challenges in its implementation, and formulates efforts to strengthen the principles of GEG in the formulation of environmental legislation in Indonesia.

Method

This study uses normative legal research, which focuses on the study of applicable legal norms, whether in the form of legislation, legal doctrine, or legal principles relevant to the issue of environmental protection and management [9]. The normative legal method is also referred to as doctrinal research, which is essentially an activity that specializes in the study of norms or positive law in the form of legislation [10].

The approaches used in this study include the statute approach and the conceptual approach. The statute approach was conducted by examining various laws and regulations related to the environment and the formation of laws and regulations in Indonesia. On the other hand, the conceptual approach was used to examine the concept of GEG, the principles of environmental law, and the principles of good governance that have developed in legal doctrine and international environmental law.

The type of data used in this study is secondary data, which consists of primary legal materials and secondary legal materials [11]. Primary legal materials include relevant legislation in the field of the environment and the formation of legislation. Secondary legal materials include legal textbooks, scientific journals, research results, and scientific articles discussing GEG, environmental law, and environmental legal policy. Data collection techniques were carried out through library research by searching for, identifying, and inventorying legal materials relevant to the research problem [12]. All legal materials collected were then analyzed qualitatively using inductive analysis, which is drawing conclusions from legal norms and general concepts to specific formulations related to the application of the principle of GEG in the formulation of environmental legislation.

Results and discussion

Application of the principle of GEG in the formation of environmental legislation

Good Environmental Governance (GEG) is one of the government's policies in managing the environment with a focus on sustainability and ecosystem preservation. The application of this principle emphasizes that governance, particularly in the management of natural resources and the environment, must be carried out in a targeted and responsible manner. All decision-making and policy implementation processes are based on a vision of protecting and preserving environmental functions, so that development is not only growth-oriented but also ensures sustainability for future generations.

GEG plays a strategic role in promoting the sustainable use of natural resources while maintaining the quality of the environment. The implementation of this governance requires open and transparent systems in environmental institutions, both in policy formulation and program implementation. Furthermore, the success of GEG is highly dependent on the active involvement of the community, not only as the object of policy, but as a subject that is involved from the planning stage to the implementation of environmental policy.

Belbase's theory outlines a conceptual framework for the application of GEG principles in environmental management. This theory is used to explain how GEG should be implemented through certain principles that emphasize openness, participation, and accountability in every stage of policy-making. The theory stated by Belbase includes: Legal rules, Participation and representation, Access to information, Transparency and accountability, Decentralization [13].

The principles of GEG normatively require that the formulation of environmental legislation be carried out based on the principles of participation, transparency, accountability, prudence, sustainability, and environmental justice. These principles have a strong legal basis in Article 28H paragraph (1) and Article 33 paragraph (4) of the 1945 Constitution, and are further regulated in Article 2 of Law Number 32 of 2009 concerning Environmental Protection and Management.

However, the reality of environmental regulation in Indonesia shows a gap between legal norms and legislative practice. In current practice, the formulation of environmental legislation tends to be within a legal policy framework oriented towards accelerating investment and economic growth. This is evident in various strategic regulations that change environmental governance, such as the reformulation of environmental licensing into environmental approval and the simplification of environmental impact analysis instruments. Normatively, these changes are projected to increase bureaucratic effectiveness. However, from the perspective of GEG, these policies actually raise serious issues related to the principles of precaution and state accountability in protecting the environment [2].

Article 44 of Law Number 32 of 2009 stipulates that "Every drafting of legislation at the national and regional levels must take into account the protection of environmental functions and the principles of environmental protection and management in accordance with the provisions of this Law." This provision has very important normative significance because it places the principle of environmental protection as a legal obligation inherent in the formulation of legislation, not merely a policy consideration. Thus, Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management explicitly establishes the principle of GEG as a normative standard that should bind the entire legislative process.

Normatively, Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management reflects the principle of environmental mainstreaming, namely the obligation to integrate environmental protection into every cross-sectoral legal norm. This principle is in line with the principles of precaution, sustainability, and state responsibility as stipulated in Article 2 of Law Number 32 of 2009 concerning Environmental Protection and Management, as well as the principle of sustainable development in the Article 33 paragraph (4) of the 1945 Constitution. Within the framework of GEG, the provisions of Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management should function as a control instrument so that the formulation of legislation does not result in norms that reduce environmental protection.

From the perspective of the principles of participation and transparency, Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management also contains normative implications that the process of forming legislation must open space for the public to monitor whether the protection of environmental functions is truly being taken into account. However, the current reality shows limited public access to academic papers, environmental studies, and ecological considerations in the legislative process. As a result, the public's control function over the compliance of legislators with Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management has become weak, so that the principle of GEG has lost its operational power.

Critically and normatively, it can be said that the main problem in applying the principle of GEG in the formulation of environmental legislation does not lie in the absence of norms, but rather in the disregard of Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management as an imperative norm. This article should be positioned as a legal benchmark for assessing whether a piece of legislation has fulfilled the principles of environmental protection and management. Without affirming the normative function of Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management, the principle of GEG has the potential to be reduced to a policy jargon without legal binding force.

The process of drafting regulations is often carried out in a short period of time, with limited access to documents and minimal space for substantive deliberation by the communities directly affected. This situation results in public participation losing its legal meaning and contradicting the principle of meaningful participation, which is part of modern environmental governance.

In addition, the principles of transparency and openness of information have not been optimally implemented. In practice, academic papers, environmental studies, and the scientific basis for the formulation of legislation are often not fully accessible to the public. In fact, normatively, the principle of openness is a requirement for the legitimacy of the legislative process, as emphasized in Law Number 13 of 2022 concerning the Second Amendment to Law Number 12 of 2011 concerning the Formation of Legislation. This lack of transparency has an impact on weak public control and has the potential to produce regulations that ignore environmental carrying capacity and sustainability.

Another reality can be seen in the application of the precautionary principle through the Strategic Environmental Assessment (SEA) instrument. Normatively, Article 15 of Law Number 32 of 2009 requires the integration of SEA in the formulation of policies, plans, and programs. However, in the practice of formulating legislation, SEA is often treated as an administrative formality rather than a substantive basis for norm formulation. As a result, the resulting regulations are less sensitive to long-term ecological risks and tend to be reactive to environmental damage.

From the perspective of accountability and legal certainty, the current reality also shows disharmony and fragmentation of norms between environmental regulations and regulations in other sectors, especially the natural resources and investment sectors. Overlapping regulations and rapid regulatory changes create legal uncertainty and weaken the function of environmental law as an instrument of protection. This condition shows that the principle of GEG has not been made a primary legal parameter in the formulation of legislation.

Thus, it can be critically and normatively concluded that the main problem in applying the principle of GEG in the formulation of environmental legislation in Indonesia lies in the weak internalization of environmental law principles in legislative practice. Although legal norms are in place, the reality of regulatory formulation shows the dominance of short-term economic and political interests over the principles of sustainability and environmental justice. Therefore, the strengthening of GEG needs to be directed at affirming environmental principles as normative standards that bind law- , so that environmental law truly functions as an instrument for sustainable and equitable environmental protection.

However, the reality of environmental lawmaking in Indonesia shows that Article 44 of Law No. 32 of 2009 on Environmental Protection has not been optimally internalized in legislative practice. In various strategic regulations, the obligation to pay attention to the protection of environmental functions is often interpreted in a minimalist and formalistic manner. Environmental protection tends to be positioned as a complementary aspect, rather than a key parameter in the formulation of norms. This condition indicates a normative deviation from the mandate of Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management and is contrary to the principle of GEG.

Furthermore, Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management should be read systematically with the obligation to implement a Strategic Environmental Assessment (KLHS) as stipulated in Article 15 of Law Number 32 of 2009 concerning Environmental Protection and Management. Normatively, SEA is a concrete instrument to ensure that the protection of environmental functions truly forms the basis for the formulation of legislation. However, in practice, the drafting of regulations often does not transparently show the substantive connection between the norms and the results of the SEA. This indicates that Article 44 of Law No. 32 of 2009 concerning Environmental Protection and Management has not been used as an evaluative basis for the quality and legitimacy of environmental legislation.

Therefore, strengthening the application of the principles of GEG must be directed towards a progressive interpretation of Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management as a controlling norm for the formation of legislation. This article needs to be used as the basis for normative testing, both in the process of harmonizing regulations and in the mechanism for testing laws, so that any regulation that ignores the protection of environmental functions can be assessed as legally flawed. Thus, Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management can function as a strategic instrument to ensure that the formation of environmental legislation in Indonesia truly reflects the principles of sustainable and equitable GEG.

2. Challenges in implementing the principles of GEG in the formulation of environmental legislation in Indonesia

The principles of GEG require that the formulation of environmental legislation be carried out in a transparent, participatory, accountable, precautionary, and sustainability and environmental justice-oriented manner. Normatively, these principles have gained constitutional legitimacy through Article 28H paragraph (1) and Article 33 paragraph (4) of the 1945 Constitution, and are further elaborated in Law Number 32 of 2009 concerning Environmental Protection and Management, which is doctrinally positioned as an umbrella act. As an umbrella act or basic regulation, Law No. 32 of 2009 concerning Environmental Protection and Management should be the main reference for all cross-sectoral legislation that has an impact on the environment. However, in the practice of regulatory formation in Indonesia, the application of GEG principles still faces complex and multidimensional challenges.

The first challenge stems from the dominance of the political paradigm of economic development in the legislative process. In practice, the objectives of forming legislation are often formulated within the framework of accelerating investment, simplifying licensing, and increasing economic competitiveness. Although procedurally these objectives can be justified based on the principles of clarity of purpose and effectiveness in Article 5 of Law Number 13 of 2022 concerning the Second Amendment to Law Number 12 of 2011 concerning the Formation of Legislation, this orientation often overlooks the obligation to protect environmental functions as mandated by Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management. As a result, the principles of sustainability and precaution, which are at the core of GEG, are reduced to secondary considerations in the formulation of norms.

The second challenge relates to the weakening position of Law No. 32 of 2009 concerning Environmental Protection and Management as an umbrella act. Normatively, the concept of an umbrella act requires it to be the substantive standard for all sectoral regulations related to the environment. However, reality shows that sectoral laws in the fields of natural resources, energy, mining, and infrastructure are often drafted without using Law No. 32 of 2009 concerning Environmental Protection and Management as the main reference framework. This has led to fragmentation of norms and regulatory disharmony that is contrary to the principle of consistency between type, hierarchy, and content as stipulated in Law No. 13 of 2022 concerning the Second Amendment to Law No. 12 of 2011 concerning the Formation of Legislation. This fragmentation not only weakens environmental legal certainty but also erodes the function of GEG as a principle of environmental governance.

The third challenge lies in the minimalist interpretation of Article 44 of Law No. 32 of 2009 concerning Environmental Protection and Management. This article explicitly requires that every piece of legislation be formulated with due regard to the protection of environmental functions and the principles of environmental protection and management. However, in legislative practice, this obligation is often interpreted formalistically, limited to the inclusion of declarative norms in the preamble without substantive implications in the body of the regulation. This reductive interpretation causes Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management to lose its normative force and fail to function as a legal benchmark in the formulation of regulations.

The fourth challenge relates to the function of academic papers and scientific instruments in the formulation of legislation. Law No. 13 of 2022 concerning the Second Amendment to Law No. 12 of 2011 concerning the Formulation of Legislation places academic papers as the scientific and juridical basis for the formulation of laws. However, in the practice of formulating environmental legislation, academic papers often fail to adequately integrate ecological analysis, including the results of Strategic Environmental Impact Assessments (KLHS). SEA, which is normatively required by Article 15 of Law Number 32 of 2009 concerning Environmental Protection and Management, should be the main instrument for implementing "prinsip kehati-hatian" (careful consideration) and environmental mainstreaming. When SEA is only positioned as an administrative formality, the GEG principle loses its preventive dimension. The fifth challenge arises from the weak implementation of the principles of transparency and public participation. Article 96 of Law Number 13 of 2022 concerning the Second Amendment to Law Number 12 of 2011 concerning the Formation of Legislation guarantees the right of the public to participate in the formation of legislation. However, in the reality of environmental regulation formation, public participation is often procedural and meaningless. Access to academic papers, environmental studies, and supporting documents is often limited, both in terms of time and substance. This condition contradicts the principles of participation and transparency in the GEG, and weakens the function of public control over the fulfilment of the mandate of Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management.

The sixth challenge relates to the absence of a substantive evaluation mechanism for environmental compliance in the legislative process. Law Number 13 of 2022 concerning the Second Amendment to Law Number 12 of 2011 concerning the Formation of Legislation emphasizes compliance with formal procedures, while not providing normative instruments that explicitly require regulators to prove that draft regulations have met environmental protection standards. As a result, legislation can be declared procedurally valid, even though it is substantively contrary to the principles of GEG and the mandate of Law No. 32 of 2009 on Environmental Protection and Management. This condition creates a paradox of legal legitimacy, namely formal legality that is not in line with ecological legitimacy.

The seventh challenge is institutional and human resource capacity. Understanding of environmental law principles and GEG principles is not yet a core competency of all actors involved in lawmaking. Environmental protection is still viewed as a sectoral issue, rather than a cross-sectoral obligation as intended by the umbrella act concept. This challenge shows that strengthening GEG requires not only the refinement of legal norms, but also a paradigm shift and political commitment to the law.

The eighth challenge relates to the imbalance between procedural legitimacy and substantive legitimacy. Many environmental laws and regulations have fulfilled the formal stages of Law No. 13 of 2022 concerning the Second Amendment to Law No. 12 of 2011 concerning the Formation of Laws and Regulations but fail to guarantee the protection of environmental functions in practice. In this context, Law No. 32 of 2009 on Environmental Protection and Management, as an umbrella act, should serve to bridge this gap by providing binding substantive standards. When this function is not fulfilled, the principle of GEG risks being reduced to a normative jargon without operational power.

Overall, the challenges in applying the principles of GEG in the formulation of environmental legislation in Indonesia reveal a structural gap between legal norms and legislative practice. Law Number 13 of 2022 concerning the Second Amendment to Law Number 12 of 2011 concerning the Formation of Legislation as a procedural framework for the formation of regulations has not been synergistically operationalized with Law Number 32 of 2009 concerning Environmental Protection and Management as an umbrella act that contains substantive standards for environmental protection. As long as Law Number 32 of 2009 concerning Environmental Protection and Management is not used as the main reference and Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management is not functioned as a controlling norm, the formation of legislation will continue to have the potential to produce regulations that are procedurally valid, but ecologically weak and contrary to the principles of GEG. Therefore, strengthening the position of Law No. 32 of 2009 concerning Environmental Protection and Management as an umbrella act is a fundamental prerequisite for the realization of a sustainable, equitable environmental legislation system oriented towards the protection of constitutional rights to a good and healthy environment.

Thus, the formulation of environmental legislation is inseparable from the principles of GEG, which ensure that the legislative process is fair, participatory, transparent, and accountable. This is important to ensure that every policy produced is not only formally valid before the law, but also morally and socially valid, as it reflects the aspirations of the people as a sovereign nation, protects the rights of current and future generations, and maintains the sustainability of the environmental ecosystem as a long-term pillar of life. From this perspective, GEG is not merely a normative principle, but also a strategic instrument in realizing fair, democratic, and sustainable environmental governance (Redin, 2019).

3. Efforts to strengthen the principle of GEG in the formulation of environmental legislation in Indonesia

Strengthening the principles of GEG in the formulation of environmental policies is a strategic choice for realizing fair, democratic, sustainable, and accountable governance. The GEG principle emphasizes transparency, public participation, accountability, and the rule of law in every decision-making process that will have a long-term impact on the environment. The implementation of this principle is not only normative but must be realized through operational mechanisms that can ensure that the community, relevant parties, and related agencies can participate meaningfully from the planning stage to the comprehensive evaluation of policies. Strengthening GEG is not merely rhetoric; it requires the application of operational mechanisms that ensure transparency, public participation, accountability, and the rule of law in the environmental policy process. These principles are the foundation for ensuring that policies are not only technically effective but also legitimate and responsive to the needs of the community.

Efforts to strengthen the application of GEG principles in the formulation of environmental legislation in Indonesia are urgently needed to bridge the gap between legal norms and legislative practice. Although a normative framework is in place, the implementation of GEG principles remains partial and formalistic. Therefore, a systemic, multi- layered strengthening strategy is needed, oriented towards reinforcing Law No. 32 of 2009 concerning Environmental Protection and Management as an umbrella act in Indonesia's environmental legal system.

The first recommendation is to strengthen the normative position of Article 44 of Law 32 of 2009 concerning Environmental Protection and Management as a mandatory legal parameter in the formulation of legislation. Article 44 of Law No. 32 of 2009 concerning Environmental Protection and Management needs to be interpreted progressively as an imperative norm that binds all regulators, both at the central and regional levels. In this context, the obligation to "pay attention to the protection of environmental functions" must be interpreted as a substantive obligation, not merely a procedural formality. Every draft regulation that has implications for the environment should be accompanied by an explicit explanation of how the norms being established fulfill the mandate of Article 44 of Law 32 of 2009 concerning Environmental Protection and Management. This affirmation can be integrated into the mechanism of harmonization and conceptualization by the competent institutions.

The second recommendation is to mainstream the principle of GEG in the principles of legislation. The principles in Article 5 of the PPP Law need to be interpreted and operationalized in an environmentally oriented manner. The principle of clarity of purpose, for example, must explicitly include the objectives of protecting environmental functions and sustainability. The principles of effectiveness and efficiency should not be interpreted solely from the perspective of economic efficiency, but also from the perspective of environmental protection effectiveness. Thus, the principles of the PPP Law can serve as a normative bridge between legislative procedures and GEG principles.

The third recommendation is to strengthen the function of academic papers as instruments of environmental mainstreaming. Academic papers must be required to include comprehensive ecological analyses, including environmental carrying capacity and capacity, long-term ecological risks, and the results of Strategic Environmental Assessments (KLHS). In the context of Law No. 32 of 2009 concerning Environmental Protection and Management as an umbrella act, academic papers must explicitly link the substance of the proposed norms with the principles of environmental law in Article 2 of Law No. 32 of 2009 concerning Environmental Protection and Management. Without strengthening this function, the academic paper risks remaining a formal document without substantive control power.

The fourth recommendation is to reorganize the Strategic Environmental Assessment (SEA) mechanism in the process of drafting legislation. SEA needs to be positioned as a substantive prerequisite, rather than an administrative one, in the drafting of regulations. The results of the SEA should form the basis of legal arguments in academic papers and discussions of draft regulations. In addition, the link between the SEA and Article 44 of Law 32 of 2009 on Environmental Protection and Management needs to be normatively emphasized, so that any regulation that ignores the results of the SEA can be considered legally flawed.

The fifth recommendation is to strengthen mechanisms for meaningful community participation. Article 96 of Law Number 13 of 2022 concerning the Second Amendment to Law Number 12 of 2011 concerning the Formation of Legislation needs to be progressively operationalized by ensuring public access to all documents related to the formation of legislation, including academic papers and environmental studies. Public participation must be carried out from the planning stage to the discussion of substantive norms, not just at the final stage. This strengthening is in line with the principles of transparency and accountability in GEG and the public's right to environmental information.

The sixth recommendation is to strengthen cross-sectoral regulatory harmonization by making Law No. 32 of 2009 concerning Environmental Protection and Management the primary reference. In the harmonization process, every draft sectoral regulation that has implications for the environment must be tested for compliance with Law No. 32 of 2009 concerning Environmental Protection and Management. The umbrella act approach requires that sectoral regulations do not stand alone, but are part of a comprehensive environmental protection system. This harmonization is important to prevent regulatory disharmony and ensure consistent application of the GEG principle.

The seventh recommendation is the development of a substantive evaluation and testing mechanism for environmental compliance in the legislative process. A normative instrument is needed to enable the evaluation of draft legislation from an environmental protection perspective before it is enacted. This evaluation can function as an environmental compliance review that assesses whether the draft regulation has met the principles of GEG and the mandate of Law 32 of 2009 concerning Environmental Protection and Management. This mechanism will strengthen the substantive legitimacy of environmental regulations.

The eighth recommendation is to strengthen the capacity and paradigm of law and regulation makers. Continuous education and training on environmental law principles and GEG principles need to be part of capacity building for legislators and regulation designers. This capacity building is important to ensure that environmental protection is understood as a cross- sectoral obligation, not merely a technical or sectoral issue.

The ninth recommendation is to utilize the mechanism of testing laws and regulations as an instrument to strengthen GEG. Testing laws and regulations under the law can be used to confirm that the omission of Article 44 of Law 32 of 2009 concerning Environmental Protection and Management and the principle of GEG constitutes a legal defect. Thus, the GEG principle can gain stronger binding force through judicial practice.

Overall, efforts to strengthen the application of GEG principles in the formulation of environmental legislation require an integrated normative approach between Law No. 13 of 2022 concerning the Second Amendment to Law No. 12 of 2011 concerning the Formation of Legislation and Law No. 32 of 2009 concerning Environmental Protection and Management as an umbrella act. These recommendations aim to ensure that environmental law is not only procedurally valid, but also ecologically and constitutionally legitimate. By placing the GEG principle as a binding legal parameter, the formation of environmental legislation in Indonesia is expected to be able to respond to the challenges of sustainable and equitable environmental protection.

Conclusion

Based on the results of the study and discussion described above, it can be concluded that the principle of GEG has normatively obtained a strong legal basis in the Indonesian legal system, both at the constitutional level through Article 28H paragraph (1) and Article 33 paragraph (4) of the 1945 Constitution, as well as at the statutory level through Law No. 32 of 2009 on Environmental Protection and Management. The principles of GEG are also reflected in the principles of environmental law, such as state responsibility, sustainability, precaution, participation, transparency, and justice, which are conceptually in line with developments in international environmental law.

However, this study shows that the application of the principles of GEG in the formulation of environmental legislation in Indonesia has not been optimal. The main problem lies not in the absence of legal norms, but in the weak internalization of environmental principles in legislative practice. Article 44 of Law Number 32 of 2009 concerning Environmental Protection and Management, which explicitly requires legislators to pay attention to the protection of environmental functions, has not been used as a binding normative standard. In practice, this provision tends to be interpreted in a formalistic and minimalist manner, thus failing to serve as a legal benchmark in the formulation of regulations.

This study also found that the process of formulating environmental legislation is still dominated by a legal policy paradigm that is oriented towards accelerating investment and economic growth. This orientation has resulted in a reduction in the principle of precaution, a weakening of preventive instruments such as Strategic Environmental Assessment (SEA), and limited meaningful public participation. As a result, many regulations are procedurally valid but substantively weak in ensuring environmental protection and intergenerational justice.

Therefore, strengthening the application of the principles of GEG in the formulation of environmental legislation must be directed towards affirming the function of Law No. 32 of 2009 concerning Environmental Protection and Management as an umbrella act, particularly through the progressive interpretation of Article 44 as an imperative norm. The GEG principle needs to be positioned as a binding normative legal parameter for legislators, not merely as an administrative governance concept. In addition, mainstreaming the Strategic Environmental Assessment (KLHS), strengthening the role of academic papers, expanding access to information, and ensuring meaningful public participation are important prerequisites to ensure that the of environmental legislation is truly oriented towards sustainable and equitable environmental protection Thus, the application of the principle of GEG in the formulation of environmental legislation is not only a normative requirement, but also a strategic necessity to ensure the legal, social, and ecological legitimacy of every environmental policy. The strengthening of this principle is expected to make environmental law an effective instrument in protecting the constitutional right to a good and healthy environment, while maintaining the sustainability of ecosystems for present and future generations.

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