

Strategy for Strengthening Environmental Legal Policy to Face the Climate Crisis in Indonesia from the Perspective of Mitigation, Adaptation, and Ecological Sustainability

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Abstract

The global climate crisis has become a real threat that affects various sectors of life throughout the world, including Indonesia. As a country with high biodiversity and a region vulnerable to the impacts of climate change, Indonesia faces primary challenges in dealing with the climate crisis. In this case, environmental legal policies play a crucial role in reducing the impacts of climate change and strengthening the resilience of ecosystems and communities. This analysis seeks to analyze the role of Indonesia's environmental legal policies in addressing the climate crisis, with a focus on national policies and the role of local governments in their implementation. The research method used is normative juridical, namely by analyzing applicable laws and regulations, such as the Environmental Law, the National Action Plan for Climate Change (RAN-PI), and other policies related to climate change in Indonesia. This investigation also examines various existing legal norms and their application in mitigating and adapting to climate change, including the challenges and obstacles faced in enforcing environmental law. Although existing legal policies show the Indonesian government's commitment to climate change, there are still various obstacles in their implementation related to law enforcement, coordination between institutions, and social and economic factors. The research is expected to provide insight into the effectiveness of existing legal policies and provide recommendations for improving environmental legal policies in the face of the increasingly pressing climate crisis.

Keywords: climate crisis, climate change, environmental legal policy.

1 Introduction

The global climate crisis refers to climate change caused by human activities, especially excessive greenhouse gas emissions, which cause global warming and changes in weather patterns around the world (Syafitri, 2022). Global warming is manifested in various phenomena, including increasing global average temperatures, melting polar ice caps, increasing and frequent natural disasters, and changing rainfall patterns. This phenomenon is exacerbated by industrialization and the ongoing burning of fossil fuels, which cause the accumulation of greenhouse gases such as carbon dioxide (CO₂) in the atmosphere (Tjiwidjaja, 2023). The climate crisis not only affects the environment but also has significant socio-economic implications, impacting the economic sector, health, and well-being of individuals globally (Zakariya, 2023).

In Indonesia, the impact of climate change is very pronounced because its geographical location makes it vulnerable to various natural disasters and extreme weather conditions. The country is experiencing an increase in the intensity of natural disasters, including floods, droughts, forest fires, and extreme weather events such as tornadoes and heat waves (Aldrian, Karmini, & Budiman, 2011). Coastal and urban areas are highly vulnerable to flooding, exacerbated by rising sea levels and increased rainfall. In addition, prolonged droughts that often hit agricultural areas pose a significant threat to food security in many regions. Furthermore, forest fires triggered by hot weather and erratic rainfall patterns negatively impact air quality and exacerbate the impacts of climate change in Indonesia (Ariadi, 2023).

Climate change has a significant impact on the sustainability of Indonesia's ecosystems and biodiversity. Coastal ecosystems, coral reefs, and tropical forests, which are integral to Indonesia's biodiversity, face increasing threats from the climate crisis (Noor, 2023). Rising sea temperatures endanger coral reefs, while changes in rainfall patterns and air temperatures directly affect the sustainability of Indonesia's tropical forests. Furthermore, the impact of the climate crisis on the fisheries, agriculture, and tourism sectors further weakens the economic carrying capacity of local communities, especially in areas that depend on natural resources. If not handled very seriously, this global climate crisis will worsen social and economic conditions in Indonesia, and increase the vulnerability of communities to natural disasters (Hasid, Noor, & Kurniawan, 2022).

Environmental legal policy plays an important role in addressing the challenges of climate change. This policy functions as an instrument for regulating, maintaining, and preserving environmental quality, which is increasingly threatened by unsustainable human activities (Mahardhika, 2024). Climate change, which is mainly driven by greenhouse gas emissions, requires a clear and effective legal framework to reduce its impacts, both in the short and long term. Environmental legal policy allows countries to establish enforceable regulations, regulate the behavior of individuals, industrial sectors, and governments, and provide a legal framework that supports efforts to adapt to climate change. This includes regulating emissions, managing natural resources, protecting ecosystems, and implementing policies that promote renewable energy and sustainability (Mubila, 2024). Without adequate legal policies, environmental rescue and preservation initiatives will face significant obstacles, and the consequences of the climate crisis will worsen the country's social, economic, and ecological conditions.

Environmental legal policies also serve as a mechanism for monitoring and enforcing laws against agencies that violate applicable regulations. Well-drafted and strong regulations ensure that parties responsible for environmental damage, including individuals, companies, and other organizations, can be subject to sanctions by applicable laws. Furthermore, this policy catalyzes mobilizing the resources needed to address climate change, such as funding for carbon emission reduction projects, ecosystem restoration, and development of climate change adaptation infrastructure (Johar, 2021). The implementation of these policies facilitates structured, coordinated, and effective mitigation and adaptation efforts, involving various stakeholders, including the government, private sector, and civil society.

2 Method

The research method used in this study is normative juridical, namely an approach that focuses on the analysis of applicable legal norms, both written and unwritten. This approach is used to explore and analyze related laws and regulations environmental legal policies in Indonesia, especially those related to climate crisis management. This study will examine various relevant legal documents, such as the Environmental Law, the National Action Plan for Climate Change (RAN-PI), and other laws and regulations that support climate change mitigation and adaptation efforts. With a normative legal approach, this study will not only analyze the content of legal norms, but the context of their application in legal practice in Indonesia. In addition, this study will explore legal aspects that influence the effectiveness of environmental policies in dealing with the climate crisis, by assessing whether existing regulations are by the principles of fair environmental law and can be implemented optimally. In this case, this study prioritizes the study of the relationship between applicable laws and social and ecological conditions in Indonesia, as well as evaluating obstacles to law enforcement that may arise.

3 Result and Discussion

3.1 Evaluation and Implementation of Environmental Legal Policy in Facing the Climate Crisis

The effectiveness of environmental legal policy in dealing with the climate crisis in Indonesia can be seen from the extent to which existing laws and regulations can effectively address the impacts of climate change and ensure their consistent implementation, both at the central and regional levels (Arfah, 2023). One of the main instruments in this policy framework is Law Number 32 of 2009 concerning Environmental Protection and Management. This law regulates the obligations of the state and society in preserving the environment. Article 4 of this law affirms the basic human rights of every person to a healthy and good environment, accompanied by the obligation to protect and preserve the environment. In the context of the climate crisis, this article has significant relevance because it regulates the state's mandate to implement policies that can reduce greenhouse gas emissions, protect natural resources, and restore damaged ecosystems. Furthermore, Article 15 of this law mandates that every activity that has the potential to endanger the environment must be accompanied by an environmental impact analysis (AMDAL). This analysis serves as an important tool for assessing the impact of these activities on the climate before they are implemented.

More specific policies related to climate change are outlined in Law Number 6 of 2023 which was established to address the challenges of the climate crisis more systematically. Article 2 of this law reaffirms the state's commitment to reducing greenhouse gas emissions through various mitigation and adaptation policies, as well as integrating climate change considerations into national development planning. Articles 3 and 4 further regulate the government's obligation to formulate a national strategy outlined in the National Action Plan for Climate Change (RAN-PI). This strategy serves as a reference framework for achieving emission reduction targets and adaptation efforts in responding to the impacts of climate change. In its implementation, this policy must lead to reducing the use of fossil fuels, developing

renewable energy sources, and protecting ecosystems that can increase resilience to climate-related disasters (Kusuma, 2024).

The implementation of environmental law policies in Indonesia faces several obstacles that hinder its effectiveness. One of the main challenges is the lack of effective coordination between various institutions (Herlina, 2017). Although there are many laws and regulations governing climate change, the roles and responsibilities of each ministry and institution in implementing these policies have not always run harmoniously. For example, the Ministry of Environment and Forestry (KLHK) is primarily responsible for nature conservation and emission reduction, while the Ministry of Energy and Mineral Resources (ESDM) is more concerned with the energy sector (Mas, 2024). The two ministries have interrelated policies, but effective coordination has not been running well. This lack of coordination can cause significant delays in policy implementation in the field, resulting in overlapping or even failure to achieve the targets that have been set.

In addition, the absence of adequate supervision and law enforcement is a significant obstacle. Many violations of environmental regulations often escape strict sanctions or go undetected. For example, although there are regulations governing forest fires, law enforcement actions against the perpetrators are often inadequate, and the sanctions imposed do not provide a deterrent effect (Nurdin, 2017). Community involvement is a factor that is no less important in supporting the success of climate change policies. Communities have an equally important role in climate change mitigation and adaptation efforts because effective environmental policies require the active participation of individuals and local communities (Malihah, 2022).

Concretely, the community can play a role in reducing greenhouse gas emissions, such as in waste management efforts, the use of renewable energy, and nature conservation at the local level. In addition, the community also plays a role in monitoring activities that can damage the environment, such as deforestation or air pollution, by reporting violations and supporting law enforcement efforts (Wibawa, 2019). The private sector plays a crucial strategic role in supporting climate change policies through Corporate Social Responsibility (CSR). Companies, especially those engaged in large industrial sectors and those that have a significant impact on the environment, are expected to contribute to efforts to reduce greenhouse gas emissions by adopting environmentally friendly technologies, reducing consumption of raw materials, and reducing the use of fossil fuels, and switch to renewable energy sources. In addition, companies can innovate in more environmentally friendly products and services, such as through energy efficiency and the use of more environmentally friendly raw materials (Anatan, 2009). In the context of Corporate Social Responsibility (CSR), the private sector can be involved in various programs that support climate policies, including funding sustainability projects, ecosystem restoration, emission reduction, and community education and training on climate change. For example, large companies can collaborate with governments to develop renewable energy projects or provide funds for research and development of environmentally friendly technologies.

Furthermore, within the framework of the Sustainable Development Goals (SDGs), many companies have begun to integrate sustainability principles into their

business models to support global goals to address climate change and maintain environmental sustainability (Santoso, 2021). Large companies, through their internal policies, can also implement carbon footprint programs that measure and reduce greenhouse gas emissions produced during their operations. By taking concrete actions to reduce their carbon footprint, companies not only fulfill their social responsibilities but also improve their reputation in the eyes of consumers who are increasingly aware of the importance of sustainability (Khairani, 2025).

3.2 Solutions Related to Constraints and Obstacles to the Implementation of Environmental Legal Policies in Facing the Climate Crisis

To improve and strengthen environmental legal policies in Indonesia in facing the climate crisis, a comprehensive approach is needed that includes improving regulations, increasing law enforcement capacity, strengthening collaboration between institutions, and increasing community participation. Although Indonesia already has various policies related to environmental protection and climate change, the implementation of these policies still faces many challenges. Therefore, the following recommendations aim to ensure that existing policies can be more effective in addressing the climate crisis.

One of the main steps in strengthening environmental legal policies is to revise and clarify existing regulations to improve their response to the challenges posed by climate change. Law Number 32 of 2009 concerning Environmental Protection and Management and Law Number 6 of 2023 concerning Climate Change have a strong legal basis. However, their effective implementation requires the development of more specific derivative regulations. For example, the government must improve regulations governing the determination of industrial emission limits, renewable energy management, and incentive schemes for companies that adopt environmentally friendly practices. In addition, the implementation of carbon taxes and green incentives must be clarified and enforced more strictly. The carbon tax policy that has been initiated needs to be expanded with stricter supervision of industrial sectors with high emissions (Dhaneswara, 2024). On the other hand, the government must also provide incentives to companies and individuals who use renewable energy or adopt low-carbon technology. It can encourage the transition to a more sustainable green economy.

Then, the government needs to strengthen the role of environmental law enforcers, including environmental investigators under the Ministry of Environment and Forestry (KLHK), so that they have greater authority in handling violations (Ramadhan, 2024). In addition, technology-based monitoring systems must be expanded, such as satellite monitoring and drone surveillance to detect environmental damage, such as deforestation and forest fires. With a stricter monitoring system, violations can be prosecuted more quickly, so that they can provide a deterrent effect on perpetrators (Usman, 2025).

Currently, various institutions, including the Ministry of Environment and Forestry (KLHK), the Ministry of Energy and Mineral Resources (ESDM), and the Ministry of Industry, are responsible for environmental issues. However, coordination between these institutions is often ineffective, resulting in overlapping policies or a lack of integration in the implementation of climate change programs.

To improve policy effectiveness, the government must establish a national coordinating body specifically tasked with managing climate change. This body must have clear authority to integrate cross-sectoral policies. In addition, it must collaborate with research institutions and universities to ensure that policies are based on scientific data and practical conditions in the field. In addition, coordination between the central and regional governments needs to be improved to facilitate the implementation of climate change policies more fairly throughout Indonesia (Kusuma, 2024).

The community also plays a critical role in supporting the implementation of climate change policies, both as individuals, communities, and non-governmental organizations. Therefore, the government needs to strengthen education programs and public campaigns related to climate change so that public awareness increases. In addition to education, the government must also encourage community involvement in monitoring environmental policies. It can be done through community participation programs in environmental monitoring. For example, communities can be involved in reporting illegal activities that damage the environment, such as forest fires or water pollution, through digital platforms provided by the government. To increase the role of communities in climate change mitigation and adaptation, the government provides incentives for communities that are actively involved in reforestation activities, water conservation, or community-based renewable energy projects (Maggara, 2025). By implementing these steps, communities will be more motivated to actively participate in protecting the environment and addressing the challenges of climate change.

4 Conclusion

The global climate crisis caused primarily by human activities has resulted in significant environmental changes, including global warming, more frequent natural disasters, and socio-economic consequences. As an archipelagic country vulnerable to climate change, Indonesia faces challenges such as floods, droughts, forest fires, and ecosystem threats. To address this crisis, environmental legal policies are crucial as regulatory instruments, which monitor and enforce environmental protection measures for long-term resource sustainability. Strong regulations can control emissions, manage resources, and promote renewable energy and sustainable practices.

Legal policies apply sanction violators and mobilize resources for climate change mitigation and adaptation. Strengthening effective and coordinated environmental legal policies involving various stakeholders is essential to addressing the climate crisis and ensuring Indonesia's social, economic, and ecological sustainability. Improving and strengthening environmental legal policies in Indonesia in facing the climate crisis requires a comprehensive approach involving various parties. By clarifying regulations, strengthening law enforcement, improving coordination between institutions, and encouraging community participation, environmental policies in Indonesia can be more effective in addressing the impacts of climate change. These efforts will not only protect the environment but will support more sustainable development and protect the welfare of future generations.

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