



Climate Change and the Law: Assessing Indonesia's 2009 Environmental Protection and Management Law in Promoting Climate Justice

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Abstract

This paper assesses the effectiveness of Indonesia's 2009 Environmental Protection and Management Law (UU No. 32/2009) in promoting climate justice, with a focus on its capacity to address the interconnected challenges of environmental degradation, social equity, and climate change. As climate change accelerates, the need for robust legal frameworks to ensure both environmental sustainability and social justice has never been more urgent. The 2009 law, which outlines the legal basis for environmental protection and resource management, aims to balance development with environmental conservation and to ensure the rights of affected communities. This study critically analyzes the law's provisions related to climate change adaptation, mitigation, and environmental justice, examining how effectively it promotes equity for marginalized communities, such as indigenous peoples, rural populations, and low-income groups, who are disproportionately impacted by environmental changes. Through policy analysis, legal review, and interviews with legal experts, activists, and affected communities, the research evaluates the implementation and impact of the law in the context of climate justice. Findings suggest that while the law provides important legal structures for environmental protection and climate adaptation, its effectiveness is undermined by gaps in enforcement, lack of political will, and insufficient integration of climate justice principles into local governance. The paper argues that for Indonesia to achieve meaningful climate justice, the 2009 law must be strengthened through more inclusive and equitable policy frameworks, enhanced public participation, and a more rigorous commitment to the rights of vulnerable populations.



[Makalah ini menilai efektivitas UU Perlindungan dan Pengelolaan Lingkungan Hidup (UU No. 32/2009) Indonesia tahun 2009 dalam mempromosikan keadilan iklim, dengan fokus pada kemampuannya untuk mengatasi tantangan yang saling terkait antara degradasi lingkungan, kesetaraan sosial, dan perubahan iklim. Seiring percepatan perubahan iklim, kebutuhan akan kerangka hukum yang kuat untuk memastikan keberlanjutan lingkungan dan keadilan sosial menjadi semakin mendesak. UU tahun 2009, yang menguraikan dasar hukum untuk perlindungan lingkungan dan pengelolaan sumber daya, bertujuan untuk menyeimbangkan pembangunan dengan konservasi lingkungan dan untuk memastikan hak-hak masyarakat yang terdampak. Studi ini secara kritis menganalisis ketentuan-ketentuan UU terkait adaptasi, mitigasi, dan keadilan lingkungan, serta meneliti seberapa efektif UU tersebut mempromosikan kesetaraan bagi masyarakat yang terpinggirkan, seperti masyarakat adat, penduduk pedesaan, dan kelompok berpenghasilan rendah, yang terkena dampak perubahan lingkungan secara tidak proporsional. Melalui analisis kebijakan, tinjauan hukum, dan wawancara dengan para ahli hukum, aktivis, dan masyarakat yang terdampak, penelitian ini mengevaluasi implementasi dan dampak UU tersebut dalam konteks keadilan iklim. Temuan menunjukkan bahwa meskipun undang-undang tersebut menyediakan struktur hukum penting untuk perlindungan lingkungan dan adaptasi iklim, efektivitasnya terhambat oleh celah dalam penegakan hukum, kurangnya kemauan politik, dan integrasi prinsip-prinsip keadilan iklim yang tidak memadai ke dalam tata kelola lokal. Makalah ini berpendapat bahwa agar Indonesia mencapai keadilan iklim yang bermakna, undang-undang tahun 2009 harus diperkuat melalui kerangka kebijakan yang lebih inklusif dan adil, peningkatan partisipasi publik, dan komitmen yang lebih ketat terhadap hak-hak kelompok rentan.]

Keywords: Climate Change, Climate Justice, Environmental Protection, Indonesia Environmental Law Framework

Introduction

Climate change has emerged as one of the most pressing global challenges of the twenty-first century, posing profound implications for environmental sustainability, socio-economic development, and human well-being. The increasing frequency and intensity of climate-related hazards—including floods, droughts, sea-level rise, coastal erosion, extreme weather events, and biodiversity loss—have intensified concerns regarding the capacity of legal and governance systems to protect vulnerable populations while promoting sustainable development (IPCC, 2023). Although climate change is a global phenomenon, its impacts are unevenly distributed, disproportionately affecting developing countries and marginalized communities that possess limited adaptive capacity and contribute relatively little to global greenhouse gas emissions (Schlosberg & Collins, 2014; Newell et al., 2021). Consequently, climate change is increasingly

recognized not only as an environmental problem but also as an issue of justice, equity, and human rights.

Indonesia represents one of the world's most climate-vulnerable countries due to its extensive archipelagic geography, ecological diversity, and dependence on natural resources for economic development. Rising sea levels threaten densely populated coastal regions, while changes in rainfall patterns have increased the frequency of floods, droughts, and landslides across many provinces. Simultaneously, rapid urbanization, deforestation, extractive industries, and agricultural expansion have accelerated environmental degradation, reducing ecosystem resilience and increasing community vulnerability to climate-related disasters (World Bank, 2021; IPCC, 2022). These interconnected environmental and developmental pressures create complex governance challenges that require legal frameworks capable of balancing economic growth, environmental protection, and social justice.

The unequal distribution of environmental risks within Indonesia further illustrates the importance of climate justice. Indigenous peoples, rural communities, smallholder farmers, coastal populations, and low-income households frequently experience the greatest exposure to climate hazards while possessing the fewest economic, political, and institutional resources to respond effectively. Environmental degradation and climate-related disasters often intersect with existing patterns of poverty, insecure livelihoods, and unequal access to natural resources, reinforcing structural inequalities that extend beyond environmental issues alone (Sultana, 2021). Addressing climate change therefore requires more than technological adaptation or emissions reduction; it requires legal and institutional arrangements that ensure environmental governance is equitable, participatory, and responsive to the needs of vulnerable populations.

Within this context, environmental law plays an increasingly important role in shaping national responses to climate change. Beyond regulating pollution or conserving ecosystems, environmental legislation establishes the legal principles governing environmental rights, state responsibilities, public participation, and accountability. Effective environmental law can create institutional mechanisms that distribute environmental benefits and burdens more fairly, facilitate access to environmental information and justice, and strengthen community resilience against climate-related risks (Boyd, 2012). Conversely, weak implementation or fragmented governance may undermine these objectives, allowing environmental degradation and climate vulnerability to persist despite comprehensive legal provisions.

Indonesia's principal environmental legislation, Law No. 32 of 2009 concerning Environmental Protection and Management (Undang-Undang Nomor 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup—UU No. 32/2009), constitutes the cornerstone of the country's environmental governance framework. The Law introduced significant legal

innovations, including explicit recognition of environmental rights, stronger environmental impact assessment procedures, the precautionary principle, sustainable development, public participation, environmental permits, administrative sanctions, civil liability, and criminal enforcement. Although enacted before climate justice became a prominent concept within legal scholarship, many of its principles are directly relevant to climate governance because they regulate environmental protection, resource management, risk prevention, and community participation.

Despite its comprehensive normative framework, important questions remain regarding the Law's contribution to climate justice. Existing scholarship has extensively examined UU No. 32/2009 from perspectives such as environmental governance, administrative law, pollution control, and sustainable development. However, relatively limited attention has been devoted to assessing whether the Law effectively addresses distributive inequalities, procedural fairness, and recognition of vulnerable communities within the context of climate change. Moreover, implementation challenges—including inconsistent law enforcement, institutional fragmentation, overlapping regulatory authority, and competing economic development priorities—raise concerns regarding the Law's practical capacity to promote equitable climate adaptation and environmental protection (Butt & Lindsey, 2018).

This study argues that evaluating environmental legislation solely through regulatory effectiveness provides an incomplete understanding of its role in addressing climate change. Instead, environmental law should be examined as an institutional mechanism capable of shaping climate justice by influencing how environmental risks, adaptation opportunities, legal protections, and decision-making authority are distributed across society. Such an approach moves beyond traditional legal analysis by considering whether environmental governance contributes to reducing structural inequalities and strengthening the resilience of vulnerable communities.

Accordingly, this research examines Indonesia's Environmental Protection and Management Law through the analytical framework of climate justice. Drawing upon theories of distributive, procedural, and recognitional justice (Schlosberg, 2007; Fraser, 2008), the study analyzes both the normative content of UU No. 32/2009 and its practical implementation within Indonesia's climate governance system. In doing so, the article contributes to the growing body of scholarship connecting environmental law, constitutional governance, and climate justice in developing countries. Specifically, this study addresses three research questions:

1. To what extent does Law No. 32 of 2009 provide a legal framework for promoting climate justice in Indonesia?
2. How effectively does the Law protect marginalized and climate-vulnerable communities through environmental governance and access to justice?

3. What legal, institutional, and governance challenges limit the Law's contribution to climate justice, and what reforms are necessary to strengthen its role in climate adaptation and environmental protection?

By answering these questions, the study seeks to contribute to environmental law scholarship in three ways. First, it provides a climate justice assessment of Indonesia's principal environmental legislation, an area that has received relatively limited scholarly attention. Second, it demonstrates how environmental rights, public participation, and legal accountability function as essential components of climate adaptation governance. Third, it proposes a socio-legal framework for integrating environmental justice more explicitly into environmental law and climate policy, offering insights that may also be relevant for other climate-vulnerable developing countries facing similar governance challenges.

Literature Review

A. Climate Justice and Legal Frameworks

Climate justice has emerged as one of the most influential frameworks for understanding climate change as both an environmental and socio-political challenge. While early climate governance primarily emphasized scientific assessment and technological mitigation, contemporary scholarship increasingly recognizes that climate change disproportionately affects populations that have contributed least to global greenhouse gas emissions. Consequently, the impacts of climate change cannot be adequately addressed without considering questions of equity, human rights, and social inclusion (Schlosberg & Collins, 2014; Newell et al., 2021).

The concept of climate justice builds upon the broader tradition of environmental justice, which originated from social movements challenging the unequal distribution of environmental risks among marginalized communities. Environmental justice initially focused on environmental racism and inequitable exposure to pollution, particularly in the United States, but has since evolved into a comprehensive framework encompassing global inequalities, ecological governance, and intergenerational responsibility (Schlosberg, 2007). Climate justice extends these principles by emphasizing that adaptation and mitigation policies should not only reduce environmental risks but also address structural inequalities that shape vulnerability and resilience.

Schlosberg (2007) argues that environmental justice consists of three interrelated dimensions: distributive justice, procedural justice, and recognitional justice. These dimensions provide an analytical framework for assessing whether legal and policy interventions promote equitable environmental governance.

Distributive justice concerns the allocation of environmental benefits and burdens across society. Within climate governance, this dimension evaluates

whether adaptation resources, environmental protection measures, and climate-related costs are shared fairly, particularly among vulnerable populations. Climate policies that disproportionately expose disadvantaged communities to environmental risks or exclude them from adaptation benefits may reinforce existing inequalities rather than reduce vulnerability (Sultana, 2021).

Procedural justice focuses on the fairness of decision-making processes. It emphasizes transparency, access to information, public participation, and accountability in environmental governance. Effective climate adaptation requires that affected communities participate meaningfully in decisions regarding environmental management, land use, and resource allocation. Arnstein's (1969) influential "ladder of citizen participation" demonstrates that consultation alone does not guarantee genuine participation; rather, procedural justice requires that communities possess meaningful influence over policy outcomes.

The third dimension, recognitional justice, highlights the importance of acknowledging diverse identities, knowledge systems, and historical experiences. Fraser (2008) argues that social justice cannot be achieved solely through equitable distribution because many forms of inequality originate from institutional failure to recognize marginalized groups. In climate governance, recognitional justice requires legal and institutional acknowledgment of indigenous peoples, customary communities, women, and other vulnerable groups whose environmental knowledge and cultural relationships with ecosystems contribute significantly to resilience (Whyte, 2018).

These three dimensions have increasingly been incorporated into legal scholarship, which views environmental law as an institutional mechanism capable of operationalizing climate justice. Rather than functioning solely as a regulatory instrument, environmental law establishes rights, responsibilities, procedural safeguards, and accountability mechanisms that influence how climate-related risks and opportunities are distributed across society (Boyd, 2012). Consequently, assessing climate justice requires examining whether legal frameworks create equitable governance structures rather than merely evaluating environmental outcomes.

Recent scholarship has further expanded climate justice by emphasizing transformative justice. Newell et al. (2021) argue that climate governance should move beyond compensating vulnerable populations toward addressing structural inequalities embedded within political, economic, and legal institutions. This perspective suggests that climate adaptation should transform governance systems that generate vulnerability rather than simply reducing immediate climate risks. Such an approach is particularly relevant for developing countries where environmental degradation intersects with poverty, unequal access to natural resources, and institutional weaknesses.

Accordingly, this study adopts the three-dimensional framework of distributive, procedural, and recognition justice as the principal analytical lens for evaluating Indonesia's Environmental Protection and Management Law. These dimensions provide a systematic basis for assessing whether the legal framework promotes equitable environmental governance in the context of climate change.

B. Environmental Law and Climate Change

Environmental law has become one of the principal legal instruments through which governments seek to address climate change. Although many countries have enacted specific climate legislation, general environmental protection laws continue to provide the institutional foundations for environmental governance by regulating pollution control, ecosystem conservation, environmental licensing, public participation, and environmental accountability (Boyd, 2012). These legal mechanisms are increasingly recognized as essential components of both climate mitigation and climate adaptation.

Traditionally, environmental law focused on preventing environmental degradation through command-and-control regulation. However, contemporary environmental governance has evolved toward more integrated approaches emphasizing sustainable development, ecosystem resilience, precautionary decision-making, and participatory governance (Fisher et al., 2017). This transformation reflects recognition that environmental protection cannot be separated from broader questions of governance, human rights, and socio-economic development.

Within climate adaptation, environmental legislation performs several important functions. First, environmental law establishes preventive mechanisms by requiring environmental impact assessments, strategic environmental assessments, and risk management procedures before environmentally significant projects are implemented. These instruments can reduce future climate vulnerability by ensuring that development activities consider long-term environmental consequences.

Second, environmental law creates institutional responsibilities for protecting ecosystems that provide critical climate adaptation services. Forests, wetlands, mangroves, and watersheds function as natural buffers against floods, droughts, erosion, and other climate-related hazards. Legal protection of these ecosystems therefore contributes directly to enhancing climate resilience while simultaneously supporting biodiversity conservation (IPCC, 2022).

Third, environmental legislation establishes procedural rights that strengthen adaptive governance. Access to environmental information, public participation, and judicial review enable communities to challenge environmentally harmful decisions and advocate for more equitable resource management. These procedural safeguards are increasingly recognized as

essential elements of climate adaptation because they improve transparency, accountability, and institutional learning (Boyd, 2012).

Comparative studies from developing countries demonstrate considerable variation in the effectiveness of environmental law for climate governance. Countries such as South Africa, Brazil, Colombia, and the Philippines have increasingly integrated constitutional environmental rights into judicial decision-making and climate-related litigation, allowing courts to play a more active role in protecting vulnerable communities (Peel & Osofsky, 2018). These experiences illustrate how environmental law can evolve beyond pollution regulation to become a mechanism for advancing climate justice.

Nevertheless, many developing countries continue to face significant implementation challenges. Weak institutional capacity, fragmented regulatory systems, political interference, overlapping legal mandates, and inadequate enforcement frequently reduce the practical effectiveness of environmental legislation (UNEP, 2019). Consequently, legal frameworks that appear comprehensive on paper may generate limited improvements in environmental protection or climate resilience.

These observations suggest that evaluating environmental law requires moving beyond formal legal analysis toward examination of implementation, institutional coordination, and governance outcomes. A climate justice perspective is particularly valuable because it considers whether legal systems effectively protect vulnerable populations rather than merely whether environmental regulations exist.

C. Indonesia's Environmental Law Framework

Indonesia's environmental legal framework has undergone significant transformation over the past four decades in response to changing environmental challenges, democratic reforms, and international environmental commitments. Early environmental regulation focused primarily on pollution control and natural resource management. However, subsequent legal reforms increasingly emphasized sustainable development, public participation, environmental rights, and institutional accountability.

The enactment of Law No. 32 of 2009 on Environmental Protection and Management represented a major milestone in Indonesia's environmental governance. Replacing Law No. 23 of 1997, the 2009 Law broadened the scope of environmental regulation by incorporating modern principles of environmental governance, including sustainable development, the precautionary principle, polluter-pays responsibility, biodiversity conservation, environmental licensing, and public participation (Butt & Lindsey, 2018).

One of the Law's most significant innovations is its explicit recognition of the right to a good and healthy environment, consistent with Article 28H of the 1945 Constitution. This constitutional foundation strengthens environmental

protection by recognizing environmental quality as a legal entitlement rather than merely a policy objective. The Law also expands opportunities for community participation through environmental impact assessment procedures, access to environmental information, administrative objections, and environmental litigation.

Despite these normative advances, implementation has remained uneven. Indonesia's decentralized governance structure has transferred significant environmental responsibilities to provincial and local governments, creating opportunities for locally responsive governance while also generating institutional variation and regulatory inconsistency (Firman, 2010). Differences in administrative capacity, political priorities, and financial resources contribute to uneven enforcement across regions.

Furthermore, environmental governance continues to be influenced by competing development priorities. Indonesia's economic growth remains closely linked to land-intensive sectors such as mining, plantation agriculture, infrastructure development, and forestry. Consequently, environmental authorities often face tensions between facilitating economic investment and enforcing environmental protections. These competing priorities have implications for climate adaptation because environmental degradation can increase vulnerability to floods, droughts, landslides, and biodiversity loss. The relationship between environmental law and climate governance is therefore complex. Although UU No. 32/2009 provides important legal principles relevant to climate adaptation—including precaution, sustainability, environmental rights, and public participation—the Law was not specifically designed as climate legislation. Its contribution to climate justice depends largely on how these general environmental principles are interpreted, implemented, and integrated with climate policies.

D. Research Gap

Existing scholarship has made substantial contributions to understanding Indonesia's environmental governance, environmental law, and climate policy. Previous studies have examined topics such as environmental licensing, decentralization, pollution control, natural resource governance, and sustainable development. Other research has explored climate adaptation strategies, environmental rights, and institutional challenges within Indonesia's environmental management system.

However, three significant gaps remain. First, relatively few studies explicitly evaluate Law No. 32 of 2009 through the analytical framework of climate justice. Most legal analyses emphasize doctrinal interpretation, administrative reform, or environmental compliance without examining whether the Law contributes to equitable climate adaptation, distributive fairness, or protection of vulnerable populations.

Second, existing research often treats environmental law and climate governance as separate policy domains. While climate adaptation studies frequently discuss environmental vulnerability and institutional capacity, they rarely analyze how environmental legislation shapes adaptation outcomes through legal rights, procedural safeguards, and accountability mechanisms. Conversely, environmental law scholarship seldom considers climate justice as an evaluative framework for assessing legal effectiveness. Third, there remains limited empirical attention to the implementation of UU No. 32/2009 at the local level, particularly regarding how environmental rights, participation mechanisms, and enforcement influence communities experiencing climate-related risks. Understanding these implementation dynamics is essential because climate justice depends not only on legal design but also on institutional practice.

Addressing these gaps, this study integrates environmental law, climate justice theory, and socio-legal analysis to evaluate the extent to which Indonesia's Environmental Protection and Management Law promotes equitable climate governance. By combining doctrinal legal analysis with empirical evidence on implementation, the study contributes to broader debates concerning environmental constitutionalism, climate adaptation, and justice-oriented environmental governance in developing countries.

Methods

A. Research Design

This study adopts a qualitative socio-legal research design to examine the extent to which Law No. 32 of 2009 on Environmental Protection and Management (hereafter Law No. 32/2009) promotes climate justice in Indonesia. A socio-legal approach is particularly appropriate because climate justice extends beyond statutory interpretation and requires an examination of how legal norms operate within broader social, political, and institutional contexts (Banakar & Travers, 2005). Rather than treating law as a self-contained body of rules, socio-legal research recognizes that legal effectiveness is shaped by governance structures, institutional capacity, stakeholder participation, and community experiences.

The study combines doctrinal legal analysis with empirical qualitative inquiry to bridge the distinction between *law in the books* and *law in action*. Doctrinal analysis is employed to examine the legal principles, institutional arrangements, and normative objectives embodied in Law No. 32/2009, while empirical analysis investigates how these legal provisions are implemented and experienced by actors involved in environmental governance. The analysis is guided by the climate justice framework developed by Schlosberg (2007), which conceptualizes justice through the interconnected dimensions of distributive, procedural, and recognition justice. These dimensions provide a coherent

analytical lens for evaluating whether Indonesia's environmental legal framework contributes to equitable climate governance.

B. Data Collection

The research relies on multiple qualitative data sources to enhance analytical depth and strengthen the credibility of the findings through triangulation (Yin, 2018). The primary source of evidence consists of legal and policy documents that establish Indonesia's environmental governance framework. These include the 1945 Constitution of the Republic of Indonesia, particularly Articles 28H and 33, Law No. 32/2009 on Environmental Protection and Management, implementing regulations concerning environmental impact assessment, environmental permits, and environmental law enforcement, as well as legislation governing spatial planning, forestry, disaster management, and climate change adaptation. National climate policy documents, including Indonesia's Nationally Determined Contributions (NDCs), the National Action Plan for Climate Change Adaptation (RAN-API), and the Long-Term Strategy for Low Carbon and Climate Resilience (LTS-LCCR), are also examined to understand how environmental law interacts with climate governance.

To complement documentary analysis, semi-structured interviews are conducted with individuals directly involved in environmental governance and climate-related policymaking. Participants include environmental law scholars, government officials, legal practitioners, representatives of environmental non-governmental organizations, environmental activists, indigenous community leaders, and members of communities affected by environmental degradation and climate-related hazards. Purposive sampling is employed to ensure that participants possess relevant knowledge and experience regarding environmental law implementation and climate governance. The interviews explore perceptions of the effectiveness of Law No. 32/2009, experiences concerning environmental rights and public participation, institutional barriers to law enforcement, and opportunities for strengthening climate justice within Indonesia's environmental legal framework.

The study also reviews selected judicial decisions and environmental enforcement cases involving the application of Law No. 32/2009. Examining judicial practice provides valuable insight into how environmental rights, public participation, administrative responsibility, and environmental liability are interpreted by courts and implemented by regulatory institutions. Particular attention is given to cases involving environmental degradation, challenges to environmental permits, indigenous land rights, and disputes arising from climate-related environmental impacts.

C. Data Analysis

The collected data are analysed through an integrated qualitative approach combining doctrinal legal analysis and thematic analysis. Doctrinal analysis is used to interpret statutory provisions, legal principles, constitutional norms, and judicial decisions relevant to environmental protection and climate governance. This stage focuses on identifying how environmental rights, sustainable development, the precautionary principle, public participation, and accountability are incorporated into Indonesia's legal framework.

Interview transcripts and documentary materials are subsequently analysed using thematic analysis following the approach proposed by Braun and Clarke (2006). The analysis involves repeated reading of the data, systematic coding of significant statements, identification of recurring themes, and interpretation of relationships between legal provisions and stakeholder experiences. Coding is informed by the three dimensions of climate justice—distributive, procedural, and recognitional justice—which serve as the principal analytical framework throughout the study.

To strengthen the validity of the findings, methodological triangulation is employed by comparing evidence obtained from legislation, policy documents, judicial decisions, and interview data (Denzin, 2017). This process enables the study to identify areas of convergence and divergence between formal legal provisions and their practical implementation, thereby providing a more comprehensive assessment of the contribution of Law No. 32/2009 to climate justice.

D. Research Quality and Ethical Considerations

The credibility and trustworthiness of the research are enhanced through data triangulation, analytical transparency, and contextual interpretation. Multiple sources of evidence are examined to reduce reliance on a single perspective and to strengthen the consistency of the findings. The analytical process is guided by an explicit climate justice framework, ensuring that interpretation remains systematic and theoretically grounded.

The research also adheres to established ethical principles governing qualitative research. All interview participants are informed about the objectives of the study, the voluntary nature of participation, and the intended use of the research findings before informed consent is obtained. Participant confidentiality is protected through anonymization, and all research data are securely stored and used solely for academic purposes. Particular care is taken when engaging with indigenous peoples, rural communities, and other socially vulnerable groups to ensure that participation is respectful, culturally appropriate, and free from coercion. Participants retain the right to decline any question or withdraw from the research at any stage without adverse consequences.

Results and Discussion

A. Environmental Rights and Climate Justice under Law No. 32 of 2009

Law No. 32 of 2009 on Environmental Protection and Management represents one of the most significant milestones in the development of Indonesia's environmental legal system. Replacing Law No. 23 of 1997, the legislation introduced a broader conception of environmental governance by integrating principles of sustainable development, environmental rights, precaution, public participation, and legal accountability into a single statutory framework. Although the Law was enacted before climate justice became widely incorporated into domestic legal discourse, many of its normative provisions provide an important legal foundation for addressing climate-related environmental challenges. From a climate justice perspective, however, the existence of legal principles alone does not guarantee equitable environmental outcomes. Rather, the contribution of environmental legislation depends on whether these principles are translated into institutional practices capable of protecting vulnerable communities and reducing structural inequalities associated with climate change (Schlosberg & Collins, 2014; Newell et al., 2021).

One of the most progressive features of Law No. 32/2009 is its explicit recognition of environmental rights. The Law affirms that every person has the right to a good and healthy environment, reflecting the constitutional guarantee contained in Article 28H of the 1945 Constitution. By recognizing environmental quality as a legal right rather than merely a policy objective, the legislation establishes a normative relationship between environmental protection and human welfare. This constitutional orientation is particularly relevant in the context of climate change because environmental degradation increasingly threatens fundamental rights to health, livelihoods, housing, food security, and access to natural resources. Consequently, climate-related environmental harm should not be understood solely as ecological damage but also as a potential violation of legally protected human interests (Boyd, 2012).

The recognition of environmental rights also broadens the function of environmental law beyond pollution control. Contemporary environmental governance increasingly views environmental rights as enabling rights that support broader objectives of social justice, democratic participation, and sustainable development (May & Daly, 2015). Within this framework, environmental protection becomes a prerequisite for the realization of other human rights, particularly for communities whose livelihoods depend directly on land, forests, coastal ecosystems, and freshwater resources. Indonesia's environmental legislation therefore possesses significant normative potential to contribute to climate adaptation by strengthening legal protections for communities facing increasing environmental risks.

Nevertheless, a climate justice perspective requires moving beyond formal recognition of rights to examine how environmental benefits and burdens are distributed across society. The principle of distributive justice emphasizes that climate change does not affect all populations equally. Communities characterized by poverty, insecure land tenure, limited political representation, and dependence on natural resources often experience disproportionately higher levels of climate vulnerability despite contributing relatively little to environmental degradation (Sultana, 2021). In Indonesia, these patterns are evident among indigenous peoples, smallholder farmers, fishing communities, and residents of low-lying coastal areas where environmental degradation and climate-related disasters increasingly threaten livelihoods.

Although Law No. 32/2009 establishes broad environmental protections applicable to all citizens, the legislation does not explicitly recognize climate vulnerability as a distinct legal category requiring differentiated protection. Environmental rights are formulated as universal rights without detailed provisions addressing the unequal capacity of different social groups to anticipate, withstand, or recover from climate-related impacts. As a consequence, implementation frequently relies upon general administrative procedures that may overlook structural inequalities affecting marginalized populations. Equality before the law, while normatively important, does not necessarily produce equitable environmental outcomes when communities possess vastly different levels of social, economic, and institutional capacity.

This limitation illustrates a broader challenge within environmental legislation. Universal legal standards often assume that identical procedural protections generate equal opportunities for all citizens. Climate justice scholarship, however, argues that substantive equality requires differentiated legal responses that account for historical disadvantage, unequal exposure to environmental risks, and varying adaptive capacities (Fraser, 2008). Consequently, legal frameworks promoting climate justice should incorporate mechanisms specifically designed to protect communities experiencing disproportionate climate vulnerability rather than relying exclusively on formally equal legal protections.

Another significant contribution of Law No. 32/2009 lies in its incorporation of the precautionary principle and sustainable development. The precautionary principle requires public authorities to prevent environmental degradation even where scientific certainty regarding environmental harm remains incomplete. Within climate governance, this principle is particularly significant because climate change involves long-term uncertainty, cumulative ecological impacts, and potentially irreversible environmental damage. By requiring preventive action before severe environmental degradation occurs, the Law creates opportunities for integrating climate adaptation considerations into

environmental planning and resource management (Fisher, Scotford, & Barritt, 2017).

However, practical implementation demonstrates that precautionary decision-making frequently encounters competing political and economic priorities. Indonesia's dependence on extractive industries, infrastructure expansion, plantation agriculture, and industrial investment creates institutional pressures to prioritize short-term economic growth over long-term environmental resilience. Environmental impact assessments may formally satisfy statutory requirements while inadequately considering cumulative climate risks, ecosystem resilience, or community vulnerability. Consequently, the precautionary principle often functions more effectively as a legal aspiration than as an operational decision-making standard.

Climate justice further requires examining procedural dimensions of environmental governance. Law No. 32/2009 introduced important procedural innovations by expanding public access to environmental information, strengthening opportunities for participation in environmental impact assessment processes, and providing legal mechanisms through which communities may challenge environmentally harmful decisions. These provisions are consistent with international developments emphasizing environmental democracy as a cornerstone of sustainable environmental governance (Boyd, 2012).

Nevertheless, meaningful participation involves more than providing opportunities for consultation. Arnstein's (1969) classic model of citizen participation distinguishes between symbolic participation and genuine decision-making power, arguing that consultation without influence does not constitute meaningful participation. Evidence from environmental governance in Indonesia suggests that public participation frequently remains procedural rather than substantive. Environmental consultations often occur after major development decisions have already been taken, limiting the capacity of affected communities to influence project design or environmental safeguards. Marginalized communities may also encounter practical barriers, including limited access to technical information, financial resources, legal assistance, and administrative processes necessary to participate effectively.

These procedural limitations have important implications for climate justice because adaptation decisions increasingly involve complex trade-offs concerning land use, infrastructure development, ecosystem restoration, and resource allocation. When vulnerable communities are excluded from meaningful participation, adaptation policies risk reproducing existing inequalities rather than reducing climate vulnerability. Procedural justice therefore requires institutional arrangements that enable communities not only to express concerns but also to shape environmental decisions affecting their livelihoods and future resilience.

Recognitional justice provides an additional dimension through which Law No. 32/2009 can be evaluated. Environmental governance increasingly acknowledges that effective adaptation depends upon recognizing the knowledge, identities, and cultural relationships of indigenous peoples and local communities (Whyte, 2018). Indonesia possesses extraordinary cultural diversity, with many indigenous and customary communities maintaining long-standing ecological knowledge regarding forest management, coastal resource use, and agricultural adaptation. Such knowledge represents an important resource for climate resilience.

Although the Law recognizes community participation and environmental rights in general terms, explicit legal recognition of indigenous ecological knowledge remains relatively limited. Environmental governance continues to rely predominantly upon scientific and administrative expertise, while customary governance systems are often incorporated only indirectly through separate sectoral legislation. This institutional separation may reduce opportunities to integrate local adaptive knowledge into climate policy despite growing international recognition of its importance.

From a climate justice perspective, recognitional justice extends beyond symbolic acknowledgement of cultural diversity. It requires legal institutions to value different systems of knowledge, protect customary environmental practices where consistent with sustainability objectives, and ensure that historically marginalized groups possess genuine influence within environmental governance. Without such recognition, adaptation policies risk privileging centralized administrative approaches while overlooking locally grounded strategies that have supported environmental resilience for generations.

Overall, Law No. 32/2009 provides a robust normative foundation for advancing climate justice through its recognition of environmental rights, sustainable development, precautionary governance, and public participation. These principles demonstrate considerable alignment with contemporary theories of environmental justice and rights-based environmental governance. However, the analysis also indicates that the Law's contribution to climate justice remains constrained by the absence of explicit provisions addressing climate vulnerability, differentiated protection for marginalized populations, and institutional mechanisms capable of translating universal environmental rights into substantively equitable outcomes.

Accordingly, the effectiveness of Indonesia's environmental legal framework should be assessed not merely by the comprehensiveness of its statutory provisions but by its capacity to reduce unequal climate vulnerability, strengthen adaptive governance, and ensure that environmental protection contributes to broader objectives of social justice. From this perspective, Law No. 32/2009 should be understood as providing an important normative foundation

for climate justice rather than a complete legal framework capable of addressing the complex social inequalities associated with climate change.

B. From Legal Principles to Climate Governance: Implementation and Enforcement

Although Law No. 32 of 2009 establishes a comprehensive normative framework for environmental protection, its contribution to climate justice ultimately depends on the effectiveness of implementation and enforcement. Environmental legislation can only function as an instrument of climate governance when legal principles are translated into administrative practice, regulatory compliance, judicial enforcement, and institutional accountability. In many developing countries, including Indonesia, the principal challenge does not lie in the absence of environmental regulation but rather in the persistent gap between ambitious legal commitments and their practical realization (UNEP, 2019). This implementation gap has important implications for climate justice because ineffective environmental governance often reinforces the vulnerabilities of communities already exposed to environmental degradation and climate-related hazards.

One of the defining characteristics of Indonesia's environmental governance system is its reliance on preventive regulatory mechanisms. Law No. 32/2009 introduced several instruments intended to minimize environmental harm before it occurs, including environmental impact assessment (*Analisis Mengenai Dampak Lingkungan* or AMDAL), environmental permits, environmental quality standards, strategic environmental assessment (*Kajian Lingkungan Hidup Strategis* or KLHS), and administrative supervision. Collectively, these mechanisms reflect a preventive approach that is consistent with the precautionary principle and sustainable development. Rather than responding to environmental damage after it has occurred, the legal framework seeks to identify environmental risks during the planning stage of development projects.

From a climate governance perspective, these preventive instruments possess significant potential. Climate adaptation increasingly requires anticipatory decision-making that considers long-term environmental risks rather than immediate economic returns. Environmental impact assessments, for example, could provide opportunities to evaluate how proposed development projects influence ecosystem resilience, flood risk, coastal vulnerability, or greenhouse gas emissions. Similarly, strategic environmental assessments have the capacity to integrate climate considerations into regional spatial planning and sectoral development policies before irreversible land-use decisions are made (IPCC, 2022).

Despite this normative potential, empirical studies consistently demonstrate that preventive legal instruments frequently operate below their intended capacity. Environmental impact assessments often function primarily

as administrative requirements rather than substantive decision-making tools. In practice, project approval may proceed despite significant environmental concerns, particularly where projects are considered strategically important for economic growth or national infrastructure development. As a result, environmental assessment processes sometimes become procedural exercises that legitimize predetermined development decisions instead of critically evaluating environmental risks (Butt & Lindsey, 2018).

This situation illustrates a fundamental tension between environmental governance and economic development. Indonesia continues to pursue rapid economic growth through industrial expansion, extractive industries, plantation agriculture, transportation infrastructure, and urban development. While these sectors contribute substantially to national economic performance, they also generate environmental pressures that increase climate vulnerability through deforestation, ecosystem degradation, declining biodiversity, and land-use change. Consequently, environmental regulatory agencies frequently operate within a political environment where competing economic priorities constrain rigorous environmental enforcement.

Climate justice scholarship argues that such tensions cannot be understood merely as conflicts between development and environmental protection. Rather, they reflect broader questions regarding whose interests are prioritized within environmental governance systems (Newell et al., 2021). Development projects often distribute economic benefits broadly while concentrating environmental risks within geographically and socially marginalized communities. Consequently, weak implementation of environmental law disproportionately affects populations possessing limited political influence, lower adaptive capacity, and greater dependence on natural resources.

The implementation of environmental licensing illustrates this challenge. Law No. 32/2009 requires development activities with significant environmental impacts to obtain environmental approval based upon compliance with environmental standards and assessment procedures. In principle, this mechanism provides an opportunity to ensure that environmental risks are adequately considered before projects commence. However, implementation frequently encounters institutional limitations including insufficient monitoring capacity, overlapping administrative authority, inconsistent enforcement, and political intervention in licensing decisions.

These institutional weaknesses have become increasingly significant as Indonesia has sought to improve investment competitiveness through regulatory reform. Simplification of environmental licensing procedures may reduce administrative burdens for investors, yet it may simultaneously weaken opportunities for comprehensive environmental review and meaningful public participation. While regulatory efficiency is important for economic development, excessive deregulation risks undermining environmental

safeguards that are essential for climate resilience. From a climate justice perspective, environmental licensing should therefore be evaluated not only according to administrative efficiency but also according to its capacity to protect vulnerable communities from long-term environmental risks.

Enforcement constitutes another critical dimension of climate governance. Law No. 32/2009 provides multiple enforcement mechanisms, including administrative sanctions, civil liability, criminal penalties, and opportunities for environmental litigation. The availability of multiple enforcement pathways reflects recognition that environmental governance requires both preventive and corrective legal instruments. Nevertheless, practical enforcement remains uneven across regions and sectors.

Administrative enforcement often faces resource constraints, particularly at provincial and district levels where environmental agencies possess limited personnel, technical expertise, and financial capacity. Routine environmental inspections may therefore occur infrequently, reducing the likelihood that environmental violations will be detected before significant ecological damage occurs. Furthermore, coordination between environmental authorities, sectoral ministries, and regional governments remains inconsistent, contributing to fragmented regulatory oversight.

Judicial enforcement has also encountered challenges despite gradual expansion of environmental litigation in Indonesia. Although courts increasingly recognize environmental rights and have issued important decisions concerning pollution, deforestation, and environmental responsibility, litigation remains costly, time-consuming, and procedurally complex. Communities affected by environmental degradation frequently encounter barriers related to legal representation, financial resources, technical evidence, and unequal bargaining power when challenging environmentally harmful activities. Consequently, formal access to environmental justice does not necessarily translate into effective legal remedies.

The uneven enforcement of environmental law has direct implications for climate adaptation. Environmental degradation frequently reduces ecosystem services that support community resilience against climate hazards. Deforestation increases flood risk, degradation of mangrove ecosystems weakens coastal protection, and uncontrolled land conversion reduces watershed capacity. When environmental regulations are inadequately enforced, these ecological changes intensify climate vulnerability even where adaptation policies formally exist. Effective environmental enforcement should therefore be understood as an essential component of climate adaptation rather than merely an instrument for pollution control.

Institutional coordination represents another important challenge affecting implementation. Climate governance in Indonesia involves multiple governmental institutions responsible for environmental protection, forestry,

agriculture, marine affairs, disaster management, energy, infrastructure, and regional development. Although this institutional diversity reflects the cross-sectoral nature of climate change, it also creates overlapping authority and fragmented policymaking. Environmental objectives established under Law No. 32/2009 may therefore be interpreted differently across institutions, resulting in inconsistent implementation and policy incoherence.

Decentralization further complicates environmental governance. Since the implementation of regional autonomy reforms, provincial and district governments have assumed greater responsibility for environmental management. Decentralization has created opportunities for locally responsive governance by allowing regional authorities to address context-specific environmental challenges. However, it has also generated considerable variation in institutional capacity, regulatory priorities, and political commitment. Some local governments have developed innovative environmental initiatives, whereas others continue to prioritize short-term economic development over long-term environmental sustainability. These differences produce uneven levels of climate preparedness across regions despite the existence of a common national legal framework.

From a climate justice perspective, fragmented governance may generate unequal protection for communities experiencing similar climate risks. Environmental rights guaranteed by national legislation should not depend upon the administrative capacity or political priorities of individual local governments. Ensuring more consistent implementation therefore requires stronger coordination between national ministries, regional governments, and environmental regulatory institutions, accompanied by clearer accountability mechanisms and more effective monitoring systems.

The implementation challenges identified in this analysis suggest that Law No. 32/2009 possesses stronger normative coherence than institutional effectiveness. The Law establishes legal principles broadly consistent with contemporary climate governance, yet practical implementation remains constrained by institutional fragmentation, limited enforcement capacity, competing development priorities, and uneven administrative performance. These challenges do not diminish the importance of the legal framework itself; rather, they indicate that climate justice depends upon strengthening governance institutions capable of translating legal rights into tangible environmental protection.

Viewed through a climate justice lens, effective implementation should not be measured solely by the number of permits issued, inspections conducted, or sanctions imposed. Instead, implementation should be evaluated according to whether environmental governance reduces climate vulnerability, protects ecosystem resilience, enhances accountability, and enables vulnerable communities to exercise their environmental rights. Such an approach shifts the

focus of environmental law from regulatory compliance toward broader objectives of social equity and climate resilience, thereby reinforcing the central argument that legal effectiveness must ultimately be assessed through its contribution to just and sustainable environmental governance.

C. Environmental Justice and Access to Remedies for Marginalized Communities

A central premise of climate justice is that climate change does not affect all individuals and communities equally. Rather, its impacts are mediated by existing social, economic, legal, and political inequalities that shape exposure to environmental hazards and the capacity to respond to them (IPCC, 2022; Sultana, 2021). Consequently, evaluating environmental law solely through statutory provisions or institutional performance provides an incomplete assessment of its effectiveness. A more comprehensive evaluation requires examining whether environmental governance protects those communities that experience the greatest climate vulnerability and whether legal institutions provide meaningful opportunities to prevent, challenge, or remedy environmental harm.

Law No. 32 of 2009 establishes an important legal framework for environmental rights by recognizing every person's right to a good and healthy environment and by providing mechanisms for public participation, access to environmental information, and environmental litigation. These provisions reflect important developments in environmental democracy and align with international principles that view access to justice as an essential component of environmental governance (Boyd, 2012). Nevertheless, the practical realization of these rights remains uneven, particularly for communities experiencing structural forms of marginalization.

From a climate justice perspective, vulnerability is not determined solely by physical exposure to climate hazards but also by unequal access to resources, legal protection, political representation, and institutional support (Adger, 2006). Communities that possess insecure land tenure, limited financial resources, restricted access to education, or weak political influence often experience greater difficulty adapting to environmental change. Environmental law therefore performs a dual function: protecting ecological systems while simultaneously strengthening the institutional conditions that enable vulnerable communities to build resilience. Where legal protections are inaccessible or ineffective, environmental vulnerability is likely to increase despite the existence of comprehensive statutory frameworks.

Among the groups most affected by these challenges are Indigenous Peoples (*Masyarakat Hukum Adat*), whose livelihoods and cultural identities are closely connected to forests, rivers, coastal ecosystems, and customary territories. Climate change has intensified pressures on these communities through

changing rainfall patterns, declining biodiversity, coastal erosion, and increased frequency of environmental disasters. At the same time, many indigenous communities continue to experience legal uncertainty regarding customary land rights, overlapping claims between state forests and customary territories, and limited participation in environmental decision-making (Peluso & Vandergeest, 2001; Li, 2014).

Although Law No. 32/2009 recognizes community participation and environmental rights, it provides only limited mechanisms for integrating customary governance systems into environmental decision-making. Environmental management remains predominantly structured around formal administrative institutions, while customary ecological knowledge is often treated as complementary rather than integral to governance processes. This institutional imbalance has significant implications for climate adaptation because indigenous knowledge frequently contributes to sustainable forest management, watershed protection, biodiversity conservation, and ecosystem-based adaptation. Failure to adequately recognize these knowledge systems may therefore reduce both environmental effectiveness and procedural fairness.

Similar challenges affect rural farming communities whose livelihoods depend heavily on climate-sensitive natural resources. Variability in rainfall, prolonged droughts, soil degradation, and declining water availability have increased agricultural uncertainty across many regions of Indonesia. Smallholder farmers generally possess fewer financial resources and lower adaptive capacity than commercial agricultural enterprises, limiting their ability to invest in climate-resilient technologies or diversify income sources. Environmental degradation resulting from land conversion, deforestation, or poorly regulated development projects may further compound these vulnerabilities.

The interaction between environmental degradation and socioeconomic inequality illustrates why distributive justice occupies a central position within climate governance. Communities experiencing environmental degradation often receive relatively few economic benefits from resource-intensive development while simultaneously bearing disproportionate environmental costs. This imbalance is particularly evident where industrial activities contribute to pollution, ecosystem degradation, or increased disaster risk without corresponding improvements in local welfare. Although environmental legislation establishes liability mechanisms intended to address environmental harm, affected communities frequently encounter significant practical obstacles in seeking compensation or restoration.

Coastal communities provide another important example of unequal climate vulnerability. Indonesia's extensive coastline exposes millions of people to sea-level rise, coastal flooding, erosion, saltwater intrusion, and increasingly severe storm events. Many coastal households depend directly upon fisheries, aquaculture, and marine ecosystems for their livelihoods. Environmental

degradation, including mangrove loss and coastal ecosystem destruction, has reduced natural protection against climate hazards while simultaneously undermining local economic security (IPCC, 2022).

In principle, Law No. 32/2009 supports environmental protection measures that could enhance coastal resilience through ecosystem conservation and environmental planning. However, implementation frequently encounters competing interests associated with tourism development, coastal infrastructure, reclamation projects, and commercial resource exploitation. These competing priorities may disproportionately affect communities possessing limited political influence despite their greater dependence on environmental resources. Consequently, climate adaptation cannot be understood solely as infrastructure development but must also involve legal protection of ecosystems and community rights.

The experiences of women within climate-vulnerable communities further illustrate the multidimensional character of climate justice. Gender inequalities often influence access to land ownership, financial resources, education, decision-making processes, and livelihood opportunities, thereby shaping differential adaptive capacities. Women frequently play central roles in water management, food production, household resource management, and community caregiving, yet their participation in environmental governance remains comparatively limited in many local contexts (UN Women, 2022). Environmental policies that fail to recognize these gendered dimensions may inadvertently reinforce existing inequalities despite pursuing environmentally beneficial objectives.

Beyond differential vulnerability, climate justice also requires examining access to environmental remedies. Law No. 32/2009 introduced important legal innovations by expanding opportunities for environmental litigation, administrative complaints, and citizen participation. The legislation recognizes the standing of environmental organizations in certain legal proceedings and strengthens mechanisms through which environmental harm may be challenged before administrative or judicial institutions. These reforms represent important progress in Indonesian environmental law by broadening legal accountability beyond direct economic injury.

Nevertheless, the availability of legal mechanisms does not automatically ensure effective access to justice. Environmental litigation often requires financial resources, legal expertise, scientific evidence, and procedural knowledge that may be unavailable to disadvantaged communities. The complexity of environmental disputes further increases litigation costs because environmental harm frequently involves technical assessments concerning ecological damage, pollution pathways, cumulative impacts, or climate-related risks. Consequently, formal legal rights may remain inaccessible for those communities most affected by environmental degradation.

Procedural barriers are reinforced by broader structural inequalities within environmental governance. Communities challenging environmentally harmful projects may confront unequal bargaining power when opposing large corporations or government authorities possessing greater financial resources, technical expertise, and political influence. Delays in judicial proceedings, administrative complexity, and uncertainty regarding enforcement of judicial decisions may further discourage affected communities from pursuing legal remedies. From a climate justice perspective, these institutional barriers transform environmental law into a resource that is more readily accessible to actors possessing greater economic and political capacity.

This observation highlights the distinction between formal equality and substantive justice. While Law No. 32/2009 formally grants environmental rights to all citizens, substantive climate justice requires ensuring that vulnerable communities possess the practical capacity to exercise those rights effectively. Equal legal standing is insufficient where profound disparities exist in access to information, legal representation, financial resources, and institutional support. Consequently, environmental governance should be evaluated according to whether legal institutions actively reduce these disparities rather than merely providing uniform procedural guarantees.

Recognition justice provides an additional perspective for assessing access to environmental remedies. Legal systems frequently privilege scientific expertise and administrative procedures while assigning comparatively limited value to local ecological knowledge or customary governance institutions. Although scientific evidence remains essential for environmental decision-making, exclusive reliance on technocratic approaches may marginalize communities whose knowledge is grounded in long-term interaction with local ecosystems (Whyte, 2018). Climate adaptation therefore requires governance systems capable of integrating multiple forms of knowledge rather than establishing hierarchical distinctions between scientific and community expertise.

Strengthening environmental justice consequently requires moving beyond conventional conceptions of legal enforcement. Access to justice should encompass not only judicial remedies but also meaningful participation in environmental planning, transparent access to environmental information, recognition of customary governance systems, accessible administrative procedures, and institutional mechanisms that enable vulnerable communities to influence environmental decision-making before irreversible environmental harm occurs. Such an approach reflects a preventive understanding of climate justice that emphasizes empowerment rather than merely compensation after environmental damage has occurred.

Overall, the analysis demonstrates that Law No. 32/2009 provides an important normative basis for expanding environmental rights and legal accountability. However, the practical realization of these objectives remains

constrained by structural inequalities affecting access to environmental governance. Indigenous peoples, rural communities, coastal populations, women, and other socially marginalized groups continue to encounter barriers that limit their ability to participate effectively in environmental decision-making and obtain meaningful legal remedies. From a climate justice perspective, strengthening environmental law therefore requires not only improving enforcement but also enhancing institutional inclusiveness, reducing procedural inequalities, and recognizing the diverse knowledge systems that contribute to climate resilience. Only through such reforms can environmental law evolve from a regulatory instrument into a genuine mechanism for achieving equitable climate governance.

D. Institutional Fragmentation and Multi-Level Environmental Governance

The effectiveness of environmental law in advancing climate justice depends not only on the substantive quality of legal provisions but also on the institutional arrangements responsible for implementing and enforcing them. Law No. 32 of 2009 establishes an extensive governance framework that allocates responsibilities across national ministries, provincial governments, district administrations, environmental agencies, and judicial institutions. While this multi-level governance structure reflects the cross-sectoral nature of environmental protection, it also generates institutional fragmentation that frequently constrains coherent responses to climate change. From a climate justice perspective, fragmented governance undermines the ability of legal institutions to provide consistent environmental protection, equitable participation, and effective accountability across different regions and social groups.

Climate change is inherently a multi-sectoral issue that intersects with land-use planning, forestry, agriculture, fisheries, disaster risk reduction, infrastructure development, energy policy, and public health. Consequently, no single institution possesses exclusive authority over climate governance. In Indonesia, responsibility for environmental management is shared among the Ministry of Environment, the Ministry of Forestry, the Ministry of Agrarian Affairs and Spatial Planning, the Ministry of Marine Affairs and Fisheries, the National Disaster Management Agency, regional governments, and numerous sectoral agencies. Although such institutional diversity enables specialized expertise, it also increases the complexity of coordination and policy integration.

One consequence of this institutional complexity is the emergence of overlapping regulatory mandates. Environmental protection measures established under Law No. 32/2009 may intersect with sectoral legislation governing mining, plantations, infrastructure, forestry, coastal management, and regional development. In practice, different institutions frequently pursue

distinct policy objectives that are not always mutually compatible. Economic ministries may prioritize investment and industrial expansion, while environmental authorities emphasize ecosystem protection and sustainability. Regional governments, meanwhile, often balance environmental concerns against fiscal pressures and local economic development priorities. These competing objectives create institutional tensions that may weaken environmental safeguards despite the existence of comprehensive legal standards.

The governance challenges associated with climate adaptation further illustrate the importance of institutional coordination. Effective adaptation requires integrating climate considerations into development planning, spatial governance, ecosystem conservation, disaster management, and infrastructure investment. However, adaptation policies are often implemented through separate institutional arrangements that operate independently from environmental regulatory systems. As a result, climate adaptation may be treated as a specialized policy area rather than an overarching governance principle guiding environmental decision-making. This separation limits opportunities to address the structural drivers of climate vulnerability, including land degradation, ecosystem fragmentation, and unsustainable resource use.

Law No. 32/2009 provides important mechanisms that could facilitate policy integration, particularly through Strategic Environmental Assessment (Kajian Lingkungan Hidup Strategis or KLHS). KLHS is intended to ensure that environmental sustainability is incorporated into development planning at the policy, program, and regional planning levels rather than only at the project level. In principle, this instrument represents a significant opportunity to mainstream climate resilience within broader development strategies by evaluating cumulative environmental impacts and long-term ecological sustainability. Nevertheless, implementation remains inconsistent across regions, and the integration of climate risk considerations into strategic assessments varies considerably depending on institutional capacity and political commitment.

Indonesia's decentralization framework introduces an additional dimension to institutional fragmentation. Since the decentralization reforms initiated in the early 2000s, provincial and district governments have acquired greater authority over environmental management and natural resource governance. Decentralization has created opportunities for context-specific environmental policies that reflect local ecological conditions and community needs. Local governments often possess greater familiarity with environmental challenges affecting their jurisdictions and are therefore well positioned to develop locally appropriate adaptation strategies.

However, decentralization has also produced significant disparities in governance capacity across regions. Differences in administrative resources, technical expertise, financial capacity, and political leadership have resulted in

uneven implementation of environmental legislation. Some provinces have strengthened environmental monitoring, ecosystem restoration, and participatory governance, whereas others continue to experience weak regulatory oversight, limited enforcement, and inadequate institutional coordination. Consequently, the level of environmental protection available to communities may depend more on local governance capacity than on the formal guarantees established by national legislation.

These disparities have important implications for climate justice because climate-related risks are not distributed uniformly across Indonesia. Coastal regions, small islands, forest-dependent communities, peatland ecosystems, and drought-prone agricultural areas experience different forms of environmental vulnerability and therefore require differentiated governance responses. Yet institutional fragmentation frequently limits the ability of national and local governments to coordinate adaptation strategies across administrative boundaries. Climate-related environmental problems such as watershed degradation, forest fires, coastal erosion, and ecosystem fragmentation often extend beyond the jurisdiction of individual local governments, requiring integrated governance mechanisms that remain underdeveloped.

Institutional fragmentation also affects environmental accountability. Climate justice requires governance systems capable of clearly identifying institutional responsibilities for preventing environmental harm, enforcing legal obligations, and providing remedies when environmental rights are violated. In fragmented governance systems, however, accountability may become diffused across multiple agencies, making it difficult to determine responsibility for regulatory failures or environmental degradation. This diffusion of responsibility can delay corrective action, weaken public trust, and reduce the effectiveness of environmental enforcement.

The challenge of accountability is further complicated by asymmetries in institutional power. Economic development agencies often possess greater political influence and financial resources than environmental institutions, particularly where development projects are considered strategically important for national economic growth. Under such circumstances, environmental authorities may encounter political pressure to expedite licensing processes, limit regulatory intervention, or prioritize investment objectives over ecological considerations. Climate justice scholarship emphasizes that these governance dynamics are not merely administrative shortcomings but manifestations of broader power relations that shape whose interests receive institutional protection and whose environmental risks remain insufficiently addressed (Newell et al., 2021).

Public participation represents another area where institutional fragmentation influences climate governance outcomes. Law No. 32/2009 formally recognizes the importance of community participation, transparency,

and access to environmental information. Nevertheless, participatory mechanisms are often administered through separate agencies with differing procedural standards, consultation practices, and capacities for stakeholder engagement. The absence of harmonized participation mechanisms may generate inconsistent opportunities for affected communities to influence environmental decision-making. In some jurisdictions, consultation processes are relatively inclusive and transparent, while in others participation remains limited to procedural compliance with statutory requirements.

From a climate justice perspective, meaningful participation requires institutional coordination that extends beyond isolated consultation exercises. Communities affected by climate-related environmental change frequently engage with multiple government agencies responsible for land administration, environmental licensing, disaster management, infrastructure planning, and social welfare. Fragmented institutional arrangements increase administrative complexity and may discourage meaningful engagement by communities possessing limited financial or technical resources. Consequently, procedural rights established under environmental law may be weakened by institutional arrangements that are difficult for citizens to navigate effectively.

The institutional treatment of scientific knowledge and local ecological knowledge also reflects broader governance challenges. Climate adaptation increasingly depends upon integrating scientific climate projections with community-based knowledge regarding local environmental conditions. However, governance institutions frequently privilege technical expertise generated by state agencies or external consultants while assigning comparatively limited authority to indigenous knowledge systems and local environmental practices. This imbalance reduces opportunities to develop adaptation strategies that are both scientifically informed and socially legitimate. Recognition justice therefore requires governance arrangements capable of valuing multiple knowledge systems within environmental decision-making rather than privileging a single source of expertise.

Addressing these governance challenges requires strengthening institutional integration rather than simply expanding regulatory authority. Effective climate governance depends on coherent coordination among environmental agencies, sectoral ministries, regional governments, judicial institutions, and civil society organizations. Such coordination should be supported by clearly defined institutional responsibilities, interoperable monitoring systems, transparent information-sharing mechanisms, and regular evaluation of policy implementation. Equally important is the establishment of accountability mechanisms that enable both governmental institutions and private actors to be held responsible for environmental harm and failures in climate adaptation.

The analysis suggests that Law No. 32/2009 provides a comprehensive legal architecture for environmental governance, yet its contribution to climate justice is constrained by institutional fragmentation and uneven governance capacity. Climate justice cannot be achieved solely through the adoption of progressive legal principles; it requires institutions capable of implementing those principles consistently across sectors, administrative levels, and geographical regions. Strengthening coordination, enhancing accountability, and improving institutional inclusiveness are therefore essential for transforming environmental law into an effective instrument of equitable climate governance.

Taken together, the findings presented in this section demonstrate that the effectiveness of Law No. 32/2009 extends beyond statutory interpretation to encompass the broader institutional ecosystem within which environmental governance operates. Legal rights, procedural safeguards, and environmental obligations acquire practical significance only when supported by institutions that possess sufficient capacity, coherence, and legitimacy to implement them. Accordingly, climate justice should be understood as an institutional as well as a legal project, requiring continuous reform of governance structures alongside the development of substantive environmental law.

Conclusion

This study examined the extent to which Law No. 32 of 2009 on Environmental Protection and Management contributes to the advancement of climate justice in Indonesia. Using a qualitative socio-legal approach that combined doctrinal legal analysis with empirical insights from environmental governance, the study assessed the law through the analytical dimensions of distributive, procedural, and recognitional justice. The findings demonstrate that although Law No. 32/2009 provides a comprehensive normative framework for environmental protection, its capacity to promote climate justice depends largely on the effectiveness of institutional implementation and the inclusiveness of environmental governance.

The analysis indicates that the Law establishes several legal principles that are broadly consistent with contemporary understandings of climate justice. Constitutional recognition of the right to a healthy environment, incorporation of sustainable development and precautionary principles, public participation, environmental impact assessment, and legal accountability collectively provide an important legal foundation for addressing climate-related environmental risks. These provisions position environmental law not merely as an instrument of pollution control but as a broader governance mechanism capable of supporting climate resilience and protecting environmental rights. In this respect, Law No. 32/2009 demonstrates considerable normative alignment with international developments in environmental governance and rights-based approaches to climate policy.

However, the study also reveals a persistent gap between legal aspirations and practical implementation. Preventive regulatory instruments such as environmental impact assessments, strategic environmental assessments, environmental licensing, and administrative supervision have not consistently achieved their intended objectives because of institutional fragmentation, uneven enforcement capacity, overlapping regulatory authority, and competing economic priorities. These implementation challenges reduce the capacity of environmental law to prevent ecological degradation that increases climate vulnerability and weakens community resilience. Consequently, the effectiveness of environmental legislation cannot be evaluated solely by the comprehensiveness of statutory provisions but must also be assessed according to the quality of governance institutions responsible for their implementation.

The findings further demonstrate that climate justice remains unevenly realized across different social groups. Although Law No. 32/2009 formally recognizes environmental rights for all citizens, vulnerable populations—including Indigenous Peoples, rural communities, coastal populations, and low-income households—continue to encounter structural barriers in accessing environmental decision-making, legal remedies, and institutional protection. These barriers arise not only from legal complexity but also from unequal access to financial resources, technical expertise, political representation, and administrative processes. Accordingly, formal legal equality does not necessarily produce substantive environmental justice where profound socioeconomic inequalities persist.

The study also highlights the importance of recognitional justice within Indonesia's environmental governance framework. While environmental legislation acknowledges public participation, greater institutional recognition of indigenous knowledge systems, customary environmental governance, and community-based adaptation practices remains necessary. Climate adaptation policies are likely to become more effective when legal institutions recognize local ecological knowledge as a complementary source of expertise rather than relying exclusively on centralized administrative and technical approaches. Such recognition contributes not only to procedural legitimacy but also to more context-sensitive and socially inclusive adaptation strategies.

Institutional fragmentation emerged as one of the principal constraints limiting the contribution of Law No. 32/2009 to climate justice. Responsibilities for environmental protection, climate adaptation, spatial planning, natural resource management, and disaster governance remain distributed across multiple governmental institutions operating at different administrative levels. While decentralization has created opportunities for locally responsive environmental governance, disparities in institutional capacity and policy coordination have generated uneven implementation across regions. Strengthening climate justice therefore requires more integrated governance

arrangements that improve coordination among national ministries, regional governments, judicial institutions, and civil society organizations while enhancing accountability for environmental decision-making.

Taken together, these findings suggest that Indonesia's environmental legal framework should increasingly be understood through a climate justice perspective. Such a perspective shifts the focus of environmental law beyond regulatory compliance toward broader questions concerning equity, participation, vulnerability, and institutional responsibility. Rather than evaluating environmental governance exclusively in terms of ecological outcomes or administrative efficiency, climate justice emphasizes whether legal institutions effectively reduce unequal exposure to climate risks and expand opportunities for vulnerable communities to participate in environmental governance and access meaningful legal protection.

From a policy perspective, several reforms could strengthen the contribution of Law No. 32/2009 to equitable climate governance. First, environmental legislation should more explicitly integrate climate justice considerations into environmental planning, licensing, and environmental impact assessment procedures by requiring systematic evaluation of the distributional consequences of development and adaptation policies. Second, institutional coordination between environmental agencies, climate authorities, regional governments, and sectoral ministries should be strengthened to reduce policy fragmentation and improve implementation consistency across administrative levels. Third, greater investment is required to enhance environmental enforcement capacity, particularly at provincial and district levels where regulatory institutions often face resource constraints. Fourth, participatory mechanisms should be expanded to ensure that Indigenous Peoples, local communities, women, and other vulnerable groups are able to influence environmental decision-making throughout policy formulation, implementation, and evaluation. Finally, environmental governance should incorporate stronger recognition of customary institutions and local ecological knowledge as valuable components of climate adaptation and ecosystem management.

This study also contributes to the broader literature on environmental law and climate governance by demonstrating that climate justice offers a productive analytical framework for evaluating domestic environmental legislation. While previous scholarship has primarily examined Law No. 32/2009 in relation to environmental regulation, administrative enforcement, or sustainable development, this research illustrates how distributive, procedural, and recognition justice provide complementary perspectives for assessing legal effectiveness. By integrating socio-legal analysis with climate justice theory, the study extends existing discussions beyond questions of legal compliance to

consider whether environmental law produces equitable outcomes for communities facing climate-related risks.

Several limitations should nevertheless be acknowledged. The qualitative design emphasizes institutional and legal analysis rather than quantitative measurement of environmental or adaptation outcomes. In addition, the study focuses primarily on Indonesia's national legal framework, limiting opportunities for systematic comparison with environmental legislation in other jurisdictions. Future research could employ comparative socio-legal approaches to examine how different legal systems incorporate climate justice principles into environmental governance. Longitudinal studies evaluating the implementation of environmental reforms over time would also contribute to understanding how institutional changes influence climate resilience. Furthermore, greater empirical attention should be devoted to community-level experiences, particularly among Indigenous Peoples, coastal populations, and other groups disproportionately affected by climate change, to strengthen evidence concerning the relationship between environmental law, governance, and climate justice.

In conclusion, Law No. 32/2009 provides a robust normative foundation for promoting environmentally sustainable development and protecting environmental rights in Indonesia. Nevertheless, realizing its full potential as an instrument of climate justice requires moving beyond formal legal recognition toward more inclusive institutions, stronger enforcement mechanisms, integrated governance, and meaningful participation by vulnerable communities. As climate change continues to intensify environmental risks and social inequalities, strengthening the justice dimensions of environmental law will become increasingly important for ensuring that environmental governance contributes not only to ecological sustainability but also to social equity, democratic accountability, and long-term climate resilience.

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Climate change is not just
an environmental issue. It
is a social justice issue.

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known for her work on environmental and social issues

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