



Eco-Justice in Indonesia's Mining Law: The Indonesian Mining Law and Its Conflict with Climate Justice in Indigenous Territories

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Abstract

This study critically examines the Indonesian Mining Law (UU No. 4/2009) and its conflict with eco-justice and climate justice in indigenous territories. As Indonesia continues to be a global leader in mineral extraction, the mining sector plays a crucial role in the national economy. However, the implementation of the Mining Law has sparked significant debates regarding its environmental and social impacts, particularly on indigenous communities whose ancestral lands are often exploited for mining activities. This research explores how the law's provisions—intended to regulate and promote responsible mining—interact with the environmental rights of indigenous peoples and the broader objectives of climate justice. Using a mixed-methods approach, which includes legal analysis, interviews with indigenous activists, and case studies of mining operations in resource-rich regions, the study evaluates the extent to which the Mining Law respects indigenous land rights, promotes environmental sustainability, and aligns with Indonesia's climate commitments. The findings reveal that while the law includes certain measures for environmental protection, it fails to adequately address the rights of indigenous peoples and often allows for unsustainable exploitation of natural resources, exacerbating climate vulnerabilities in affected areas. This study argues that eco-justice, which includes the integration of indigenous rights in environmental governance, is crucial to achieving true climate justice. The research concludes with policy recommendations aimed at reconciling the goals of economic



development, indigenous rights, and environmental protection in Indonesia's mining sector.

[Studi ini secara kritis meneliti UU Pertambangan Indonesia (UU No. 4/2009) dan konfliknya dengan keadilan ekologis dan keadilan iklim di wilayah masyarakat adat. Seiring Indonesia terus menjadi pemimpin global dalam ekstraksi mineral, sektor pertambangan memainkan peran penting dalam perekonomian nasional. Namun, implementasi UU Pertambangan telah memicu perdebatan signifikan mengenai dampak lingkungan dan sosialnya, khususnya pada masyarakat adat yang tanah leluhurnya sering dieksploitasi untuk kegiatan pertambangan. Penelitian ini mengeksplorasi bagaimana ketentuan hukum—yang dimaksudkan untuk mengatur dan mempromosikan pertambangan yang bertanggung jawab—berinteraksi dengan hak-hak lingkungan masyarakat adat dan tujuan yang lebih luas dari keadilan iklim. Dengan menggunakan pendekatan metode campuran, yang meliputi analisis hukum, wawancara dengan aktivis masyarakat adat, dan studi kasus operasi pertambangan di wilayah kaya sumber daya, studi ini mengevaluasi sejauh mana UU Pertambangan menghormati hak atas tanah masyarakat adat, mempromosikan keberlanjutan lingkungan, dan selaras dengan komitmen iklim Indonesia. Temuan penelitian ini mengungkapkan bahwa meskipun undang-undang mencakup beberapa langkah untuk perlindungan lingkungan, undang-undang tersebut gagal untuk secara memadai menangani hak-hak masyarakat adat dan seringkali memungkinkan eksploitasi sumber daya alam yang tidak berkelanjutan, sehingga memperburuk kerentanan iklim di daerah yang terkena dampak. Studi ini berpendapat bahwa keadilan ekologis, yang mencakup integrasi hak-hak masyarakat adat dalam tata kelola lingkungan, sangat penting untuk mencapai keadilan iklim yang sejati. Penelitian ini diakhiri dengan rekomendasi kebijakan yang bertujuan untuk menyelaraskan tujuan pembangunan ekonomi, hak-hak masyarakat adat, dan perlindungan lingkungan di sektor pertambangan Indonesia.]

Keywords: Eco-Justice, Mining Law, Indigenous Rights, Climate Justice, Indonesia

Introduction

The global transition toward a low-carbon economy has intensified demand for mineral resources, positioning mining as a central component of contemporary climate and development debates. Minerals such as nickel, copper, cobalt, lithium, and other strategic resources are increasingly considered essential for renewable energy technologies, electric vehicles, and low-carbon infrastructure. However, the expansion of mining activities has generated complex environmental and social challenges, particularly in regions where extraction occurs within ecologically sensitive areas and Indigenous territories.

While mining is often presented as a pathway toward economic growth and energy transition, its social and ecological consequences raise fundamental questions regarding justice, responsibility, and the unequal distribution of environmental benefits and burdens (Bebbington et al., 2018; Bridge, 2004). This tension highlights the importance of examining mining governance not only through economic and regulatory perspectives but also through the broader frameworks of eco-justice and climate justice.

Eco-justice provides a critical perspective for analyzing the relationship between human societies, natural ecosystems, and legal institutions. Unlike conventional environmental governance approaches that primarily focus on pollution control or resource management, eco-justice emphasizes the interconnectedness between ecological integrity and social equality. It recognizes that environmental harm is often experienced disproportionately by communities with limited political power, including Indigenous peoples and local communities whose livelihoods and cultural identities are closely connected to their territories (Schlosberg, 2007; Walker, 2012). Within this framework, mining conflicts cannot be understood merely as disputes over economic development or land use; they represent deeper conflicts regarding recognition, participation, and the rights of communities to determine the future of their environments.

Indigenous territories have become one of the most contested spaces in global extractive governance. Across many regions, including Latin America, Africa, and Southeast Asia, mining expansion frequently occurs in areas inhabited by Indigenous peoples whose relationships with land extend beyond economic value. These territories often function as cultural landscapes, sources of identity, and foundations of ecological knowledge systems. However, extractive projects frequently challenge Indigenous rights through land appropriation, environmental degradation, and limited participation in decision-making processes (Bebbington et al., 2018; Temper et al., 2015). The concept of climate justice further expands this discussion by highlighting that communities least responsible for global environmental degradation often face the greatest consequences of resource exploitation and climate vulnerability (Sultana, 2022).

Indonesia represents an important case for examining the intersection between mining law, ecological justice, and Indigenous rights. As one of the world's largest producers of coal, nickel, gold, and other minerals, Indonesia has positioned mining as a strategic sector supporting national economic development. The country's abundant mineral resources have attracted significant domestic and international investment, particularly following increasing global demand for critical minerals associated with energy transition technologies (Hilson, 2020). However, mining expansion has also contributed to extensive environmental challenges, including deforestation, ecosystem degradation, water contamination, and conflicts over land ownership. These

impacts are particularly significant because many mining operations are located within or adjacent to Indigenous and customary territories.

The legal framework governing Indonesia's mining sector is primarily established through Law No. 4 of 2009 on Mineral and Coal Mining (*Undang-Undang Mineral dan Batubara*), which was later amended through Law No. 3 of 2020. The Mining Law was designed to strengthen state control over mineral resources, regulate mining activities, and promote responsible resource extraction. However, critics argue that the regulatory framework has prioritized investment facilitation and economic growth while providing insufficient protection for Indigenous rights and ecological sustainability (Bakker & Moniaga, 2010; Butt, 2020). The centralized licensing system, limited recognition of customary land rights, and weak mechanisms for community consent have generated significant tensions between mining governance and environmental justice principles.

The constitutional recognition of Indigenous communities in Indonesia presents a complex legal landscape. Article 18B(2) of the Indonesian Constitution recognizes the existence of customary communities and their traditional rights, provided that these communities continue to exist and comply with national legal principles. Although this provision establishes a foundation for Indigenous rights protection, its implementation remains challenging due to unclear recognition procedures and competing claims between state authority, corporate interests, and customary territories. The absence of a comprehensive Indigenous Peoples Law has further contributed to legal uncertainty regarding land ownership, resource governance, and community participation in development decisions (Arizona et al., 2019).

The conflict between mining regulation and Indigenous rights reflects a broader contradiction within Indonesia's environmental governance. On one hand, the state recognizes environmental protection and sustainable development as constitutional objectives. On the other hand, mining policies continue to promote resource extraction as a driver of economic development. This contradiction becomes increasingly problematic in the context of climate change because mining activities contribute to ecological degradation while simultaneously affecting communities that often possess limited capacity to adapt to environmental disruptions. Therefore, climate justice requires examining not only emissions reduction strategies but also the social consequences of economic systems that continue to rely on intensive resource extraction.

Recent developments in Indonesia's mineral governance demonstrate the complexity of balancing climate commitments with extractive economic strategies. The expansion of nickel mining for electric vehicle battery production illustrates this dilemma. Although nickel is considered essential for global decarbonization efforts, mining expansion in regions such as Sulawesi and North

Maluku has raised concerns regarding forest loss, coastal ecosystem destruction, pollution, and impacts on local communities. This situation demonstrates that energy transition policies may reproduce environmental injustices if they fail to consider the rights and participation of affected communities (Sovacool et al., 2021). A transition toward renewable energy must therefore be evaluated not only based on carbon reduction potential but also through principles of justice and sustainability.

Despite growing scholarship on mining conflicts, environmental impacts, and Indigenous rights in Indonesia, limited research has examined Indonesian mining law through an integrated eco-justice and climate justice perspective. Existing studies frequently analyze mining governance from economic, institutional, or environmental perspectives but pay less attention to how legal structures distribute ecological risks and social burdens among different groups. This research addresses this gap by critically examining how Indonesia's Mining Law interacts with Indigenous territorial rights and climate justice principles.

This study argues that Indonesia's mining governance framework demonstrates a fundamental tension between extractive development priorities and the principles of eco-justice. While mining regulation provides mechanisms for environmental management, it remains insufficient in addressing recognition, participation, and protection of Indigenous communities affected by extraction. Achieving climate justice requires transforming mining governance from a resource-centered regulatory system toward a rights-based framework that recognizes ecological integrity and Indigenous sovereignty as essential components of sustainable development.

Accordingly, this research examines three central questions: (1) how Indonesia's Mining Law regulates mining activities within Indigenous territories; (2) how mining governance affects the environmental and social rights of Indigenous communities; and (3) what legal reforms are necessary to align Indonesia's mining governance with eco-justice and climate justice principles. By addressing these questions, this study contributes to broader debates on extractive governance, Indigenous rights, and the pursuit of a just transition in resource-dependent economies.

Literature Review

A. Eco-Justice Theory and Environmental Justice

The concept of eco-justice has emerged as a critical framework for understanding environmental conflicts that involve both ecological degradation and social inequality. Unlike conventional approaches to environmental protection that often emphasize technical solutions, resource efficiency, or ecosystem management, eco-justice highlights the ethical and political relationships between human communities and the natural environment. It argues that environmental governance should consider not only the protection of

ecosystems but also questions of fairness, responsibility, and the rights of communities affected by environmental decisions (Schlosberg, 2007; Baxter, 2005). In this sense, ecological sustainability cannot be separated from social justice because environmental harms are frequently distributed unevenly across different social groups.

Eco-justice builds upon the broader environmental justice movement, which initially developed in response to the unequal exposure of marginalized communities to environmental risks. Environmental justice scholarship identifies three interconnected dimensions of justice: distributive justice, procedural justice, and recognition justice (Fraser, 2009; Schlosberg, 2007). Distributive justice concerns the unequal allocation of environmental benefits and burdens; procedural justice emphasizes meaningful participation in environmental decision-making; while recognition justice focuses on respecting the identities, knowledge systems, and rights of marginalized groups. These dimensions provide an important analytical framework for examining mining conflicts because extractive industries often generate economic benefits for national actors while concentrating environmental and social costs on local communities.

Recent scholarship has expanded environmental justice beyond human-centered concerns by incorporating ecological considerations into justice analysis. This perspective argues that ecosystems possess intrinsic value and that environmental governance should recognize the interdependence between human well-being and ecological integrity (Washington et al., 2018). Eco-justice therefore challenges development models that treat nature primarily as an economic resource and instead promotes governance systems that respect ecological limits and the rights of both human and non-human communities.

Within extractive industries, eco-justice provides a useful framework for analyzing how mining activities reshape relationships between communities and their environments. Mining operations frequently transform landscapes, disrupt ecological systems, and alter cultural relationships with land. For Indigenous communities, these impacts are particularly significant because territories are not merely economic spaces but also sites of cultural identity, spirituality, and collective memory (Whyte, 2018). Therefore, mining conflicts represent not only environmental disputes but also struggles over recognition, authority, and alternative visions of development.

B. Climate Justice and Extractive Industries

Climate justice scholarship examines the unequal causes, consequences, and responsibilities associated with climate change. It challenges approaches that focus exclusively on global emissions reduction while ignoring historical inequalities and social vulnerabilities. Climate justice emphasizes that those who contribute least to climate change often experience its most severe consequences,

particularly communities already affected by poverty, political marginalization, and environmental degradation (Roberts & Parks, 2007; Sultana, 2022).

The relationship between climate justice and extractive industries has become increasingly important as the global economy seeks to transition toward low-carbon technologies. Although renewable energy development requires significant quantities of minerals, the extraction of these resources creates new environmental and social challenges. Scholars argue that the transition away from fossil fuels does not automatically guarantee justice because renewable energy supply chains may reproduce existing patterns of exploitation if mining expansion ignores community rights and ecological impacts (Sovacool et al., 2021; Bainton et al., 2021).

Mining activities contribute directly and indirectly to climate vulnerability through several mechanisms, including deforestation, ecosystem destruction, carbon emissions, and disruption of local adaptation systems. In forest-dependent communities, mining-induced land transformation can reduce ecosystem resilience and weaken traditional livelihood strategies. Similarly, mining pollution may reduce access to clean water and agricultural resources, increasing the vulnerability of communities facing climate-related challenges (Bridge, 2004; Bebbington et al., 2018).

The concept of a “just transition” has become central in discussions regarding climate-compatible development. A just transition requires that climate policies address not only technological transformation but also social consequences, including employment, resource governance, and community rights (Heffron & McCauley, 2018). In mining-dependent countries such as Indonesia, this approach requires careful consideration of how mineral extraction for energy transition purposes affects communities located in resource-rich territories. Without justice-oriented governance, climate policies may unintentionally shift environmental burdens from fossil fuel extraction to new forms of mineral extraction.

C. Indigenous Rights and Territorial Governance

Indigenous peoples’ rights have become a central issue in environmental governance because Indigenous territories frequently overlap with areas of high ecological value and significant natural resources. International frameworks, including the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), recognize Indigenous peoples’ rights to land, resources, cultural identity, and participation in decisions affecting their territories. These principles emphasize that environmental protection should not occur through the exclusion of Indigenous communities but through recognition of their governance authority and knowledge systems.

Indigenous territorial governance differs significantly from state-centered resource management models. Indigenous relationships with land are often

based on collective ownership, cultural responsibilities, and long-term ecological relationships rather than individual economic ownership. Research demonstrates that Indigenous-managed territories frequently contribute to biodiversity conservation and ecosystem protection because Indigenous governance systems are embedded within local ecological knowledge and social institutions (Garnett et al., 2018; Fa et al., 2020).

However, extractive industries often create tensions between Indigenous governance systems and state legal frameworks. Mining concessions are generally granted through state licensing systems that may recognize land primarily as an economic asset rather than as a cultural and ecological territory. This creates conflicts regarding authority, consent, and resource control. A major concern in Indigenous rights scholarship is the limited implementation of Free, Prior, and Informed Consent (FPIC), which requires meaningful agreement from Indigenous communities before activities affecting their territories are undertaken (Papillon & Rodon, 2019).

In Indonesia, Indigenous territorial governance faces additional challenges due to legal uncertainty surrounding customary rights. Although the Constitution recognizes customary communities, practical recognition depends on administrative procedures and government decisions. This creates a gap between constitutional recognition and effective protection. As a result, Indigenous communities may face difficulties defending their territories against mining expansion and other development projects.

D. Mining Law, Legal Pluralism, and Environmental Governance in Indonesia

Mining governance in Indonesia reflects the complex interaction between state law, economic development priorities, and environmental protection objectives. The Indonesian Mining Law, particularly Law No. 4/2009 on Mineral and Coal Mining and its amendment through Law No. 3/2020, establishes a regulatory framework intended to manage mineral resources and promote investment. However, scholars have criticized the framework for emphasizing extraction and economic growth while providing limited mechanisms for protecting local communities and ecological systems (Butt, 2020; Bedner & Arizona, 2019).

A central issue within Indonesian mining governance is the tension between formal state law and customary legal systems (*hukum adat*). While Indigenous communities maintain their own systems of territorial governance, these systems often operate within a legal environment dominated by state authority. This situation reflects legal pluralism, where multiple legal orders exist simultaneously but do not necessarily possess equal recognition or power (von Benda-Beckmann et al., 2009). In mining conflicts, this imbalance frequently disadvantages Indigenous communities because corporate mining rights are

supported by formal permits while customary claims may require lengthy recognition processes.

Environmental governance scholars argue that effective resource management requires institutions capable of integrating multiple forms of knowledge and authority. However, Indonesia's mining governance has traditionally relied on centralized licensing and regulatory mechanisms. Such approaches may limit community participation and weaken accountability when environmental impacts occur. The result is a governance system where economic interests often receive stronger institutional support than ecological protection and community rights.

The literature therefore suggests that Indonesia's mining law requires evaluation through a broader justice framework. Examining mining regulation through eco-justice and climate justice perspectives allows analysis beyond legal compliance by asking deeper questions: Who benefits from mining activities? Who bears environmental costs? Whose knowledge and rights are recognized? These questions are essential for developing mining governance that aligns economic development with ecological sustainability and Indigenous rights protection.

E. Conceptual Framework of the Study

Based on the reviewed literature, this study develops a conceptual framework linking mining law, eco-justice, and climate justice. The framework argues that mining governance produces justice outcomes through three interconnected dimensions. First, distributive justice examines whether environmental benefits and burdens associated with mining are fairly distributed between corporations, the state, and Indigenous communities. Second, procedural justice evaluates whether Indigenous communities have meaningful participation in mining decisions affecting their territories. Third, recognition justice analyzes whether Indigenous identities, customary institutions, and ecological knowledge are legally and politically acknowledged.

Through this framework, the study argues that Indonesia's mining governance challenges are not limited to environmental regulation but involve deeper questions regarding power, rights, and the relationship between economic development and ecological responsibility. Achieving eco-justice in mining requires legal reforms that recognize Indigenous territorial rights, strengthen community participation, and integrate climate considerations into resource governance.

Methods

This study employs a qualitative socio-legal research approach to examine the relationship between Indonesia's mining law, Indigenous territorial rights, and the principles of eco-justice and climate justice. A socio-legal approach is

appropriate because mining conflicts cannot be understood solely through the analysis of statutory regulations but must also consider the social, political, ecological, and institutional contexts in which legal frameworks operate. This approach enables the research to investigate how legal norms governing mineral extraction interact with the experiences of Indigenous communities affected by mining activities. Rather than treating law as an isolated regulatory instrument, socio-legal analysis examines law as a social institution that reflects competing interests, power relations, and development priorities.

The research applies doctrinal legal analysis to examine Indonesia's regulatory framework governing mining activities and environmental protection. The primary legal materials analyzed include Law No. 4 of 2009 on Mineral and Coal Mining (*Undang-Undang Mineral dan Batubara*), Law No. 3 of 2020 amending the Mining Law, Law No. 32 of 2009 on Environmental Protection and Management, and constitutional provisions concerning Indigenous and environmental rights. These legal instruments are analyzed to identify the extent to which Indonesian mining regulations incorporate principles of environmental sustainability, Indigenous recognition, public participation, and climate responsibility. The analysis also considers international legal principles, including the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and the principle of Free, Prior, and Informed Consent (FPIC), as comparative frameworks for evaluating Indonesia's mining governance.

In addition to legal analysis, this study utilizes qualitative case study analysis to examine the practical implications of mining governance in Indigenous territories. Selected cases include mining activities in resource-rich regions such as East Kalimantan, Sulawesi, North Maluku, and Papua, where extractive activities have generated debates regarding environmental degradation, land rights, and community participation. These cases were selected because they represent different categories of mineral extraction, including coal, nickel, and gold mining, while demonstrating similar governance challenges related to Indigenous territories and ecological vulnerability. The case study approach allows the research to explore the gap between formal legal protections and the realities experienced by affected communities.

The study further incorporates secondary qualitative data from academic publications, environmental reports, civil society documentation, and policy analyses related to mining conflicts and Indigenous rights in Indonesia. These sources provide empirical insights into issues such as deforestation, ecosystem degradation, community displacement, environmental pollution, and conflicts over customary land. Data were analyzed using thematic analysis based on three dimensions of justice: distributive justice, procedural justice, and recognition justice. This analytical framework enables the study to evaluate how mining governance distributes environmental risks, provides opportunities for participation, and recognizes Indigenous identities and territorial relationships.

Ethical considerations are central to this research because mining conflicts involve vulnerable communities and contested political issues. The study adopts a rights-based perspective that avoids representing Indigenous communities merely as victims of environmental harm but recognizes them as political actors and knowledge holders with legitimate governance claims. By integrating legal analysis with social and ecological perspectives, this methodology seeks to provide a comprehensive understanding of how Indonesia's mining law aligns or conflicts with eco-justice and climate justice principles. The research ultimately aims to identify pathways for reforming mining governance toward a more equitable, participatory, and environmentally responsible framework.

Results and Discussion

A. Mining Expansion and Environmental Inequality in Indonesia

The findings demonstrate that mining expansion in Indonesia has generated a complex relationship between economic development, environmental degradation, and social inequality. As one of the world's leading producers of coal, nickel, gold, and other strategic minerals, Indonesia has positioned the mining sector as a crucial component of national economic growth. Mineral extraction contributes significantly to export revenues, industrial development, and employment opportunities. However, the economic benefits generated by mining are frequently accompanied by substantial ecological and social costs, particularly for communities living in and around mining areas. This unequal distribution of benefits and burdens represents a central concern within climate justice and eco-justice perspectives.

Indonesia's mining sector has expanded significantly over the past several decades, driven by increasing global demand for mineral commodities and domestic development priorities. Coal extraction in regions such as East Kalimantan and South Sumatra has contributed to Indonesia's position as one of the world's largest coal exporters, while nickel mining in Sulawesi and North Maluku has grown rapidly due to global demand for electric vehicle batteries and renewable energy technologies. Although these industries are often framed as essential for economic development and energy transition, their environmental consequences raise important questions regarding the sustainability of resource-dependent development models (Bebbington et al., 2018; Sovacool et al., 2021).

The environmental impacts of mining are particularly significant because many mining operations occur in ecologically sensitive landscapes, including forests, watersheds, coastal areas, and Indigenous territories. Large-scale mining activities frequently involve land clearing, habitat destruction, soil degradation, and water contamination. In coal-producing regions, open-pit mining has contributed to extensive landscape transformation and loss of forest ecosystems. Similarly, nickel mining expansion in eastern Indonesia has raised concerns regarding deforestation, sedimentation, and impacts on marine ecosystems due

to mining waste and coastal development. These environmental transformations reduce ecosystem resilience and increase vulnerability to climate-related risks.

From an eco-justice perspective, environmental degradation caused by mining cannot be understood only as ecological damage; it also represents a disruption of social and cultural relationships between communities and their environments. Indigenous communities often maintain complex relationships with ancestral territories, where forests, rivers, and landscapes are not merely economic resources but sources of identity, cultural continuity, and collective responsibility. When mining transforms these landscapes, the impacts extend beyond material losses to include threats to cultural practices, traditional livelihoods, and community autonomy (Whyte, 2018).

The findings also reveal that mining-related environmental impacts are distributed unevenly across Indonesian society. While mining revenues are generally accumulated at national and corporate levels, local communities frequently experience direct consequences such as declining agricultural productivity, reduced access to clean water, health concerns, and disruption of traditional livelihoods. This pattern reflects the concept of environmental inequality, where marginalized communities bear a disproportionate share of environmental risks while having limited influence over decisions regarding resource extraction.

The relationship between mining and climate change further intensifies these inequalities. Although mining is often discussed primarily in terms of local environmental impacts, extractive activities also contribute to broader climate challenges. Coal mining remains a significant source of greenhouse gas emissions through both direct extraction processes and its connection to fossil fuel consumption. Meanwhile, mineral extraction for renewable energy technologies creates new environmental pressures that demonstrate the complexity of climate transitions. A low-carbon future cannot be considered socially sustainable if it depends on extractive practices that reproduce environmental injustices in resource-producing regions.

The expansion of nickel mining provides a particularly important example of this contradiction. Indonesia has promoted nickel extraction as part of its strategy to become a global hub for electric vehicle battery production. From a climate mitigation perspective, nickel is considered strategically important because it supports electrification and renewable energy technologies. However, the rapid expansion of nickel mining has generated concerns regarding deforestation, coastal ecosystem disruption, waste management, and impacts on local communities. This demonstrates that climate action itself may create new forms of environmental inequality if justice considerations are not integrated into resource governance.

The vulnerability of communities affected by mining is further increased by limited participation in decision-making processes. Many mining decisions are

determined through licensing procedures involving government institutions and corporations, while affected communities often have limited opportunities to influence project approval, environmental assessments, or benefit-sharing mechanisms. This creates a procedural justice gap because communities experiencing environmental consequences do not always possess meaningful authority over decisions affecting their territories.

The problem is particularly evident in Indigenous territories where customary land systems often conflict with state-based mining concessions. Although Indigenous communities may have longstanding relationships with their territories, formal mining permits are generally issued through state regulatory mechanisms that may not adequately recognize customary claims. As a result, mining expansion can create overlapping claims between corporate rights granted by the state and Indigenous claims based on historical occupation and cultural relationships with land.

The findings suggest that mining-related inequality in Indonesia is therefore not solely an environmental issue but also a governance issue. The central question is not whether mining produces environmental impacts, but how legal and institutional systems determine who benefits from extraction and who bears its consequences. Climate justice requires examining these unequal relationships by addressing questions of responsibility, participation, and recognition.

Furthermore, the current development model demonstrates a tension between economic growth objectives and ecological sustainability. Indonesia's reliance on mineral extraction reflects a broader challenge faced by many resource-dependent countries: balancing national development aspirations with environmental protection and social justice. While mining contributes to economic indicators, these benefits must be evaluated alongside long-term ecological costs and social impacts that may undermine sustainable development objectives.

The findings indicate that addressing environmental inequality in Indonesia's mining sector requires a shift from extraction-centered governance toward justice-oriented resource management. This transformation requires stronger environmental safeguards, recognition of Indigenous territorial rights, transparent decision-making processes, and mechanisms ensuring that communities affected by mining receive fair benefits and protection. Without such reforms, mining expansion risks reinforcing existing inequalities while limiting Indonesia's ability to achieve climate-resilient development. This section demonstrates that mining expansion in Indonesia represents a fundamental challenge for eco-justice and climate justice. The issue is not simply whether minerals should be extracted, but how extraction is governed and whose rights are prioritized in the process. Sustainable mining governance must therefore move beyond economic calculations and incorporate ecological integrity,

community rights, and intergenerational responsibility as essential principles of development.

B. The Indonesian Mining Law and the Prioritization of Economic Development

The findings reveal that Indonesia's mining legal framework reflects a persistent tension between the objectives of economic development and the principles of environmental and climate justice. The Indonesian Mining Law, initially established through Law No. 4 of 2009 on Mineral and Coal Mining, was introduced as an effort to reform the mining governance system by strengthening regulation, improving state control over mineral resources, and promoting more responsible mining practices. However, despite incorporating environmental obligations and sustainability principles, the implementation of the Mining Law has largely maintained an extractive development orientation in which mineral resources are primarily viewed as economic assets for national growth.

The economic orientation of Indonesia's mining governance is rooted in the constitutional principle that natural resources are controlled by the state and utilized for the greatest prosperity of the people. This principle has historically provided justification for extensive state involvement in resource extraction. However, the interpretation of state control has frequently emphasized resource utilization and economic contribution rather than ecological protection and community rights. As a result, mining governance has often prioritized increasing investment, production capacity, and export revenues, while social and environmental concerns have remained secondary considerations within regulatory implementation.

Law No. 4 of 2009 introduced several important reforms, including the transition from a concession-based system (*contract of work*) toward a licensing-based framework (*Izin Usaha Pertambangan/IUP*). The reform was intended to improve transparency and strengthen state authority over mineral resources. Nevertheless, the licensing approach also created new challenges, particularly regarding the rapid expansion of mining permits and the capacity of regulatory institutions to monitor environmental compliance. In many regions, the growth of mining licenses exceeded institutional capacity, resulting in overlapping permits, weak enforcement, and conflicts with existing land uses and customary territories.

From an eco-justice perspective, the licensing framework demonstrates a regulatory imbalance between the interests of economic development and ecological protection. Although mining companies are required to conduct environmental assessments and implement reclamation obligations, these mechanisms often function as procedural requirements rather than effective safeguards against ecological harm. Environmental impact assessments may become administrative instruments for project approval rather than tools for

meaningful environmental decision-making, particularly when affected communities have limited influence over assessment processes.

The amendment of the Mining Law through Law No. 3 of 2020 further intensified debates regarding the relationship between mining regulation and environmental justice. The amendment was introduced as part of broader economic reform efforts aimed at accelerating investment and improving regulatory efficiency. However, critics argue that the reform strengthened central government control over mining licensing while reducing regional authority and potentially weakening opportunities for local participation. This shift raises concerns because local governments and communities are often the actors most directly affected by mining activities.

The centralization of mining authority creates important implications for procedural justice. Prior to the amendment, regional governments possessed greater authority in issuing mining permits, although decentralization also generated challenges related to permit proliferation and governance inconsistency. The revised framework attempts to address these problems by recentralizing decision-making authority at the national level. However, centralized governance may reduce the ability of local institutions to respond to specific ecological and social conditions. For Indigenous and local communities, this may create additional barriers to participating in decisions affecting their territories.

The Mining Law's emphasis on investment certainty also reflects broader tensions within global extractive governance. Many resource-rich countries seek to attract foreign and domestic investment by creating regulatory environments perceived as favorable to mining industries. While investment can contribute to economic development, excessive prioritization of investor interests may weaken environmental safeguards and community protections. Scholars have argued that extractive governance often produces "development conflicts" where national economic objectives compete with local rights and ecological sustainability (Bebbington et al., 2018).

Another significant concern relates to the limited integration of climate considerations within Indonesia's mining regulatory framework. Although Indonesia has committed to international climate agreements and established national emissions reduction targets, mining legislation has traditionally focused on resource extraction management rather than climate mitigation or adaptation. This creates a regulatory gap because mining activities contribute to climate vulnerability through deforestation, ecosystem destruction, and greenhouse gas emissions. A climate-just mining framework would require environmental regulation to consider not only operational impacts but also broader contributions to climate change.

The relationship between mining law and Indigenous rights represents another critical challenge. Indonesia's Mining Law does not provide a

comprehensive mechanism requiring Free, Prior, and Informed Consent (FPIC) from Indigenous communities before mining activities are approved in customary territories. Although environmental regulations require public participation, these mechanisms do not necessarily provide communities with decision-making authority. This differs from international Indigenous rights standards, which emphasize that Indigenous peoples should have meaningful control over activities affecting their ancestral lands.

The absence of strong Indigenous consent mechanisms creates a recognition justice problem. Indigenous communities are frequently treated as stakeholders who may provide input rather than as rights holders with legitimate authority over their territories. This approach reflects a legal hierarchy in which state-issued mining permits often receive stronger recognition than customary territorial relationships. Consequently, mining governance may legally authorize extraction while simultaneously undermining Indigenous systems of environmental stewardship.

The findings also indicate that Indonesia's mining law reflects a broader contradiction between sustainable development discourse and extractive economic practices. While the legal framework includes concepts such as environmental protection, reclamation, and responsible mining, these principles operate within a system fundamentally designed to facilitate mineral exploitation. The result is a governance model where environmental protection often functions as a limitation on extraction rather than as a central organizing principle of resource management. To address these challenges, mining law requires a transformation from a resource-management approach toward a justice-oriented governance framework. Such reform would require integrating climate considerations into mining regulation, strengthening environmental accountability, recognizing Indigenous territorial rights, and ensuring meaningful community participation. Mining governance should not only ask whether extraction is legally permitted but also whether it is socially legitimate, ecologically sustainable, and compatible with climate responsibilities.

Overall, the analysis demonstrates that Indonesia's Mining Law contains significant tensions between economic priorities and eco-justice principles. While the legal framework provides mechanisms for regulating mining activities, it remains insufficient in addressing the unequal distribution of environmental risks and the limited recognition of Indigenous rights. Achieving climate justice within Indonesia's mining sector therefore requires legal reform that redefines mineral governance as a system responsible not only for economic development but also for ecological protection and social justice.

C. Indigenous Territories, Land Rights, and Recognition Justice

The findings demonstrate that conflicts between mining activities and Indigenous territories in Indonesia are fundamentally rooted in competing

understandings of land, authority, and environmental governance. For Indigenous communities, territories represent more than physical spaces containing economic resources; they constitute cultural landscapes that sustain social identity, collective memory, spiritual relationships, and traditional ecological practices. In contrast, state-centered mining governance often conceptualizes land primarily as a resource space that can be allocated for economic utilization through licensing mechanisms. This difference in understanding creates structural tensions between Indigenous territorial rights and extractive development policies.

Recognition justice provides an important analytical framework for understanding these conflicts. Recognition justice emphasizes that marginalized communities must be acknowledged as legitimate political actors with distinct identities, knowledge systems, and governance institutions (Fraser, 2009; Schlosberg, 2007). In the context of mining governance, recognition requires more than acknowledging the existence of Indigenous communities; it requires respecting their authority over ancestral territories and recognizing their capacity to participate in environmental decision-making. The failure to provide such recognition can produce environmental injustices even when mining activities comply with formal legal procedures.

Indonesia's legal framework contains important but incomplete recognition of Indigenous rights. Article 18B(2) of the 1945 Constitution acknowledges the existence of customary communities and their traditional rights, provided that they continue to exist and remain consistent with national legal principles. Similarly, Article 28I(3) recognizes respect for cultural identity and traditional communities as part of human rights protection. However, constitutional recognition has not automatically translated into effective protection because the implementation of Indigenous rights depends on complex administrative and political processes.

One of the most significant developments in Indigenous rights protection in Indonesia was Constitutional Court Decision No. 35/PUU-X/2012, which removed customary forests (*hutan adat*) from the category of state forests and recognized them as forests belonging to Indigenous communities. This decision represented an important shift in Indonesian environmental law by acknowledging that Indigenous communities possess legitimate relationships with forest territories. However, the practical implementation of this recognition remains challenging because communities must still undergo formal recognition procedures conducted by local governments. As a result, many Indigenous communities continue to face uncertainty regarding the legal status of their territories.

The challenges of recognition become particularly evident in mining areas where state-issued mining permits overlap with customary territories. Mining concessions are generally granted through administrative procedures that

recognize state authority over mineral resources. However, these procedures often occur without adequate consideration of historical land relationships or customary governance systems. Consequently, Indigenous communities may discover that their territories have already been allocated for mining activities without meaningful consultation or consent.

This situation reflects a fundamental conflict between formal legality and social legitimacy. A mining permit may be legally valid under state law but remain contested from the perspective of Indigenous rights and environmental justice. Eco-justice analysis highlights that legality alone is insufficient to determine justice because laws themselves may reproduce unequal power relations. When legal systems prioritize state authority and corporate rights over Indigenous territorial relationships, environmental governance may become a mechanism through which marginalized communities lose control over their environments.

The absence of mandatory Free, Prior, and Informed Consent (FPIC) mechanisms in Indonesia's mining governance further strengthens this inequality. FPIC represents an internationally recognized principle requiring Indigenous communities to provide consent before activities affecting their territories are undertaken. Unlike consultation, which allows communities to express opinions without necessarily influencing outcomes, FPIC emphasizes community decision-making authority. The limited incorporation of FPIC into Indonesian mining regulation creates a significant gap between international Indigenous rights standards and domestic legal practice.

Mining conflicts in Indigenous territories demonstrate the consequences of this regulatory gap. In regions such as Kalimantan, Sulawesi, Papua, and North Maluku, communities have raised concerns regarding land dispossession, environmental degradation, and disruption of traditional livelihoods. In coal-producing areas of Kalimantan, Indigenous groups have experienced changes in forest landscapes and agricultural systems due to mining expansion. Similarly, nickel mining development in eastern Indonesia has generated concerns regarding impacts on forests, coastal ecosystems, and community access to traditional resources.

The Papua region illustrates the complexity of mining conflicts involving Indigenous territories. Many Papuan Indigenous communities maintain strong cultural and spiritual connections with forests and natural resources. Large-scale extractive activities, including mining operations, have generated debates regarding environmental protection, Indigenous autonomy, and benefit distribution. These conflicts demonstrate that mining impacts are not limited to physical environmental changes but also involve questions of cultural survival and political recognition.

From the perspective of climate justice, protecting Indigenous territorial rights is essential because Indigenous communities often contribute significantly to ecosystem conservation. Research demonstrates that Indigenous-managed

territories frequently maintain high levels of biodiversity and ecological integrity because governance practices are based on long-term relationships with ecosystems (Garnett et al., 2018). Therefore, undermining Indigenous territorial rights may not only create social injustice but also weaken broader climate mitigation and conservation efforts.

The recognition of Indigenous governance systems also challenges the assumption that environmental protection must be achieved exclusively through state institutions. Indigenous communities possess alternative governance models based on collective responsibility, customary rules, and ecological knowledge. Integrating these systems into formal environmental governance could strengthen climate adaptation and biodiversity protection. However, such integration requires moving beyond symbolic recognition toward genuine power-sharing arrangements.

The findings indicate that legal pluralism is a critical concept for understanding Indigenous rights within Indonesia's mining governance. Indonesia contains multiple overlapping legal systems, including state law, customary law, and local governance practices. However, these systems do not operate with equal authority. State law generally maintains dominant power, while customary systems often require formal validation before receiving legal recognition. This unequal relationship creates structural disadvantages for Indigenous communities involved in mining conflicts.

Addressing these challenges requires legal reforms that strengthen recognition justice within mining governance. First, Indigenous territories should receive clearer legal recognition before mining permits are issued. Second, FPIC principles should be incorporated into mining approval processes to ensure meaningful community participation. Third, customary governance systems should be recognized as legitimate partners in environmental management rather than treated as informal practices. Overall, the findings demonstrate that mining conflicts in Indonesia's Indigenous territories are fundamentally struggles over recognition, authority, and environmental responsibility. The challenge is not merely improving mining regulation but transforming the underlying assumptions of resource governance. A climate-just mining system must recognize Indigenous communities as rights holders and environmental stewards whose participation is essential for achieving ecological sustainability and social justice.

D. Mining Activities, Climate Change, and Ecological Justice

The findings indicate that mining activities in Indonesia represent a significant challenge for achieving ecological justice because extractive operations generate environmental transformations that extend beyond local pollution and land degradation. While mining is commonly evaluated through economic indicators such as investment, production capacity, and export

contribution, its ecological consequences reveal deeper tensions between resource extraction and environmental sustainability. From an ecological justice perspective, mining activities must be assessed not only according to their economic benefits for human societies but also according to their impacts on ecosystems, biodiversity, and the capacity of natural systems to sustain life.

Mining contributes to climate change through multiple pathways, including deforestation, ecosystem conversion, greenhouse gas emissions, and disruption of carbon storage systems. In forested regions, mining activities frequently require extensive land clearing, resulting in the loss of vegetation that functions as a critical carbon sink. Indonesia's tropical forests represent globally significant ecosystems for biodiversity conservation and climate regulation; therefore, mining-induced forest degradation creates consequences that extend beyond local communities to broader climate mitigation efforts. The transformation of forest landscapes into mining areas reduces ecological resilience and increases vulnerability to climate-related impacts such as flooding, drought, and extreme weather events.

Coal mining provides one of the clearest examples of the relationship between extractive activities and climate change. Indonesia remains one of the world's largest coal producers and exporters, and coal extraction continues to play an important role in national energy and economic strategies. However, coal mining contributes to climate change not only through its connection to fossil fuel combustion but also through methane emissions, land disturbance, and ecosystem destruction associated with mining operations. Although Indonesia has committed to reducing greenhouse gas emissions under international climate agreements, continued dependence on coal extraction demonstrates the difficulty of reconciling economic interests with climate objectives.

The ecological consequences of mining are particularly significant in regions where ecosystems provide essential services for local communities. Forests, rivers, coastal zones, and marine ecosystems affected by mining activities support food systems, water security, and cultural practices. When mining disrupts these ecosystems, the impacts are experienced not only as environmental degradation but also as the loss of ecological relationships that sustain community livelihoods. This demonstrates that ecological justice requires recognizing the intrinsic value of ecosystems and understanding environmental harm as a disruption of relationships between humans and nature.

The expansion of nickel mining illustrates the complexity of ecological justice within the global energy transition. Nickel has become a strategic mineral because of its importance in lithium-ion battery production and electric vehicle technologies. Indonesia's ambition to become a global center for nickel processing reflects the country's attempt to benefit from the transition toward renewable energy. However, the environmental consequences of nickel extraction demonstrate that renewable technologies are not automatically environmentally

neutral. Mining expansion in Sulawesi and North Maluku has generated concerns regarding deforestation, biodiversity loss, water pollution, and marine ecosystem degradation.

This situation reveals an important contradiction within contemporary climate policy. The global transition away from fossil fuels requires increased access to minerals, yet mineral extraction itself can create significant ecological pressures. Scholars have warned that a transition based solely on technological substitution may reproduce extractive patterns if it ignores social and environmental consequences within mineral supply chains (Sovacool et al., 2021). Therefore, climate justice requires evaluating not only whether a technology reduces emissions but also how its production affects communities and ecosystems.

From the perspective of ecological justice, nature should not be treated merely as a collection of resources available for human consumption. Mining governance based primarily on economic valuation often overlooks ecological relationships that cannot be fully captured through market mechanisms. Ecosystems affected by mining possess ecological, cultural, and ethical significance that extends beyond their economic contribution. This perspective challenges development models that justify environmental destruction through promises of economic growth or technological progress.

The concept of ecological justice also highlights the importance of intergenerational responsibility. Mining decisions made today influence environmental conditions experienced by future generations. Land degradation, contaminated water systems, and biodiversity loss may persist long after mining operations have ended. Therefore, responsible mining governance requires consideration of long-term ecological consequences rather than focusing primarily on short-term economic benefits. This principle is particularly relevant for Indigenous communities whose territorial relationships often involve responsibilities toward future generations.

The findings further demonstrate that environmental impact assessment mechanisms within Indonesia's mining governance remain insufficient to address broader climate and ecological concerns. Environmental assessments generally focus on project-level impacts rather than cumulative ecological consequences. As a result, multiple mining operations within the same ecological region may collectively generate significant environmental damage that is not adequately addressed through individual approval processes. A climate-just governance framework requires moving toward cumulative impact assessments that consider ecosystem-level consequences.

Another important issue concerns mine reclamation and post-mining environmental responsibility. Although Indonesian mining regulations require companies to conduct reclamation and rehabilitation activities, implementation remains inconsistent. Abandoned mining sites, particularly former coal mines,

have become symbols of ecological governance failures, creating risks such as open mining pits, water contamination, and landscape instability. These impacts demonstrate that environmental responsibility cannot be limited to compliance during active mining operations but must include long-term ecosystem restoration.

The relationship between mining and ecological justice also involves questions of environmental knowledge and decision-making. Scientific assessments often dominate mining governance processes, while local and Indigenous ecological knowledge may receive limited recognition. However, communities living within mining landscapes possess valuable knowledge regarding ecosystem changes, environmental risks, and sustainable resource management. Integrating diverse knowledge systems could improve environmental decision-making and strengthen ecological governance.

The findings suggest that achieving ecological justice in Indonesia's mining sector requires a fundamental shift in how mineral resources are governed. Mining should not be evaluated solely through economic productivity but through broader assessments of ecological sustainability, climate responsibility, and social legitimacy. Such an approach requires stronger environmental standards, ecosystem-based planning, and recognition that ecological protection is not an obstacle to development but a foundation for long-term sustainability. Overall, mining activities in Indonesia demonstrate the interconnected nature of climate justice and ecological justice. The environmental impacts of mining reveal that climate solutions based on mineral extraction must be carefully governed to avoid creating new forms of environmental inequality. A just climate transition must therefore ensure that mineral development respects ecological boundaries, protects vulnerable communities, and maintains the integrity of ecosystems upon which both present and future generations depend.

E. Toward Eco-Just Mining Governance in Indonesia

The findings demonstrate that addressing the conflicts between mining development, Indigenous rights, and climate justice requires a fundamental transformation of Indonesia's mining governance framework. Existing regulatory approaches have primarily focused on managing extraction activities through licensing, environmental compliance, and investment regulation. While these mechanisms provide important administrative functions, they remain insufficient to address the deeper structural inequalities created by extractive development. An eco-just mining governance model requires a shift from a resource-centered approach toward a rights-based and ecosystem-oriented framework that places ecological sustainability and community protection at the center of decision-making.

A key element of eco-just mining governance is the recognition that Indigenous communities are not merely affected populations but legitimate

governance actors. Current mining governance mechanisms often position local communities as stakeholders who may provide input during consultation processes but have limited authority over decisions affecting their territories. This approach does not adequately reflect recognition justice because it fails to acknowledge Indigenous peoples as rights holders with distinct relationships to land and ecosystems. Strengthening Indigenous participation therefore requires moving beyond consultation toward meaningful decision-making mechanisms, including the incorporation of Free, Prior, and Informed Consent (FPIC) principles into mining approval processes.

The integration of FPIC into Indonesian mining governance represents an important step toward improving procedural and recognition justice. Under FPIC principles, Indigenous communities should have access to complete information, sufficient time for deliberation, and the ability to accept or reject projects that significantly affect their territories. Implementing FPIC would not necessarily eliminate mining activities but would create a more legitimate governance process by ensuring that affected communities participate in determining development pathways. Such an approach is consistent with international Indigenous rights standards and reflects the principle that sustainable development requires democratic participation.

Another important reform concerns the legal recognition of Indigenous territories. The uncertainty surrounding customary land recognition remains one of the major causes of conflict between mining companies and Indigenous communities. Although Constitutional Court Decision No. 35/PUU-X/2012 strengthened the legal status of customary forests, implementation remains dependent on lengthy administrative recognition procedures. Strengthening Indigenous territorial recognition would reduce overlapping claims, improve legal certainty, and provide a stronger foundation for environmental protection. From an eco-justice perspective, recognizing Indigenous territories is not only a matter of human rights but also an essential strategy for maintaining ecological resilience.

Mining governance reform also requires stronger integration of climate considerations into regulatory frameworks. Existing mining regulations primarily address operational environmental impacts but provide limited attention to broader climate consequences. A climate-just mining framework should evaluate mining activities based on their contribution to emissions, ecosystem degradation, and long-term climate vulnerability. This requires incorporating climate impact assessments into mining approval processes, particularly for projects located in carbon-rich ecosystems such as forests, peatlands, and coastal areas.

The concept of a just transition provides another important pathway for reforming Indonesia's mineral governance. As global demand shifts toward renewable energy technologies, Indonesia faces increasing pressure to expand

mineral extraction, particularly nickel mining. However, a just transition requires ensuring that renewable energy supply chains do not reproduce the environmental and social inequalities historically associated with fossil fuel extraction. Mineral development for energy transition purposes must therefore include strong environmental safeguards, fair benefit-sharing mechanisms, and protections for communities affected by extraction.

Improving corporate accountability is also essential for achieving eco-just mining governance. Mining companies should not be evaluated solely based on regulatory compliance but also on their broader social and ecological responsibilities. This requires strengthening monitoring mechanisms, increasing transparency regarding environmental impacts, and ensuring effective enforcement of reclamation obligations. Corporate responsibility should include long-term commitments to ecosystem restoration and community well-being rather than limited compliance during the operational phase of mining projects.

The findings also highlight the importance of strengthening environmental governance institutions. Effective eco-justice requires institutions capable of balancing economic interests with ecological and social considerations. This includes improving coordination among government agencies, strengthening environmental oversight, and ensuring that local communities have access to legal and institutional mechanisms for protecting their rights. Without institutional reform, even progressive legal principles may remain ineffective in practice.

A more inclusive mining governance model should also recognize the importance of diverse knowledge systems. Scientific expertise remains important for assessing environmental impacts, but Indigenous and local ecological knowledge can provide valuable insights into ecosystem conditions and sustainable resource management. Integrating these knowledge systems can improve environmental decision-making and support more adaptive governance approaches. Such integration reflects the principle that environmental sustainability requires collaboration among different forms of knowledge and authority.

Furthermore, eco-just mining governance requires reconsidering the broader development paradigm underlying mineral extraction. The assumption that economic growth depends primarily on continuous resource exploitation has contributed to environmental conflicts and ecological degradation. A more sustainable approach requires evaluating development success not only through economic indicators but also through ecological integrity, social equality, and community well-being. This perspective aligns with broader debates on post-extractive development and sustainable resource governance.

Indonesia's experience demonstrates that mining governance reform must address both legal structures and underlying political-economic relationships. Regulatory improvements alone will not achieve climate justice if decision-

making processes continue to prioritize powerful economic actors over vulnerable communities and ecosystems. Therefore, eco-just governance requires redistributing decision-making authority, strengthening accountability, and recognizing environmental protection as a fundamental component of development rather than a limitation on economic progress.

The findings suggest that Indonesia has an opportunity to develop a more progressive model of mining governance by integrating Indigenous rights, climate responsibility, and ecological protection. As a country rich in mineral resources and highly vulnerable to climate change, Indonesia's policy choices will influence not only domestic sustainability but also global debates on responsible mineral supply chains. A governance framework based on eco-justice would allow Indonesia to pursue economic development while ensuring that extraction does not undermine ecological systems and community rights. Overall, achieving eco-just mining governance requires transforming the relationship between the state, corporations, communities, and nature. Mining regulation must evolve from a framework focused primarily on controlling extraction toward one that recognizes ecological limits and social responsibilities. By embedding climate justice, Indigenous rights, and ecological integrity into mining governance, Indonesia can move toward a more equitable model of resource management that balances development needs with the protection of people and the environment.

Conclusion

This study demonstrates that the governance of mining activities in Indonesia reflects a fundamental tension between economic development priorities and the principles of eco-justice and climate justice. Although mining contributes significantly to national economic growth, investment, and industrial development, the distribution of its environmental and social consequences remains highly unequal. Indigenous communities and local populations living in mining areas frequently experience the greatest impacts through land transformation, ecosystem degradation, livelihood disruption, and reduced control over ancestral territories. The analysis shows that mining conflicts are not merely environmental disputes but represent deeper struggles regarding recognition, participation, and the relationship between state authority, corporate interests, and community rights. Therefore, evaluating mining governance requires moving beyond economic considerations and incorporating broader principles of ecological responsibility and social justice.

This research further concludes that Indonesia's current mining legal framework, particularly through Law No. 4 of 2009 and its amendment under Law No. 3 of 2020, remains insufficient in addressing the challenges posed by climate change and Indigenous rights protection. While existing regulations contain environmental obligations and mechanisms for responsible mining, their implementation continues to prioritize resource extraction and investment

facilitation over ecological integrity and meaningful community participation. The absence of strong recognition mechanisms for Indigenous territories and limited integration of FPIC principles demonstrate persistent gaps between formal legal frameworks and justice-oriented governance. Achieving eco-just mining governance therefore requires legal transformation that strengthens Indigenous territorial recognition, enhances procedural participation, incorporates climate considerations into mining regulation, and ensures stronger accountability for environmental impacts.

Ultimately, this study argues that Indonesia's future mining governance must be based on a more balanced relationship between economic development, ecological sustainability, and social justice. The increasing demand for strategic minerals in the global energy transition provides both opportunities and risks, particularly if mineral expansion reproduces historical patterns of environmental inequality. A just transition requires ensuring that mineral development does not undermine the rights of communities or the resilience of ecosystems upon which society depends. By integrating eco-justice principles into mining regulation, Indonesia can develop a governance model that recognizes Indigenous communities as essential environmental actors, protects ecological systems, and promotes a more equitable approach to resource management in the context of climate change.

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