

A Juridical Analysis of Regulatory Barriers to Green Investment in Indonesia in Achieving Net Zero Emission

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ABSTRACT: Indonesia has pledged to reach net zero emissions (NZE) by 2060 or sooner, with green investment serving as the primary vehicle for financing this transition. However, the domestic regulatory architecture remains fragmented and poorly harmonized with climate commitments. This article examines the juridical obstacles hindering green investment and evaluates the adequacy of the existing normative framework in accelerating NZE. Employing normative legal research with statutory, conceptual, and comparative approaches, this study analyzes primary legal materials including the Investment Law, Job Creation Law, carbon pricing regulations, and sustainable finance taxonomies alongside secondary literature. The findings reveal five regulatory obstacles: institutional fragmentation across sectors; legal uncertainty in carbon trading; inconsistent fiscal incentives; weakened environmental safeguards under recent deregulation; and the absence of a binding definition of "green investment," risking greenwashing. The study concludes that Indonesia must enact a dedicated Green Investment Law, establish an independent climate authority, and harmonize sectoral regulations. These reforms are critical to translating climate diplomacy into an enforceable domestic legal order capable of mobilizing the private capital required for NZE.

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I. INTRODUCTION

Climate change has moved from the periphery of environmental policy to the centre of global economic governance. Financing the transition toward a low carbon economy is now understood primarily as a legal and regulatory problem rather than a purely technical or financial one, because private capital will only flow toward green assets when legal certainty, enforceable property rights, and predictable fiscal treatment are in place (Rokhmawati, 2021). Indonesia, as one of the world's largest greenhouse gas emitters and the owner of vast tropical forest and mineral wealth, occupies a pivotal position in this transition. The government has ratified the Paris Agreement through Law No. 16 of 2016, submitted an Enhanced Nationally Determined Contribution targeting a 31.89 per cent unconditional emission reduction by 2030, and publicly committed to net zero emission (NZE) by 2060 or earlier. Achieving this target requires an estimated investment of several hundred billion United States dollars over the coming decades, most of which is expected to come from private and blended green finance rather than the state budget.

Green investment broadly defined as capital allocation toward projects, assets, or business activities that generate positive environmental externalities, particularly the mitigation of and adaptation to climate change-has therefore become a strategic legal category. Yet green investment in Indonesia continues to face what several legal scholars describe as chronic regulatory fragmentation (Supriyadi, Lutfi, & Bahagiati, 2025). Indonesia's positive law does not contain a single, binding statutory definition of "green investment"; the term is instead scattered across investment law, sectoral energy regulation, tax law, and financial sector regulations issued by the Financial Services Authority (Otoritas Jasa Keuangan, OJK). This absence of a unified legal definition creates interpretive uncertainty for investors, exposes the taxonomy to abuse through greenwashing, and complicates enforcement by regulators and courts alike.

The regulatory landscape for green investment in Indonesia can be mapped across at least four overlapping legal regimes. First, general investment law, consisting of Law No. 25 of 2007 on Investment as amended by the Job Creation Law (Law No. 6 of 2023 concerning the Stipulation of Government Regulation in Lieu of Law No. 2 of 2022 on Job Creation into Law), which liberalised licensing but simultaneously relaxed environmental safeguards that previously conditioned investment approval (Handayani, Yosiana, & Kongrawd, 2025). Second, fiscal and carbon-pricing law, embodied in the Harmonisation of Tax Regulations Act (Law No. 7 of 2021) and Presidential Regulation No. 98 of 2021 on the Implementation of Carbon Economic Value, which introduced a carbon tax and a national carbon exchange but left key implementing norms vague (Wahyuni, Harris, & Sujatmoko, 2023); (Sulistawati & Buana, 2023). Third, sectoral energy law, principally Law No. 30 of 2007 on Energy and Law No. 30 of 2009 on Electricity, supplemented by

Presidential Regulation No. 112 of 2022 on the Acceleration of Renewable Energy Development, which sets ambitious targets without a comprehensive Renewable Energy Law to enforce them. Fourth, sustainable finance regulation issued by OJK, including the Indonesia Green Taxonomy and its successor, the Indonesia Taxonomy for Sustainable Finance, which classify economic activities for lending and investment purposes but remain largely voluntary guidance rather than binding law.

Each of these regimes has been analysed separately in the legal literature, yet relatively few studies integrate them into a single juridical account of why green investment in Indonesia continues to underperform relative to its climate ambitions. Existing research has examined the carbon tax's vague normative content (Wahyuni, Harris, & Sujatmoko, 2023), the weaknesses of the carbon trading mechanism under Presidential Regulation No. 98 of 2021 (Sulistiawati & Buana, 2023); (Liyadi & Ludiasa, 2023), the risk that carbon markets create new avenues for financial crime (Adiwarman, 2024), the deregulation of environmental licensing under the Job Creation Law (Handayani, Yosiana, & Kongrawd, 2025), and the constitutional foundations for a more robust green investment paradigm grounded in the Green Constitution doctrine (Supriyadi, Lutfi, & Bahagiati, 2025); (Qurbani & Rafiqi, 2022). What remains underexplored is a consolidated juridical mapping of how these separate obstacles interact to depress green investment flows and delay the achievement of NZE.

This article therefore addresses two research questions. First, what are the principal regulatory and institutional obstacles within Indonesia's positive law that hinder green investment? Second, how should the legal framework be reformed so that green investment regulation becomes an effective instrument for accelerating Indonesia's transition to net zero emission? In answering these questions, the article contributes to the legal literature by offering an integrated normative analysis that connects investment law, tax and carbon pricing law, environmental licensing law, and sustainable finance regulation, and by situating Indonesia's experience within the broader comparative discourse on green finance disclosure (Steuer & Tröger, 2022) and sustainable finance regulation in other jurisdictions (Zetzsche, Bodellini, & Consiglio, 2022).

II. METHOD

This study employs normative (doctrinal) legal research, a method commonly used in Indonesian legal scholarship to examine positive law as a coherent system of norms rather than as a social fact to be measured empirically. Normative legal research is appropriate here because the research problem concerns the internal coherence, consistency, and adequacy of legal norms governing green investment, rather than the behavioural response of investors, which would instead call for empirical socio-legal methods.

Approach

Three complementary approaches are used. The statutory approach (*pendekatan perundang-undangan*) examines the hierarchy and substance of relevant Indonesian legislation, from the 1945 Constitution down to ministerial and OJK regulations. The conceptual approach (*pendekatan konseptual*) is used to clarify legal concepts that lack a single statutory definition, particularly "green investment," "carbon economic value," and "net zero emission," by drawing on legal doctrine and international climate law literature (Rajamani, 2024). The comparative approach (*pendekatan perbandingan*) juxtaposes Indonesia's sustainable finance taxonomy and carbon pricing regime with functionally equivalent instruments in the European Union and other Association of Southeast Asian Nations jurisdictions, in order to identify design choices that have improved legal certainty elsewhere (Zetsche, Bodellini, & Consiglio, 2022); (Wibisono, Setiawan, & Choi, 2021).

Legal Materials

Primary legal materials consist of binding legal instruments, including the 1945 Constitution of the Republic of Indonesia (particularly Article 33 paragraph (4) on the sustainable economic principle), Law No. 25 of 2007 on Investment, Law No. 32 of 2009 on Environmental Protection and Management, Law No. 30 of 2007 on Energy, Law No. 30 of 2009 on Electricity, Law No. 16 of 2016 ratifying the Paris Agreement, Law No. 7 of 2021 on the Harmonisation of Tax Regulations, Law No. 6 of 2023 on Job Creation, Presidential Regulation No. 98 of 2021 on Carbon Economic Value, Presidential Regulation No. 112 of 2022 on the Acceleration of Renewable Energy Development for Electricity

Supply, Government Regulation No. 78 of 2019 on fiscal facilities for renewable energy, OJK Regulation No. 51/POJK.03/2017 on the Application of Sustainable Finance, OJK Regulation No. 60/POJK.04/2017 on green bonds, and OJK Regulation No. 14 of 2023 on carbon trading through a carbon exchange. Secondary legal materials comprise peerreviewed journal articles, law review commentary, and institutional reports that interpret and critique these primary instruments, drawn primarily from Sinta and Scopus indexed law journals. Tertiary materials include legal dictionaries and encyclopaedic references used to clarify terminology.

Data Collection and Analysis Technique

Legal materials were collected through library based documentary research (*studi kepustakaan*), tracing amendments and implementing regulations of each primary instrument to reconstruct the current, consolidated state of the law. The collected materials were then analysed using qualitative content analysis and legal systematic interpretation (*interpretasi sistematis*), in which each provision is read in relation to the

surrounding body of law rather than in isolation, so as to expose contradictions, gaps (leemten in het recht), and overlapping authority between institutions such as the Ministry of Investment/BKPM, the Ministry of Environment and Forestry, the Ministry of Finance, the Ministry of Energy and Mineral Resources, and OJK. Legal gap analysis was used to identify norms that are declaratory rather than operative that is, provisions that state a policy aspiration (such as the 2060 NZE target) without a corresponding enforceable mechanism (Sudarwanto & Daryanti, 2025). The findings were subsequently triangulated against the comparative and international investment law literature to assess whether Indonesia's regulatory design choices are consistent with, or diverge from, prevailing international standards on climate aligned investment protection (Cotula, 2023); (Hug, 2026).

III. RESULT AND DISCUSSION

Institutional and Normative Fragmentation of Green Investment Law

The first and most structural obstacle identified in this study is the absence of a single, coherent legal definition of green investment in Indonesian positive law. Investment law (Law No. 25 of 2007, as amended) regulates investment generally without distinguishing green from conventional capital; environmental law (Law No. 32 of 2009) regulates environmental protection without directly addressing capital allocation; energy law addresses the energy sector specifically; and OJK's taxonomy addresses only the financial-sector classification of green activities for lending and disclosure purposes. Because these four regimes were drafted at different times, by different ministries, and for different regulatory objectives, they employ inconsistent terminology and thresholds for what counts as "green," "sustainable," or "low carbon" (Supriyadi, Lutfi, & Bahagiati, 2025). This fragmentation is not merely an academic inconvenience: it produces genuine legal uncertainty for investors seeking fiscal incentives or regulatory fast tracking, because an activity classified as "green" under the OJK taxonomy may not automatically qualify for the tax facilities available under Government Regulation No. 78 of 2019 or the licensing simplifications introduced by the Job Creation Law.

The consequence of this fragmentation is a legal vacuum in institutional coordination. No single agency possesses overarching statutory authority to define, certify, and monitor green investment across sectors; instead, authority is dispersed among the Ministry of Investment/BKPM, the Coordinating Ministry for Maritime Affairs and Investment, the Ministry of Environment and Forestry, the Ministry of Energy and Mineral Resources, the Ministry of Finance, and OJK. Several scholars have therefore called for a dedicated climate change law and a specialised institution to consolidate the achievement of emission reduction targets (Sudarwanto & Daryanti, 2025). Without such consolidation,

green investment policy remains, in the words of one normative legal study, permanently "partial" (parsial), lacking the constitutional and statutory anchoring needed to give it binding force (Supriyadi, Lutfi, & Bahagiati, 2025).

Legal Uncertainty in Carbon Pricing and Carbon Trading

The second cluster of obstacles concerns Indonesia's carbon pricing architecture, which is composed of two parallel and imperfectly integrated instruments: the carbon tax under Article 13 of the Harmonisation of Tax Regulations Act, and the carbon trading (cap and trade and carbon offset) mechanism under Presidential Regulation No. 98 of 2021. Normative juridical analysis of Article 13 shows that the provision contains vague norms (*norma kabur*) regarding the tax base, the rate setting mechanism, and the relationship between the carbon tax and the carbon trading price, none of which has been fully operationalised through implementing regulation (Wahyuni, Harris, & Sujatmoko, 2023). Because the carbon tax rate is intended to track the prevailing carbon market price, but the carbon market itself remains thin and has not yet produced a reliable price signal, the tax cannot function as intended to internalise the social cost of carbon and thereby channel capital toward low carbon projects.

The carbon trading regime under Presidential Regulation No. 98 of 2021 exhibits a parallel set of weaknesses. Although the regulation successfully established foundational infrastructure, including the IDX Carbon exchange and OJK Regulation No. 14 of 2023 on carbon trading, normative studies identify regulatory fragmentation across sectors, overlapping institutional authority between the Ministry of Environment and Forestry, the Ministry of Energy and Mineral Resources, and OJK, and underdeveloped monitoring, reporting, and verification (MRV) systems as continuing sources of legal uncertainty for participants in the carbon market. The absence of clear criteria for strategic carbon zones and the jurisdiction of the institutions responsible for them has produced what one study terms a legal vacuum (*kekosongan hukum*) in the spatial governance of carbon trading. In addition, the high capital requirements imposed on carbon exchange operators tend to exclude smaller and community based actors, including indigenous communities whose customary forests generate significant carbon sequestration value, from participating in and benefiting from the carbon market on equitable terms.

A further, less examined risk is that the rapid, government driven expansion of carbon trading has outpaced the anti money laundering and countering the financing of terrorism (AML/CFT) architecture designed to police financial markets. Because carbon credits are intangible, cross border, and valued through opaque verification methodologies, they present a structurally attractive vehicle for layering illicit proceeds (Adiwarman, 2024). Left unaddressed, this vulnerability could deter reputable institutional investors who are subject to stringent AML/CFT compliance obligations in

their home jurisdictions, thereby narrowing rather than widening the pool of capital available for Indonesia's carbon market.

Weak and Inconsistently Applied Fiscal Incentives

The third obstacle concerns the design and implementation of fiscal incentives intended to de risk green investment. Government Regulation No. 78 of 2019 offers renewable energy investors income tax deductions of up to 30 per cent, extended tax loss carry forward of up to ten years, and accelerated depreciation, while non-fiscal incentives include land and building tax reductions and streamlined permitting. In practice, however, the scope and depth of these incentives remain narrow relative to the scale of the capital costs and country risk that renewable energy developers face, and they must be read alongside continuing grid access constraints, take or pay contractual structures imposed by the state electricity utility, and financing gaps that are particularly acute at the early development stage.

This mismatch between the ambition of the incentive regime and its practical uptake mirrors a broader problem identified in the comparative green finance literature: fiscal incentives alone cannot substitute for credible, court enforceable property and contractual rights (Rokhmawati, 2021). Where the underlying licensing regime remains discretionary and subject to shifting sectoral priorities such as the government's continuing reliance on coal based power generation and the provision of preferential royalty treatment to coal downstreaming business actors notwithstanding Indonesia's NZE pledge fiscal incentives function as a partial palliative rather than a structural solution. Legal policy analysis of the electricity sector concludes that Indonesia's regulatory and policy framework for NZE remains internally inconsistent, oscillating between decarbonisation commitments and continuing legal protection for fossil fuel incumbents.

Deregulated Environmental Permitting and the Job Creation Law

The fourth obstacle is the weakening of environmental permitting safeguards introduced by the Job Creation Law. Prior to the Job Creation Law, an Environmental Impact Analysis (Analisis Mengenai Dampak Lingkungan, AMDAL) was a mandatory prerequisite for, and an integral component of, the business licence for any activity with a significant environmental impact, and the revocation of an environmental permit directly invalidated the corresponding business licence. The Job Creation Law replaced this unified structure with a risk-based licensing system administered through the Online Single Submission platform, under which AMDAL is required only for activities classified as posing significant environmental risk, while lower risk activities need only a standardform statement of environmental management capability (Surat Pernyataan Kesanggupan Pengelolaan Lingkungan, SPPL).

From an investment facilitation perspective, this reform reduces bureaucratic steps and shortens the time to obtain a business licence, which is precisely why the reform has been welcomed by investors seeking to limit third party litigation risk during the permitting process. From an environmental governance perspective, however, the same reform removes the requirement that fault be substantiated for strict liability environmental claims, narrows public participation in the AMDAL process to only those directly and immediately affected, and eliminates the environmental permit as an independently revocable legal instrument. Normative comparative research on environmental licensing for renewable energy specifically finds that Indonesia continues to apply uniform, one-size-fits-all licensing procedures to projects of widely differing risk profiles, failing to distinguish the genuinely low-impact characteristics of solar, wind, and geothermal projects from those of large scale extractive or fossil-fuel infrastructure, and thereby imposing disproportionate compliance costs precisely on the class of projects that green investment policy is meant to encourage (Handayani, Yosiana, & Kongrawd, 2025). Comparative analysis with Germany, Australia, and selected ASEAN jurisdictions suggests that differentiated, risk tiered environmental approval procedures calibrated to the actual ecological footprint of renewable energy technologies could resolve this tension without reintroducing the earlier system's litigation risk.

The tension exposed here is a genuine juridical dilemma rather than a simple drafting defect: investment facilitation and environmental protection are both constitutionally mandated objectives under Article 33 of the 1945 Constitution, yet the Job Creation Law resolves the tension by favouring procedural speed over substantive environmental safeguards. Broader empirical scholarship on infrastructure investment barriers similarly finds that Indonesia's regulatory and land-use planning processes generate transparency deficits that deter, rather than attract, investors who are themselves subject to environmental, social, and governance disclosure obligations in their home markets (OECD, 2025). Deregulation designed to attract investment in the abstract can therefore, paradoxically, deter the specific subset of investors most inclined toward green and ESGaligned capital allocation.

Sustainable Finance Taxonomy, ESG Disclosure, and the Risk of Greenwashing

The fifth obstacle concerns the legal status and enforceability of Indonesia's sustainable finance taxonomy. OJK issued the Indonesia Green Taxonomy Edition 1.0 in 2022 as part of Phase II of the Sustainable Finance Roadmap, and has since transformed it into the broader Indonesia Taxonomy for Sustainable Finance, most recently updated in its second version in February 2025 to expand sectoral coverage and to introduce the concept of transition finance for activities moving away from high emission processes. The taxonomy's stated purpose is to prevent greenwashing by providing an objective

classification of environmentally supportive economic activities that can guide capital allocation toward Indonesia's 2060 NZE target.

Nevertheless, the taxonomy operates principally as supervisory guidance directed at banks and financial institutions under OJK Regulation No. 51/POJK.03/2017 on Sustainable Finance, rather than as a binding, generally applicable legal standard enforceable by courts against issuers or project sponsors that misrepresent the environmental character of an investment. Empirical-legal research on foreign investment in Indonesia's renewable energy sector documents significant regulatory gaps that allow companies to invoke ESG and sustainability narratives for reputational purposes while the underlying environmental and social obligations remain effectively unenforced, in the absence of strong compliance monitoring mechanisms and accessible avenues for affected communities to seek redress. The consequence is a structural risk of greenwashing: an activity may be marketed, and even financed, as "green" without being subject to any independent verification mechanism equivalent to those found in more mature sustainable finance jurisdictions such as the European Union, where the Sustainable Finance Disclosure Regulation imposes binding, court enforceable disclosure duties on financial market participants (Zetsche, Bodellini, & Consiglio, 2022); (Steuer & Tröger, 2022).

This gap matters not only for environmental integrity but for investment law itself, because credible ESG disclosure has been shown to reduce the cost of capital and to correlate positively with corporate financial performance and sustainability outcomes (de Souza Barbosa, Basilio Crispim da Silva, Bueno da Silva, Morioka, & Fernandes de Souza, 2023). A weak or voluntary taxonomy therefore does not merely fail to prevent greenwashing; it also fails to capture the capital cost benefits that a credible, legally binding green classification system would otherwise generate for genuinely sustainable Indonesian issuers, including through instruments such as green bonds and green sukuk regulated under OJK Regulation No. 60/POJK.04/2017.

International Investment Law, the Just Energy Transition Partnership, and Regulatory Risk

A further dimension of legal uncertainty arises at the intersection of green investment regulation and international investment law. Indonesia's Just Energy Transition Partnership (JETP), announced at the 2022 G20 Summit with an initial pledge of USD 20 billion in public and private finance from the International Partners Group, is designed to accelerate the early retirement of coal-fired power plants and to de-risk renewable energy investment. Comparative legal analysis of JETP arrangements in Indonesia and Vietnam shows that the early decommissioning of coal assets, when implemented without carefully designed compensation and contractual renegotiation mechanisms,

exposes the host state to expropriation and fair and equitable treatment claims under existing investment-protection instruments, including bilateral investment treaties and investor state contracts (Hug, 2026). This creates an unresolved tension between Indonesia's domestic decarbonisation policy and its pre-existing international investment law obligations, since any regulatory measure that shortens the operating life of a coal asset without adequate compensation risks generating parallel claims from the very foreign investors whose capital JETP is designed to attract for renewable energy replacement projects.

This tension is not unique to Indonesia; it reflects a wider global debate about whether investment protection standards should be reformed to accommodate legitimate climate regulation (Cotula, 2023). Juridical normative research on Indonesia's broader energy transition policy likewise finds persistent inconsistencies between international climate commitments and domestic sectoral regulation, and recommends harmonisation together with the diversification of low carbon energy sources. At the level of legal doctrine, this suggests that Indonesia's green investment framework cannot be reformed by domestic legislation alone; it must also be reconciled with the country's network of international investment agreements, failing which JETP-financed decarbonisation measures could themselves become a source of costly investor-state arbitration rather than a catalyst for green investment (Yuniza, Salim, Triyana, & Triatmodjo, 2024).

Comparative Perspective and the Case for a Consolidated Legal Framework

Comparative analysis reinforces the conclusion that fragmented, non-binding classification systems are an inadequate substitute for a dedicated legislative framework. In the European Union, the Sustainable Finance Disclosure Regulation and the accompanying EU Taxonomy Regulation impose binding, harmonised, court-enforceable disclosure and classification obligations directly on financial market participants, backed by supervisory sanctions for non-compliance (Zetzsche, Bodellini, & Consiglio, 2022).

Studies of emission-trading-scheme design across Southeast Asia similarly show that jurisdictions with clearer statutory foundations for their carbon markets, more precise allocation methodologies, and stronger monitoring reporting verification institutions achieve greater market liquidity and investor confidence than those relying primarily on presidential or ministerial regulation (Wibisono, Setiawan, & Choi, 2021). Cross-country empirical evidence likewise indicates that green innovation and resource efficiency respond positively to clear, stable, and appropriately stringent environmental regulatory signals, rather than to loosely enforced voluntary guidance (Tang, Mai, & Li, 2023).

Applying these comparative insights to Indonesia suggests that the country's reliance on presidential regulations, OJK circulars, and ministerial guidance none of which carries the same normative weight, judicial enforceability, or legislative permanence as a statute

enacted by the House of Representatives constitutes a structural design weakness rather than a merely technical shortcoming. A regulation (Peraturan Presiden) can be amended by the executive without legislative deliberation, which undermines the very long-term regulatory predictability that green investors, who typically commit capital over ten to twenty year project horizons, require before committing capital.

Toward Legal Reform: Elements of a Dedicated Green Investment Law

Drawing on the preceding analysis, this study identifies four elements that a future, consolidated Green Investment Law for Indonesia should contain. First, a single statutory definition of "green investment" and "green economic activity," harmonised with the OJK taxonomy but elevated to the status of binding law, so that fiscal incentives, licensing simplification, and carbon market participation all apply a consistent classification standard. Second, statutory clarification of the relationship between the carbon tax and the carbon-trading price, including a clear legal mechanism for periodic rate adjustment, in order to resolve the normative vagueness identified in Article 13 of the Harmonisation of Tax Regulations Act (Wahyuni, Harris, & Sujatmoko, 2023). Third, a differentiated, risk tiered environmental permitting track for renewable-energy and other low carbon infrastructure projects, restoring meaningful public participation safeguards without reintroducing the AMDAL bottlenecks that the Job Creation Law sought to eliminate (Handayani, Yosiana, & Kongrawd, 2025). Fourth, an independent or semi independent climate and green finance authority with cross sectoral coordinating powers over the Ministry of Investment/BKPM, the Ministry of Environment and Forestry, the Ministry of Energy and Mineral Resources, the Ministry of Finance, and OJK, mandated to certify green investment status, monitor compliance, and adjudicate or refer disputes concerning greenwashing allegations (Sudarwanto & Daryanti, 2025).

These reforms should further be read against the doctrine of the Green Constitution, which grounds environmental protection directly in Article 33 paragraph (4) of the 1945 Constitution and, for a substantial share of green investment related activity, in the Islamic legal principle of *maslahah* (public benefit), both of which provide a normative foundation for treating environmental sustainability as a constitutional rather than merely a policy objective (Supriyadi, Lutfi, & Bahagiati, 2025); (Qurbani & Rafiqi, 2022). Anchoring green-investment law in this constitutional framework would give the Constitutional Court and the Supreme Court a clearer doctrinal basis on which to review implementing regulations that fall short of Indonesia's climate commitments, thereby converting NZE from an aspirational policy target into an enforceable constitutional and statutory obligation.

Institutional reform of this kind is also consistent with the international law recognised in Law No. 16 of 2016 ratifying the Paris Agreement, and with related international climate

instruments referenced in Indonesian legal scholarship on climate governance (Wendra & Sutrisno, 2023). Aligning domestic green investment law more closely with these international obligations would also strengthen Indonesia's position in future JETP-related negotiations and reduce the risk of the investor state disputes identified above (Hug, 2026), while consolidating the fragmented green finance instruments already available to Bank Indonesia and OJK, including loan to value incentives and green finance guidelines (Nursahla, Paramayoga, Fadli, & Hamidi, 2023), into a single, coherent statutory scheme built on responsible banking principles already partially adopted by Indonesian financial institutions (Abubakar & Handayani, 2019).

IV. CONCLUSION

This study finds that green investment regulation in Indonesia is hindered by five interlocking juridical obstacles: institutional and normative fragmentation across investment, environmental, energy, and financial sector law; unresolved legal uncertainty in the carbon tax and carbon trading regime; fiscal incentives that are too narrow and too discretionary to offset country and grid related investment risk; an environmental permitting regime, deregulated by the Job Creation Law, that favours investment facilitation at the expense of enforceable ecological safeguards; and a sustainable finance taxonomy that, lacking binding legal force, remains structurally vulnerable to greenwashing. These obstacles are compounded by an unresolved tension between Indonesia's domestic decarbonisation measures, particularly under the Just Energy Transition Partnership, and its pre-existing international investment law obligations.

Taken together, these findings suggest that Indonesia's declared commitment to net zero emission by 2060 cannot be achieved through voluntary guidance, sectoral regulation, or presidential decree alone. A dedicated, statutorily enacted Green Investment Law anchored in the constitutional principle of sustainable economic development under Article 33 of the 1945 Constitution, harmonised with OJK's sustainable finance taxonomy, and administered by a cross sectoral coordinating authority is necessary to convert Indonesia's climate diplomacy into a legally enforceable domestic order capable of mobilising the scale of private green capital that the net zero transition demands. Future research should test the practical effect of such reforms empirically, once implemented, by examining green investment flows, litigation patterns, and greenwashing enforcement outcomes under the revised legal architecture.

V. REFERENCES

- [1] Supriyadi, A. P., Lutfi, M., & Bahagiati, K. (2025). Strengthening Indonesia's green investment law: Legal reconceptualisation toward net-zero emissions under Green

- Constitution and Masalah. *Jurisdictie: Jurnal Hukum dan Syariah*, 16(2), 417–457.
<https://doi.org/10.18860/j.v16i2.35169>
- [2] Wahyuni, I., Harris, R. F., & Sujatmoko, E. (2023). The road to net-zero emission in Indonesia: Legal loopholes in national carbon tax scheme. *Media Iuris*, 6(3), 399–416. <https://doi.org/10.20473/mi.v6i3.48537>
- [3] Handayani, I. G. A. K. R., Yosiana, C., & Kongrawd, S. (2025). Reform of environmental approval policy for renewable energy in Indonesia. *Journal of Sustainable Development and Regulatory Issues (JSDERI)*, 3(2), 286–323. <https://doi.org/10.53955/jsderi.v3i2.101>
- [4] Sudarwanto, A. S., & Daryanti. (2025). Examining legal tools in encouraging the achievement of net zero emission: A way forward for Indonesia. *IOP Conference Series: Earth and Environmental Science*, 1438(1), 012018, 1–10. <https://doi.org/10.1088/1755-1315/1438/1/012018>
- [5] Nursahla, R. S. A., Paramayoga, N., Fadli, M. A., & Hamidi, M. P. (2023). Legal aspects of the central bank's green finance instruments in Indonesia: An overview. *Journal of Central Banking Law and Institutions*, 2(1), 123–152. <https://doi.org/10.21098/jcli.v2i1.38>
- [6] Sulistiawati, L. Y., & Buana, L. (2023). Legal analysis of the carbon pricing regulation in Indonesia. *Journal of Central Banking Law and Institutions*, 2(1), 179–198. <https://doi.org/10.21098/jcli.v2i1.46>
- [7] Adiwarman, A. (2024). Potensi dan risiko terjadinya tindak pidana pencucian uang di perdagangan karbon. *AML/CFT Journal: The Journal of Anti Money Laundering and Countering the Financing of Terrorism*, 2(2), 126–146. <https://doi.org/10.59593/amlcft.2024.v2i2.136>
- [8] Wendra, M., & Sutrisno, A. (2023). Penerapan hukum internasional terkait United Nations Framework Convention on Climate Change dalam menghadapi perubahan iklim. *Journal Evidence of Law*, 2(2), 265–275. <https://doi.org/10.59066/jel.v2i2.563>
- [9] Wibisono, R., Setiawan, C., & Choi, Y.-J. (2021). A review on the development of emission trading systems in Southeast Asia with focus on Indonesia. *Environmental*

- Science and Pollution Research*, 28(1), 1–11. <https://doi.org/10.1007/s11356-02001089-z>
- [10] Liyadi, Z. F., & Ludiasa, R. (2023). Mekanisme hukum: Perdagangan karbon melalui bursa karbon di Indonesia. *UNES Law Review*, 6(2), 7354–7365. <https://doi.org/10.31933/unesrev.v6i2.1>
- [11] Yuniza, M., Salim, D., Triyana, H., & Triatmodjo, M. (2024). Revisiting just energy transition in Indonesia energy transition policy. *The Journal of World Energy Law & Business*, 17(2), 118–127. <https://doi.org/10.1093/jwelb/jwad032>
- [12] Hug, F. (2026). Do Just Energy Transition Partnerships collide or converge with substantive investment law standards? Case studies from Indonesia and Vietnam. *Review of European, Comparative & International Environmental Law*, 35(1), 115–141. <https://doi.org/10.1111/reel.70033>
- [13] Abubakar, L., & Handayani, T. (2019). Implementation of the Principles for Responsible Banking in Indonesian banking practices to realize sustainable development goals. *Advances in Social Science, Education and Humanities Research*, 358(1), 103–106. <https://doi.org/10.2991/icglow-19.2019.26>
- [14] Cotula, L. (2023). International investment law and climate change: Reframing the ISDS reform agenda. *The Journal of World Investment & Trade*, 24(4–5), 766–791. <https://doi.org/10.1163/22119000-12340310>
- [15] Qurbani, I. D., & Rafiqi, I. D. (2022). Prospective green constitution in new and renewable energy regulation. *Legality: Jurnal Ilmiah Hukum*, 30(1), 68–87. <https://doi.org/10.22219/ljih.v30i1.18289>
- [16] Rajamani, L. (2024). Interpreting the Paris Agreement in its normative environment. *Current Legal Problems*, 77(1), 167–200. <https://doi.org/10.1093/clp/cuae011>
- [17] Zetzsche, D. A., Bodellini, M., & Consiglio, R. (2022). The EU sustainable finance framework in light of international standards. *Journal of International Economic Law*, 25(4), 659–679. <https://doi.org/10.1093/jiel/jgac043>
- [18] Rokhmawati, A. (2021). The nexus among green investment, foreign ownership, export, greenhouse gas emissions, and competitiveness. *Energy Strategy Reviews*, 37, 100679. <https://doi.org/10.1016/j.esr.2021.100679>
- [19] Steuer, S., & Tröger, T. H. (2022). The role of disclosure in green finance. *Journal of Financial Regulation*, 8(1), 1–50. <https://doi.org/10.1093/jfr/fjac001>

- [20] Tang, W., Mai, L., & Li, M. (2023). Green innovation and resource efficiency to meet net-zero emission. *Resources Policy*, 86, 104231.
<https://doi.org/10.1016/j.resourpol.2023.104231>
- [21] de Souza Barbosa, A., Basilio Crispim da Silva, M. C., Bueno da Silva, L., Morioka, S. N., & Fernandes de Souza, V. (2023). Integration of environmental, social, and governance (ESG) criteria: Their impacts on corporate sustainability performance.
- [22] Tobroni, T., & Firmansyah, E. (2022). Tipologi manajemen tradisional dan modern dalam perkembangan pendidikan pesantren. *Research and Development Journal of Education*, 8(1), 333-338.
- [23] Firmansyah, E. (2023). Various Paradigms in Islamic Educational Thought: Fundamentalism, Modernism, and Liberalism. *International Journal of Health, Economics, and Social Sciences (IJHESS)*, 5(2), 139-145.
- [24] Bakar, M. Y. A., Firmansyah, E., & Abdeljelil, M. B. (2024). Legal framework analysis of Islamic religious education policy implementation. *International Journal of Law and Society*, 3(3), 217-237.
- [25] Firmansyah, E., Tobroni, T., & Rusady, A. T. (2023). Internalisasi Ajaran Islam Dalam Aktivitas Budaya Etnik Kaili Prespektif Antropologi Pendidikan Islam. *Research and Development Journal of Education*, 9(1), 285-299.
- [26] Firmansyah, E., Tobroni, T., & Romelah, R. (2023). Anthropology of Islamic Education as A Socio-Cultural-Religious Modernization Strategy in Alam Al-Kudus Islamic Boarding School. *Edukasi Islami: Jurnal Pendidikan Islam*, 12(03).
- [27] Firmansyah, E., & Idris, A. (2024). Moderation as a Solution to Religious Harmony in Poso Central Sulawesi. *International Journal of Law and Society*, 3(1), 1-9.
- [28] Syah, E. F., Khozin, K., & Haris, A. (2023). Merenda The History of Sheik Sya'ban in The Framework of Banggai Ethnic Islamic Educational Anthropology 8th Century Ad. *Edukasi Islami: Jurnal Pendidikan Islam*, 12(03).

