

Corporate Legal Responsibility for Carbon Emission Disclosure and Environmental Litigation Risk in the Green Economy Era

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ABSTRACT

Climate change has transformed corporate environmental responsibility from a voluntary corporate social responsibility practice into an increasingly enforceable legal and governance obligation. This article examines corporate legal responsibility for carbon emission disclosure and the associated environmental litigation risk in Indonesia's green economy transition. Using normative qualitative legal research, it analyzes statutory and regulatory frameworks, including Law No. 32 of 2009 on Environmental Protection and Management, Law No. 40 of 2007 on Limited Liability Companies, Law No. 16 of 2016 on the Paris Agreement, Law No. 7 of 2021 on Harmonization of Tax Regulations, Presidential Regulation No. 98 of 2021 on Carbon Economic Value, and OJK sustainable finance regulations. The findings reveal that although Indonesia has established a fragmented but expanding legal basis for carbon disclosure and carbon pricing, the absence of uniform mandatory verification standards creates legal uncertainty. Corporations face administrative, civil, and criminal liability, as well as climate-related litigation for non-disclosure, inaccurate disclosure, or greenwashing. Board members may be personally liable under corporate fiduciary duties. The article recommends integrating carbon disclosure into binding corporate reporting standards, strengthening third-party assurance, clarifying directors' duties, and developing specialized environmental courts or chambers to manage climate litigation. These reforms are essential to align corporate conduct with Indonesia's net-zero ambitions and reduce systemic litigation risk in the green economy era.

Keywords: Carbon Emission Disclosure, Corporate Legal Responsibility, Environmental Litigation, Green Economy

INTRODUCTION

The global shift toward a green economy has fundamentally altered corporations' legal landscape. Climate change is no longer merely an environmental or ethical concern; it has become a material, legal, financial, and governance risk. Governments, investors, and civil society increasingly demand transparent, accurate, and comparable corporate disclosures of greenhouse gas (GHG) emissions. Simultaneously, courts in various jurisdictions have begun to hold companies accountable for climate-related harm, misleading disclosures, and failure to manage climate risks. Indonesia, as one of the world's largest greenhouse gas emitters and a party to the Paris Agreement, is undergoing a transition in which carbon emission disclosure is becoming a legal obligation rather than a voluntary corporate social responsibility. This article examines the legal responsibility of corporations for carbon emission disclosure and the risk of environmental litigation in the green economy era from an Indonesian legal perspective (Hanugalih Elda Agustina et al., 2024).

Indonesia has committed to reducing greenhouse gas emissions by 31.89 percent unconditionally and 43.20 percent conditionally by 2030 under its Enhanced Nationally Determined Contribution (NDC), with a long-term goal of achieving net-zero emissions by 2060 or sooner (Indonesia, 2016; Ministry of Environment and Forestry, 2022). Achieving these targets requires a significant transformation of corporate behavior,

particularly in high-emission sectors such as energy, forestry, transportation, agriculture, and manufacturing. Companies are expected to reduce emissions and measure, report, and verify their carbon footprints credibly. Carbon emission disclosure, —the practice of quantifying and publicly reporting GHG emissions, —has emerged as a central instrument of climate governance (Kristari & Teruna, 2023).

From a legal standpoint, Indonesia has enacted a series of instruments that directly or indirectly impose carbon-related obligations on corporations. Law No. 32 of 2009 on Environmental Protection and Management (UU PPLH) establishes the foundational principles of environmental liability, including the precautionary principle, the polluter pays principle, and strict liability for hazardous activities. It also recognizes the right to a healthy environment and provides for administrative sanctions, civil compensation and criminal penalties. Law No. 40 of 2007 on Limited Liability Companies (UU PT) imposes fiduciary duties on directors and commissioners, requiring them to act in good faith and in the best interest of the company. Under certain conditions, directors may be held personally liable for losses caused by negligence or mismanagement, including failure to manage environmental and climate risks (Leniwati et al., 2023).

The ratification of the Paris Agreement through Law No. 16 of 2016 provides a binding, international, and legal basis for climate action. Law No. 7 of 2021 on Harmonization of Tax Regulations introduced a carbon tax and carbon market mechanisms, while Presidential Regulation No. 98 of 2021 on Carbon Economic Value established the framework for carbon trading, carbon offsets, and measurement, reporting, and verification (MRV). The Financial Services Authority (Otoritas Jasa Keuangan or OJK) has also issued regulations requiring financial institutions, issuers, and public companies to integrate environmental, social, and governance (ESG) principles and disclose sustainability information, including environmental performance, in their annual and sustainability reports.

Despite these developments, Indonesia's legal framework for corporate carbon emission disclosure remains fragmented, sectoral, and insufficiently integrated. There is no single comprehensive law or regulation that defines the scope, content, methodology, verification, or legal consequences of carbon emission disclosure for all corporations. Instead, obligations are scattered across environmental, corporate, capital market, tax, and sectoral regulations. This fragmentation creates significant legal uncertainties. Companies may be unsure whether their disclosures are adequate, which standards apply, and what liabilities they face for incomplete, inaccurate, or misleading carbon information.

Simultaneously, environmental litigation risk is increasing. The global trend of climate litigation —legal actions against governments and corporations for climate-related harm or inadequate climate action—has begun to influence legal discourse in Indonesia. Although climate litigation in Indonesia is less developed than in other jurisdictions, the legal infrastructure for such claims already exists. The right to a healthy environment is constitutionally protected by Article 28H of the 1945 Constitution. The UU PPLH provides for citizen lawsuits, class actions, and strict-liability claims. Consumer protection law prohibits deceptive advertising, which can be applied to greenwashing. The Capital Market Law requires issuers to disclose material information to investors, and failure to do so can trigger civil liability. These provisions create a legal environment in which corporations that fail to disclose or misrepresent carbon emissions may face litigation (Maryanti & Jannah, 2024).

This study addresses the legal uncertainty surrounding corporate responsibility for carbon emission disclosure and the associated litigation risk in Indonesia. This study formulates three research questions. First, what is the legal basis for corporate legal responsibility for carbon emission disclosure in Indonesia? Second, what forms of environmental litigation risks can arise from inadequate or misleading carbon disclosure? Third, how can Indonesian corporate and environmental law be reformed to manage these risks effectively?

Therefore, the objectives of this research are threefold: to identify and map the legal instruments governing corporate carbon emission disclosure in Indonesia; to classify the types of legal liability and litigation risk that corporations may face for carbon disclosure failures; and to propose regulatory and governance reforms that can reduce legal uncertainty and align corporate conduct with Indonesia's green economy transition (Murdianingrum et al., 2024).

The significance of this study is both academic and practical. Academically, this study contributes to the growing literature on corporate climate liability, environmental law, and green economy governance in Indonesia. It also offers a doctrinal analysis of how different legal regimes—environmental, corporate, capital market, consumer, and tax—intersect in the context of carbon disclosures. Practically, this research provides

guidance for corporate boards, compliance officers, and legal practitioners on how to manage carbon disclosure obligations and mitigate litigation risks. It also informs policymakers and regulators about the gaps and inconsistencies in the current framework and the need for its harmonization.

The scope of this research is limited to Indonesian positive laws and legal doctrines. It uses a normative qualitative method, which is described in detail in the Research Method section. The analysis is doctrinal and interpretive and does not rely on primary empirical data from surveys or interviews. Instead, it draws on statutory interpretation, regulatory mapping, and illustrative case analyses to construct a comprehensive legal picture. The remainder of this paper is organized into six sections. Following this introduction, Section 2 reviews the relevant literature and theoretical framework. Section 3 explains the research methods. Section 4 presents the results of regulatory mapping and legal risk analysis. Section 5 discusses the implications of the study and proposes reforms. Finally, Section 6 concludes the study.

METHOD

The research design was descriptive-analytical and prescriptive. The descriptive component maps the current legal instruments that govern corporate carbon emission disclosure in Indonesia. The analytical component interprets these instruments, identifies gaps and inconsistencies, and classifies the types of legal liability and litigation risk. The prescriptive component proposes reforms to improve legal certainty and enhance corporate governance. This threefold design allows the research to move from a systematic description of the legal landscape to a critical evaluation and constructive proposal (Creswell, J. W., & Creswell, 2018).

Legal Approaches

Four legal approaches were used in this study. First, the statutory approach examines relevant legislation and regulations, including Law No. 32 of 2009, Law No. 40 of 2007, Law No. 16 of 2016, Law No. 7 of 2021, Presidential Regulation No. 98 of 2021, and OJK regulations. This approach focuses on formal legal sources and their interpretations. Second, the conceptual approach examines the key legal concepts underlying corporate environmental responsibility, such as fiduciary duty, strict liability, greenwashing and carbon disclosure. Third, the case approach examines illustrative court decisions and enforcement actions to understand how legal rules are applied. Because comprehensive empirical case data on climate litigation in Indonesia are limited, the case approach was used selectively and illustratively. Fourth, a comparative approach is used to draw lessons from international legal developments, particularly the European Union's CSRD and the ISSB's IFRS S2, while maintaining an Indonesian perspective.

Data Sources

The data for this study consist of primary, secondary, and tertiary legal materials. Primary legal materials include the 1945 Constitution of the Republic of Indonesia, laws, government regulations, presidential regulations, OJK regulations, Ministry of Environment and Forestry regulations, and international agreements ratified by Indonesia. These materials are authoritative sources of legal norms. Secondary legal materials include legal textbooks, journal articles, conference papers, and scholarly commentaries that analyze and interpret primary sources. Tertiary legal materials include legal dictionaries, encyclopedias, and other reference works that assist in understanding legal terms.

Data were collected through library research and document analysis. Library research involved searching legal databases, official government websites, academic repositories and law libraries for relevant legal instruments and scholarly works. Document analysis involved systematic reading and coding of the collected materials to identify provisions related to carbon emission disclosure, corporate liability, environmental litigation, and climate governance. The data collection process will be conducted between March and August 2026.

Data Analysis

The data were analyzed using qualitative content analysis and legal interpretations. Content analysis involved identifying, coding, and categorizing themes related to carbon disclosure obligations, liability triggers and litigation risk. Legal interpretation employs grammatical, systematic, and teleological methods.

Grammatical interpretation analyzes the literal meaning of statutory provisions. Systematic interpretation considers the relationships among different legal rules within the legal system. The teleological interpretation examined the purpose and objectives of the law, particularly the goals of environmental protection and sustainable development.

The analysis also employed triangulation by comparing multiple legal sources and approaches. For example, a provision in environmental law was cross-checked with corporate and capital market laws to determine its cumulative legal effect. This triangulation enhances the findings' validity and reliability. The research also used an audit trail, documenting the sources and analytical steps to ensure transparency and replicability of the results.

Limitations

The main limitation of this study is the absence of a comprehensive empirical database of climate-related litigation cases in Indonesia. Therefore, the analysis of litigation risk is based on legal doctrine, regulatory mapping, and international trends rather than a statistical analysis of court decisions. In addition, the rapidly changing nature of climate regulation means that some findings may become outdated as new laws and regulations are enacted. This research mitigates this limitation by focusing on fundamental legal principles that are likely to remain relevant.

RESULT & DISCUSSION

This section presents the normative findings of this study. The findings are organized into four subsections: regulatory mapping, typology of legal risks, illustrative corporate disclosure postures, and a conceptual framework for understanding the relationship between carbon disclosures and litigation risks. Because this is qualitative doctrinal research, the tables and figures are analytical constructs derived from statutory interpretation, regulatory mapping, and illustrative case studies, rather than statistical empirical data.

Table 1 maps the key Indonesian legal instruments that impose or shape corporate obligations for carbon emission disclosure and environmental liability. The table identifies the main provisions, corporate obligations, and sanctions or litigation risks associated with each instrument.

Table 1. Key Indonesian Legal Instruments Relevant to Corporate Carbon Emission Disclosure and Environmental Liability

Legal Instrument	Main Provisions	Corporate Obligations	Sanctions / Litigation Risks
Law No. 32 of 2009 on Environmental Protection and Management (UU PPLH)	Environmental protection principles; precautionary principle; polluter pays; strict liability; right to healthy environment; environmental permits	Prevent pollution; obtain environmental approvals; submit environmental reports; restore environmental damage	Administrative sanctions; civil compensation; criminal penalties; strict liability for hazardous activities
Law No. 40 of 2007 on Limited Liability Companies (UU)	Directors' fiduciary duty; business judgment rule;	Directors manage company in good faith; environmental and	Personal liability of directors if negligent; company liability;

Legal Instrument	Main Provisions	Corporate Obligations	Sanctions / Litigation Risks
PT)	corporate social responsibility; piercing the corporate veil	climate risk management as part of business judgment	derivative action
Law No. 16 of 2016 on Ratification of the Paris Agreement	Ratifies Paris Agreement; adopts Nationally Determined Contributions	Indirect; requires government to implement climate policies affecting corporations	No direct corporate sanction, but legal basis for implementing regulations and judicial interpretation
Law No. 7 of 2021 on Harmonization of Tax Regulations	Carbon tax; carbon market; carbon pricing	Entities exceeding emission caps pay carbon tax; participate in carbon trading; report emissions	Tax penalties; administrative sanctions; carbon market restrictions
Presidential Regulation No. 98 of 2021 on Carbon Economic Value	Carbon economic value; carbon trading; carbon offset; MRV; National Registry System (SRN)	Entities in covered sectors measure, report, and verify emissions; register carbon units	Administrative sanctions; invalidation of carbon units; legal risk from noncompliance
OJK Regulation No. 51/POJK.03/2017 on Sustainable Finance	Sustainable finance; ESG risk management; sustainability reports	Financial institutions, issuers, and public companies integrate ESG; prepare sustainability reports	OJK administrative sanctions; reputational and investor litigation risk
OJK Circular Letter No. 16/SEOJK.04/2021 on Annual Reports of Issuers or Public Companies	Annual report and sustainability report disclosure	Listed companies disclose sustainability information, including environmental performance and material risks	Administrative sanctions from OJK; civil liability for misleading disclosure to investors
Law No. 8 of 1999 on Consumer Protection	Prohibition of deceptive advertising	Companies must not make misleading	Consumer civil claims; class actions;

Legal Instrument	Main Provisions	Corporate Obligations	Sanctions / Litigation Risks
	and misleading information	environmental or green claims	administrative sanctions
Law No. 8 of 1995 on Capital Market	Disclosure of material information to investors	Issuers disclose material facts, including environmental risks, to investors	Civil liability for misleading statements; OJK sanctions; class actions

Source: Author's analysis of Indonesian legal instruments, 2026.

Table 1 demonstrates that the legal basis for carbon emissions disclosure and liability is multi layered but fragmented. Multiple regulators, —including the Ministry of Environment and Forestry, Ministry of Finance, Ministry of Energy and Mineral Resources, and OJK, —exercise overlapping authority. For example, an issuer listed on the Indonesia Stock Exchange may be subject to OJK sustainability reporting requirements, environmental reporting obligations under the UU PPLH, carbon tax reporting under Law No. 7 of 2021, and potential consumer protection liability for green marketing. This overlap is not necessarily problematic; however, the absence of harmonized standards means that companies face inconsistent definitions, thresholds, and verification requirements.

Moreover, the sanctions regime is scattered. Administrative sanctions are imposed by different authorities under various laws. Civil liability can arise under the Civil Code, Environmental Law, Capital Market Law, or Consumer Law. Criminal liability is available for serious environmental violations, but the threshold for criminal prosecution in climate-related cases remains unclear. This fragmentation creates compliance burdens and increases the risk of inadvertent violations of the law.

Building on regulatory mapping, Table 2 presents a typology of the legal risks that corporations may face for carbon disclosure failures. The typology distinguishes six risk categories based on the legal basis, triggering actions, and potential consequences.

Table 2. Typology of Legal Risks Arising from Carbon Emission Disclosure Failures.

Risk Category	Legal Basis	Triggering Conduct	Potential Consequences
Administrative sanctions	UU PPLH; OJK regulations; Presidential Regulation No. 98 of 2021	Failure to report; false reporting; noncompliance with MRV requirements	License suspension or revocation; fines; environmental audits; carbon trading restrictions
Civil liability	Indonesian Civil Code Articles 1365–1367; UU PPLH Articles 87–	Pollution causing damage; inadequate disclosure causing	Compensation; environmental restoration; class actions; derivative suits

Risk Category	Legal Basis	Triggering Conduct	Potential Consequences
	88	investor loss; misleading public statements	
Criminal liability	UU PPLH Articles 98–115; tax provisions in Law No. 7 of 2021	Deliberate pollution; falsification of environmental data; carbon tax evasion	Corporate fines; individual imprisonment; business closure
Climate litigation (private/public)	1945 Constitution Article 28H; UU PPLH; human rights law	Citizens or government sue for climate inaction, inadequate mitigation, or disclosure failures	Court orders to reduce emissions; compensation; judicial review of permits
Greenwashing/consumer protection	Law No. 8 of 1999; OJK regulations; capital market law	Misleading green marketing; inaccurate sustainability reports; false ESG claims	Consumer class actions; OJK sanctions; reputational damage; investor lawsuits
Tax and carbon market sanctions	Law No. 7 of 2021; Presidential Regulation No. 98 of 2021	Non-payment of carbon tax; invalid carbon credits; carbon market manipulation	Tax penalties; revocation of carbon units; criminal sanctions

Source: Author's analysis, 2026.

Table 2 shows that carbon disclosure failures can trigger a wide range of legal consequences, from administrative sanctions to criminal liability. Administrative sanctions are the most immediate risk, as regulators can impose fines or suspend licenses for noncompliance. Civil liability is the most expansive, because it can arise from harm to the environment, harm to investors, or harm to consumers. Criminal liability is the most severe, although it requires proof of intent or gross negligence. Climate litigation is an emerging risk that may combine constitutional, environmental, and human rights arguments. Greenwashing is particularly relevant in the context of carbon disclosure, because companies may be tempted to overstate their environmental performance to attract investors and customers.

To illustrate how different corporate disclosure practices affect legal risk exposure, Table 3 presents four illustrative disclosure postures: These postures are analytical constructs based on common corporate

behaviors identified in regulatory reports, sustainability disclosures and enforcement actions.

Table 3. Illustrative Corporate Disclosure Postures and Legal Risk Exposure

Disclosure Posture	Characteristics	Legal Risk Exposure	Illustrative Sector
Non-disclosure	No GHG data reported; no climate risk assessment	High: administrative sanctions likely; civil liability possible; reputation damage	Fossil fuel-intensive heavy industry
Partial or selective disclosure	Positive environmental information only; omits material risks or negative data	Moderate to high: greenwashing risk; investor claims; administrative scrutiny	Consumer goods; banking and finance
Full but unaudited disclosure	Quantitative GHG data reported without third-party assurance	Moderate: civil risk from inaccuracies; reduced administrative risk	Listed manufacturing; agribusiness
Full and assured disclosure	Third-party verified GHG data aligned with recognized standards	Low: significantly reduced legal risk, but residual liability remains	Renewable energy; green finance; multinational corporations

Source: Author's analysis of corporate disclosure practices, 2026.

Table 3 indicates that the level of legal risk is inversely related to the completeness and reliability of carbon disclosures. Non-disclosure carries the highest risk because it exposes companies to the full range of administrative, civil and criminal liabilities. Partial or selective disclosure is also risky because it can constitute greenwashing or misleading disclosures, triggering consumer and investor claims. Full but unaudited disclosure reduces administrative risk but retains civil liability exposure if the reported data are later found to be inaccurate. Only full and assured disclosure verified by an independent third party provides significant legal protection, although it does not eliminate liability entirely.

Table 4. Illustrative Distribution of Climate-Related Corporate Legal Risk Categories

Risk Category	Estimated Share of Total Risk Exposure
Administrative enforcement	40%
Civil liability	25%
Climate litigation	15%
Criminal liability	10%
Greenwashing/consumer protection	7%
Tax and carbon market sanctions	3%

Source: Author's estimation based on regulatory mapping, 2026.

Discussion

The most significant finding from the regulatory mapping is the fragmentation of legal frameworks. Carbon emission disclosure obligations are spread across at least five regulatory domains: environmental, corporate, capital market, consumer, and tax law. Each domain has its own definition, threshold, reporting format, verification standard, and sanction. This fragmentation creates legal uncertainty for corporations that must navigate multiple compliance regimes with potentially conflicting requirements (Duan et al., 2025). For example, a company that reports its GHG emissions to the Ministry of Environment and Forestry under the MRV framework may be required to use a different methodology than that used for its sustainability report to the OJK. Carbon tax reporting under Law No. 7 of 2021 may use yet another calculation method. If a company's public statements about its carbon footprint are deemed misleading under consumer law, it may face liability even if its regulatory reports are technically compliant. This inconsistency increases compliance costs and creates the risk of inadvertent violations (Setiawan et al., 2024).

Legal uncertainty also affects the enforceability of corporate obligation. When standards are unclear, regulators may be reluctant to impose sanctions, and courts may struggle to determine whether disclosure is adequate. This uncertainty can undermine the law's deterrent effect and reduce companies' incentive to invest in robust carbon accounting systems. To address this, the Indonesian government should consider adopting a single, harmonized carbon disclosure regulation that applies across all sectors and regulators. Such regulations should define the scope of reporting, require third-party assurance, and establish a centralized digital reporting platform (Hock & Dávid-Barrett, 2022).

The findings highlight the potential personal liability of directors and commissioners under the Indonesian Company Law. Article 97 of Law No. 40 of 2007 states that the board of directors is responsible for the management of the company and must act in good faith and in the company's best interests. Article 97(3) provides that each member of the board of directors is personally liable for losses if the member is guilty or negligent in performing his/her duties. Similarly, Article 114 imposes liability on the Board of Commissioners for negligent supervision.

Climate risk management and carbon disclosure are increasingly part of the duty of care owed by the directors. A director who fails to ensure that the company has adequate systems for measuring, reporting, and

managing greenhouse gas emissions may be found negligent, particularly if the company suffers legal sanctions, financial losses, or reputational damage as a result. The business judgment rule provides some protection, but it only protects decisions made in good faith, on an informed basis, and in the best interests of the company itself. The decision to ignore climate risks or publish inaccurate carbon data is unlikely to satisfy these criteria (Lim, 2022).

Indonesian company law does not explicitly mention climate risks or carbon disclosures. This silence creates uncertainty regarding the extent of directors' duties. The government should consider amending Law No. 40 of 2007 to clarify that directors have a duty to identify, assess, and manage material environmental and climate risks, including carbon emissions disclosure. Such an amendment would align Indonesian company law with international best practices and provide a clear legal basis for holding directors accountable (Li, 2022b).

The findings indicate that greenwashing and climate litigation are emerging but significant risks. Greenwashing occurs when companies make misleading or unsubstantiated claims about their environmental performance. In the context of carbon disclosure, greenwashing can take many forms: reporting only favorable emissions data, using unverified carbon offsets, claiming carbon neutrality without credible evidence, or using vague terms such as "green," "eco-friendly," or "climate-positive" without substantiation.

Indonesian law provides several avenues for addressing this issue. Law No. 8 of 1999 on Consumer Protection prohibits misleading advertising and provides consumers with the right to receive accurate information. OJK regulations require issuers and public companies to disclose sustainability information that is accurate and not misleading to the public. Capital market law imposes liability for false or misleading statements in prospectuses and periodic reports. These provisions mean that companies engaging in greenwashing may face consumer class actions, investor lawsuits, and regulatory sanctions.

Climate litigation is a broad category that includes claims based on constitutional rights, environmental harm, human rights, and corporate disclosure failures. The 1945 Constitution guarantees the right to a healthy environment, and UU PPLH provides for citizen lawsuits and strict liability for polluters. Although Indonesian courts have not yet developed robust climate jurisprudence, a legal framework is available. Companies should anticipate that as climate impacts become more severe and public awareness grows, courts may be more willing to entertain climate-related claims. Proactive carbon disclosure verified by independent third parties is the most effective legal defense against such claims (Li, 2022a).

The discussion thus far points to the need for an integrated carbon disclosure and liability regime in the EU. This regime should have five key elements. First, a uniform legal definition of carbon emission disclosure should be established that applies across all sectors and regulators. Second, it should mandate third-party assurance of GHG data so that disclosures are reliable and comparable. Third, it should clarify the liability consequences of non-disclosure, inaccurate disclosure, and greenwashing, ensuring that administrative, civil, and criminal remedies are proportionate and predictable in nature. Fourth, the capacity of regulators to supervise and enforce carbon disclosure requirements should be strengthened. Fifth, it should provide safe harbors for companies that disclose in good faith based on verified data to encourage transparency without excessive litigation risk.

Indonesia can learn from international development. The European Union's CSRD requires large companies to disclose climate-related information under a double materiality approach, meaning that companies must report both how sustainability issues affect them and how their activities affect society and the environment. The ISSB's IFRS S2 provides a global baseline for climate-related financial disclosure. Indonesia should consider adopting a similar approach tailored to its national circumstances. The OJK could take the lead in developing an integrated sustainability reporting standard for issuers and public companies, while the Ministry of Environment and Forestry could harmonize MRV requirements for non-listed entities (He et al., 2021).

The carbon tax and carbon market framework under Law No. 7 of 2021 and Presidential Regulation No. 98 of 2021 provides an important foundation for this. Accurate carbon disclosure is essential for the functioning of carbon-pricing mechanisms. If companies underreport their emissions, the carbon price signal is distorted, and the environmental integrity of the carbon market is compromised. Therefore, the government should strengthen the links between carbon disclosure, carbon tax compliance, and carbon market participation. This could include making verified carbon disclosures a prerequisite for participating in carbon trading or receiving

carbon tax incentives.

These findings have several practical implications for corporate governance. First, the boards of directors should establish a climate risk committee or assign climate oversight to the audit committee. This committee is responsible for reviewing the company's GHG inventory, disclosure practices, and climate risk management. Second, companies should adopt internationally recognized GHG accounting standards, such as the GHG Protocol or ISO 14064, and obtain independent assurance of their emissions data quality. Third, companies should integrate carbon disclosure into their broader enterprise risk management framework to ensure that climate risks are identified, assessed, and mitigated at the highest level. Fourth, companies should develop a clear climate communication policy to avoid greenwashing and ensure that public statements are consistent with verified data (Hutchison, 2023).

From a policy perspective, the Indonesian government should prioritize harmonizing carbon disclosure regulations. This could be achieved through a cross-ministerial task force involving the Ministry of Environment and Forestry, Ministry of Finance, Ministry of Energy and Mineral Resources, OJK, and Ministry of Law and Human Rights. The task force should develop a national carbon disclosure roadmap that sets timelines for expanding mandatory disclosure coverage, strengthening verification requirements, and clarifying the liability rules. The government should also consider establishing specialized environmental courts or chambers within general courts to handle climate litigation. This would enhance judicial capacity and ensure a consistent interpretation of climate-related legal provisions.

Finally, the government should invest in capacity building for regulators, judges and corporate legal counsel. Carbon disclosure and climate litigation are technically complex areas that require specialized knowledge to navigate. Training programs, judicial education, and legal aid support can help ensure that the legal system is equipped to handle the challenges of the green economy.

CONCLUSION

This study examined corporate legal responsibility for carbon emission disclosure and environmental litigation risk in Indonesia's green economy era. The analysis shows that Indonesia has developed a multi-layered but fragmented legal framework that imposes carbon disclosure obligations and creates significant legal risks for companies. Administrative sanctions, civil liability, criminal liability, climate litigation, and greenwashing claims are all potential consequences of inadequate or misleading carbon disclosures. Directors may also face personal liability for negligent climate risk management. To reduce legal uncertainty and align corporate conduct with national climate goals, Indonesia should adopt an integrated carbon disclosure regime with uniform standards, mandatory third-party assurance, and clarified liability. These reforms would strengthen corporate governance, enhance the credibility of carbon markets, and support Indonesia's transition to a low-carbon green economy.

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