



Green accountability firewall: A framework for challenging the illusion of ESG compliance

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ABSTRACT

This study investigates ESG compliance illusion in corporate sustainability reporting, focusing on environmental impacts, eco-efficiency, environmental accounting, and environmental financial statements. Using qualitative document analysis, data were drawn from regulations, ESG standards, academic literature, and 30 sustainability reports of Indonesian listed companies in high-impact sectors during 2020–2024. Thematic analysis and pattern matching identified three dominant patterns: attention deflection, symbolic ESG compliance, and decoupling between ESG claims and actual performance. These practices weaken transparency, comparability, and stakeholder trust. The study proposes the Green Accountability Firewall, integrating literacy, assurance, and governance mechanisms to promote substantive, verifiable, and evidence-based sustainability reporting.

ABSTRAK

Penelitian ini mengkaji ilusi kepatuhan ESG dalam pelaporan keberlanjutan perusahaan, dengan fokus pada dampak lingkungan, keefisiensi, akuntansi lingkungan, dan laporan keuangan lingkungan. Dengan menggunakan analisis dokumen kualitatif, data diperoleh dari regulasi, standar ESG, literatur akademik, serta 30 laporan keberlanjutan perusahaan tercatat di Indonesia yang bergerak pada sektor berdampak tinggi selama periode 2020–2024. Analisis tematik dan pencocokan pola mengidentifikasi tiga pola dominan, yaitu pengalihan perhatian, kepatuhan ESG simbolis, dan keterputusan antara klaim ESG dan kinerja aktual. Praktik-praktik tersebut melemahkan transparansi, keterbandingan, dan kepercayaan pemangku kepentingan. Penelitian ini mengusulkan Green Accountability Firewall yang mengintegrasikan mekanisme literasi, assurance, dan tata kelola untuk mendorong pelaporan keberlanjutan yang substantif, dapat diverifikasi, dan berbasis bukti.

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1. Introduction

Environmental, social, and governance (ESG) reporting has become an important way for companies to communicate their sustainability performance and accountability to stakeholders. Although ESG reporting covers environmental, social, and governance aspects, this study focuses specifically on the environmental dimension, including environmental impacts, eco-efficiency, environmental accounting, and environmental financial statements. In this study, ESG reporting serves as the broader context, while environmental reporting is the main area of analysis. By examining the quality and credibility of environmental disclosures, this study contributes to Sustainable Development Goal (SDG) 12, particularly Target 12.6, which encourages companies to integrate sustainability information into their reporting practices. The study also relates to SDG 16 through its emphasis on transparency, accountability, and effective governance.

However, the increasing volume of environmental sustainability disclosures within ESG reporting does not necessarily indicate that companies have achieved substantive ESG performance. Sustainability reports may instead create an overly positive corporate image by emphasizing favorable achievements, omitting unfavorable outcomes, or presenting claims that are not adequately supported by evidence. This phenomenon has received growing attention because it can produce an illusion of ESG compliance, in which a company appears to meet sustainability standards through formal reporting while its actual environmental, social, and governance practices remain incomplete, symbolic, or unverifiable (Arvidsson & Dumay, 2022; Chopra et al., 2024; Ferro et al., 2025; Lagasio, 2024).

ESG compliance illusion is closely associated with several established concepts, including greenwashing, selective disclosure, symbolic compliance, organizational façades, and the decoupling of corporate statements from actual organizational practices (Elsayed & Albeltagy, 2025; Siddique et al., 2026; Xu et al., 2023). From the perspective of legitimacy theory, companies may use sustainability disclosure to maintain social acceptance and protect their reputation when actual ESG performance does not meet stakeholder expectations. Similarly, impression management theory explains how companies strategically select language, numerical information, and visual presentations to influence stakeholders' perceptions of corporate sustainability. These theoretical perspectives suggest that ESG reporting may serve not only as an accountability mechanism but also as a means of managing legitimacy and concealing organizational shortcomings.

One mechanism underlying ESG compliance illusion is attention deflection, through which companies redirect stakeholders' attention away from negative ESG outcomes. This mechanism may involve highlighting positive initiatives while omitting environmental damage, social controversies, governance weaknesses, or unmet sustainability targets (Pope et al., 2024). Companies may also use vague statements, irrelevant comparisons, complex terminology, and visually attractive presentations that create an impression of strong ESG performance without providing verifiable evidence (Hassan, 2024; Jakubczak & Chmielewska-Muciek, 2025). Other practices include unsubstantiated claims,

implied environmental superiority, and the “sin of no proof,” in which sustainability assertions are communicated without accessible data, documentation, or independent verification (Verma & Bharti, 2023).

ESG compliance illusion can therefore be reflected in both the exaggeration of positive performance and the concealment of negative information (Kathan et al., 2025; Lublóy et al., 2024). It may appear through selective reporting, overly optimistic narratives, symbolic commitments, incomplete indicators, and inconsistencies between reported claims and actual corporate practices (Kim & Lee, 2023; Sneideriene & Legenzova, 2024). Complex, ambiguous, or excessively technical language may further obscure poor sustainability performance and make reports more difficult for stakeholders to evaluate (Laeq et al., 2026). Accordingly, ESG compliance illusion can be examined through narrative, linguistic, visual, and evidentiary patterns within corporate sustainability reports.

In Indonesia, POJK No. 51/POJK.03/2017 provide the regulatory basis for sustainable finance and sustainability reporting by financial institution, issuers, and public companies (OJK, 2017). More recently, IFRS S1 and IFRS S2 have strengthened the international sustainability disclosure landscape by establishing requirements for sustainability-related financial disclosures and climate-related disclosures. Because these standards were issued in 2023 and became effective for annual reporting periods beginning on or after 1 January 2024, they were not applied retrospectively as assessment benchmarks for sustainability reports published before their issuance. Rather, they are used in this study as a contemporary reference for interpreting the evolving expectations of sustainability disclosure, particularly for the later part of the study period.

Previous studies have extensively discussed greenwashing, selective disclosure, symbolic reporting, and organizational façades (Jakubczak & Chmielewska-Muciek, 2025; Lagasio, 2024; Li et al., 2024; Yang et al., 2024). Nevertheless, several research gaps remain. First, ESG compliance illusion is frequently examined through separate concepts, resulting in a fragmented understanding of its forms and underlying mechanisms. Second, limited attention has been given to how ESG illusions appear across specific dimensions of environmental reporting, particularly environmental impacts, eco-efficiency, environmental accounting, and environmental financial statements. Third, commonly used ESG measures derived from secondary databases are often aggregated, inconsistent, or insufficiently transparent, making it difficult to identify selective narratives and unverifiable claims (Laeq et al., 2026; Verma & Bharti, 2023). Finally, there remains a lack of an integrated framework connecting stakeholder ESG literacy, independent professional assurance, and corporate governance oversight as complementary mechanisms for preventing misleading sustainability disclosures.

To address these limitations, this study introduces the Green Accountability Firewall, a conceptual framework that brings together ESG literacy, professional assurance, and governance oversight as complementary layers of accountability. The framework does not claim that these mechanisms are new on their own. Rather, its contribution lies in showing how they work together to address different

weaknesses that may allow ESG compliance illusion to develop. ESG literacy helps stakeholders recognize selective disclosure, unclear claims, missing evidence, and inconsistencies in environmental reporting. Professional assurance provides an independent way to assess whether sustainability claims are supported by sufficient and reliable evidence, while governance oversight helps ensure that reported information is consistent with corporate policies, activities, risks, and actual environmental performance.

These mechanisms perform different roles, but they are more effective when they operate together. ESG literacy may help stakeholders identify questionable claims, but without assurance those claims may remain difficult to verify. Assurance may reveal weaknesses in reporting, but without effective governance there may be no follow-up or corrective action. Likewise, governance oversight may be limited if it relies only on internally generated information without sufficient stakeholder understanding and independent verification. For this reason, the Green Accountability Firewall views accountability as a layered process of detection, verification, and correction. Through these interconnected layers, the framework is intended to reduce attention deflection, symbolic ESG compliance, and inconsistencies between sustainability claims and actual environmental performance.

This study aims to identify the principal forms and patterns of ESG compliance illusion in corporate sustainability reporting, particularly within environmental impacts, eco-efficiency, environmental accounting, and environmental financial statements. It also examines how organizational, professional, and governance factors contribute to the emergence or mitigation of such illusions. Theoretically, this study contributes by integrating ESG literacy, professional assurance, and governance oversight into the Green Accountability Firewall as complementary mechanisms for detecting, verifying, and correcting misleading environmental disclosures. Practically, the framework provides guidance for companies, auditors, regulators, investors, and other stakeholders to strengthen the transparency, credibility, and verifiability of sustainability reporting. Based on these findings, the study develops the Green Accountability Firewall as an integrated framework for strengthening substantive accountability in ESG disclosures.

2. Literature Review

ESG Compliance Illusion

ESG compliance illusion refers to a condition in which corporate sustainability disclosures create an impression that a company has fulfilled environmental, social, and governance responsibilities, although such claims are not fully supported by measurable performance, substantive organizational practices, or verifiable evidence. This phenomenon occurs when companies formally adopt ESG terminology, sustainability policies, reporting standards, governance structures, and environmental commitments, while their actual implementation remains incomplete, fragmented, or disconnected from operational activities (Arvidsson & Dumay, 2022; Ferro et al., 2025; Lagasio, 2024; Siddique

et al., 2026). Consequently, stakeholders may perceive a higher level of corporate sustainability performance than is reflected in actual business practices.

Legitimacy theory explains that companies seek to ensure that their operations are perceived as consistent with social values, institutional expectations, and stakeholder demands (Suchman, 1995). When actual ESG performance threatens corporate legitimacy, sustainability reporting may be used to restore or maintain public acceptance. In this context, sustainability reports may function not only as accountability instruments but also as strategic tools for managing organizational (Arvidsson & Dumay, 2022; Chopra et al., 2024; Ferro et al., 2025)

Impression management theory also provides an important explanation for ESG compliance illusion. Rooted in (Erving Goffman, 1959) seminal work, impression management describes how individuals and organizations seek to influence how they are perceived by others. In the context of corporate reporting, companies may influence stakeholder perceptions through narrative, linguistic, numerical, and visual reporting strategies. Positive language, attractive images, selective indicators, favorable comparisons, and detailed descriptions of sustainability programs can direct stakeholder attention toward corporate achievements. Conversely, negative information may be minimized, placed in less visible sections, expressed using vague or highly technical language, or excluded entirely from the report (Hassan, 2024; Jakubczak & Chmielewska-Muciek, 2025; Laeeq et al., 2026). These strategies may create an overly favorable interpretation of ESG performance, even when individual statements are not necessarily false (Barry R. Schlenker, 1980).

ESG compliance illusion may also emerge through symbolic compliance or organizational façades. Companies may establish sustainability committees, adopt environmental policies, publish codes of conduct, or announce ambitious targets without integrating these commitments into operational decisions, investment planning, risk management, and performance evaluation. Such practices provide visible evidence of formal compliance but may not result in substantive improvements in ESG performance (Li et al., 2024; Sneideriene & Legenzova, 2024; Xu et al., 2023). This symbolic orientation can weaken the credibility of sustainability reporting because the existence of formal structures is interpreted as evidence of effective implementation.

Green Accountability Firewall

The Green Accountability Firewall is proposed as an integrated accountability framework designed to prevent, detect, and correct misleading ESG disclosures before they influence stakeholder decisions. The term “firewall” represents a multilayered filtering mechanism that evaluates whether corporate ESG claims are understandable, balanced, materially complete, verifiable, and consistent with actual organizational practices. Rather than operating as a single control mechanism, the framework integrates ESG literacy, professional assurance, and governance oversight as complementary and mutually reinforcing accountability filters. The first component of the Green Accountability Firewall is ESG literacy. ESG literacy refers to the ability of report preparers,

managers, investors, auditors, regulators, and civil society to understand, interpret, question, and evaluate sustainability information. Strong ESG literacy enables stakeholders to distinguish substantive ESG performance from symbolic communication.

Existing studies have proposed various approaches to address greenwashing and sustainability accountability. For example, greenwashing measurement frameworks primarily focus on identifying discrepancies between corporate environmental claims and underlying performance, while sustainability assurance frameworks emphasize the independent verification and credibility of disclosed information. Recent evidence also shows that ESG assurance can reduce greenwashing, although its effectiveness depends on institutional and governance conditions. However, these approaches generally emphasize particular accountability functions rather than their interaction. The Green Accountability Firewall extends these approaches by integrating ESG literacy, professional assurance, and governance oversight into a complementary three-layer mechanism of detection, verification, and correction. Its distinctive contribution therefore lies not in introducing these mechanisms individually, but in explaining how they can operate sequentially and reinforce one another to reduce ESG compliance illusion.

ESG literacy is increasingly important because the growing complexity of sustainability standards does not automatically produce higher-quality disclosures. Companies may comply formally with reporting requirements while presenting information that remains difficult to understand, verify, or compare. Similarly, stakeholders may accept sustainability claims without critically evaluating their materiality, evidence, methodological basis, or consistency with actual performance. ESG literacy therefore functions as the first layer of the firewall by strengthening the capacity of both report preparers and users to recognize possible reporting distortions, selective narratives, and unsupported sustainability claims.

The second component is professional sustainability assurance. Professional assurance provides an independent assessment of whether ESG information has been prepared in accordance with appropriate criteria and supported by sufficient and relevant evidence. The issuance of the International Standard on Sustainability Assurance 5000 strengthens the professional foundation for evaluating sustainability information and the systems used to produce it (IAASB, 2024). Professional assurance can reduce ESG compliance illusion by challenging unsubstantiated claims, identifying material omissions, and assessing whether disclosed information accurately represents actual ESG performance. However, its effectiveness depends on the scope, level, independence, competence, and transparency of the assurance engagement. Limited assurance covering only selected indicators may create an appearance of credibility while leaving significant reporting areas unexamined. Therefore, assurance statements should clearly disclose the applicable criteria, indicators examined, procedures performed, limitations encountered, and conclusions reached. Within the Green Accountability Firewall, professional assurance operates as an evidentiary filter that determines whether corporate ESG claims can be independently substantiated.

3. Research Methods

Research Design

This study employs a qualitative document analysis with a concept-based research design. The approach was selected because the study aims to identify, classify, and interpret recurring patterns of ESG compliance illusion in corporate sustainability reporting and subsequently develop the Green Accountability Firewall (GAF) as a conceptual accountability framework. The analysis focuses on publicly available documents rather than primary data collected directly from companies. Three categories of documents were examined: (1) regulatory and sustainability reporting standards, (2) academic literature, and (3) corporate sustainability reports. The analysis was conducted to identify observable disclosure characteristics related to environmental impacts, eco-efficiency, environmental accounting, and environmental financial information. The study does not seek statistical generalization. Instead, it aims to develop an analytically grounded understanding of recurring disclosure patterns and to use these findings as the empirical basis for developing the proposed Green Accountability Firewall.

Unit of Analysis

The primary unit of analysis is the environmental disclosure segment contained within each corporate sustainability report. A disclosure segment refers to a distinct textual, numerical, tabular, graphical, or assurance-related disclosure concerning environmental performance or environmental accountability. The analyzed disclosure segments included: (1) narrative statements concerning environmental commitments and achievements; (2) quantitative environmental indicators, including energy, water, emissions, waste, and resource efficiency; (3) environmental targets and performance comparisons; (4) environmental costs, expenditures, provisions, and other accounting-related information; (5) information connecting environmental matters with financial performance or financial position; and (6) external assurance statements and related information. The company-level sustainability report served as the document-level observation, while individual disclosure segments constituted the coding units. This distinction enabled the analysis to identify specific reporting characteristics rather than treating an entire sustainability report as a single homogeneous observation.

Data Collection Procedures

The study draws on three categories of data sources: regulatory and standard-setting documents, academic literature, and corporate sustainability reports. The regulatory review covered Indonesia's POJK 51/2017, the GRI Standards (200, 300, and 400 series), SASB standards for extractive, manufacturing, and energy sectors, IFRS S1 and S2, and ISAE 3000 (Revised). The literature review examined studies on greenwashing, institutional decoupling, symbolic management, and ESG assurance, including key references by (Lublóy et al., 2024) and (Janik & Ryszko, 2025). In

addition, 30 sustainability reports from Indonesian listed companies in mining, oil and gas, manufacturing, and agribusiness during 2020–2024 were purposively selected based on IDX listing status, use of GRI or SASB frameworks, availability of at least three consecutive years, and prior public ESG scrutiny. These reports were analyzed qualitatively to identify patterns of ESG compliance illusion rather than to achieve statistical generalization.

Data for this study were collected in three stages. First, key sections of POJK 51/2017, GRI, SASB, ISSB, and ISAE 3000 were reviewed to extract requirements on environmental impacts, eco-efficiency, environmental accounting, integration into financial statements, and assurance, creating a benchmark for assessing corporate sustainability reports. Second, a systematic literature search in Scopus and Google Scholar (2010–2024) focused on ESG compliance, greenwashing, decoupling, symbolic management, and assurance, from which 45 relevant articles were analyzed to define the three main ESG illusion patterns: attention deflection/narrative obfuscation, symbolic compliance/façade, and decoupling of claims versus actual performance. Third, 30 purposively selected sustainability reports from Indonesian listed companies were examined and coded for quantitative environmental data, indicator consistency, use of ambiguous language, inclusion of external cost estimates, integration with financial data, and type of assurance, with manifestations of each illusion pattern documented using direct examples and page references.

Data Analysis Technique

Data analysis used thematic analysis with pattern matching (Wati et al., 2025). Documents were reviewed to understand ESG reporting, and text segments were coded with labels such as “selective disclosure,” “baseline manipulation,” and “symbolic tree planting.” Codes were grouped into themes reflecting the three main ESG illusion patterns attention deflection, symbolic compliance, and decoupling and organized by reporting area. Patterns were matched against operational definitions from literature and regulations, with a pattern confirmed if at least three independent examples were observed. Cross-area comparison identified root weaknesses, including lack of separation between data production and reporting, absence of substantive assurance, and missing personal accountability. Based on these findings, the Green Accountability Firewall (GAF) was developed with three filters: literacy, assurance, and governance. No statistical analysis was performed, as the study is qualitative and conceptual.

Coding Procedures

The coding procedure consisted of three stages: initial coding, category development, and pattern classification. In the initial coding stage, relevant disclosure segments were identified and assigned descriptive codes based on their observable characteristics. Examples of initial codes included “selective disclosure,” “positive narrative emphasis,” “policy without performance

evidence,” “inconsistent baseline,” “incomplete quantitative indicator,” “limited environmental cost disclosure,” “weak financial linkage,” and “limited assurance scope.”

In the second stage, related initial codes were grouped into broader analytical categories. For example, positive narrative emphasis, selective presentation, and limited disclosure of unfavorable outcomes were grouped under the broader category of attention deflection/narrative obfuscation. Policy disclosures without corresponding outcome indicators were grouped under symbolic ESG compliance/façade, while inconsistencies between claims, indicators, baselines, or supporting evidence were considered in relation to decoupling between ESG claims and reported performance.

In the third stage, the categories were compared with the operational definitions developed from the literature and regulatory documents. A pattern was considered recurrent when comparable disclosure characteristics were identified in at least three independent report observations. The recurrence criterion was used to distinguish isolated disclosure characteristics from patterns sufficiently evident across the analyzed documents.

Importantly, coding was based on observable disclosure characteristics rather than assumptions regarding managerial intention. Consequently, the identification of a disclosure pattern does not automatically indicate intentional greenwashing or regulatory violation.

4. Results and Discussion

Empirical Evidence from the Sustainability Reports

The analysis of 30 sustainability reports issued by Indonesian listed companies in mining, oil and gas, manufacturing, and agribusiness sectors during 2020–2024 identified recurring disclosure patterns that may contribute to the appearance of ESG compliance without providing sufficient evidence of substantive environmental performance. The unit of analysis was the disclosure segment within each sustainability report, including narrative statements, quantitative indicators, tables, graphs, environmental accounting information, and assurance statements. The analysis focused on four reporting areas: environmental impacts, eco-efficiency, environmental accounting, and environmental financial information.

The document analysis identified three recurring patterns: (1) attention deflection and narrative obfuscation, (2) symbolic ESG compliance or organizational façade, and (3) decoupling between ESG claims and reported performance. These patterns were identified when similar disclosure characteristics appeared across multiple reports and could be linked to the operational definitions established from the literature and regulatory benchmarks. The findings are therefore based on observed reporting characteristics rather than assumptions about companies' intentions to mislead stakeholders.

General Patterns of ESG Compliance Illusion Identified

Based on a review of academic literature, analysis of regulatory documents (including POJK 51/2017, GRI standards, SASB, and ISSB), and an examination of sustainability reports from publicly listed companies across various sectors, this study identifies three main patterns of ESG compliance illusion that cut across dimensions. These patterns are not isolated; rather, they are interconnected and often appear simultaneously within a single sustainability report, creating the illusion that a company has substantively complied with ESG principles, whereas actual practices on the ground differ.

Table 1. Three Main Patterns of ESG Compliance Illusion

Pattern	Operational Definition	Manifestation in ESG Reports	Impact on Stakeholders
Attention Deflection / Narrative Obfuscation	Using positive-sounding language, unclear terms, or attractive visuals to distract readers from negative results or actual failures.	Using phrases like ‘committed to,’ ‘gradually,’ or ‘within reasonable limits’; presenting graphs with manipulated scales; giving disproportionate space to small but visually appealing activities (like tree planting) while only briefly mentioning significant issues (like hazardous waste).	Readers are distracted from important issues; an unfounded positive perception is created; public pressure for substantive improvements is reduced.
Symbolic ESG Compliance / Façade	Presenting ESG initiatives symbolically or as procedural formalities without producing meaningful environmental or social performance.	The company has written policies, procedures, sustainability committees, and regular reports, but there is no change in operational practices; ESG targets lack a clear roadmap; and community empowerment claims are made without sufficient resource allocation.	Stakeholders believe that the company has ‘complied’ with ESG standards, even though actual practices have not changed; legitimacy is gained without real improvement.
Decoupling ESG Claims vs Actual Performance	A systematic gap between what is claimed in ESG reports and the actual operational performance that can be verified through independent sources.	The report claims ‘zero waste to landfill,’ but field inspections reveal illegal waste disposal; emission reduction claims are not supported by actual energy consumption data; statements about living wages do not match payroll records.	Investment decisions and public policies are based on misleading information; legal and reputational risks accumulate and only become apparent when an incident or investigation occurs.

The table above outlines the three main patterns of ESG compliance illusion Attention Deflection, Narrative Obfuscation, Symbolic ESG Compliance /Façade, and Decoupling ESG Claims vs Actual

Performance providing operational definitions, manifestations in ESG reports, and impacts on stakeholders. To better visualize these patterns and their connections across environmental, social, and governance dimensions, the following diagram presents a hierarchical summary. It shows how each pattern is reflected in reporting practices and highlights the areas where gaps occur, reinforcing the need for the Green Accountability Firewall as a framework to ensure transparency, accountability, and alignment between reported ESG claims and actual corporate performance.

The illusion patterns presented in this section are derived from the analysis of sustainability reporting practices and are interpreted in light of relevant sustainability reporting literature and regulatory requirements. To distinguish empirical observations from conceptual interpretation, claims describing recurring disclosure patterns are presented as findings from the document analysis, while explanations concerning their potential implications are supported by prior literature and applicable reporting requirements. Recommendations concerning the Green Accountability Firewall are presented as conceptual implications of the identified patterns rather than as empirically tested effects.

Illusion Patterns in the Environmental Impacts Area

The environmental impacts area represents a key dimension of environmental performance and contains several disclosure challenges identified in the document analysis. These challenges are particularly relevant to future environmental costs and external environmental effects, which may be difficult to quantify and verify. The following patterns were identified in the analyzed disclosures and are interpreted in relation to existing environmental reporting literature.

Pattern 1: Foresight Environmental Costs

The document analysis identified disclosures concerning potential future remediation liabilities and long-term environmental risks that were presented primarily in qualitative terms. In several cases, the disclosures did not provide sufficiently detailed quantitative information regarding estimated costs, uncertainty ranges, assumptions, or discount rates. This limitation can make it difficult for stakeholders to assess the potential materiality of future environmental obligations. The interpretation is consistent with the broader literature emphasizing the importance of transparent and decision-useful information concerning environmental liabilities and risks.

Pattern 2: Focus on Symbolic Programs

The document analysis also identified substantial disclosure of environmental programs such as tree planting, clean-up activities, and biodiversity initiatives. However, the reported information did not consistently provide outcome-based indicators such as survival rates, ecological outcomes, or quantified environmental benefits. This pattern is interpreted as a potential form of attention deflection when highly visible initiatives receive greater disclosure emphasis than material

environmental impacts. This interpretation is consistent with prior research on symbolic sustainability communication and selective disclosure.

Pattern 3: Non-transparent Recognition of External Environmental Costs

Another pattern concerns the limited disclosure of environmental externalities. The analyzed reports generally provided information on environmental expenditures borne by the company, such as waste treatment, environmental compliance costs, and remediation activities, while information concerning broader external costs was less explicit. This finding should be interpreted cautiously because external environmental costs are not necessarily required to be recognized in conventional financial reporting. Therefore, the observed disclosure gap reflects both reporting practices and the boundaries of existing accounting and reporting requirements. Conceptually, greater disclosure of material external environmental effects could improve stakeholders' understanding of the broader consequences of corporate activities.

Illusion Patterns in the Eco-efficiency Area

The eco-efficiency analysis identified several disclosure patterns concerning the measurement and presentation of resource-use performance. These patterns relate primarily to the availability of performance data, consistency of measurement, and the balance between narrative and quantitative information.

Pattern 1: Policies Without Performance Data

The analysis identified disclosures emphasizing resource- and energy-efficiency policies without equivalent detail on implementation outcomes or measurable improvements. In particular, some disclosures provided limited information on absolute energy consumption, energy intensity, or quantified efficiency targets. This pattern may create a gap between formal policy commitment and evidence of actual performance.

Pattern 2: Inconsistent Indicator Measurement

The analysis also identified differences in baseline periods, measurement approaches, and reporting scopes across reporting periods. Such changes can affect the comparability of eco-efficiency indicators when the reasons and effects of methodological changes are not clearly disclosed. This issue is relevant to the broader reporting principle of comparability and should therefore be distinguished from deliberate manipulation unless supporting evidence demonstrates intentional distortion.

Pattern 3: Narrative Dominates Over Quantitative Evidence

A further pattern concerns the relative prominence of narrative descriptions compared with quantitative resource-use data. Where information on energy, water, or waste is presented without sufficiently detailed units, boundaries, baselines, or methodological explanations, stakeholders may face difficulties in independently evaluating reported improvements. This pattern is interpreted as a potential form of narrative obfuscation rather than direct evidence of intentional greenwashing.

Illusion Patterns in the Environmental Accounting Area

Environmental accounting provides an important link between environmental performance and financial information. The analysis identified three disclosure issues related to the classification of environmental costs, the presentation of environmental investments, and the treatment of environmental liabilities and related fiscal costs. These issues are discussed in relation to existing accounting requirements and prior environmental accounting literature.

Pattern 1: Partial and Non-standard Recognition of Environmental Costs

The analysis identified differences in how environmental costs were classified and presented across corporate reports. Some environmental expenditures were disclosed separately, while others were incorporated into broader operational or maintenance categories. Such differences may reduce comparability when reporting criteria and classification policies are not clearly explained. The interpretation should therefore be considered in the context of existing accounting requirements and the discretion available in presenting environmental information.

Pattern 2: Reactive Environmental Investments

The analyzed disclosures also identified environmental investments that were primarily presented in relation to regulatory compliance or environmental obligations. However, disclosure did not always clearly distinguish between investments undertaken voluntarily and those required by regulation. This distinction is important because regulatory compliance alone does not necessarily demonstrate proactive environmental performance..

Pattern 3: Exclusion of Environmental Taxes and Provisions in Decision-Making

The analysis identified limited integration between environmental costs or liabilities and broader financial decision-making information. In particular, environmental provisions, taxes, and future remediation costs were not always presented in a way that allows stakeholders to assess their potential implications for investment and operational decisions. This observation is interpreted in relation to existing accounting requirements and the broader literature on environmental management accounting.

Illusion Patterns in the Environmental Financial Statements Area

Environmental financial information is important because environmental risks and obligations can affect financial position, performance, and cash flows. The analysis identified three disclosure patterns concerning the recognition of environmental liabilities, the linkage between sustainability and financial information, and the quantification of emerging environmental risks.

Pattern 1: Only Minimum Liabilities Are Shown

The analysis identified cases in which environmental liabilities were disclosed primarily when they met applicable recognition requirements, while other potential environmental risks were described qualitatively or disclosed outside the main financial statements. This distinction is

important because the absence of a recognized liability does not necessarily indicate the absence of environmental risk

Pattern 2: Environmental and Financial Information Are Not Linked

The analysis also identified limited integration between environmental indicators and financial information. Environmental data such as emissions, energy consumption, or water use were often presented separately from financial information, making it difficult to assess their financial implications. This finding highlights the importance of improving connectivity between sustainability-related information and financial reporting.

Pattern 3: Hidden or Unmeasured Environmental Risks

A further pattern concerns environmental risks that may have financial consequences but are difficult to quantify at the reporting date, including potential regulatory changes, litigation, remediation obligations, and reputational effects. Where such risks are communicated only qualitatively, stakeholders may have difficulty assessing their potential financial significance and evaluating the long-term implications for organizational value creation and risk exposure. Conceptually, the Green Accountability Firewall could address these gaps by encouraging stronger integration of environmental and financial information, independent verification, and governance oversight. However, the effectiveness of these mechanisms requires empirical validation through future research examining their implementation across different organizational contexts and regulatory environments.

Summary Findings and Systematic Gaps

Table 2. Summary of Illusion Patterns by Area and Their Implications for ESG Credibility.

Area	Dominant Illusion Pattern	Root Weakness	Impact on Stakeholders
Environmental Impacts	Attention deflection, symbolic programs, hidden externalities.	No requirement to measure or disclose long-term and external impacts.	Stakeholders and investors underestimate real environmental effects, capital allocation decisions do not reflect social costs
Eco-efficiency	Dominant narrative, minimal data, inconsistent indicators	No universal measurement or reporting standards.	Performance comparisons across companies are impossible, reports cannot be verified.
Environmental Accounting	Indicators are not measured consistently across periods or compared to a clear baseline.	Companies change calculation methods year to year, use favorable baseline years (e.g., unusually high energy use), or report different indicators each year, making comparisons impossible.	Performance trends cannot be analyzed; companies can hide declines by changing methodology or baseline, giving readers the illusion of improvement that has not actually occurred.
Environmental Financial Statements	Sustainability narrative (stories, commitments, vision) dominates over measurable quantitative evidence.	Reports are filled with statements like 'we are committed to environmentally friendly operations' and 'sustainability is at the core of our business strategy,' but provide few actual numbers; charts often lack clear scales.	Untrained readers may be impressed by the rhetoric; there is no verifiable information, making the report more of a public relations document than an accountability tool.

The table highlights the systematic ways in which ESG compliance illusion manifests across different reporting areas. While each area faces distinct challenges, a common thread is the gap between what is reported and the reality of corporate performance. Environmental, efficiency, accounting, and financial statement disclosures often prioritize narrative, selective presentation, or formal compliance over verifiable, substantive information. These patterns reduce transparency, hinder comparability, and can mislead stakeholders, from investors to civil society, about the company's true environmental and financial impact. Addressing these issues requires frameworks like the Green Accountability Firewall, which emphasize quantitative verification, consistent measurement, and integration of environmental data into decision-making processes, ensuring that ESG reports serve as credible tools for accountability rather than symbolic communication.

Green Accountability Firewall as a Solution to the Identified Illusion Patterns

Based on the identified ESG illusion patterns, the Green Accountability Firewall (GAF) addresses the specific weaknesses through three complementary filters: literacy, assurance, and governance. The literacy filter responds primarily to attention deflection, vague narratives, and selective presentation by improving stakeholders' ability to identify missing information, unsupported claims, and inconsistencies in environmental disclosures. The assurance filter addresses unsupported claims, incomplete evidence, and discrepancies between reported information and underlying performance by providing independent verification of material ESG information. The governance filter addresses recurring inconsistencies and selective disclosure by strengthening oversight of the preparation, review, and approval of sustainability information. Thus, the three filters correspond to different stages of the identified illusion patterns: literacy supports detection, assurance supports verification, and governance supports correction and accountability. Through this layered process, the GAF provides an integrated mechanism for reducing the gap between ESG claims and the underlying environmental performance reported by companies.

The implementation of the Green Accountability Firewall (GAF) should be understood as a continuous accountability process rather than a one-time control mechanism. Environmental reporting challenges often emerge from the interaction between information limitations, organizational incentives, and weaknesses in verification systems. Therefore, the effectiveness of GAF depends on the ability of each filter to operate collectively within the sustainability reporting ecosystem. The literacy filter enables stakeholders to critically interpret ESG information by reducing information asymmetry between companies and external users. However, awareness alone may not be sufficient when organizations provide complex disclosures or present environmental achievements without adequate supporting evidence. In this context, the assurance filter strengthens credibility by assessing whether disclosed information reflects actual environmental conditions and whether measurement processes follow reliable standards. Meanwhile, the governance filter ensures

that accountability is embedded within organizational decision-making structures by assigning responsibility for the accuracy, completeness, and consistency of sustainability information. The interaction among these filters creates a feedback mechanism in which identified weaknesses can be detected, evaluated, and addressed through improved disclosure practices and stronger oversight. Consequently, the GAF framework provides a structured approach to enhance ESG reporting reliability by connecting stakeholder understanding, independent verification, and internal governance responsibilities. Future empirical studies are needed to examine how these filters operate in different industries and institutional settings.

Implications and Recommendations

Table 3. Implications of the Green Accountability Firewall for Stakeholders

Stakeholder	Required Actions	Benefits Obtained
company	Voluntarily adopt the GAF; separate data and reporting functions; appoint a firewall officer; request substantive reasonable assurance.	Enhance report credibility; reduce greenwashing litigation risks; improve internal decision-making through accurate data; attract investors who prioritize transparency
auditor	Develop ESG technical competencies; implement substantive verification methodology (reconciliation with independent sources); provide reasonable assurance services.	Differentiation from competitors; higher margins; reduced litigation risk due to truly substantive assurance
Regulators (OJK, IDX, Ministry of Environment and Forestry)	Revise sustainability reporting regulations: mandate function separation, firewall officer, reasonable assurance, and personal accountability.	Enhance the quality of sustainability reports systematically; protect investors from misleading information; support credible sustainable development commitments.
investor	Make GAF adoption an investment criterion; propose shareholder resolutions to encourage GAF adoption.	Reduce investment risk in greenwashing companies; allocate capital to companies with real ESG performance.
“Civil Society / NGOs”	Use the GAF framework to critique ESG reports; advocate for GAF adoption by regulators.	Increase advocacy effectiveness; protect the public from environmental and social impacts hidden by ESG illusion.

The table above highlights how the Green Accountability Firewall (GAF) can create actionable pathways for multiple stakeholder groups. Beyond the specific actions and benefits summarized, the framework encourages a systemic shift in sustainability practices by fostering transparency, accountability, and verifiable ESG performance. Its adoption strengthens trust among stakeholders, aligns corporate behavior with reported claims, and provides a structured approach for auditors, regulators, investors, and civil society to identify, mitigate, and address misleading ESG disclosures.

Importantly, GAF emphasizes proactive engagement, ensuring that all actors contribute to a culture of substantive sustainability reporting rather than symbolic compliance.

5. Conclusion

This study concludes that ESG compliance illusion appears as a serious challenge in corporate sustainability reporting because companies may present ESG compliance in a positive, formal, and convincing manner while the actual performance remains incomplete, symbolic, or difficult to verify. The findings show three main patterns of ESG compliance illusion: attention deflection or narrative obfuscation, symbolic ESG compliance or façade, and decoupling between ESG claims and actual performance. These patterns appear across environmental impacts, eco-efficiency, environmental accounting, and environmental financial statements. They reduce the credibility of sustainability reports, weaken comparability among companies, and may mislead stakeholders, especially investors, auditors, regulators, and civil society. Therefore, the Green Accountability Firewall is proposed as an integrated framework to strengthen ESG accountability through three main filters: literacy, assurance, and governance. This framework helps ensure that ESG claims are not merely rhetorical or symbolic, but substantive, verifiable, evidence-based, and aligned with actual corporate performance.

This study has several limitations. First, the Green Accountability Firewall is developed primarily as a conceptual framework based on the identified ESG illusion patterns and existing literature; therefore, its effectiveness has not yet been empirically validated. Second, the analysis focuses mainly on environmental aspects of ESG reporting, which may limit the applicability of the framework to broader social and governance disclosures. Third, the effectiveness of the three filters may vary across industries, regulatory environments, and levels of assurance and governance maturity.

Based on these findings, companies are advised to improve the quality of sustainability reporting by separating data production and reporting functions, providing measurable environmental and financial information, and ensuring that ESG claims are supported by valid evidence. Auditors should strengthen their ESG assurance competencies and apply substantive verification procedures, while regulators are encouraged to develop stricter reporting requirements related to assurance, accountability, and the integration of environmental information into financial reporting. Investors and civil society should also use the Green Accountability Firewall as a tool to critically evaluate corporate ESG disclosures. Future research is recommended to test the Green Accountability Firewall empirically using a larger sample of companies, across different industries and countries, and to develop measurable indicators that can assess the effectiveness of literacy, assurance, and governance filters in reducing ESG compliance illusion.

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