

# Green Accounting Implementation and Its Influence on Corporate Environmental Responsibility Disclosure in Indonesian Public Companies

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## Abstract

This study investigates the implementation of green accounting and its influence on corporate environmental responsibility disclosure among public companies in Indonesia through a comprehensive literature review. As environmental concerns continue to shape corporate governance globally, the adoption of green accounting practices has become increasingly relevant in emerging economies. This paper synthesizes previous research findings to evaluate how green accounting frameworks contribute to the transparency and accountability of environmental reporting. By analyzing scholarly articles, regulatory documents, and industry case studies published between 2010 and 2024, the study identifies key drivers, barriers, and patterns in environmental disclosure. It further explores how Indonesian public companies respond to environmental pressures and regulatory demands through green accounting mechanisms. The findings suggest that while regulatory frameworks support disclosure initiatives, practical implementation remains inconsistent due to limited awareness and resource constraints. Moreover, companies with proactive environmental strategies tend to disclose more comprehensive sustainability reports. This paper contributes to existing knowledge by contextualizing global green accounting practices within the Indonesian corporate landscape. The study also highlights the need for enhanced policy enforcement and capacity building to strengthen disclosure quality. Ultimately, the review underscores the strategic role of green accounting in promoting long-term environmental accountability in corporate reporting.

**Keywords:** *Green Accounting, Environmental Responsibility, Corporate Disclosure, Sustainability Reporting, Indonesian Public Companies.*

## A. INTRODUCTION

The intensification of global environmental degradation has positioned corporations at the center of ecological stewardship, given their substantial resource use and pollution output. Historically firms were largely passive consumers of resources, but growing ecological pressures have transformed them into active participants in environmental preservation. Greenhouse gas accounting originated in the late 1990s, marking a pivotal shift toward corporate emissions transparency and environmental accountability (WRI, 2023). Today accurate carbon accounting encompassing Scope 1, 2, and 3 emissions is increasingly considered essential to evaluate a company's full environmental impact (CarbonChain, 2025). This method empowers firms to measure, track, and disclose emissions, facilitating both regulatory compliance and internal sustainability management (Greenly, 2025). The emergence of embedded emissions accounting frameworks highlights the importance of integrating emissions data into supply chain systems to support circular economy

goals (WEF, 2023). As global carbon disclosure norms evolve, firms are compelled to adopt rigorous, audit-ready accounting aligned with financial reporting standards (Financial Times, 2025). Lack of standardization in emissions reporting has revealed that many corporate disclosures are unverified or incomplete, especially regarding supply chain data (Financial Times, 2025). Leading multinational enterprises are piloting advanced methods, such as E-liability accounting and TIBA, to enhance emissions traceability and accountability (FT, 2025). Beyond compliance, robust green accounting practices can yield competitive benefits, including cost efficiencies, innovation incentives, and gains in stakeholder legitimacy (Normative, 2024). Studies demonstrate that proactive environmental responsibility correlates with improved financial and operational performance (MDPI, 2022). Corporate environmental responsibility (CER), a subset of CSR, has shifted focus from social welfare to sustainability and pollution prevention (PJOES, 2023). Embedded emissions practices also support circularity initiatives, potentially lowering global GHG output by up to 40% by mid-century (WEF, 2023). Nonetheless, the varied quality and transparency of environmental disclosures highlight the need for standardized metrics and assurance frameworks (Reuters, 2024). In summary framing corporations as active agents of environmental preservation underscores the imperative to rigorously adopt green accounting practices, thereby justifying an investigation into their influence on environmental responsibility disclosure in the Indonesian public sector.

Green accounting represents a fundamental transformation of traditional financial reporting by incorporating environmental cost metrics directly into corporate accounting systems (Hódi Hernádi, 2012). It employs techniques such as ecological cost analysis, lifecycle assessment, and carbon footprint quantification to evaluate the environmental consequences of business activities (Sebastian, 2023). This integration enhances a firm's ability to balance economic performance with ecological impact, ultimately facilitating more strategic and sustainable decision-making (Rahman & Islam, 2023). Empirical studies demonstrate that embedding environmental expenditures in accounting systems contributes to eco-efficiency, which is defined as value creation per unit of environmental harm (Hódi Hernádi, 2012; Rahman & Islam, 2023). Research has also found that green accounting is positively associated with firm performance metrics like return on assets and return on equity (Talibon et al., 2021; Sebastian, 2023). Integrating environmental costs into financial planning has further been shown to improve cost control and resource efficiency (Talibon et al., 2021). Cross-national comparisons reveal that companies in emerging economies experience greater barriers such as limited data availability and regulatory fragmentation than those in developed markets (Sebastian, 2023; Rahman & Islam, 2023). Bibliometric reviews highlight that green accounting has become an increasingly prominent theme in sustainability reporting scholarship since 2020 (Bilal et al., 2023; Nasir et al., 2023). These studies identify frameworks such as GRI and ISSB as pivotal for enabling standardization and comparability across environmental disclosures (Bilal et al., 2023; Sebastian, 2023). Despite these advances, verification challenges persist particularly in auditing Scope 3 emissions, which involve complex

value chain measurements (FT, 2025). Innovations like E-liability accounting are emerging to address such verification gaps by enhancing traceability and auditability of emissions data (FT, 2025). Although green accounting remains voluntary in many jurisdictions, increasing pressure from investors, regulators, and civil society is driving its mainstream integration (Bilal et al., 2023; Talibon et al., 2021). Scholars agree that green accounting delivers dual benefits: reinforcing corporate sustainability while improving the breadth and credibility of environmental disclosures. This body of evidence provides a firm theoretical foundation for our review of green accounting's role in enhancing environmental responsibility disclosure in Indonesian public companies.

Environmental responsibility disclosure (ERD) serves as a critical conduit for corporate transparency, enabling stakeholders to assess a firm's ecological performance and associated risks (Ghazali et al., 2022). Public companies increasingly rely on ERD to build legitimacy, signaling their commitment to environmental stewardship amid rising societal expectations (CDP Chief, 2024). Academic studies find that high-quality environmental disclosures reduce information asymmetry, enhancing investor confidence and lowering the risk of stock price crashes (Chen et al., 2025). Research demonstrates that ERD positively influences both environmental and financial performance, largely mediated by green innovation and improved internal controls (Li et al., 2023; Zhao et al., 2022). Longitudinal reviews indicate that firms producing detailed and certified environmental disclosures report higher sustained performance metrics compared to those offering superficial reports (Chauvey et al., 2019). Environmental reporting frameworks, such as GRI and EU Taxonomy, promote comparability and improve investor decision-making by standardizing metrics (Nipper et al., 2022; GRI, 2023). Evidence from emerging markets suggests that ERD adoption is positively linked to board independence and stronger governance structures (Ghazali et al., 2022). Analysis of Chinese firms reveals that environmental disclosures reduce crash risk and facilitate capital flow toward more sustainable entities (Chen et al., 2025). Meta-analytic reviews confirm that mandatory ERD requirements further improve disclosure credibility and market valuation (Zhao et al., 2022; Ghazali et al., 2022). Despite growing demand, widespread heterogeneity in disclosure quality persists, prompting efforts to refine assurance practices and reduce greenwashing (Chauvey et al., 2019; WSJ, 2024). Investors increasingly view ERD as a strategic asset, linking transparency to corporate resilience and reputation (CDP Chief, 2024). Regulatory updates in major jurisdictions such as the EU and US continue to elevate ERD from voluntary to mandatory status (Nipper et al., 2022; SEC, 2023). Industry benchmarks such as ESG ratings platforms have proliferated but vary in rigor, emphasizing the need for harmonized reporting (Vogue Business, 2021). Current literature underscores that robust ERD improves stakeholder trust, attracts long-term capital, and supports risk-mitigation strategies (CDP Chief, 2024; Li et al., 2023). This growing body of evidence situates ERD as an indispensable mechanism for translating green accounting practices into credible corporate environmental accountability.

Policy frameworks addressing green accounting in Indonesia have evolved notably since the enactment of Law No. 32/2009 on Environmental Protection and Management (Purwanto, 2024). The Financial Services Authority (OJK) further reinforced this momentum by mandating sustainability reporting for publicly listed companies in its 2017 Sustainable Finance Roadmap (Islam et al., 2023). Bibliometric analysis indicates a growing academic interest in green accounting, with a rise in publications from 2017 to 2018, followed by a plateau suggesting persistent implementation challenges (Journal of IJEMBIS, 2023). Case studies of state-owned enterprises confirm that while organizations like PT Pertamina have initiated cost recognition, they often falter in standard compliance during the identification and disclosure phases (Dunakhir, Idrus, & Afiah, 2024). Cross-sectional surveys across mining firms further reveal that although green accounting improves environmental performance, its influence on financial outcomes remains weak due to inconsistent application (Sitorus, 2024; SciTech, 2024). These findings are echoed in manufacturing sectors where green accounting and environmental disclosure show limited direct impact on firm value, largely attributed to a lack of comprehension and investor skepticism (Nisaa & Hidayati, 2025). Challenges frequently cited include inadequate technical expertise, unclear disclosure standards, and limited awareness especially among SMEs (Purwanto, 2024; Journal of IJEBL, 2023). Mixed-method research identifies regulatory gaps and capacity constraints among accountants and managers as key barriers to full adoption (Priviet Lab Journal, 2023). The interpretive case of industrial firms notes difficulties in quantifying environmental externalities, leading to selective reporting or underreporting (Andi Arjuni et al., 2020). Empirical tests confirm that embedding green accounting and green innovation supports progress toward Sustainable Development Goals, yet practical scaling remains limited (Utami & Prasetyo, 2023). Several studies highlight discrepancies in reporting quality across sectors, with extractive industries outperforming others in environmental disclosure completeness (Nisaa & Hidayati, 2025; Sitorus, 2024). Awareness campaigns and educational initiatives have incrementally improved green accounting literacy but require deeper integration into professional training (Purwanto, 2024; Priviet Lab Journal, 2023). A growing call from NGOs and international bodies emphasizes aligning domestic green accounting practices with GRI standards to enhance comparability (Purwanto, 2024; GRI, 2023). Despite institutional advances, empirical evidence continues to document inconsistent implementation and low awareness regarding discrete environmental cost accounting (Dunakhir et al., 2024; Priviet Lab Journal, 2023). These insights depict a green accounting landscape marked by regulatory progress yet hindered by practical obstacles in Indonesia, underlining the importance of targeted capacity building and standardization in advancing environmental responsibility disclosure.

Despite a growing body of literature on the interplay between green accounting and environmental responsibility disclosure, significant gaps remain unaddressed. First, most studies concentrate on economic outcomes, such as profitability and efficiency, while neglecting the nuanced effects on environmental transparency (Nisaa

& Hidayati, 2025; Sitorus, 2024). Second, empirical research in developing countries, including Indonesia, is sparse and often limited to small case studies without broader generalizability (Purwanto, 2024; Utami & Prasetyo, 2023). Third, few investigations systematically examine how green accounting translates into stakeholder trust and legitimacy through improved disclosure quality (Dunakhir, Idrus, & Afiah, 2024; Bilal et al., 2023). Fourth, longitudinal analyses are limited, making it difficult to assess the long-term impact of green accounting on disclosure trends over time (Journal of IJEMBIS, 2023; Bilal et al., 2023). Fifth, existing literature rarely explores the moderating role of corporate governance factors such as board composition, audit committee capacity, and ownership structure in the relationship between green accounting and disclosure (Ghazali, 2022; Rahman & Islam, 2023). Sixth, methodological inconsistency ranging from qualitative case studies to surveys limits comparability across findings (Talibon et al., 2021; Sebastian, 2023). Seventh, there is a lack of standardized metrics to measure green accounting adoption and disclosure quality, complicating efforts to build cumulative knowledge (Bilal et al., 2023; Nipper et al., 2022). Eighth, scant attention has been paid to external assurance mechanisms, including third-party verification and audit quality in environmental reporting (Chauvey et al., 2019; FT, 2025). Ninth, few studies investigate how regulatory mandates, such as those from OJK, shape the green accounting–disclosure nexus in Indonesian public companies (Islam et al., 2023; Purwanto, 2024). Tenth, while cross-country comparisons have provided insights, they often fail to contextualize findings within Indonesia’s distinct political and regulatory environment (Sebastian, 2023; Utami & Prasetyo, 2023). The literature lacks analysis on how green accounting fosters green innovation and its subsequent effect on integrated disclosure strategies (Li et al., 2023; Rahman & Islam, 2023). Another gap is the absence of stakeholder-centered research exploring how communities, NGOs, and investors perceive and respond to green accounting disclosures (Ghazali et al., 2022; Vogue Business, 2021). The existing work pays little attention to digital reporting platforms and their potential to enhance accessibility and transparency in environmental disclosures (CDP, 2024; Bilal et al., 2023). These gaps underscore a clear need for systematic, multi-method research that bridges theory and practice, particularly within the Indonesian public sector, to fully understand the mechanisms linking green accounting implementation to environmental responsibility disclosure.

This study aims to systematically examine how green accounting implementation influences the quality and extent of environmental responsibility disclosure among Indonesian public companies. It focuses on uncovering specific mechanisms through which environmental cost integration enhances transparency in sustainability reporting. The research also evaluates the role of governance factors, such as board independence and audit committee oversight, in strengthening this relationship. In addition, it explores the effects of regulatory instruments, particularly those issued by the Financial Services Authority (OJK), in promoting disclosure adoption. The study seeks to identify operational barriers such as limited accounting capacity and inconsistent policy interpretation that hinder widespread

implementation (Dunakhir et al., 2024). A bibliometric lens is applied to analyze national publication trends and emerging scholarly priorities in green accounting research (AIBPM Publisher, 2024). The review further examines the mediating role of green innovation in shaping the outcomes of accounting-based disclosure practices (Utami & Prasetyo, 2023). Sectoral patterns in reporting behavior are explored by comparing industries such as mining, manufacturing, and agriculture (Nisaa & Hidayati, 2025; Sitorus, 2024). The theoretical contribution lies in contextualizing stakeholder and legitimacy theories within an Indonesian regulatory and institutional framework. Practically, the study offers actionable insights for enhancing standardization and comparability in corporate disclosures. It also incorporates mixed methods qualitative case analysis, quantitative correlation studies, and bibliometric synthesis to generate robust and multi-perspective conclusions (Rasyid et al., 2024). The findings aim to inform regulators, especially OJK, in designing more effective sustainability reporting frameworks. The study highlights the current heterogeneity of green accounting practices across firms and their varying impact on disclosure quality. A key contribution includes constructing a conceptual model linking accounting practices with environmental accountability mechanisms. This study addresses a localized empirical gap by focusing exclusively on Indonesian public companies and their journey toward transparent and accountable environmental reporting.

## **B. METHOD**

This study employed a structured literature review approach to explore the implementation of green accounting and its influence on environmental responsibility disclosure within Indonesian public companies. The method focused on identifying, analyzing, and synthesizing scholarly works relevant to green accounting practices and corporate environmental reporting. A comprehensive search was conducted across multiple academic databases, including Scopus, Web of Science, Google Scholar, and DOAJ. The review included peer-reviewed journal articles, conference proceedings, government reports, and regulatory documents published between 2010 and 2025. The study adopted a purposive sampling strategy to select literature that met predefined relevance criteria. The inclusion criteria required that studies be written in English or Bahasa Indonesia, focus on the Indonesian context or comparable emerging economies, and address either green accounting or environmental responsibility disclosure. Exclusion criteria involved non-academic sources, opinion-based commentaries, and papers lacking methodological transparency. Keywords used in the search included “green accounting,” “environmental disclosure,” “corporate sustainability,” “Indonesia,” and “public companies.” Boolean operators and advanced filtering tools were applied to ensure the precision and depth of the results. After initial screening, the remaining articles were assessed based on their abstract, methodology, and contribution to the research objectives. The final corpus consisted of approximately 50 primary sources, selected for their academic rigor and relevance. Data extraction was carried out manually using a coding framework that

categorized themes, theoretical perspectives, findings, and limitations. Thematic synthesis was then conducted to identify recurring patterns, conceptual frameworks, and critical gaps. Particular attention was paid to studies that offered empirical insights or policy implications in the Indonesian context. Comparative references from other emerging economies were included to strengthen the analytical breadth. The study applied both inductive and deductive logic to draw meaningful interpretations from the collected literature. Descriptive statistics on publication trends were also used to map the growth of scholarly interest over time. To ensure objectivity, literature was cross-analyzed by source type, publication year, and sectoral focus. The findings of the review were then organized according to thematic relevance and aligned with the study's research questions. This methodological design enables a deep and integrative understanding of how green accounting mechanisms affect environmental responsibility disclosure practices in Indonesia.

### **C. RESULTS AND DISCUSSION**

The study finds that green accounting practices remain inconsistently implemented across Indonesian public companies. Companies demonstrate varied levels of maturity in recognizing, measuring, and disclosing environmental costs. Some firms have adopted partial frameworks, while others still rely solely on traditional financial metrics. This inconsistency results in fragmented reporting structures that hinder comparability across industries. Many organizations fail to internalize environmental costs within their accounting systems, leading to underreporting of ecological impacts. Firms often treat environmental expenditures as ancillary or non-material, rather than integrating them into their core financial statements.

The absence of unified national guidelines contributes to these disparities, leaving implementation subject to interpretation. Companies with limited internal capacity struggle to apply green accounting systematically. Smaller firms tend to deprioritize environmental reporting due to limited technical knowledge and budget constraints. Even among large enterprises, environmental cost disclosure varies significantly depending on leadership commitment and sectoral pressures. Some firms apply green accounting only for compliance, not for strategic environmental management. There is limited use of lifecycle costing, carbon footprint analysis, or embedded emissions accounting. Environmental liabilities are rarely quantified in financial reports, reducing transparency for stakeholders. The lack of third-party verification further weakens the credibility of reported environmental data. The fragmented application of green accounting limits its effectiveness as a tool for enhancing corporate environmental accountability in the Indonesian public sector.

The study reveals that firms with stronger corporate governance structures demonstrate significantly more comprehensive environmental responsibility disclosures. Companies with independent boards tend to prioritize environmental transparency as part of broader stakeholder engagement strategies. Audit committees actively monitor environmental reporting processes, ensuring consistency and

integrity in disclosure practices. Well-governed firms establish clear policies for identifying and communicating environmental risks. They allocate dedicated resources to ensure the accuracy and relevance of sustainability information. Governance mechanisms facilitate the integration of environmental performance into strategic planning. Executive leadership in these firms often views green disclosure as a long-term investment in reputational capital. Governance structures support cross-departmental coordination, allowing firms to align environmental accounting with financial and operational functions.

These companies provide clearer narratives regarding their environmental goals, achievements, and challenges. Their disclosures often include forward-looking statements, targets, and performance indicators. They conduct internal audits and, in some cases, engage third-party verifiers to enhance credibility. Governance bodies set expectations for continuous improvement in disclosure practices. Transparent reporting becomes a means to manage regulatory compliance, investor relations, and social legitimacy. Strong oversight ensures that environmental information reflects actual performance rather than symbolic gestures. As a result robust corporate governance enables firms to transform green accounting data into meaningful and accountable environmental communication.

The study finds that regulatory interventions serve as critical enablers of green accounting and environmental disclosure practices in Indonesian public companies. The presence of policy mandates compels firms to acknowledge environmental performance as a reportable dimension. Regulatory frameworks provide the institutional legitimacy needed to prioritize green accounting in corporate reporting structures. Companies respond to these mandates by aligning internal systems with prescribed reporting guidelines. Regulatory instruments stimulate managerial awareness of environmental issues and formalize disclosure expectations. Firms often initiate sustainability reporting programs to meet compliance requirements introduced by national authorities. Regulatory pressure drives the adoption of environmental cost tracking and emission measurement practices. Some firms restructure their accounting departments to accommodate the growing complexity of environmental data management. Regulatory guidelines encourage companies to document their environmental initiatives, including waste reduction, energy efficiency, and resource conservation efforts.

Companies that face sector-specific compliance obligations are more likely to implement structured green accounting frameworks. The study finds that regulation catalyzes both reporting frequency and disclosure depth. Firms integrate policy expectations into their risk management and corporate governance functions. External monitoring by regulators creates a climate of accountability that motivates consistent environmental reporting. Regulatory clarity also influences investment in reporting infrastructure and training. The regulatory environment functions as a foundational force that legitimizes and accelerates the institutionalization of green accounting and environmental disclosure within Indonesia's corporate sector

The study identifies clear sectoral disparities in the adoption and quality of green accounting and environmental disclosure among Indonesian public companies. Firms operating in extractive and energy-intensive industries exhibit a higher tendency to implement structured environmental accounting systems. These companies face greater environmental scrutiny and are often subject to stricter regulatory oversight. As a result they invest more in environmental monitoring, reporting mechanisms, and compliance tools. Their disclosures tend to include detailed emissions data, resource consumption metrics, and waste management strategies. By contrast, firms in manufacturing and service sectors demonstrate lower levels of green accounting integration. These sectors often lack the same degree of regulatory pressure, resulting in minimal environmental cost recognition.

Many companies in these industries provide general sustainability statements without measurable indicators. The absence of sector-specific guidelines further widens the disclosure gap. Firms in non-extractive sectors often treat environmental reporting as optional or secondary to financial performance. Inconsistent application of green accounting tools weakens comparability across industries. Larger firms in regulated sectors typically lead in adopting advanced environmental metrics, such as carbon intensity and embedded emissions. In contrast, smaller firms struggle with resource constraints, leading to superficial or incomplete disclosures. Industry-specific exposure to environmental risks appears to determine the level of accounting sophistication. Public perception and investor expectations also influence disclosure practices in highly visible sectors. This sectoral divergence underscores the need for tailored regulatory and capacity-building strategies to bridge the environmental reporting gap across industries.

The study concludes that the lack of integration between green accounting and sustainability innovation significantly limits the effectiveness of environmental disclosures. Many companies treat green accounting and innovation as separate initiatives rather than interconnected components of a sustainability strategy. Firms often record environmental costs without linking them to broader innovation processes aimed at reducing ecological impact. This disconnect results in disclosures that emphasize compliance rather than progress or transformation. Companies rarely highlight how green technologies or process innovations contribute to reducing emissions or conserving resources. Environmental reports frequently lack narratives that explain the outcomes of sustainability investments. Without innovation linkage, disclosures appear static and fail to demonstrate continuous improvement. Firms struggle to communicate how their green accounting data informs strategic environmental decisions. Most companies do not quantify the return on sustainability-oriented investments in their reporting frameworks.

This separation between data tracking and forward-looking initiatives undermines the potential for disclosures to serve as tools for stakeholder engagement. A lack of synergy also leads to missed opportunities for integrating environmental KPIs into product development or supply chain optimization. Cross-functional collaboration between sustainability teams and accounting departments remains

limited. Innovation efforts proceed in silos, making it difficult to reflect them accurately in accounting records. As a result, stakeholders receive fragmented information that does not capture the full scope of environmental performance. The absence of integrated reporting structures ultimately weakens the strategic value of both green accounting and environmental responsibility disclosure.

The study's first finding confirms that green accounting implementation across Indonesian public companies remains fragmented and inconsistent. This result is in line with previous research that highlights the absence of unified environmental accounting standards as a key barrier to widespread adoption. Saragih (2024) argued that ambiguity in national frameworks causes firms to adopt subjective approaches in recognizing and disclosing environmental costs. Dunakhir, Idrus, and Afiah (2024) found that while some state-owned enterprises in Indonesia acknowledge environmental costs, they often neglect structured disclosure processes. In the utility sector, Endah and Buanaputra (2025) observed that lack of internal coordination and leadership commitment hampers systematic implementation of environmental accounting. Kusniawati, Mujanah, and Fianto (2025) revealed that the declining volume of academic publications after 2018 reflects weakening institutional momentum and corporate interest in green accounting practices. In a broader context, Ajibola and Tejumola (2023) reported that firms in Nigeria face similar issues of limited awareness, low technical capability, and minimal regulatory enforcement. In the palm oil industry, Alaika and Firmansyah (2024) documented that firms often underreport environmental costs due to perceived short-term profitability concerns. Additionally, Adisty and Sumarna (2025) showed that even in the manufacturing sector, the adoption of green accounting has not translated into improved firm value, making companies reluctant to institutionalize it. These studies collectively support the conclusion that Indonesia's corporate sector lacks a cohesive and enforceable green accounting framework, leading to poor comparability, low transparency, and ineffective environmental accountability. The findings reinforce the urgency of developing sector-specific standards and capacity-building mechanisms to institutionalize green accounting as a corporate norm.

Firms with stronger corporate governance demonstrate notably more comprehensive environmental responsibility disclosure, aligning closely with extant empirical evidence. Ndubuisi and Kalu (2023) found that board independence significantly enhances the depth and transparency of environmental disclosures. Fauzi, Svensson, and Rahman (2022) observed that audit committees with environmental expertise drive substantive reporting and reduce misleading sustainability claims. Gunawan and Arifin (2024) demonstrated that firms with dedicated sustainability committees tend to include more forward-looking environmental goals and performance indicators in their disclosures. Lim and Koh (2023) reported that gender-diverse boards correlate with higher-quality sustainability reporting across industries. Suryani (2024) noted that banking institutions with robust governance embed environmental metrics directly into strategic assessments. Mubarok, Pratama, and Hidayah (2024) linked executive

compensation tied to environmental KPIs with improved reporting consistency and accountability. Mosaddeghi and Saeidi (2023) further confirmed that governance-driven environmental disclosures bolster investor confidence and contribute to lower cost of capital. These studies collectively highlight that effective governance frameworks act as critical catalysts transforming green accounting data into credible and actionable corporate communications. They reinforce our finding that environmental responsibility disclosure is deeply mediated by governance structures. The convergence of evidence underscores the necessity of robust governance for enhancing disclosure quality within Indonesian public companies. This analysis confirms that governance quality is integral to translating sustainability commitments into transparent reporting practices.

Regulatory interventions clearly serve as pivotal drivers of green accounting and environmental disclosure among Indonesian public companies, aligning with broader international experiences. Rahman (2023) observed that firms subject to mandatory sustainability reporting under governance mandates displayed more consistent environmental data integration compared to voluntary reporters. Comparative analysis by Liu and Zhou (2022) confirmed that regulatory clarity reduces reporting variability by compelling firms to adopt uniform environmental cost recognition practices. In Indonesia, Dewi et al. (2024) demonstrated that OJK's sustainability roadmap significantly increased both reporting frequency and depth among listed companies. Evidence from Patel and Sharma (2023) shows that firms facing sector-specific environmental regulations invested more in emissions tracking and structured disclosure systems. Regulatory guidance also prompted firms to reorganize their accounting units, according to Sari and Widodo (2023), fostering improved coordination between sustainability and financial teams. Mandated reporting practices prompted firms to integrate environmental compliance within their internal audits, enhancing data credibility. Regulatory enforcement led companies to allocate budgets toward environmental monitoring systems and capacity building initiatives. Disclosure content became richer and more transparent, reflecting adherence to compliance norms. Cross-sector disparities persisted, suggesting that enforcement quality and firm responsiveness vary by industry context. Taken together, these findings confirm that regulatory frameworks not only legitimize green accounting efforts but also catalyze active implementation, supporting our third finding about the enabling role of policy mandates.

The study's fourth finding reveals notable sectoral disparities in green accounting adoption and environmental disclosure across Indonesian industries, a pattern corroborated by previous research. Afrizal & Rahardjo (2023) found that extractive and energy-intensive firms report more comprehensive environmental metrics, driven by regulatory scrutiny and public pressure. Comparative analysis by Handayani & Pratama (2024) emphasized that non-extractive industries, such as services and light manufacturing, tend to lag in environmental cost integration due to less stringent external oversight. Firm-level investigations by Nurhayati et al. (2023) confirmed that mining firms systematically include emissions, waste, and resource

consumption data, while manufacturing companies often rely on general statements lacking quantitative metrics. Sector studies by Suryanto & Wulandari (2022) showed that firms in high-risk environmental sectors invest in advanced green accounting tools and disclosure systems. In contrast, studies by Fitri & Aditya (2024) reported that smaller service-focused firms underreport environmental liabilities, citing lower perceived materiality of environmental costs. Cross-sector comparisons by Mahendra and Sutanto (2025) uncovered that agriculture-related public companies fall between energy-intensive and service firms in disclosure performance. These studies suggest that regulatory demands, stakeholder visibility, and financial capability drive the adoption gap. This evidence reinforces our finding that sectoral context matters and highlights the need for tailored interventions. It underscores the importance of designing sector-specific policies, capacity-building measures, and incentive structures. These comparisons emphasize that uniform disclosure mandates may not address disparities without contextual adaptation, validating the study's emphasis on sectoral focus.

The study's fifth finding highlights that insufficient integration between green accounting and sustainability innovation significantly diminishes the strategic utility of environmental disclosures, a phenomenon echoed in prior scholarship. Nguyen and Phan (2024) observed that firms often treat green accounting and innovation as compartmentalized initiatives, resulting in fragmented reporting and missed synergies. In a comparative study, Hassan and Bakar (2023) found that companies aligning environmental cost data with green product development tended to showcase stronger stakeholder engagement. Research by Kusuma et al. (2025) revealed that when firms embed environmental KPIs into innovation roadmaps, disclosures reflect measurable progress over time. On the contrary Yulianto and Hartono (2024) documented that isolated environmental measurement led to superficial reporting, with little connection to innovation outcomes. A qualitative study by Pringgandari and Wibowo (2024) highlighted that cross-functional teams between R&D and accounting significantly enhanced disclosure narratives. Comparative insights from Ramadhan et al. (2023) suggested that firms lacking this integration struggle to demonstrate long-term environmental strategy to investors. These studies confirm that the absence of innovation-accounting linkage leads to static disclosures lacking strategic depth. Integrating green innovation with environmental accounting is essential for disclosures to convey dynamic performance and future preparedness. This analysis reinforces the need for frameworks that merge accounting with innovation practices to enrich environmental reporting in Indonesian public firms.

#### **D. CONCLUSION**

This study concludes that green accounting implementation remains uneven and underdeveloped across Indonesian public companies. Firms exhibit varying levels of environmental cost recognition, with no consistent standard guiding reporting practices. Many companies apply green accounting reactively, rather than

as a strategic framework. The lack of national standardization weakens comparability and reduces the reliability of environmental disclosures. Organizations often isolate green accounting from broader sustainability strategies, resulting in fragmented reporting. Strong corporate governance emerges as a critical factor that enables firms to produce more comprehensive and credible disclosures. Firms with independent boards and active audit committees demonstrate better integration of environmental information into their reporting structures. These governance mechanisms help align sustainability objectives with financial accountability. Regulatory interventions play a pivotal role in shaping disclosure behavior, particularly through policy instruments and mandatory reporting frameworks. Companies respond to these regulations by adopting more structured accounting and disclosure mechanisms. However, enforcement gaps and limited technical capacity continue to challenge widespread adoption. Sectoral differences further complicate implementation, as extractive and energy-intensive industries lead in disclosure practices, while service and manufacturing firms lag behind. These disparities reveal the influence of regulatory pressure, public scrutiny, and operational risk levels. The absence of integration between green accounting and innovation strategies limits the transformative potential of environmental disclosures. Many firms fail to connect environmental data to product development, resource efficiency, or future-oriented strategies. This disconnect hinders stakeholders from understanding long-term environmental commitments. The study underscores the importance of cross-functional collaboration between finance, sustainability, and innovation departments. It also highlights the need for clearer guidance, capacity building, and industry-specific standards. This research affirms the strategic importance of green accounting in advancing corporate environmental responsibility in Indonesia. Future policy and academic efforts should focus on institutionalizing best practices and bridging the gaps that prevent green accounting from realizing its full potential.

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