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ENVIRONMENTAL ACCOUNTABILITY OR SYMBOLIC REPORTING? EVIDENCE FROM ESG DISCLOSURES IN INDONESIA'S TELECOMMUNICATIONS INDUSTRY

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Abstrak: Penelitian ini mengkaji kredibilitas pengungkapan lingkungan Environmental, Social, and Governance (ESG) dengan mengevaluasi apakah informasi keberlanjutan yang dilaporkan mencerminkan kinerja lingkungan aktual pada perusahaan telekomunikasi di Indonesia. Dengan analisis isi kualitatif terhadap laporan keberlanjutan perusahaan telekomunikasi besar antara tahun 2022 hingga 2024, sebuah kerangka pengkodean digunakan untuk menilai transparansi, keterukuran, dan integrasi operasional pengungkapan, sekaligus mengklasifikasikannya ke dalam tiga tingkat kematangan: simbolik, operasional, dan substantif. Temuan menunjukkan bahwa sebagian besar pengungkapan berada pada tingkat simbolik dan operasional, dengan hanya sedikit yang mencapai tingkat substantif, sehingga mengungkap kesenjangan yang persisten antara komitmen yang diungkapkan dan bukti kinerja yang dapat diverifikasi. Pengurangan kertas yang terkait digitalisasi memberikan hasil paling konsisten terukur, sementara program limbah elektronik, daur ulang, dan kesadaran lingkungan umumnya dilaporkan tanpa metrik yang jelas. Sejalan dengan teori legitimasi, pola ini menunjukkan bahwa pelaporan ESG berfungsi bukan hanya sebagai mekanisme akuntabilitas, tetapi juga sebagai alat untuk menjaga legitimasi di mata pemangku kepentingan. Hasil penelitian menunjukkan bahwa inisiatif yang terintegrasi ke dalam operasi inti lebih cenderung menghasilkan pengungkapan yang terukur dan kredibel dibandingkan aktivitas CSR yang berdiri sendiri. Penelitian ini berkontribusi pada literatur akuntansi keberlanjutan dengan mengalihkan fokus dari keberadaan program lingkungan menuju kredibilitas pengungkapan ESG, serta menawarkan kerangka kematangan yang dapat direplikasi untuk industri yang padat infrastruktur.

Kata kunci: pengungkapan ESG; pelaporan keberlanjutan; kinerja lingkungan; teori legitimasi; industri telekomunikasi; Indonesia

Abstract: *This study examines the credibility of Environmental, Social, and Governance (ESG) environmental disclosures by evaluating whether reported sustainability information reflects actual environmental performance in Indonesian telecommunications companies. Using qualitative content analysis of sustainability reports from major telecom firms between 2022 and 2024, a coding framework assesses disclosure transparency, quantifiability, and operational integration, classifying disclosures into three maturity levels: symbolic, operational, and*

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substantive. The findings show that most disclosures cluster within the symbolic and operational levels, with only a few reaching substantive maturity, revealing a persistent gap between disclosed commitments and verifiable performance evidence. Paper reduction linked to digitalization provides the most consistent measurable outcomes, while electronic waste, recycling, and awareness programs are typically reported without clear metrics. Consistent with legitimacy theory, this pattern suggests ESG reporting functions not only as an accountability mechanism but also as a tool for maintaining stakeholder legitimacy. The results indicate that initiatives integrated into core operations are more likely to produce measurable, credible disclosures than isolated CSR activities. This research contributes to sustainability accounting literature by shifting the analytical focus from the existence of environmental programs to the credibility of ESG disclosures, offering a replicable maturity framework for infrastructure-intensive industries.

Keywords: *ESG disclosure; sustainability reporting; environmental performance; legitimacy theory; telecommunications industry; Indonesia*

I. INTRODUCTION

The rapid expansion of information and communication technology (ICT) has significantly accelerated economic growth and digital transformation worldwide. In Indonesia, telecommunications companies play a central role in supporting national connectivity by developing broadband infrastructure, digital services, and communication platforms. However, the deployment and maintenance of telecommunications infrastructure also generate environmental externalities, including electronic waste (e-waste), energy consumption, packaging waste, and equipment disposal. As infrastructure-intensive organizations, telecommunications companies are increasingly expected to manage environmental risks while maintaining operational efficiency and long-term sustainability.

In response to these challenges, Environmental, Social, and Governance (ESG) frameworks have become an important mechanism for evaluating corporate sustainability performance. ESG reporting extends beyond traditional financial disclosure by providing information regarding environmental risks, social responsibility, and governance practices that influence long-term firm value [1], [2]. Investors, regulators, and stakeholders increasingly incorporate ESG performance into decision-making processes, viewing sustainability reporting as an indicator of corporate accountability and risk management capability.

From an accounting perspective, ESG disclosure represents a form of non-financial reporting aimed at reducing information asymmetry between corporations and stakeholders [3]. High-quality sustainability reporting should therefore provide reliable, comparable, and decision-useful information regarding environmental performance. However, previous research suggests that many sustainability reports emphasize narrative descriptions of policies and commitments without providing measurable performance indicators [4], [5]. When environmental disclosures lack quantifiable evidence, stakeholders may find it difficult to evaluate whether reported initiatives represent substantive environmental performance or symbolic communication.

This issue is particularly relevant in the context of legitimacy theory, which suggests that organizations use disclosure strategies to maintain social acceptance and align with societal expectations [6], [7]. Companies facing increasing environmental scrutiny may therefore increase the volume of sustainability disclosure in order to demonstrate responsibility and responsiveness to stakeholder concerns. However, disclosure quantity does not necessarily reflect actual environmental improvement. In some cases, sustainability reporting may function as a legitimacy-seeking mechanism that emphasizes symbolic commitments rather than measurable environmental outcomes [8]. The telecommunications industry provides an important empirical context for examining these issues. Rapid technological innovation results in frequent equipment replacement cycles, generating substantial volumes of electronic waste and obsolete network components. At the same time, telecommunications companies often promote digital solutions—such as electronic billing, digital services, and virtual platforms—as environmentally friendly initiatives that reduce physical resource consumption. Although these initiatives are frequently highlighted in sustainability reports, the extent to which they produce measurable environmental benefits remains unclear.

In emerging economies such as Indonesia, ESG reporting practices are still evolving. Regulatory initiatives such as sustainable finance regulations issued by the Financial Services Authority (Otoritas Jasa Keuangan/OJK)

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have encouraged publicly listed companies to publish sustainability reports and disclose environmental performance indicators. Nevertheless, previous studies indicate that ESG disclosure practices in emerging markets remain heterogeneous, with varying levels of transparency and limited standardization of environmental metrics [9], [10]. This lack of standardized indicators complicates cross-company comparison and may reduce the credibility of sustainability reporting.

Existing research on sustainability reporting in telecommunications companies has primarily focused on the extent of disclosure or the presence of environmental initiatives. However, relatively limited attention has been given to the credibility of ESG disclosures, particularly whether reported initiatives are supported by measurable performance outcomes. From a sustainability accounting perspective, evaluating the reliability and decision usefulness of environmental disclosure is essential for understanding whether ESG reporting functions as a genuine accountability mechanism or primarily as a strategic communication tool. Therefore, this study examines the credibility of ESG environmental disclosures in Indonesian telecommunications companies by evaluating whether reported sustainability initiatives are supported by quantifiable environmental performance indicators. Using qualitative content analysis of corporate sustainability reports from major telecommunications firms between 2022 and 2024, the study assesses disclosure transparency, the availability of measurable indicators, and the alignment between narrative reporting and verifiable environmental outcomes.

This research contributes to sustainability accounting literature in several ways. First, it shifts the analytical focus from the presence of sustainability initiatives to the credibility and quality of ESG disclosures. Second, it provides empirical insights into ESG reporting practices within an infrastructure-intensive industry characterized by rapid technological change and significant environmental externalities. Third, the findings offer practical implications for regulators, investors, and corporate managers seeking to improve transparency, accountability, and comparability of sustainability reporting in emerging markets.

II. LITERATURE REVIEW

2.1 ESG Disclosure and Sustainability Reporting

Environmental, Social, and Governance (ESG) disclosure has emerged as an important component of contemporary corporate reporting systems. Unlike traditional financial statements, ESG reporting provides stakeholders with information regarding environmental risks, social responsibility, and governance practices that influence long-term organizational sustainability [1]. Investors increasingly integrate ESG indicators into decision-making processes, as environmental performance is often associated with risk management, regulatory compliance, and long-term value creation [2].

Within the field of sustainability accounting, ESG reporting functions as a mechanism for enhancing corporate transparency and accountability. The primary objective of such disclosure is to reduce information asymmetry between corporations and stakeholders by providing reliable and decision-useful non-financial information [11]. Ideally, sustainability reports should contain measurable indicators that allow stakeholders to evaluate environmental performance objectively.

However, prior research suggests that the quality of ESG disclosure varies significantly across companies and industries. Clarkson et al. [3] demonstrate that environmental disclosure does not always correspond with actual environmental performance. Similarly, Michelon et al. [4] argue that many sustainability reports emphasize symbolic commitments rather than substantive environmental outcomes. As a result, evaluating the credibility of ESG disclosure has become an increasingly important topic in sustainability accounting research.

2.2 Symbolic Versus Substantive Sustainability Disclosure

A growing body of literature distinguishes between symbolic and substantive sustainability disclosure. Symbolic disclosure refers to communication strategies that emphasize environmental commitment without providing measurable evidence of actual performance improvements. Substantive disclosure, by contrast, reflects genuine environmental initiatives supported by verifiable performance indicators [5]. Symbolic disclosure may occur when companies publish sustainability reports primarily to respond to stakeholder pressure or regulatory expectations rather than to communicate measurable environmental outcomes. In such cases, sustainability reporting may function as a reputational management tool rather than a transparent accountability mechanism [8].

Empirical studies have documented this phenomenon in various industries. For example, Lyon and Maxwell [12] highlight how companies may engage in "greenwashing," presenting environmentally responsible images while underlying operational practices remain unchanged. This distinction between symbolic and substantive reporting is particularly important for stakeholders who rely on ESG information to assess corporate sustainability performance.

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2.3 Legitimacy Theory and Sustainability Reporting

Legitimacy theory provides an important theoretical lens for understanding why organizations disclose sustainability information. According to legitimacy theory, companies seek to ensure that their activities are perceived as consistent with societal norms and expectations in order to maintain access to resources and organizational survival [6].

Corporate disclosure can therefore be interpreted as a strategy for maintaining social legitimacy. When companies face environmental scrutiny or public pressure, they may increase the volume of sustainability disclosure to demonstrate compliance with societal expectations [7]. However, such disclosures do not necessarily reflect actual improvements in environmental performance. Within this framework, sustainability reporting may serve as a legitimacy-seeking mechanism that emphasizes policies, commitments, and partnerships rather than measurable environmental outcomes. Consequently, analyzing the credibility and transparency of ESG disclosures becomes essential for determining whether sustainability reporting represents substantive accountability or symbolic communication.

2.4 ESG Reporting in Infrastructure-Intensive Industries

Industries characterized by extensive infrastructure deployment and technological innovation often face significant environmental challenges. Telecommunications companies represent a particularly relevant context due to the rapid turnover of electronic devices, network equipment, and digital infrastructure. These operational characteristics generate environmental externalities such as electronic waste, energy consumption, and packaging waste. At the same time, telecommunications firms frequently promote digitalization as a sustainability strategy. Initiatives such as electronic billing, virtual services, and digital platforms are often presented as environmentally beneficial because they reduce physical resource consumption. However, the environmental impact of these initiatives depends on the scale of adoption and integration into core business operations.

Research on ESG disclosure in the telecommunications sector remains relatively limited, particularly in emerging markets. Existing studies primarily focus on the extent of sustainability disclosure rather than the credibility of the reported information [9]. As ESG reporting practices continue to evolve, evaluating the reliability and transparency of environmental disclosures has become an important area of inquiry.

2.5 Research Gap and Study Contribution

Although previous research has examined ESG disclosure practices across industries, relatively limited attention has been given to the credibility of environmental reporting within the telecommunications sector. Most studies focus on the presence or extent of sustainability disclosure rather than evaluating whether reported initiatives are supported by measurable environmental outcomes.

This limitation is particularly relevant in emerging economies, where ESG reporting frameworks are still developing and disclosure practices remain heterogeneous. Without standardized indicators, sustainability reports may emphasize narrative descriptions of environmental initiatives while providing limited evidence of measurable performance.

Therefore, this study addresses this research gap by examining whether ESG environmental disclosures in Indonesian telecommunications companies provide verifiable performance indicators or rely primarily on narrative reporting. By focusing on disclosure credibility rather than disclosure volume, the research contributes to sustainability accounting literature and provides insights into the effectiveness of ESG reporting as a mechanism for corporate accountability.

III. METHODOLOGY

3.1 Research Design

This study adopts a qualitative research design using content analysis to evaluate the credibility of ESG environmental disclosures in corporate sustainability reports. Content analysis is widely used in sustainability accounting research to systematically analyze corporate disclosures and identify patterns in reporting practices [13], [14].

The approach allows researchers to examine not only the presence of sustainability initiatives but also the transparency, quantifiability, and credibility of reported environmental information.

3.2 Data Sources

The study uses secondary data derived from publicly available sustainability reports published by major Indonesian telecommunications companies. The sample includes Telkomsel [15], [16]; Indosat Ooredoo Hutchison [17]–[20]; XL Axiata [21]–[27]; Smartfren [28], [29]; Moratelindo [30], [31]; and Lintasarta [32].

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Sustainability reports from 2022–2024 were selected to reflect recent ESG disclosure practices following the strengthening of sustainable finance regulations in Indonesia. These reports are considered reliable sources of corporate sustainability information because they represent official company disclosures typically prepared in accordance with internationally recognized reporting frameworks such as the Global Reporting Initiative (GRI).

3.3 Unit of Analysis

The unit of analysis in this study is individual environmental initiatives related to waste management and resource efficiency disclosed in sustainability reports. Each initiative was examined to determine whether the disclosure contains narrative descriptions of environmental activities, measurable performance indicators, and evidence of operational integration.

3.4 Coding Framework for ESG Disclosure Quality

To assess the credibility of environmental disclosures, a structured coding framework was developed based on sustainability accounting principles. Each initiative was evaluated across five dimensions: (1) Transparency — clarity and completeness of the reported environmental initiative; (2) Quantifiability — availability of measurable indicators such as percentages, volumes, or reduction targets; (3) Operational Integration — the extent to which the initiative is embedded in core business processes; (4) Consistency — continuity of disclosure across multiple reporting periods; and (5) Verifiability — availability of data that allows independent evaluation of environmental performance. Each dimension was assessed using a three-point scale (low, moderate, high) to evaluate disclosure quality.

3.5 ESG Disclosure Maturity Classification

Based on the coding results, environmental disclosures were categorized into three levels of maturity. Level 1 — Symbolic Disclosure consists of narrative descriptions of environmental commitments without measurable outcomes. Level 2 — Operational Disclosure includes environmental initiatives linked to operational activities with partial quantitative indicators. Level 3 — Substantive Disclosure comprises disclosures supported by measurable indicators demonstrating environmental impact. This classification allows the study to distinguish between symbolic reporting practices and substantive environmental accountability.

3.6 Data Analysis Procedure

The coded data were analyzed using cross-company comparison to identify patterns in ESG environmental disclosure practices across the telecommunications sector. The analysis focuses on the transparency of environmental reporting, the availability of quantitative indicators, and the integration of sustainability initiatives into operational activities. This comparative approach enables identification of industry-wide trends in ESG disclosure credibility.

3.7 Validity and Reliability

Several procedures were applied to enhance research validity and reliability. First, source triangulation was employed by analyzing multiple sustainability reports from different reporting periods for each company. Second, the use of a structured coding framework improves consistency in evaluating disclosure quality. Third, all data were derived from official corporate reports, reducing potential bias associated with informal or secondary sources.

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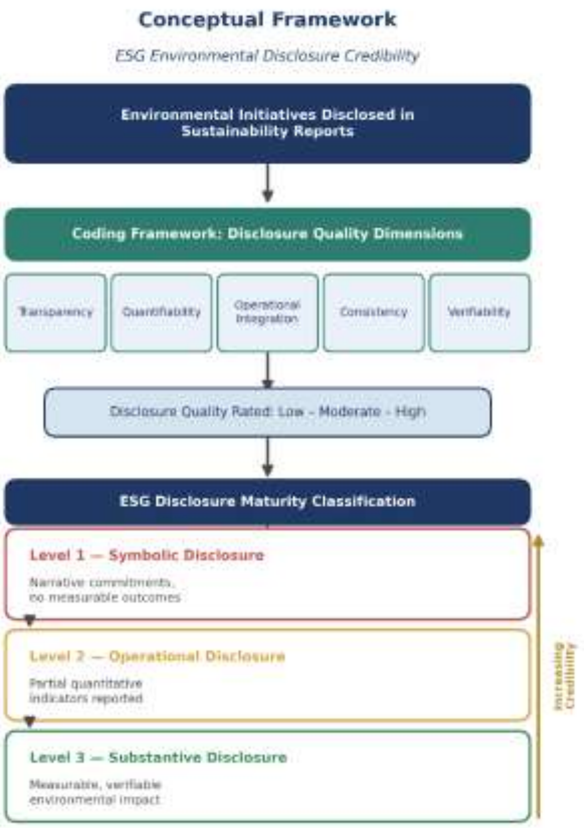

Figure 1. Conceptual Framework for Assessing ESG Environmental Disclosure Credibility
(Steelyana et al., 2026)

Figure 1 illustrates the conceptual framework used to analyze the credibility of ESG environmental disclosures. The framework emphasizes that the credibility of sustainability reporting depends on the quality of disclosure supporting environmental initiatives. By evaluating transparency, quantifiability, and operational integration, the model enables classification of ESG disclosures into symbolic, operational, and substantive categories.

IV. RESULTS

This section presents the findings of the content analysis of sustainability reports published by major Indonesian telecommunications companies. The analysis focuses on the quality, transparency, and credibility of ESG environmental disclosures, particularly whether reported initiatives are supported by measurable performance indicators. Rather than evaluating the effectiveness of environmental programs themselves, the results assess the extent to which sustainability reports provide decision-useful information regarding environmental performance.
Table 1 presents quantifiable evidence of paper consumption reduction resulting from digitalization initiatives. Paperless systems represent one of the few environmental programs consistently reported with measurable indicators, enabling objective assessment of environmental performance.

Table 1. Paper Consumption Reduction from Digitalization Initiatives

Company	Year	Initiative	Paper Reduction Reported	Unit	Disclosure Type
XL Axiata	2015	Paperless e-Billing System	Approximately 31,032 reams per year (≈2,586 reams per month)	Reams of paper	Quantitative
Moratelindo	2024	Paperless Operational Initiative	Reduction from 2,628 to 2,135 reams (≈23% decrease)	Reams of paper	Quantitative

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Company	Year	Initiative	Paper Reduction Reported	Unit	Disclosure Type
XL Axiata	2019–2024	Digital procurement and billing systems	Continuous reduction reported, exact figures vary by year	Reams of paper	Partially quantitative

Source: Author's data compilation and analysis, 2026

4.1 Overall Transparency of ESG Environmental Disclosures

The analysis reveals substantial variation in the transparency of ESG environmental reporting across companies. This variation suggests that ESG reporting practices in the Indonesian telecommunications sector remain heterogeneous, reflecting different levels of organizational commitment to sustainability disclosure.

Most companies provide extensive narrative descriptions of sustainability policies, programs, and commitments. These disclosures often emphasize corporate responsibility, stakeholder engagement, and alignment with global sustainability frameworks. However, only a limited number of firms present quantitative indicators that allow stakeholders to assess the magnitude of environmental impact.

In many cases, disclosures focus on activities performed rather than outcomes achieved. For example, reports frequently describe awareness campaigns, training programs, or environmental policies without specifying measurable reductions in waste generation or resource consumption. This pattern suggests that ESG reporting in the sector is largely narrative-driven, potentially limiting its usefulness for performance evaluation.

4.2 Availability of Quantitative Environmental Indicators

A key criterion for assessing disclosure credibility is the presence of quantifiable performance data. The findings indicate that only a minority of disclosed initiatives include clear metrics, such as percentage reductions, volume measurements, or numerical targets.

Paper reduction initiatives represent the most consistently quantified environmental activities across companies. Several firms report measurable decreases in paper consumption resulting from digitalization efforts, such as electronic billing and paperless administrative systems. These disclosures provide concrete evidence of environmental improvement and enable comparison across reporting periods.

In contrast, initiatives addressing electronic waste and plastic waste often lack numerical indicators. Programs involving recycling, circular economy practices, or device reuse are typically described qualitatively, with limited information on the scale of implementation or environmental outcomes. As a result, stakeholders cannot determine whether these initiatives produce substantial environmental benefits or operate on a relatively small scale.

The absence of standardized metrics further complicates cross-company comparison. Different firms use varying units, time frames, and reporting formats, making it difficult to evaluate relative performance. This inconsistency reduces the comparability and reliability of ESG information.

4.3 Integration of Environmental Initiatives into Core Operations

The degree to which environmental initiatives are embedded in core business activities influences both their potential impact and disclosure quality. The analysis identifies three general patterns of integration.

First, some companies implement operationally integrated initiatives that directly affect business processes. Examples include digital services that reduce physical materials, equipment reuse programs, and supply chain modifications. These initiatives are more likely to generate measurable environmental outcomes, although not all firms provide detailed metrics.

Second, several companies focus on efficiency-oriented internal programs, such as paperless systems, energy savings, or waste segregation in offices. These initiatives contribute to resource reduction but may have limited external impact. Disclosure quality varies, with some firms reporting numerical results while others provide only descriptive information.

Third, a number of companies emphasize compliance-based or awareness-driven activities, including environmental training, community programs, or regulatory adherence. These disclosures often highlight corporate responsibility but rarely include measurable performance indicators. Consequently, their environmental effectiveness is difficult to assess.

4.4 Consistency of Reporting Across Companies

Cross-company comparison indicates that ESG environmental disclosures are highly heterogeneous in structure and content. While all firms publish sustainability reports, the level of detail, organization, and transparency varies widely.

Some companies present structured reporting aligned with recognized frameworks, including clearly defined objectives, performance indicators, and progress evaluations. Others provide fragmented information scattered across narrative sections, making it difficult to identify specific environmental outcomes.

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The lack of standardized reporting practices suggests that sustainability disclosure remains an evolving process in the Indonesian telecommunications sector. Without consistent formats and metrics, stakeholders face challenges in comparing environmental performance across firms.

4.5 ESG Disclosure Maturity Classification

Based on the coding framework, environmental disclosures were classified into three levels of maturity reflecting their credibility and transparency. Level 1 — Symbolic Disclosure companies primarily provide narrative descriptions of environmental commitments, policies, and awareness programs without measurable indicators. Level 2 — Operational Disclosure includes initiatives linked to operational activities that present partial quantitative information, such as resource savings or reduction targets. Level 3 — Substantive Disclosure presents clear, quantifiable indicators demonstrating measurable environmental impact, allowing stakeholders to assess performance objectively and track progress over time.

The analysis indicates that most companies fall within the first two levels, with only a few initiatives reaching the substantive disclosure stage. This distribution suggests that ESG reporting in the sector is transitioning toward greater transparency but has not yet achieved consistent maturity.

4.6 Implications for Disclosure Credibility

Overall, the findings reveal a gap between the volume of sustainability disclosure and the availability of verifiable performance data. Although companies increasingly report environmental initiatives, the absence of consistent quantitative indicators limits the credibility and decision usefulness of ESG information.

From an accounting perspective, disclosures dominated by narrative content may function as communication tools rather than reliable performance reports. Without measurable outcomes, stakeholders cannot accurately assess environmental risk management or sustainability achievements.

These results highlight the importance of strengthening reporting standards to ensure that ESG disclosures provide transparent, comparable, and verifiable information. Improved disclosure practices would enhance accountability and support more informed decision-making by investors, regulators, and other stakeholders.

Table 2. ESG Environmental Disclosure Quality in Indonesian Telecommunications Companies

Company	Main Environmental Initiatives	Quantitative Indicators Available	Integration into Core Operations	Disclosure Transparency	ESG Disclosure Maturity Level
Indosat Ooredoo Hutchison	Digital top-up, waste exchange programs, packaging reduction	High — percentage data and measurable outcomes reported	Strong — directly affects service delivery and consumer behavior	High — structured reporting with clear metrics	Level 3 — Substantive Disclosure
XL Axiata	Paperless systems, recycling programs, community initiatives	Moderate — measurable paper reduction, limited e-waste data	Moderate — operational efficiency oriented	Moderate — mix of narrative and quantitative data	Level 2 — Operational Disclosure
Telkomsel	SIM card recycling, equipment reuse, eSIM adoption	Moderate — targets reported, limited actual outcomes	Strong — integrated with product lifecycle management	Moderate — initiatives clear but metrics limited	Level 2 — Operational Disclosure
Moratelindo	Hazardous waste management, paper reduction, storage facilities	Low–Moderate — compliance targets with minimal quantitative evidence	Moderate — linked to regulatory requirements	Moderate — compliance-focused reporting	Level 2 — Operational Disclosure
Lintasarta	Waste management partnership, employee awareness programs	Low — qualitative descriptions only	Low — primarily CSR-oriented activities	Low — limited measurable information	Level 1 — Symbolic Disclosure
Smartfren	eSIM adoption, environmental education, eco-friendly materials	Low–Moderate — qualitative improvements without precise metrics	Moderate — internal operational changes	Low–Moderate — narrative-dominant reporting	Level 1 — Symbolic Disclosure

Source: Author's data compilation and analysis, 2026

Table 2 summarizes the quality of ESG environmental disclosures across the sampled telecommunications companies based on transparency, availability of quantitative indicators, and integration into core operations.

Table 3. Indicators Used to Assess ESG Disclosure Credibility

Assessment Dimension	Criteria for High Quality Disclosure
Transparency	Clear explanation of initiatives, scope, and implementation
Quantifiability	Presence of measurable indicators (percentages, volumes, targets)
Operational Integration	Link between initiative and core business processes
Consistency	Continuity of reporting across periods
Verifiability	Availability of data that can be independently evaluated

Source: Author's data compilation and analysis, 2026

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Table 3 outlines the criteria employed to assess ESG disclosure quality from a sustainability accounting perspective. These indicators enable systematic evaluation of whether reported environmental initiatives are supported by measurable and reliable performance information.

V. DISCUSSION

The findings reveal important insights into the credibility of ESG environmental disclosures in Indonesian telecommunications companies. Although all observed firms publish sustainability reports and describe various environmental initiatives, the extent to which these disclosures provide reliable and decision-useful information varies substantially. From a sustainability accounting perspective, the results suggest that the volume of disclosure does not necessarily correspond to the quality or transparency of reported environmental performance.

This section presents the results of the content analysis of sustainability reports published by major Indonesian telecommunications companies and interprets the findings within relevant theoretical perspectives. The analysis focuses on the transparency, credibility, and maturity of ESG environmental disclosures. Rather than evaluating the effectiveness of environmental programs themselves, the study examines whether corporate sustainability reports provide measurable and verifiable evidence of environmental performance.

5.1 Transparency of ESG Environmental Disclosure

The analysis indicates that all observed telecommunications companies disclose environmental initiatives related to sustainability, waste management, and resource efficiency. However, the level of transparency varies significantly across companies. While some firms provide structured reporting with clear descriptions of environmental initiatives, others rely heavily on general narrative explanations without providing detailed operational information.

In many sustainability reports, environmental disclosures emphasize corporate policies, sustainability commitments, and stakeholder engagement activities. Although these disclosures demonstrate organizational awareness of environmental issues, they do not always provide sufficient detail to assess the scale or effectiveness of environmental initiatives.

From a theoretical perspective, this pattern aligns with legitimacy theory, which suggests that organizations disclose sustainability information in order to maintain social acceptance and demonstrate alignment with societal expectations [6], [7]. Telecommunications companies operate in an environment of increasing public scrutiny regarding environmental sustainability. Consequently, sustainability reporting may function partly as a communication mechanism aimed at reinforcing corporate legitimacy.

However, the reliance on narrative disclosure without detailed operational evidence may limit the usefulness of sustainability reports as tools for evaluating environmental performance. From a sustainability accounting perspective, high-quality disclosure should provide transparent and decision-useful information that allows stakeholders to evaluate corporate environmental impacts.

5.2 Availability of Quantifiable Environmental Indicators

One of the most significant findings of this study is the limited availability of quantifiable environmental indicators within ESG disclosures. Although companies frequently describe environmental initiatives, only a small number of disclosures include measurable data such as percentage reductions, volume measurements, or numerical targets.

Paper reduction initiatives associated with digitalization represent one of the few environmental programs consistently reported with quantitative indicators. For example, several companies report reductions in paper consumption resulting from electronic billing systems and digital administrative processes. These initiatives provide measurable evidence of environmental improvement and allow stakeholders to track performance over time.

In contrast, initiatives related to electronic waste management, recycling, and environmental awareness programs are often described qualitatively without providing measurable indicators. As a result, it is difficult to determine whether these initiatives produce substantial environmental benefits or operate on a relatively limited scale.

This finding supports previous research suggesting that sustainability reporting often emphasizes communication rather than performance measurement [4]. Without quantitative indicators, ESG disclosures may have limited decision usefulness because stakeholders cannot objectively evaluate environmental outcomes.

5.3 Integration of Environmental Initiatives into Core Operations

Another important aspect of ESG disclosure credibility is the extent to which environmental initiatives are integrated into core business operations. The analysis identifies three general categories of integration.

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First, some initiatives are directly embedded in core operational processes. These include digital services such as electronic billing systems, digital top-up platforms, and electronic SIM technology, which reduce the use of physical materials. Because these initiatives are closely connected to business operations, their environmental impacts are easier to measure and report.

Second, some companies implement internal operational efficiency programs, such as paperless office systems and waste management practices within organizational facilities. While these initiatives contribute to resource efficiency, their environmental impact is typically limited to internal organizational activities.

Third, several disclosures emphasize compliance-based or awareness-oriented programs, including environmental training and community engagement initiatives. Although these activities demonstrate corporate responsibility, they rarely provide measurable evidence of environmental performance.

The findings suggest that environmental initiatives integrated into core business operations are more likely to generate measurable outcomes and credible disclosures. This observation highlights the importance of aligning sustainability strategies with operational processes rather than treating them as isolated corporate social responsibility activities.

5.4 ESG Disclosure Maturity Classification

Using the coding framework developed in this study, ESG environmental disclosures were classified into three levels of reporting maturity: symbolic disclosure, operational disclosure, and substantive disclosure.

Symbolic disclosures primarily consist of narrative descriptions of environmental commitments, policies, or awareness programs without measurable performance indicators. These disclosures emphasize corporate responsibility but provide limited evidence of tangible environmental outcomes.

Operational disclosures represent initiatives linked to business processes that include partial quantitative indicators. For example, companies may report resource efficiency improvements or reduction targets but provide limited evaluation of actual environmental impact.

Substantive disclosures represent the highest level of reporting maturity. These disclosures present measurable indicators demonstrating environmental outcomes, allowing stakeholders to evaluate performance objectively.

The analysis indicates that most telecommunications companies fall within the symbolic or operational disclosure categories, with only a limited number of initiatives reaching the substantive disclosure level. This finding supports previous research highlighting the gap between the volume of sustainability disclosure and the availability of verifiable performance evidence [5].

5.5 Implications for ESG Reporting Credibility

Overall, the findings reveal a significant gap between the increasing volume of sustainability disclosure and the availability of measurable environmental performance indicators. While telecommunications companies increasingly publish sustainability reports and describe environmental initiatives, the majority of disclosures remain narrative-driven.

From a legitimacy theory perspective, such disclosures may serve as mechanisms for maintaining corporate reputation and demonstrating alignment with societal expectations. However, the absence of measurable indicators limits the ability of stakeholders to distinguish between symbolic communication and substantive environmental performance.

These results also have important implications for sustainability accounting and ESG reporting standards. Without standardized metrics and consistent reporting practices, sustainability disclosures may lack comparability and reliability across companies. Strengthening reporting frameworks and emphasizing quantifiable indicators could enhance the credibility and decision usefulness of ESG information for investors, regulators, and other stakeholders.

NOVELTY STATEMENT

This study contributes to sustainability accounting literature by examining the credibility of ESG environmental disclosures rather than merely documenting the existence of environmental initiatives. While prior studies often focus on disclosure levels or types of sustainability programs, this research evaluates whether reported activities are supported by measurable and verifiable performance indicators. By analyzing the gap between narrative disclosure and quantitative evidence, the study provides insight into the reliability and decision usefulness of ESG information in the telecommunications industry. The findings offer a deeper understanding of whether sustainability reporting functions as substantive accountability or as symbolic communication aimed at maintaining organizational legitimacy.

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VI. CONCLUSION

This study examines the credibility of ESG environmental disclosures in Indonesian telecommunications companies by evaluating whether reported sustainability initiatives are supported by measurable performance indicators. Using qualitative content analysis of corporate sustainability reports, the research reveals substantial variation in disclosure transparency, quantifiability, and integration into core business operations.

The findings indicate that while telecommunications companies increasingly report environmental initiatives, the majority of disclosures remain narrative-driven and lack verifiable quantitative evidence. Only a limited number of programs provide measurable outcomes that enable stakeholders to assess environmental performance objectively. Paper reduction initiatives associated with digitalization emerge as the most consistently quantified activities, whereas programs addressing electronic waste, recycling, and environmental awareness are often described without clear metrics.

The classification of disclosures into symbolic, operational, and substantive levels demonstrates that ESG reporting in the sector is still evolving toward greater accountability. Symbolic disclosures emphasizing policies and commitments are prevalent, while fully substantive reporting supported by comprehensive performance indicators remains relatively limited. This pattern suggests that sustainability reporting may serve not only as an accountability mechanism but also as a tool for legitimacy signaling.

From a sustainability accounting perspective, the findings highlight a gap between the volume of ESG disclosure and the reliability of the information provided. Without standardized metrics and consistent quantitative reporting, stakeholders face difficulties in evaluating environmental risks and comparing performance across firms. Consequently, the decision usefulness of ESG information may be constrained, particularly for investors seeking to assess long-term sustainability and risk exposure.

The study also identifies digital transformation as a key driver of measurable environmental outcomes. Initiatives such as electronic billing, digital services, and virtual platforms directly reduce material consumption and generate quantifiable efficiency gains, making them more conducive to credible reporting. These results suggest that integrating sustainability initiatives into core business operations enhances both environmental impact and disclosure transparency.

The implications of this research extend to regulators, standard-setting bodies, and corporate managers. Strengthening reporting requirements to emphasize verifiable performance indicators could improve the credibility and comparability of ESG disclosures. Greater alignment between sustainability reporting and financial reporting frameworks may also enhance accountability by linking environmental performance to risk management and long-term value creation.

This study contributes to sustainability accounting literature by shifting the analytical focus from the existence of environmental programs to the credibility of the information disclosed. By demonstrating the importance of measurable indicators and transparent reporting, the research provides insights into how ESG disclosures can better serve stakeholders' information needs.

Future research may expand the scope by incorporating longitudinal analysis, cross-industry comparisons, or quantitative examination of the relationship between ESG disclosure quality and financial performance. Such studies would further enhance understanding of the role of sustainability reporting in corporate governance and investment decision-making.

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