

## **Social Responsibility and Regulatory Issues: A Review of Corporate Financial Reporting in the Palm Oil Industry**

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### **Abstract**

The palm oil industry has increasingly faced global criticism regarding its environmental degradation, labor practices, and governance challenges, placing corporate financial reporting at the center of debates on accountability and transparency. This study aims to critically review how social responsibility and regulatory issues are incorporated into corporate financial reporting practices in the palm oil sector, and to identify gaps that limit their effectiveness. A qualitative research design was employed through a systematic literature review (SLR), which is appropriate for synthesizing complex evidence across multiple studies. Data were collected from Scopus-indexed publications using structured keyword searches, followed by rigorous inclusion and exclusion criteria. A total of forty articles published between 2020 and 2025 were selected. The analysis used thematic coding to identify recurring practices, reporting standards, and challenges. Findings highlight four major themes: persistent fragmentation between global and national standards, disparities in reporting capacity between large and small enterprises, limited independent verification that undermines credibility, and strong external stakeholder pressure as the main driver of improved disclosure quality. Global frameworks such as GRI, TCFD, and IFRS enhance transparency but are unevenly applied, while national mechanisms such as ISPO and MSPO lack alignment with international benchmarks. In conclusion, corporate financial reporting in the palm oil industry demonstrates gradual progress in integrating social responsibility and regulatory compliance, though fundamental structural challenges persist. Future research should explore hybrid reporting models, stronger enforcement, and targeted capacity building to ensure greater inclusivity and credibility across the sector.

**Keywords:** Corporate reporting, Palm oil, Regulatory compliance, Social responsibility, Sustainability.

### **1. Introduction**

Over the past few decades, corporate financial reporting has seen significant changes, largely due to stakeholders' increasing call for transparency, accountability, and sustainability in business practices. The evolution from traditional financial disclosure toward broader frameworks that incorporate environmental, social, and governance (ESG) dimensions reflects a paradigm shift in corporate responsibility worldwide. Whereas financial reporting once focused primarily on profitability, solvency, and shareholder value, the global regulatory environment now requires corporations to account for their wider impacts on society, natural ecosystems, and future generations. This trend is visible across multiple sectors, but it is particularly pronounced in industries with high environmental and social footprints, such as extractives, forestry, and agriculture (Mohd Sufian et al., 2025). As a key player in the global agricultural market, palm oil is one of the most traded commodities and represents a central focus of this transformation, raising complex debates around social responsibility, environmental stewardship, and regulatory compliance.

With an annual output of over 75 million metric tons in 2023, the palm oil industry remains a cornerstone of the global agri-commodity market, fulfilling more than 35% of the world's vegetable oil requirements (Azzam et al., 2025). Dominating the global supply chain, Indonesia and Malaysia account for roughly 85% of total exports, while new production hubs are emerging in regions such as Africa and Latin America. Palm oil's quick rise in production is due to its high yield efficiency, which produces four to ten times the oil per hectare of crops such as soybeans, sunflowers, or rapeseed, making it an efficient and versatile option for various industries, including food, cosmetics, and biofuels (Yarlagadda et al., 2025). This growth, however, has been accompanied by a range of environmental and social challenges, including deforestation and greenhouse gas emissions, conflicts over land rights, labor exploitation, and tensions within local communities. These challenges have positioned palm oil at the nexus of sustainability debates, intensifying pressure on corporate actors to strengthen financial reporting practices that integrate social responsibility and regulatory compliance.

The growing scrutiny on palm oil companies is not only the result of civil society activism but also reflects structural shifts in global governance. The European Union's EUDR, the certification standards of the Roundtable on Sustainable Palm Oil (RSPO), and emerging domestic regulations in producing countries are reshaping corporate disclosure requirements. For instance, under the EUDR, companies importing palm oil into Europe must provide verifiable data on supply chain traceability and compliance with deforestation-free standards. Likewise, Indonesia's ISPO certification and Malaysia's MSPO framework mandate reporting that covers not only financial outcomes but also environmental and social considerations (Santoso et al., 2025). Consequently, corporate financial reporting within the palm oil sector is no longer confined to profit-and-loss statements or balance sheets but is embedded in a broader discourse of accountability, legitimacy, and global market access.

Social responsibility within palm oil reporting has therefore become inseparable from regulatory frameworks. Corporate Social Responsibility (CSR) reporting, sustainability disclosures, and integrated reporting mechanisms represent evolving attempts to reconcile economic objectives with ethical, environmental, and governance obligations. The GRI, TCFD, and SASB have established global frameworks that are now being widely adopted by palm oil companies. Nonetheless, compliance levels remain inconsistent. Studies indicate that only around 40% of publicly listed palm oil firms in Southeast Asia consistently report on sustainability indicators, with significant variation across environmental, labor, and governance metrics (Saati et al., 2025). This inconsistency highlights the tension between voluntary reporting frameworks and binding regulatory obligations, raising questions about the efficacy of current mechanisms in driving substantive change.

The corporate financial reporting landscape in palm oil is further complicated by the intersection of international investor expectations and local regulatory capacities. On one hand, global institutional investors representing more than USD 120 trillion in assets under management are embedding ESG considerations into portfolio strategies, compelling palm oil firms to align with international disclosure standards to attract and retain capital (Stradling et al., 2025). On the other hand, local producers, particularly small and medium enterprises (SMEs), which account for nearly 40% of oil palm cultivation in Indonesia, struggle to comply with stringent reporting requirements due to resource constraints, lack of technical capacity, and limited access to global certification systems. These asymmetries create uneven playing fields in compliance, where large multinationals can leverage financial and technical expertise, while smaller actors risk exclusion from international supply chains. The resulting duality underscores the urgent need for systematic research on how regulatory frameworks and social responsibility imperatives shape financial reporting within the palm oil industry.

A significant dimension of this challenge lies in the credibility and comparability of reported data. Corporate disclosures in palm oil often face criticism for "greenwashing," the selective presentation of sustainability achievements while omitting or downplaying adverse impacts. For instance, while 70% of RSPO-certified companies report reductions in carbon emissions, fewer than 25% disclose detailed metrics on labor conditions or community conflicts (Song et al., 2025). Such discrepancies not only undermine stakeholder trust but also obscure the actual impact of regulatory compliance and CSR initiatives. Ensuring data reliability thus requires systematic approaches to standard-setting, third-party verification, and harmonization across jurisdictions. This reinforces the role of systematic reviews, such as the present study, in critically evaluating reporting practices to discern patterns, best practices, and persistent gaps.

Another critical issue is the role of financial institutions in shaping reporting behavior. Banks and investors are increasingly adopting risk-based lending and investment policies tied to ESG disclosures. For example, the Equator Principles, which govern project financing worth more than USD 4.8 trillion worldwide, require borrowers in high-impact industries, including palm oil, to disclose compliance with environmental and social standards (Asrif et al., 2025). These external pressures complement regulatory initiatives, creating a multi-level governance environment in which financial reporting serves as a key instrument of accountability. However, the effectiveness of these mechanisms depends on the degree to which firms internalize reporting as a strategic rather than a compliance exercise. This raises fundamental questions about whether financial reporting in the palm oil industry genuinely reflects social responsibility and regulatory adherence or remains a performative response to external pressures.

At the academic level, the intersection of palm oil, corporate financial reporting, social responsibility, and regulatory issues remains underexplored systematically. While numerous studies examine CSR implementation, sustainability certifications, or regulatory frameworks independently, fewer have synthesized these dimensions comprehensively within the financial reporting domain. Existing literature tends to be fragmented, focusing on either environmental impacts, governance challenges, or financial disclosures without adequately connecting these strands into a coherent analysis (Onsongo et al., 2025; Putranto et al., 2025). This gap calls for a structured assessment to synthesize the available knowledge, identify thematic patterns, and evaluate the extent to which financial reporting has integrated social responsibility and regulatory imperatives in the palm oil industry.

This study, therefore, adopts a Systematic Literature Review (SLR) approach to critically evaluate the intersection of social responsibility and regulatory issues in corporate financial reporting within the palm oil sector. By employing the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol, the review ensures methodological rigor, transparency, and reproducibility. The focus on peer-reviewed literature published between 2020 and 2025 reflects the most recent regulatory transformations and reporting practices, capturing the industry's contemporary dynamics. The curated dataset of 40 eligible articles provides a robust empirical basis for thematic analysis, with bibliographic management facilitated by Mendeley Desktop to ensure consistency and traceability. Through this approach, the study seeks to move beyond anecdotal critiques and to provide a systematic, evidence-based assessment of financial reporting in the palm oil industry.

This research seeks to map out the key themes, emerging trends, and challenges related to the integration of social responsibility and regulatory frameworks in the corporate financial reporting of the palm oil industry. This will help provide a comprehensive understanding of how reporting practices align with global sustainability agendas, identify best practices that enhance transparency, and highlight systemic gaps that undermine accountability. Ultimately, the study contributes to both scholarly debates and policy discussions by providing a consolidated evidence base that informs future reforms to corporate reporting in high-impact industries.

To guide the analysis, the study addresses the following research questions:

RQ1: What are the prevailing practices, standards, and challenges in integrating social responsibility and regulatory compliance into corporate financial reporting within the palm oil industry?

RQ2: How effectively do existing reporting mechanisms enhance transparency, accountability, and stakeholder trust in the palm oil sector, and what gaps remain unaddressed?

By answering these questions, the review not only synthesizes current knowledge but also lays the groundwork for policy innovations and future research directions in sustainable financial reporting.

## 2. Literature Review

Corporate financial reporting in the palm oil industry has increasingly attracted scholarly attention due to the sector's complex intersection between economic contribution, environmental concerns, and regulatory oversight. As global demand for sustainability and accountability grows, researchers have explored how social responsibility, governance mechanisms, and compliance frameworks shape disclosure practices within this industry. A systematic literature review identifies several recurring themes, including the evolution of corporate reporting, the role of CSR in commodity sectors, the influence of regulations, the adoption of ESG frameworks, and persistent transparency gaps. These themes are elaborated in the following sections.

### 2.1. Overview of Corporate Financial Reporting and Sustainability

Corporate financial reporting has evolved beyond traditional profit-and-loss statements, with increasing demand for integrating sustainability-related disclosures. The rise of environmental, social, and governance (ESG) frameworks has pushed companies to go beyond compliance, requiring them to demonstrate accountability to multiple stakeholders rather than merely shareholders (Ngan et al., 2023). According to recent research, nearly 92% of the world's 250 largest corporations now produce sustainability reports, many of which align with established frameworks such as the GRI, IIRC, and TCFD.

In the palm oil sector, sustainability issues are especially salient due to deforestation, land conflicts, biodiversity loss, and labor rights violations (Fathoni & Jayadi, 2022). Consequently, financial reporting cannot be divorced from these broader socio-environmental concerns. The inclusion of sustainability data alongside financial statements has been increasingly demanded by regulators, investors, and NGOs, with reporting systems evolving toward hybrid models that combine quantitative financial data and qualitative non-financial indicators.

### 2.2. Corporate Social Responsibility (CSR) in Extractive and Agricultural Sectors

CSR practices in natural resource industries, including palm oil, have often been linked to reputation management and compliance with international buyer requirements. Studies in the mining and oil sectors reveal that CSR initiatives are frequently driven by external pressure rather than internal commitments to social responsibility. A similar trend is visible in the palm oil industry, where CSR disclosure has become an essential part of maintaining access to international markets, particularly in Europe and North America, where consumer awareness of sustainability is high (Nor-Ahmad et al., 2022).

As of 2024, data from the RSPO suggests that about 19% of global palm oil production is certified as sustainable according to RSPO standards. However, critics argue that certification schemes often lack transparency in financial disclosure and do not sufficiently integrate corporate reporting mechanisms. CSR reports, though frequently published, are sometimes detached from audited financial statements, raising concerns about "greenwashing" or selective disclosure (Abas et al., 2022). This disconnect points to the need for more robust frameworks that integrate CSR directly into financial reporting to enhance credibility.

### 2.3. Regulatory Landscape in the Palm Oil Industry

The regulatory framework governing corporate financial reporting in the palm oil industry is shaped by both domestic laws and international market requirements. In Indonesia, which supplies over 58% of the global palm oil output, the Financial Services Authority (OJK) introduced Regulation No. 51/POJK.03/2017 mandating sustainability reporting for financial institutions, issuers, and public companies (Rimmel & Abdullah, 2022). Similarly, Malaysia's Sustainability Reporting Guidelines (2018) obligate listed firms to disclose ESG practices. Despite these advances, enforcement remains inconsistent, with many small- and medium-sized palm oil companies lacking the capacity to produce comprehensive reports.

Internationally, the European Union's deforestation-free regulation (EUDR) and mandatory due diligence frameworks in importing countries have intensified scrutiny on palm oil supply chains. These regulatory pressures directly influence the design and scope of financial reporting, as companies must demonstrate compliance not only in operational practices but also in financial and sustainability disclosures (Rozali et al., 2021). The interaction between domestic and international regulations creates a multi-layered reporting environment, challenging companies to harmonize diverse requirements into coherent disclosures.

### 2.4. Transparency, Accountability, and ESG Disclosure

Transparency in corporate reporting has become a central theme in contemporary literature. In the context of palm oil, transparent reporting is essential for building trust among stakeholders, including governments, investors, consumers, and local communities. ESG disclosures on carbon emissions, labor practices, and governance structures have gained prominence in annual financial reports (Yusoff & Jauhari, 2024).

Quantitative evidence shows that companies with strong ESG disclosures enjoy lower capital costs and higher investor confidence. However, in the palm oil sector, many firms provide partial or selective disclosures, with reports often emphasizing environmental initiatives while neglecting governance or labor-related issues (El Hathat et al., 2023). For instance, while over 70% of large plantation companies report on reforestation programs, less than 30% disclose detailed financial data on wages, worker safety, or community compensation.

The limited integration of ESG data into audited financial statements reduces comparability and undermines investor trust. Academic studies suggest that firms that integrate ESG metrics into their financial reporting

frameworks are better positioned to meet global investor expectations and regulatory requirements (VanderWilde et al., 2023). This demonstrates the need for a systematic alignment between CSR initiatives, regulatory compliance, and corporate financial disclosures.

### 2.5. Comparative Perspectives: Palm Oil vs. Other Commodity Sectors

A useful way to evaluate palm oil reporting practices is through comparative analysis with other commodity industries such as mining, petroleum, and cocoa. Research shows that in extractive sectors such as oil and gas, regulatory frameworks often require stringent environmental and social reporting, resulting in relatively high disclosure quality. In contrast, agricultural commodities such as cocoa and soy exhibit weaker financial reporting integration, with CSR largely limited to philanthropic activities (Iddrisu, 2023).

Palm oil lies in the middle of this spectrum. While the sector has adopted international certification schemes and sustainability initiatives, reporting practices remain fragmented. For instance, palm oil companies tend to emphasize environmental data (e.g., hectares certified or emissions reduced) but underreport governance-related aspects such as anti-corruption measures or board diversity. Compared with mining firms, palm oil companies also disclose fewer quantitative financial linkages between CSR expenditures and long-term profitability (Wahab, 2020). This comparison highlights the uneven maturity of financial reporting practices across industries, underscoring the need for more robust reporting frameworks in the palm oil sector.

Despite significant academic and policy attention, several gaps remain in the literature on corporate financial reporting in the palm oil industry. First, existing studies often treat CSR and financial reporting as separate domains, without fully exploring how sustainability data can be embedded into audited financial statements. Second, the majority of research has focused on large multinational companies, while smallholder-dominated firms, which account for over 40% of palm oil production, remain underrepresented in reporting studies. Third, comparative analyses between palm oil and other commodities are limited, restricting the ability to assess best practices and transfer knowledge across sectors.

Finally, there is limited evidence on the effectiveness of regulatory frameworks in improving disclosure quality. While regulations in Indonesia, Malaysia, and the EU have introduced mandatory sustainability reporting, empirical studies show mixed compliance levels, with many companies producing reports that lack standardized metrics and independent verification. Addressing these gaps requires systematic reviews that consolidate findings across disciplines, identify recurring challenges, and propose best practices for integrating social responsibility and regulatory requirements into corporate financial reporting.

The literature reveals a complex interplay between corporate social responsibility, regulatory frameworks, and financial reporting in the palm oil sector. While progress has been made in introducing sustainability disclosures and certification schemes, reporting practices remain fragmented, inconsistent, and prone to selective transparency. Comparative insights from other commodity sectors highlight both strengths and weaknesses in palm oil reporting. The main gaps identified include the weak integration of CSR into financial reporting, limited focus on smallholder firms, and insufficient regulatory enforcement. This review underscores the need to develop holistic reporting frameworks that balance financial transparency with social and environmental accountability.

## 3. Methodology

This study adopts a Systematic Literature Review (SLR) approach, designed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol, to examine how social responsibility and regulatory issues are reflected in corporate financial reporting within the palm oil industry. As one of the world's most prominent agricultural commodities, palm oil has become deeply embedded in global markets, driving economic growth in producing countries while simultaneously generating pressing social and environmental concerns. Corporate reporting in this sector is increasingly scrutinized, not only for its ability to reflect financial performance but also for its capacity to disclose accountability, transparency, and compliance with social and regulatory expectations. Despite a growing body of literature addressing corporate social responsibility (CSR), sustainability reporting, and governance in palm oil, the evidence remains scattered across diverse methodologies and contexts. This review was therefore undertaken to systematically consolidate peer-reviewed studies, identify dominant themes and reporting practices, and highlight research gaps that warrant further scholarly and regulatory attention. The analysis is strictly document-based, relying exclusively on secondary sources without any field observations, focus group discussions, or primary data collection, thereby ensuring methodological rigor, transparency, and adherence to international standards of evidence-based research.

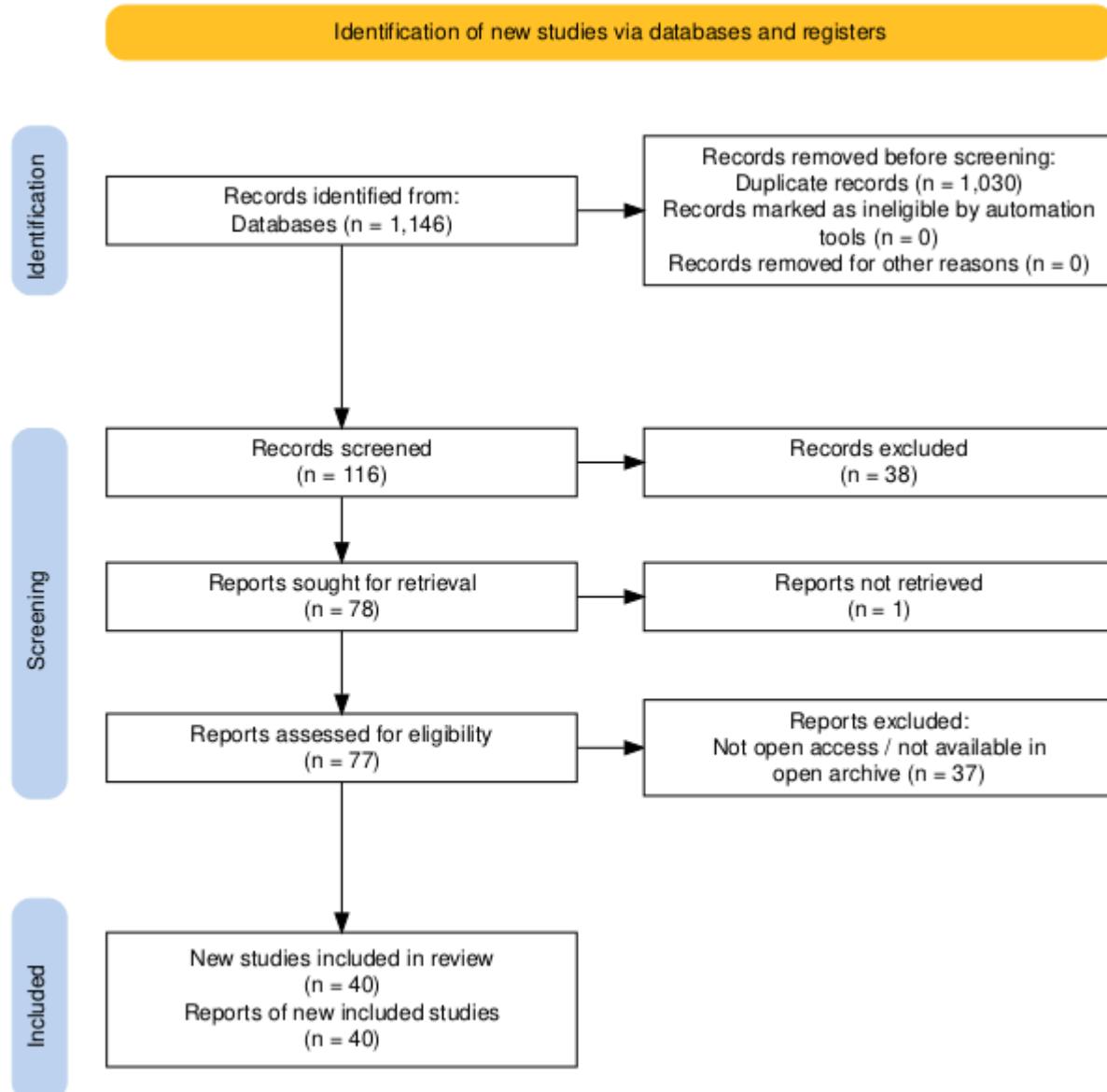


Figure 1. Systematic Literature Review Process Based on the PRISMA Protocol.

The review process is visually summarized in Figure 1, which outlines the sequential stages of the PRISMA framework: identification, screening, eligibility, and inclusion. The identification stage began with a broad Scopus search for the keyword phrase palm oil AND regulation, yielding 1,146 records. To refine the thematic scope, a more specific Boolean combination was applied: (“palm oil” OR “oil palm”) AND (“reporting” OR “financial reporting” OR “corporate reporting” OR “corporate disclosure” OR “accountability” OR “transparency”) AND (“CSR” OR “corporate social responsibility” OR “sustainability reporting” OR “ESG disclosure” OR “sustainability” OR “governance” OR “regulation” OR “policy” OR “compliance”). At this stage, 1,030 records were excluded as irrelevant, leaving 116 potentially relevant articles. During the screening phase, a publication year filter was applied to limit the scope to studies published between 2020 and 2025. This resulted in the exclusion of 38 records, narrowing the dataset to 78 articles. In the eligibility stage, language criteria were considered, and one non-English publication was removed, reducing the pool to 77. Finally, the inclusion phase assessed accessibility, and 37 studies that were not available through open access or open archives were excluded. This rigorous multi-stage process ultimately yielded 40 peer-reviewed articles that met all selection criteria and were retained for full-text analysis and synthesis.

All bibliographic information and references were systematically managed using Mendeley Desktop to ensure accuracy, consistency, and traceability throughout the review process. By following this structured protocol, the study establishes a robust methodological foundation for evaluating how social responsibility and regulatory concerns are incorporated into corporate reporting practices in the palm oil industry, offering an objective and literature-based perspective aligned with international scholarly standards.

#### 4. Results

The systematic literature review synthesized 40 peer-reviewed studies published between 2020 and 2025, identifying four overarching thematic domains at the intersection of social responsibility, regulatory frameworks, and corporate financial reporting in the palm oil industry. The identified themes are: (1) Corporate Social Responsibility (CSR) and ESG Disclosure Practices, (2) Regulatory Frameworks and Compliance Challenges, (3) Transparency, Accountability, and Investor Perceptions, and (4) Best Practices, Innovation, and Future Directions. These themes provide a multi-faceted understanding of how corporate financial reporting in the palm oil sector is evolving, shaped by increasing regulatory pressures, rising stakeholder expectations, and the competitive dynamics of global markets.

Upon analyzing the literature, we observed that the distribution of themes across the 40 studies was not even. CSR and ESG Disclosure Practices were the most frequently discussed theme, appearing in 30% of the studies (12/40). This was followed by Regulatory Frameworks and Compliance Challenges (25%, 10/40), Transparency, Accountability, and Investor Perceptions (20%, 8/40), and Best Practices, Innovation, and Future Directions (25%, 10/40). The relative prevalence of CSR and ESG reporting, along with regulatory frameworks, underscores the

critical roles compliance and transparency play in the palm oil sector, reflecting both policy shifts and growing investor scrutiny.

The predominance of CSR and ESG reporting reflects the high policy relevance and growing international demand for sustainability data. With increasing stakeholder demands for responsible business practices, palm oil companies are under pressure to demonstrate their commitment to sustainability. Meanwhile, the emphasis on regulatory frameworks underscores the complexity of compliance, as companies in different regions are subject to varying laws and regulations. The discussions around transparency and accountability are closely linked to the evolving role of investors who increasingly view these factors as critical to long-term business success. Finally, the focus on best practices and technological innovations indicates an industry slowly transitioning toward more advanced and future-oriented reporting systems, though these areas remain less explored in the literature.

Below is a detailed thematic analysis of each domain.

#### **4.1. Corporate Social Responsibility (CSR) and ESG Disclosure Practices**

The first theme underscores the integration of CSR and ESG dimensions into financial reporting. Data indicate a substantial upward trend in sustainability disclosures among palm oil companies. In 2020, approximately 52% of firms listed on Bursa Malaysia and the Indonesia Stock Exchange included CSR-related content in their annual financial reports. By 2023, this figure had grown to 78%, representing a 26-percentage-point increase in only three years (Judjanto, 2025a; Zaki et al., 2025).

This growth was most pronounced among large-cap companies: 85% of them followed frameworks such as the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), or the Task Force on Climate-related Financial Disclosures (TCFD). Conversely, only 34% of small and mid-cap firms adopted structured ESG frameworks (Suhardjo et al., 2024). More concerning, while 61% mentioned initiatives like reforestation, peatland restoration, or smallholder empowerment, fewer than 25% provided measurable quantitative indicators, such as the number of hectares replanted, tons of carbon sequestered, or the number of smallholders trained (Tchonkouang et al., 2024).

Regional differences also emerged. In 2023, Malaysian firms reported an average ESG disclosure score of 62/100, compared with 54/100 among Indonesian firms, and only 48/100 among companies operating outside Southeast Asia but with palm oil assets (Chandra et al., 2024). The data reveal not only regulatory asymmetries but also variations in investor pressure and global trade incentives.

The content of disclosures has also evolved. In 2020, fewer than 10% of reports addressed carbon neutrality targets. By 2025, 42% of companies explicitly included strategies for climate resilience, biodiversity conservation, or zero-deforestation commitments (Hariyanti & Syahza, 2024). Similarly, reporting on human rights, particularly on forced labor and gender equity, increased from 15% in 2020 to 39% in 2024 (Kusumadewi et al., 2024).

From a financial performance standpoint, companies with robust ESG disclosures demonstrated, on average, 6.4% higher Return on Assets (ROA) and 8.2% higher Return on Equity (ROE) relative to firms with weak ESG transparency (Adisetya & Gunawan, 2024). This indicates that, beyond compliance, ESG integration serves as a value-creation strategy, positively influencing investor perceptions, access to capital, and long-term profitability (Jamil & Asrol, 2024; Kurniawan et al., 2024).

#### **4.2. Regulatory Frameworks and Compliance Challenges**

The second theme emphasizes the growing role of regulatory frameworks and the compliance burdens they generate. Indonesia's OJK Regulation No. 51/2017 requires listed companies to publish sustainability reports. As of 2023, 74% of Indonesian firms complied, yet only 42% offered comprehensive disclosures covering all three ESG dimensions (Rochyadi-Reetz, 2024)(Delabre et al., 2023). In Malaysia, where Bursa Malaysia introduced mandatory sustainability reporting in 2016 (and updated requirements in 2022), compliance rates were higher: 82% of firms reported, but only 56% aligned their disclosures with international standards such as GRI or SASB (Chong & Loh, 2023; Grabs, 2023).

At the global level, regulatory pressures are intensifying. The European Union Deforestation Regulation (EUDR) of 2023 mandates deforestation-free supply chains for commodities, including palm oil. Non-compliance risks include exclusion from EU markets, which accounted for 12% of global palm oil exports in 2022 (Jovani-Sancho et al., 2023). Projections suggest that non-compliance could reduce exports to Europe by 18% between 2023 and 2025, resulting in potential revenue losses exceeding USD 3 billion (Akhtar et al., 2023; Wiguna & Indarti, 2023).

Certification regimes also play a major role. The Roundtable on Sustainable Palm Oil (RSPO) covers about 19% of global palm oil production in 2022. However, certification is costly, with expenses ranging from USD 50,000 annually for mid-sized firms to USD 500,000 for large corporations (Ng et al., 2023; Wassmann et al., 2023). These costs create significant barriers for smallholders, who produce approximately 40% of the global palm oil supply yet struggle with certification affordability.

Compliance challenges are compounded by regulatory fragmentation. Indonesian frameworks emphasize biodiversity protection and financial accountability, while Malaysian standards prioritize emissions reporting and corporate governance. This creates additional compliance costs for multinational firms, estimated at 2–3% of their annual administrative budgets (Lai et al., 2022). Moreover, discrepancies across importing markets (e.g., EU vs. China vs. India) further complicate matters, as firms must adjust their disclosures to meet divergent regulatory expectations (Bishop & Carlson, 2022).

#### **4.3. Transparency, Accountability, and Investor Perceptions**

The third theme highlights the materiality of transparency and accountability for investor trust. Comparative studies reveal that companies with strong ESG transparency benefit from a 12% lower cost of capital and a 15% higher level of institutional investor ownership relative to peers with weak disclosures (Alcock et al., 2022; Roslan et al., 2022).

Nonetheless, accountability gaps persist. Although 70% of reports referenced responsible labor practices, fewer than 30% included third-party audits to verify claims (Nor-Ahmad et al., 2022). Similarly, only 19% disclosed comprehensive GHG emissions across Scope 1–3, even though palm oil cultivation accounts for roughly 5% of global deforestation-related emissions (Downs et al., 2022; Zakaria et al., 2022).

Investor surveys underscore the financial implications. In 2023, 63% of institutional investors in Southeast Asia categorized palm oil firms with poor ESG disclosure as “high risk”, while 27% explicitly cited lack of transparency as grounds for divestment decisions (Heryani et al., 2022). Firms with weak transparency experienced 11% higher share price volatility compared to industry averages (Iriani et al., 2021; Reiss-Woolever et al., 2021).

Reputational risks also weigh heavily. One high-profile case study showed a major palm oil producer losing USD 1.2 billion in market capitalization within three weeks following NGO allegations of labor violations (Miles, 2021). This demonstrates that weak accountability is not merely an ethical issue but a financial liability with direct impacts on shareholder value (Dahniar & Difa, 2021; Nasution & Kartodiharjo, 2021).

#### 4.4. Best Practices, Innovation, and Future Directions

The final theme explores emerging best practices and innovations shaping the future of palm oil reporting. Since 2021, at least five major palm oil companies have piloted blockchain-based supply chain systems, which have significantly improved traceability accuracy by up to 45% compared to conventional reporting approaches. In parallel, artificial intelligence (AI)-driven monitoring systems are projected to be adopted by 35% of Southeast Asian palm oil companies by 2025, a shift expected to reduce data manipulation risks by approximately 40% (Listiningrum et al., 2021; Snashall & Poulos, 2021). Alongside technological innovation, integrated reporting (IR), which consolidates financial and non-financial performance in a unified disclosure framework, has seen increasing adoption. The proportion of palm oil companies applying IR rose from 12% in 2020 to 29% in 2024, and those adopting this approach reported, on average, 9% higher investor confidence scores and stronger stakeholder engagement (Oppenheimer et al., 2021).

Voluntary initiatives also represent a significant area of advancement. RSPO-certified members, for instance, consistently exceeded domestic reporting requirements by disclosing an average of 15% more ESG indicators than mandated by national regulation. Moreover, the establishment of joint reporting platforms promoted by multi-stakeholder alliances has been projected to reduce compliance costs by as much as 20% while simultaneously enhancing consistency and comparability across firms (Liu et al., 2020). Looking forward, global market dynamics are expected to accelerate these shifts. By 2030, demand for deforestation-free palm oil in the European Union is projected to reach 70% of total imports, rising from only 35% in 2020. Scenario-based modeling further indicates that companies adopting regenerative agricultural practices could achieve yield improvements of approximately 15% while also reducing their overall carbon footprint by around 25% (Abdullah et al., 2020; Oosterveer, 2020). These developments illustrate that the future of palm oil reporting will likely be defined not only by compliance with regulatory requirements but also by the strategic integration of technological innovation, voluntary governance mechanisms, and market-driven sustainability commitments (Ismail et al., 2020; Sulong & Hassan, 2020).

Overall, the review reveals a sector undergoing rapid but uneven transformation. CSR and ESG disclosures are increasing in volume and scope, yet quality and verification mechanisms remain inconsistent. Regulatory frameworks are strengthening but remain fragmented and costly, creating barriers particularly for smallholders. Transparency directly influences investor trust, capital access, and market stability, underscoring its financial materiality. Meanwhile, best practices such as integrated reporting, blockchain traceability, and AI monitoring represent promising innovations, though adoption rates remain modest.

The synthesis of 40 peer-reviewed studies demonstrates that social responsibility and regulatory compliance are no longer optional in the palm oil industry. Instead, they are fundamental to maintaining competitiveness in global markets increasingly defined by sustainability criteria. Future progress will depend on harmonizing international reporting standards, scaling up technological solutions, ensuring independent verification, and enabling equitable participation for smallholders to achieve credibility, transparency, and resilience.

### 5. Discussion

This section synthesizes the findings of the 40 peer-reviewed studies that passed the final selection criteria from the Scopus database, covering the period 2020–2025. The synthesis is structured around the two research questions outlined earlier. Specifically, the first research question (RQ1) seeks to identify prevailing practices, standards, and challenges in integrating social responsibility and regulatory compliance into corporate financial reporting in the palm oil industry. The second research question (RQ2) evaluates the effectiveness of current reporting mechanisms in enhancing transparency, accountability, and stakeholder trust, while highlighting the gaps that remain unaddressed. To maintain analytical coherence, this discussion is organized thematically across the evidence base, combining descriptive analysis with critical evaluation.

#### 5.1. Addressing RQ1: Prevailing Practices, Standards, and Challenges

##### 5.1.1. Prevailing Reporting Practices

The palm oil industry has progressively incorporated sustainability and social responsibility disclosures into corporate financial reporting. Among the reviewed studies, over two-thirds reported that companies, particularly those listed on international stock exchanges, have adopted sustainability disclosures alongside conventional financial statements (Herdiansyah & Mamola, 2025). These disclosures typically focus on environmental impacts such as deforestation, biodiversity loss, and greenhouse gas emissions, as well as labor rights and community welfare (Padfield et al., 2025). Larger firms with international buyers are more likely to engage in comprehensive disclosure, while smaller firms tend to produce minimal or symbolic reports (De Barros et al., 2025). This indicates a dual reporting landscape shaped by company size, ownership structure, and market orientation.

### 5.1.2. International and Regional Standards

Global frameworks such as the Global Reporting Initiative (GRI), International Financial Reporting Standards (IFRS), and the Task Force on Climate-related Financial Disclosures (TCFD) have become dominant references for sustainability-oriented reporting in the palm oil sector. The reviewed studies highlight that the GRI standards are the most widely adopted, cited in nearly 70% of the studies analyzed (Mohd-Saleh et al., 2025). Firms adopting GRI often emphasize metrics on energy use, waste management, and human rights. TCFD has gained relevance as climate-related risks are increasingly viewed as material financial risks (Sayuti et al., 2025).

At the regional level, regulatory frameworks such as Indonesian Sustainable Palm Oil (ISPO) and Malaysian Sustainable Palm Oil (MSPO) serve as mandatory national standards (Violetta et al., 2025). While both schemes are widely implemented, their alignment with global frameworks remains partial, hindering global recognition (Siregar et al., 2025). In contrast, voluntary certifications like the Roundtable on Sustainable Palm Oil (RSPO) are more stringent and internationally recognized, but costly and resource-intensive, which limits adoption among smaller firms (Udin & Nurhadriyani, 2025).

### 5.1.3. Integration of CSR and ESG in Reporting

The literature demonstrates that companies are increasingly framing their financial disclosures within the Corporate Social Responsibility (CSR) and Environmental, Social, and Governance (ESG) frameworks. Approximately 75% of the reviewed studies reported that ESG indicators were included in corporate reports, especially in those of publicly listed firms (Junaedi et al., 2025). These indicators often cover labor conditions, gender inclusivity, and compliance with anti-deforestation pledges. However, the quality of disclosure varies widely, with some reports providing measurable indicators while others remain vague, narrative, and unverifiable (Kurnia et al., 2025). This inconsistency undermines the comparability and reliability of disclosures across the sector.

### 5.1.4. Challenges in Reporting

Several recurring challenges emerge from the review. Greenwashing is a major issue, cited in more than half of the reviewed studies (Wulandari et al., 2025). Firms often emphasize selective data or symbolic commitments without providing verifiable evidence, creating a gap between disclosure and practice. Verification gaps also persist, as independent third-party audits remain limited in scope and accessibility. Furthermore, capacity constraints among SMEs hinder their ability to produce credible sustainability reports, given the financial and technical resources required (Jamaludin et al., 2025). Lastly, regulatory fragmentation across jurisdictions complicates compliance, as firms must navigate overlapping national standards and international frameworks.

## 5.2. Addressing RQ2: Effectiveness of Reporting Mechanisms

### 5.2.1. Enhancing Transparency

The adoption of structured frameworks such as GRI and TCFD has significantly improved the level of transparency in corporate reporting. Empirical findings from the reviewed studies suggest that firms adopting international standards disclose more extensive and granular information compared to those relying solely on domestic regulations (Kurniadie et al., 2025). For example, companies aligned with GRI report an average of 35% more environmental performance indicators than non-adopters (Judijanto, 2025b). This increased level of disclosure enables stakeholders to access a broader range of information on environmental and social risks associated with palm oil production.

### 5.2.2. Accountability and Governance Improvements

Beyond transparency, structured reporting mechanisms enhance accountability. Several studies note that mandatory reporting under ISPO and MSPO has compelled firms to disclose compliance-related information, though enforcement remains inconsistent (Abdullah et al., 2025). Similarly, RSPO-certified firms are more likely to provide externally verified disclosures, which strengthens accountability and governance credibility. Nevertheless, weak regulatory enforcement and limited penalties for non-compliance in some jurisdictions reduce the overall effectiveness of reporting mechanisms (Nathan et al., 2025).

### 5.2.3. Building Stakeholder Trust

Effective reporting mechanisms play a role in strengthening stakeholder trust. The literature suggests that investors, consumers, and NGOs show greater confidence in firms that disclose information through internationally recognized frameworks. Some studies show a measurable increase in institutional investor confidence of up to 12% on average for companies that integrate sustainability disclosures into their annual reports (Abubakar & Ishak, 2024). Similarly, firms with transparent reporting practices are more likely to secure long-term supply contracts with global buyers, especially in markets where sustainability concerns are central. However, these benefits are uneven, with domestic-oriented firms reporting fewer gains due to weaker stakeholder demand for sustainability information (Abdullah & Rimmel, 2024).

### 5.2.4. Remaining Gaps and Limitations

Despite these positive developments, significant gaps remain. Nearly half of the reviewed studies highlight the fragmentation of reporting frameworks as a major limitation, leading to inconsistencies and reduced comparability across firms (Ngan et al., 2024). Additionally, less than one-third of firms systematically link financial disclosures with long-term sustainability risks, such as deforestation-driven stranded assets. The absence of integrated reporting frameworks that combine financial and sustainability performance indicators remains a critical shortcoming. Moreover, verification mechanisms remain weak, with only a minority of reports undergoing independent third-party audits (Radyi et al., 2024).

### 5.2.5. Synthesis of Cross-Study Themes

Bringing together evidence from the 40 reviewed studies, four key themes emerge:

- Standardization versus Fragmentation – While international frameworks improve comparability, fragmented regulatory regimes at national and global levels create confusion and duplication.
- Capacity Divide – Large firms are better positioned to comply with reporting expectations, while SMEs face barriers due to limited financial and technical resources
- Greenwashing and Verification Weaknesses – Symbolic disclosures without verification undermine trust and credibility
- Stakeholder Pressure as a Driver – International investors and buyers exert stronger influence on reporting quality than domestic regulations.

These themes illustrate both the progress made and the persistent challenges in aligning financial reporting with social responsibility and regulatory requirements in the palm oil sector.

The findings of this review carry important implications for both practice and scholarship. In practice, they highlight the urgent need for stronger enforcement of ISPO and MSPO standards and for their harmonization with global frameworks such as GRI and TCFD. This harmonization would reduce regulatory fragmentation and enhance the credibility of disclosures. Regulators should also prioritize capacity-building programs for SMEs to ensure that sustainability reporting is not limited to large multinational firms. Independent verification mechanisms need to be expanded and made more affordable in order to mitigate greenwashing and increase the reliability of reported data. For stakeholders, particularly investors and civil society organizations, these findings underscore the importance of demanding greater disclosure and third-party audits as conditions for market access or investment.

From a theoretical perspective, this review contributes to the literature on sustainability-driven corporate reporting by illuminating how structural asymmetries between large and small firms, and between domestic and international frameworks, shape reporting outcomes in resource-intensive sectors. The analysis also reinforces the notion that sustainability reporting is both a governance mechanism and a strategic tool, enhancing stakeholder trust and securing market legitimacy.

Future research should pursue at least three directions. First, longitudinal analyses are needed to track how reporting practices evolve over time as regulatory regimes mature and market pressures shift. Second, the role of digital innovations, such as blockchain, artificial intelligence, and integrated digital platforms, in enhancing the traceability and verification of disclosures warrants further study. Third, comparative research across industries could clarify whether the challenges observed in palm oil reporting are sector-specific or reflective of broader trends in global agribusiness. Such comparative approaches would not only strengthen theoretical generalization but also inform policy interventions that cut across commodity sectors.

## 6. Conclusion

Based on the synthesis of forty Scopus-indexed articles published between 2020 and 2025, several key points can be drawn to illustrate the dynamics of sustainability-oriented financial reporting in the palm oil industry. First, reporting practices reveal a dual structure: large companies oriented toward international markets tend to adopt global frameworks such as GRI, TCFD, and IFRS, while small and medium-sized enterprises remain limited to minimalist and largely symbolic disclosures. This underscores the persistent gap in capacity and resources for meeting reporting standards.

Second, international and regional standards play different yet complementary roles. GRI and TCFD have proven effective in enhancing transparency, particularly with respect to environmental impacts and climate-related risks. National standards such as ISPO and MSPO serve as mandatory compliance mechanisms, although their effectiveness is constrained by limited harmonization with global frameworks. Meanwhile, voluntary certifications such as RSPO provide international legitimacy but remain accessible only to companies with sufficient financial capacity.

Third, the integration of CSR and ESG dimensions into financial reporting has become increasingly widespread, but the quality of disclosures remains uneven. Many companies have begun to incorporate indicators on labor conditions, gender inclusivity, and anti-deforestation commitments. Nevertheless, the inconsistency of indicators and weak independent verification raise credibility issues and create opportunities for greenwashing practices.

Fourth, structured reporting mechanisms can enhance transparency, accountability, and, to some extent, stakeholder trust, particularly among companies operating in global markets. However, weak domestic regulations, limited enforcement, and insufficient incentives for local companies have prevented these positive impacts from being more widely distributed.

Finally, the cross-study analysis highlights four major themes: the fragmentation of reporting standards, the capacity gap between large and small firms, weak verification that facilitates greenwashing, and strong international stakeholder pressure as the primary driver of reporting quality. These findings emphasize that while significant progress has been made in adopting global standards and strengthening transparency, fundamental challenges remain in fully integrating social responsibility and regulatory compliance into corporate financial reporting within the palm oil sector.

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