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Green Accounting as a Strategy to Encourage Corporate Transparency and Sustainability: Systematic Literature Review"

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ABSTRACT

This study aims to analyze the development and role of green accounting in promoting corporate transparency and sustainability in Indonesia. The study employs a Systematic Literature Review (SLR) based on the Kitchenham and Charters protocol and PRISMA guidelines. A total of 15 articles published between 2021 and 2025 were selected from 47 initial articles based on predetermined inclusion and exclusion criteria. The findings indicate that research on green accounting has increased, particularly during 2024–2025, with increasingly diverse themes, including environmental performance, CSR, sustainability reporting, Material Flow Cost Accounting (MFCA), eco-efficiency, carbon emission disclosure, profitability, financial performance, and firm value. Green accounting is no longer viewed merely as a mechanism for recording environmental costs but has developed into a strategic instrument for improving resource efficiency, the quality of environmental information, transparency, and corporate sustainability. However, studies specifically examining the quality of transparency, asymmetric information, greenwashing, and the drivers and barriers to implementation remain limited. The literature is also dominated by quantitative studies focusing on companies in Indonesia. These findings highlight the need for further research using qualitative and mixed-methods approaches, cross-country studies, and more in-depth investigations into the quality of environmental disclosure and the integration of green accounting into corporate strategic decision-making. Keywords: green accounting; transparency; sustainability; sustainability reporting; Systematic Literature Review.

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INTRODUCTION

Climate change and environmental degradation are currently one of the most crucial challenges faced by business entities in carrying out their operational activities. For decades, business activities oriented towards aggressive economic growth have often ignored the carrying capacity of the environment, leading to the exploitation of natural resources, increased energy consumption, and the escalation of waste and greenhouse gas emissions (Schaltegger & Burritt, 2000). Awareness of these destructive impacts has led to a global paradigm shift towards the evaluation of company performance. The sustainability of an entity is no longer measured exclusively by its financial achievements, but by its ability to integrate and balance three main pillars: profit, *people*, and *planet*, known as the *Triple Bottom Line* concept (Elkington, 1997).

In line with this paradigm shift, the pressure from *stakeholders* on companies is increasingly massive. Based on *Stakeholder Theory*, companies have a responsibility to meet the expectations of various parties who are influenced and influenced by their business activities, including investors, governments, consumers, and the wider community (Freeman, 1984). Currently, institutional investors not only consider the level of return, but also include environmental, social,

and governance (ESG) risks as crucial metrics that affect the company's prospects and valuation in the long term (Deegan, 2013). On the other hand, regulators are increasingly stringent in enforcing environmental protection regulations, while the public has high expectations of ethical business practices. This constellation of pressures makes environmental transparency and accountability essential pillars in modern corporate governance.

Increased attention to environmental aspects has also triggered a transformation of corporate orientation, from initially only focusing on achieving maximum profits (*profit-oriented*) to *sustainability-oriented*. Sustainability orientation places ecological and social aspects as integral components in strategy formulation and decision-making, not just peripheral philanthropic activities (Hayati, 2026). In this perspective, a company's competitive advantage is achieved through its ability to minimize negative externalities to the environment while meeting stakeholder expectations, which in turn will ensure the company's survival (Gray et al., 1995).

However, conventional accounting systems are considered to have fundamental limitations in representing the environmental impact of the company's operational activities. Traditional accounting tends to be anthropocentric and focuses on reporting entities, so it focuses more on transactions that have a direct financial impact (Lako, 2018). As a result, various environmental *costs* such as resource depletion costs, waste management, emissions, ecosystem degradation, and recovery costs are often incorrectly allocated as *overhead* costs or even not recorded at all in financial statements (Hansen & Mowen, 2007). This limitation leads to information asymmetry, where the data presented to stakeholders fails to comprehensively describe the company's risk profile and sustainability performance.

In response to these limitations, green *accounting* or *environmental accounting* emerged as a strategic instrument that bridges the gap between conventional accounting and environmental conservation demands. Green accounting integrates ecological considerations into the process of identifying, measuring, recording, presenting, and disclosing a company's financial and non-financial information (De Beer & Friend, 2006). This approach allows companies to trace and internalize previously hidden environmental costs. Thus, green accounting not only serves as an administrative reporting mechanism, but also plays a crucial role in the efficiency of resource allocation, environmental risk management, and supporting environmentally sound managerial decision-making (Qureshi et al., 2012).

The application of green accounting has a strong interdependence with the disclosure and transparency of environmental information (Saragih, F., 2024). Based on the *Legitimacy Theory*, companies will always strive to ensure that their activities operate within the framework of norms and values that apply in society (Suchman, 1995). Transparent disclosure of environmental information through the green accounting framework is a strategic mechanism for companies to gain and maintain social legitimacy, reduce information asymmetry for investors, and facilitate government oversight (Cho & Patten, 2007). Therefore, environmental transparency is not just the fulfillment of regulatory obligations (*compliance*), but a reputation risk mitigation strategy and an instrument to build public trust (Gunawan, 2015).

A number of previous literature has proven that green accounting practices and environmental information transparency are positively correlated with improved environmental performance, increased legitimacy, and corporate sustainability. However, a review of emerging research indicates fragmentation and diversity, both in terms of operational definitions, measurement indicators, and sectoral and geographic contexts in the implementation of green accounting (Arru & Ruggieri, 2016). The existence of ambiguity and variation in these findings confirms the urgency of comprehensive literature mapping to reposition the position of green accounting as a catalyst for transparency and sustainability.

Based on this background, this article was prepared with the aim of conducting an in-depth *literature review* on the role of green accounting in encouraging transparency and corporate sustainability. This study specifically explores the evolution of the concept of green accounting, its mechanism of relation to environmental information disclosure, and its real contribution to the achievement of corporate sustainability pillars. Through this literature synthesis, it is hoped that a holistic understanding of the strategic value of green accounting in responding to the dynamics of stakeholder demands can be built, as well as identifying research *gaps* as a foothold for future research.

LITERATURE REVIEW

Basic Theory

The study of the role of green accounting in promoting transparency and corporate sustainability is based on two main theories: *Stakeholder Theory* and *Legitimacy Theory*. Based on the Stakeholder Theory pioneered by Freeman (1984), business entities do not only operate for the benefit of *shareholders*, but must provide benefits and accountability to all *stakeholders*, such as investors, creditors, government, society, employees, customers, and the environmental ecosystem. As stakeholders' expectations of ecological responsibility increase, companies are required to provide transparent information through green accounting systems to support sustainable decision-making processes (Deegan, 2013).

Meanwhile, the Theory of Legitimacy explains the existence of an implicit "social contract" between a business entity and the community in the environment in which it operates (Suchman, 1995). This legitimacy reflects the public perception that the company's actions are in accordance with applicable social norms, values, and expectations. If business activities are proven to be harmful to the environment, the community has the right to revoke the legitimacy, which has the potential to threaten the survival of the entity (O'Donovan, 2002). To maintain and strengthen this legitimacy, companies use *environmental disclosure* as a strategic instrument in convincing the public that their operational activities remain within the corridor of ecological boundaries (Cho & Patten, 2007).

The Concept of Corporate Sustainability and the Triple Bottom Line

The demand for legitimacy from stakeholders encourages the importance of achieving *corporate sustainability*, namely the ability of business entities to create long-term value through the management of risks and opportunities in the economic, environmental, and social fields (Dyllick & Hockerts, 2002). This concept is practically operationalized through *the Triple Bottom Line* (TBL) framework initiated by Elkington (1997). The TBL framework emphasizes that the measure of a company's success should no longer be solely centered on the financial bottom line in the form of profit, but must balance integrating the social dimension (*people*) and the environmental dimension (*planet*). In this perspective, the *profit dimension* emphasizes the acquisition of reasonable financial benefits in order to maintain operational sustainability. The *people dimension* demands the implementation of fair and ethical business practices for the workforce, communities, and social entities. Meanwhile, the *planetary dimension* requires the implementation of nature conservation practices that actively minimize the ecological footprint, reduce carbon emissions, and manage operational waste responsibly.

Green Accounting and Its Dimensions

To integrate these sustainability pillars into business activities, entities need green *accounting*. Green accounting is defined as the process of identifying, measuring, assessing, and allocating environmental costs into a company's accounting system to then communicate it to the report users (Hansen & Mowen, 2007; Lako, 2018). This approach aims to overcome the limitations of conventional accounting that often ignores the externalities or hidden costs of ecological impacts. In its application, green accounting is divided into two main dimensions (De Beer & Friend, 2006), namely *Environmental Management Accounting* (EMA) and *Environmental Financial Accounting* (EFA). The EMA dimension focuses on management's internal needs by tracking environmental costs such as resource efficiency, waste treatment, regulatory fines, and environmentally friendly technology, to support performance evaluation and pricing. Meanwhile, the EFA dimension focuses on external reporting by presenting information on costs, liabilities, and environmental assets in financial statements and sustainability *reports* for investors, creditors, and the government (Kalsum, 2021).

Environmental Transparency and Disclosure

The application of green accounting is an important foundation for the creation of environmental transparency, namely the level of openness of companies in conveying information related to their activities, policies, and operational impacts to the public. Environmental *disclosure* plays a role as the main medium in realizing this transparency

(Gunawan, 2015). This disclosure can be mandatory to comply with government regulations, or *voluntary* as a strategic step to build a company's reputation. In modern reporting practices, the use of global standards such as *the Global Reporting Initiative* (GRI) is an important means to facilitate relevant, measurable, reliable, and comparable disclosures by stakeholders (Clarkson et al., 2008).

RESEARCH METHODS

This study uses the Systematic Literature Review (SLR) approach to identify, evaluate, and synthesize previous research on the role of green accounting in promoting transparency and corporate sustainability. The SLR process refers to the stages proposed by Kitchenham and Charters (2007) and is reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. This approach is used to ensure that the process of searching, selection, and synthesis of literature is carried out in a systematic, transparent, and traceable manner.

Literature sources were obtained from the Science and Technology Index (SINTA) database using a combination of the keywords green accounting, environmental accounting, environmental disclosure, environmental transparency, and corporate sustainability. The initial search yielded 47 articles. After 8 duplicate articles were issued, a total of 39 articles entered the screening stage based on titles and abstracts. Furthermore, 23 articles were declared relevant and examined in full-text at the eligibility stage. A total of 8 articles were excluded because they did not meet the research criteria, so that 15 articles were obtained that met all inclusion criteria and were used as the final sample.

Inclusion criteria include scientific articles that have gone through peer review, are available in full-text form, are published in Indonesian or English, are indexed by SINTA, and are related to green accounting, environmental disclosure or transparency, and company sustainability. Articles in the form of duplicate publications, proceedings, editorials, book reviews, popular articles, articles that are not available in full-text, and articles that are not relevant to the focus of the research are excluded from the analysis.

Data from 15 articles were then extracted based on authors, year of publication, journal, SINTA ranking, research objectives, methods, research objects, variables or concepts used, and main findings. Data were analyzed using thematic synthesis to identify patterns, similarities, differences, thematic developments, and research gaps. The results of the synthesis were then grouped based on the form of application of green accounting, environmental transparency and disclosure, company sustainability, research methodology, industrial sector, and research context.

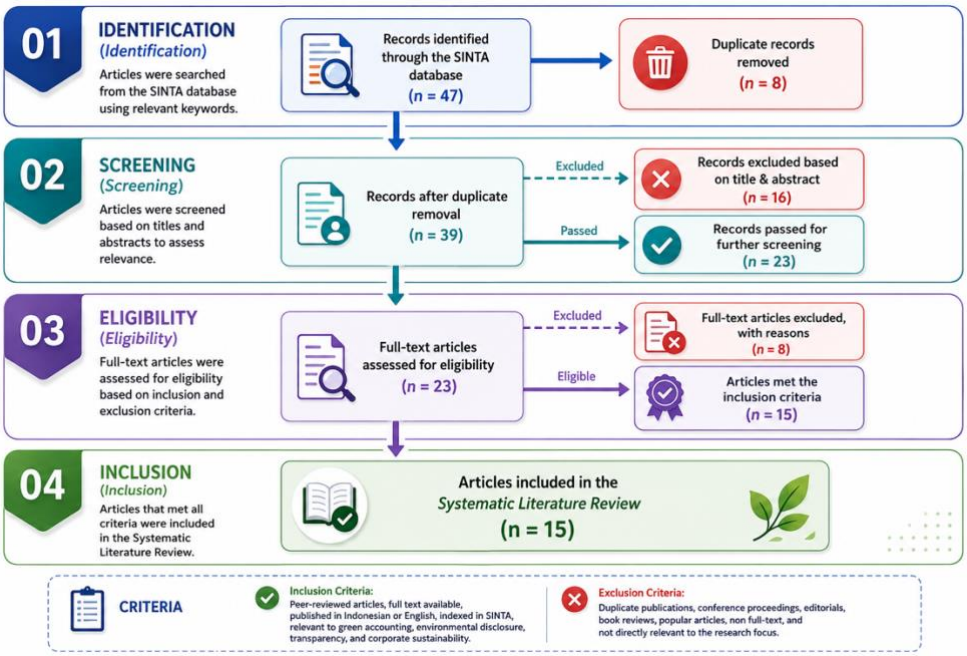

Figure 1. Prism Diagram

Research Questions

To direct the process of identification and synthesis of literature, this study uses eight research questions (RQ), namely:

1. RQ1: What are the developments and trends of research on green accounting in relation to transparency and corporate sustainability?
2. RQ2: What are the most widely studied forms and indicators of green accounting in the literature?
3. RQ3: How does green accounting contribute to corporate transparency, particularly through environmental disclosure and the reduction of information asymmetry?
4. RQ4: How does the implementation of green accounting contribute to the sustainability of the company from economic, environmental, and social aspects?
5. RQ5: What are the factors that are the drivers and obstacles in the implementation of green accounting in companies?
6. RQ6: What are the most dominant research methods, industry sectors, and geographical contexts in research on green accounting, transparency, and corporate sustainability?
7. RQ7: What are some of the consistent and inconsistent findings regarding the relationship between green accounting, transparency, and corporate sustainability?
8. RQ8: What are the research gaps that still exist in the literature and what research directions can be developed in the future?

Overall, the research stages can be summarized into four main stages, namely identification, screening, eligibility, and inclusion. The process resulted in 15 articles from the initial 47 articles which were then analyzed to answer eight research questions and produced a synthesis of the position of green accounting as an instrument of transparency and corporate sustainability strategy.

RESEARCH RESULTS AND DISCUSSION

Literature Mapping

Literature mapping was carried out to identify and analyze previous research that discusses the application of *green accounting* and its relationship with company performance, sustainability, environmental performance, *corporate social responsibility* (CSR), and corporate value. The mapping process was carried out on 15 articles published in the 2021–2025 period. The selected literature came from various scientific journals that have been indexed by SINTA with various rankings, ranging from SINTA 2 to SINTA 5. This mapping aims to obtain an overview of the development of *green accounting* research, the tendency of the variables used, and aspects that still need development in future research. The following table presents the results of article mapping based on the author's name, year of publication, research title, journal, and SINTA accreditation status.

Literature Mapping Analysis

Based on the 15 articles that have been mapped, it can be seen that research on *green accounting* in Indonesia has developed quite consistently in recent years. The most publications will be in 2024, with 10 articles, while three articles will be published in 2025, one article in 2023, and one article in 2021. This condition shows the increasing academic attention to *green accounting* issues, especially in relation to corporate sustainability and the demand for more environmentally oriented business practices.

In terms of research themes, *green accounting* is widely studied along with **environmental performance variables, CSR, *sustainability reports*, *material flow cost accounting* (MFCA), *eco-efficiency*, carbon emission disclosure, profitability, financial performance, and company value.** This pattern shows that *green accounting* is no longer seen only as a mechanism for recording environmental costs, but also as part of the company's strategy to improve transparency, resource efficiency, environmental responsibility, and business sustainability.

Several studies focus on the relationship between *green accounting* and company performance. Christy and Tjun (2024), for example, examine *green accounting* and sustainable

company performance with environmental performance as a moderation variable. Other research links *green accounting* to profitability, as conducted by Fitrifatun and Meirini (2024) and Alim and Puji (2021). Meanwhile, Gunawan and Berliyanda (2024) and Saputra and Windyastuti (2024) direct attention to the influence of *green accounting* on company value. This suggests that one of the main trends of research is to test whether environmentally oriented accounting practices can provide economic benefits to companies.

In addition to aspects of corporate performance and value, there is also research that integrates *green accounting* with an efficiency and sustainability approach. Dwi Rari Dwi R.T., Heryana, and Basuki (2024) examine the application of *green accounting* with MFCA in relation to corporate sustainability. Lestari and Alim (2022) also discuss the relationship between *green accounting* and MFCA to *sustainable development*. Muanifah and Cahyani (2024) even place *green accounting* as a moderation variable in the relationship between MFCA and company sustainability. These mapping findings show a development of research approaches from simply testing direct influences to testing more complex relationships between variables.

In the social and environmental aspects, several studies combine *green accounting* with CSR, carbon emission disclosure, and *sustainability reporting*. Deomega and Sari (2025) link *green accounting*, CSR, and environmental performance with the achievement of SDGs 2030 in mining companies. Sari and Andriany (2025) examine *green accounting*, CSR, and *sustainability report* disclosure on the profitability of companies in the transportation and logistics sector. Meanwhile, Azizah and Fujianti (2024) expanded the study by linking *green accounting* with *earnings management*. These developments show that the issue *of green accounting* is increasingly related to the dimensions of governance, transparency, social responsibility, and the quality of corporate information.

In terms of the research sector, the literature mapped shows that the research objects are quite diverse, including manufacturing, mining, transportation and logistics companies, as well as companies that are generally listed in the Indonesian capital market. However, research still tends to be concentrated on companies with relatively good availability of environmental information and sustainability reports. This condition shows that there is an opportunity to expand the study on sectors or characteristics of companies that have not been widely researched.

Judging from the quality of publications, most of the articles have been published in SINTA-indexed journals, with some articles coming from SINTA 2 and SINTA 3 journals. The dominance of publications in accredited journals shows that the topic of *green accounting* has received considerable attention in accounting research in Indonesia. However, variations in the quality and ranking of journals show that research on *green accounting* is still widespread and has not been fully consolidated in journals with higher levels of accreditation.

No.	Author	Year	Title	Journal	SINTA
1	Christy & Tjun	2024	*Green Accounting and Sustainable Corporate Performance: Environmental Performance as a Moderating Variable*	ASET Journal	**S2**
2	Dwi Rari Dwi R.T., Heryana & Basuki	2024	*Analysis of the Implementation Green Accounting and Material Flow Cost Accounting on Corporate Sustainability*	Journal of Accounting and Finance Research	**S2/S3**
3	Gunawan & Berliyanda	2024	*The Influence of Green Accounting, Carbon Emission Disclosure, and Environmental Performance on Company Value*	Indonesian Accounting and Business Review	**S3**
4	Sari & Andriany	2025	*Analysis of the Influence of the Implementation of Green Accounting, CSR and Sustainability Report Disclosure on the Profitability of Companies in the Transportation and Logistics Sector*	IKRAITH-ECONOMICS	SINTA Indexed

No.	Author	Year	Title	Journal	SINTA
5	Deomega & Sari	2025	*The Influence of Green Accounting, CSR and Environmental Performance on SDGs 2030 on Mining Companies in 2019–2023*	IKRAITH-ECONOMICS	SINTA Indexed
6	Fitrifatun & Meirini	2024	*The Influence of Green Accounting, Environmental Performance, Company Size and Liquidity on Profitability*	Reslaj	SINTA Indexed
7		2024	*The Influence of Eco-Efficiency and Green Accounting Implementation on the Achievement of Sustainable Development*	Journal of Economic, Business and Accounting (COSTING)	**S4**
8		2024	*The Influence of Green Accounting, Environmental Performance, and Leverage on Financial Performance Moderated by Corporate Social Responsibility*	SAFE-Network Journal of Business Economics Informatics	**S4**
9	Saputra & Windyastuti	2024	*The Effect of Green Accounting Implementation, Sustainability Report, Asymmetric Information, and Financial Performance on Firm Value*	Utsaha: Journal of Entrepreneurship	**S5**
10	Azizah & Fujianti	2024	*Green Accounting and Earnings Management in Indonesian Manufacturing Companies*	Title: Scientific Journal of Accounting	**S2**
11	Muanifah & Cahyani	2024	*Green Accounting Moderates Material Flow Cost Accounting to Improve Company Sustainability*	ACADEMIC: Journal of Economics & Business Students	**S5**
12	Lestari & Alim	2022	*The Influence of Green Accounting, Material Flow Cost Accounting (MFCA) on Sustainable Development*	Digital Journal of Accounting	SINTA Indexed
13	Alim & Praise	2021	*The Effect of the Implementation of Green Accounting, Corporate Social Responsibility Disclosure on Company Profitability*	Digital Journal of Accounting	SINTA Indexed
14	Nuha, Cahyaningati & Meilan	2023	*Application Green Accounting in Islamic Perspective and its Impact on Company's Financial Performance*	Assets: Scientific Journal of Accounting, Finance and Tax	**S4**
15	Febrianto et al.	2025	*Tax Avoidance and Green Accounting in Increasing Firm Value and CSR Practices in Indonesia*	Journal of Accounting and Finance Review	**S2**

Research Question Answers

Based on the mapping of 15 articles that became research samples, a literature synthesis can be carried out to answer the eight research questions (RQ) that have been formulated. The analysis not only considers the year of publication and research variables, but also pays attention to the development of themes, the form of application of green accounting, impact orientation, characteristics of research objects, and gaps that are still visible in the literature.

RQ1: What are the developments and research trends regarding green accounting in relation to transparency and corporate sustainability?

Based on the 15 articles analyzed, research on green accounting shows that the development of green accounting is increasingly intensive during the period 2021–2025. The distribution of articles shows that there is one article in 2021, one article in 2022, one article in 2023, nine articles in 2024, and three articles in 2025. Thus, 2024 will be the period with the most dominant number of publications, namely 9 out of 15 articles or around 60% of the total mapped articles. This increase shows that green accounting issues are increasingly gaining attention in accounting research, especially when issues of sustainability, environmental performance, CSR, carbon emissions, and SDGs are increasingly integrated into business activities.

When viewed based on the development of the theme, research in the early period tends to place green accounting as a variable associated with the economic consequences of the company. Alim & Puji (2021), for example, examines the implementation of green accounting and CSR disclosure on company profitability. Lestari & Alim (2022) then expands the focus by linking green accounting and Material Flow Cost Accounting (MFCA) with sustainable development. These developments show a shift from a perspective that only assesses financial benefits to a perspective that considers resource efficiency and sustainability.

In the 2024–2025 period, research themes will become more diverse. Christy & Tjun (2024) connect green accounting with sustainable corporate performance through environmental performance, while Gunawan & Berliyanda (2024) include carbon emission disclosure and environmental performance in the study of corporate value. Saputra & Windyastuti (2024) even associate green accounting with sustainability reports, asymmetric information, financial performance, and firm value. In 2025, the scope of research will be further expanded through the issue of SDGs 2030, the mining sector, the transportation and logistics sectors, as well as the relationship between green accounting and tax avoidance and CSR.

Thus, the development of the literature shows a conceptual transformation. Green accounting is no longer positioned only as a mechanism for recording or disclosing environmental costs, but is beginning to be understood as a strategic instrument that can connect the environmental dimension with economic performance, information transparency, governance, social responsibility, and corporate sustainability. However, the transparency dimension is still not the main focus compared to the dimensions of financial performance and company value.

RQ2: What are the most widely studied forms of green accounting implementation and indicators in the literature?

The mapping results show that green accounting is the main concept used in almost all articles, but its implementation is translated through various indicators and instruments. The most prominent forms of implementation include Material Flow Cost Accounting (MFCA), environmental performance, carbon emission disclosure, sustainability report, CSR, eco-efficiency, as well as financial performance indicators and company value.

MFCA is one of the approaches that has consistently appeared in the literature. Dwi Rari Dwi R.T. et al. (2024), Muanifah & Cahyani (2024), and Lestari & Alim (2022) explicitly link green accounting with MFCA. The emergence of MFCA shows the development of environmental accounting that is reporting to a more operational approach. MFCA allows companies to identify material flows and costs related to materials that become products and materials that end up as waste. Thus, green accounting is not only used to find out the amount of environmental costs, but also to find sources of inefficiencies in the production process.

Environmental performance indicators also have an important position. Christy & Tjun (2024) use environmental performance as a moderation variable, while Gunawan & Berliyanda (2024) use it in conjunction with carbon emission disclosure to explain the company's value. This shows that green accounting measurement is increasingly directed at the company's ability to produce environmental performance that can be observed and compared.

Meanwhile, sustainability reports and carbon emission disclosures show the development of green accounting towards external transparency. Sustainability reports provide information on economic, environmental, and social aspects of the company, while carbon emission

disclosures provide more specific information about the company's impact on climate change. Saputra & Windyastuti (2024) is one of the articles that shows the relationship between green accounting, sustainability reports, and asymmetric information.

Thus, the form of implementing green accounting in 15 articles can be grouped into four main orientations, namely the orientation of cost and material measurement through MFCA, the orientation of environmental performance measurement through environmental performance, the orientation of disclosure through sustainability report and carbon emission disclosure, and the orientation of value creation through profitability, financial performance, and firm value. This pattern shows that the concept of green accounting is increasingly multidimensional.

RQ3: How does green accounting contribute to corporate transparency?

Based on the mapped articles, green accounting's contribution to corporate transparency is mainly seen through increased disclosure of environmental and sustainability information. Green accounting allows companies to identify and measure information that was not previously fully reflected in conventional financial statements, such as environmental costs, material use, carbon emissions, waste management, and environmental performance.

This relationship is evident in the research of Saputra & Windyastuti (2024) which includes sustainability reports and asymmetric information in the research model. The use of asymmetric information shows that sustainability information not only functions as a form of corporate accountability, but also has relevance to the information gap between management and external users of company reports. With more structured environmental and sustainability information, external parties gain a broader basis to evaluate the company's condition and prospects.

The disclosure of carbon emissions studied by Gunawan & Berliyanda (2024) also shows a more specific form of transparency. Information on emissions allows stakeholders to know the extent to which a company's activities are generating an impact on the environment. In this context, green accounting serves as a mechanism that transforms environmental impact into measurable and communicable information to stakeholders.

However, based on these 15 articles, research that explicitly places transparency or asymmetric information as the main outcome is still limited. Most of the research uses profitability, financial performance, company value, and sustainability as dependent variables. This shows that the relationship between green accounting and transparency is still a relatively open area to be developed.

Thus, the contribution of green accounting to transparency can be understood through three main mechanisms, namely producing more measurable environmental information, expanding the scope of non-financial information available to stakeholders, and potentially reducing the information gap between companies and external parties. However, the existing literature is not strong enough to conclude that increased disclosure automatically results in better quality transparency, as the quality, verification, consistency, and materiality of information also need to be considered.

RQ4: How does the implementation of green accounting affect the sustainability of the company?

Sustainability is one of the most powerful themes in the literature mapping. This can be seen from the emergence of the terms corporate sustainability, sustainable development, SDGs, sustainable corporate performance, environmental performance, and eco-efficiency in a number of articles. This condition shows that green accounting is increasingly positioned as an instrument that can help companies integrate economic and environmental goals.

Dwi Rari, Dwi, R.T. et al. (2024) directly link the implementation of green accounting and MFCA with corporate sustainability. Muanifah & Cahyani (2024) also examined the relationship between MFCA and corporate sustainability with green accounting as a moderation variable. Both studies show that green accounting can be understood through the mechanism of resource efficiency and material management, not solely through reporting activities.

On a broader level, Deomega & Sari (2025) links green accounting, CSR, and environmental performance with the 2030 SDGs in mining companies. This shows that sustainability in the green accounting literature is starting to be directed towards broader

development goals. This means that the success of the implementation of green accounting is not only assessed based on the company's economic benefits, but also on its contribution to environmental management and the achievement of sustainable development goals.

If synthesized, the impact of green accounting on sustainability can be divided into three dimensions. The economic dimension is reflected through profitability, financial performance, and firm value. The environmental dimension is seen through environmental performance, carbon emission disclosure, MFCA, and eco-efficiency. Meanwhile, the social dimension is reflected through CSR and contribution to the SDGs.

Thus, the literature shows that green accounting has the potential to be a strategic instrument for corporate sustainability because it provides information that can be used to control costs, improve resource efficiency, improve environmental performance, and improve the quality of corporate relationships with stakeholders. However, sustainability is not only determined by the existence of a green accounting system, but also by how the information is used in the company's strategic decisions.

RQ5: What are the factors that are the drivers and obstacles in the implementation of green accounting?

The mapping of 15 articles shows that the driving factors for the implementation of green accounting can be seen from the increasing demands on environmental performance, CSR, sustainability reporting, carbon emission disclosure, resource efficiency, and the achievement of the SDGs. The emergence of these variables shows that companies are facing pressure to not only maintain financial performance, but also demonstrate responsibility to the environment and society.

The characteristics of the industrial sector can also be a factor that strengthens the relevance of green accounting. Deomega & Sari (2025) use mining companies, while Sari & Andriany (2025) use transportation and logistics companies. Both sectors have operational characteristics that have the potential to have environmental impacts so that the need for environmental measurement, control, and disclosure becomes greater. Thus, the level of environmental impact of an industry can be an important context in explaining the application of green accounting.

In addition to external pressures, the company's internal need for efficiency is also a driver. The emergence of MFCA and eco-efficiency in the literature shows that green accounting can provide benefits through reducing material waste and controlling costs. This means that the implementation of green accounting is not solely driven by regulatory obligations or stakeholder pressure, but can also come from the company's need to improve operational efficiency.

In contrast, implementation barriers have not been a strong focus in the 15 articles. Most of the research examines the influence or relationship between variables, rather than delving deeply into the process of implementing green accounting within organizations. Therefore, some potential obstacles such as system investment costs, limited human resource competencies, difficulties in obtaining environmental data, technological limitations, and regulatory differences have not received comparable attention to research on the benefits of green accounting.

This condition indicates an important gap. Future research needs to shift from the question "does green accounting have an effect?" to more implementable questions, namely "how is green accounting implemented?", "what are the obstacles?", and "what kind of organizational conditions make its implementation successful?".

RQ6: What are the most dominant research methods, industry sectors, and geographical contexts?

Based on the mapping of the article, the research on green accounting in this literature sample is very strong in using a quantitative approach. This can be seen from the dominance of the use of research variables such as green accounting, profitability, financial performance, firm value, leverage, CSR, environmental performance, sustainability report, and SDGs. This pattern shows that the research is more directed to test the relationship or influence between variables than to explore the process of implementing green accounting in depth.

In terms of the industrial sector, the research includes manufacturing, mining, transportation and logistics, as well as companies in general. Azizah & Fujianti (2024) specifically

examined Indonesian manufacturing companies, Deomega & Sari (2025) focused on mining companies, and Sari & Andriany (2025) examined companies in the transportation and logistics sectors. The diversity of these sectors shows that green accounting has relevance across industries, but the research tends to pay more attention to sectors that have a close relationship with environmental issues.

The most prominent aspect is the geographical context. All 15 articles mapped are in the Indonesian context. This is an advantage if the purpose of the research is to understand the development of green accounting in Indonesia, but at the same time it is a limitation in producing international generalizations.

The concentration on Indonesia also shows comparative research opportunities. Differences in regulations, ESG awareness levels, investor pressure, industry structure, and the quality of reporting systems between countries have the potential to result in different patterns of green accounting implementation. Therefore, cross-country research or comparison of developed and developing countries can make a stronger contribution to the development of the literature.

RQ7: What are some consistent and inconsistent findings in the literature regarding the relationship between green accounting, transparency, and corporate sustainability?

From the mapping of 15 articles, there is a relatively consistent pattern that green accounting is related to various aspects of company performance and sustainability. This can be seen from the many studies that connect green accounting with profitability, financial performance, firm value, environmental performance, sustainability, SDGs, and eco-efficiency.

However, the pattern of the relationship is not simple. Several studies include moderation variables to explain the conditions that can strengthen or change the relationship between variables. Christy & Tjun (2024), for example, use environmental performance as a moderation variable, while Muanifah & Cahyani (2024) place green accounting as a moderation variable in the relationship between MFCA and company sustainability. The use of the moderation model shows that the benefits of green accounting may depend on the company's internal and external conditions.

The research also showed an expansion of outcomes. In the initial research, profitability was one of the main objectives of the test. However, subsequent research began to include sustainability, SDGs, environmental performance, carbon emission disclosure, asymmetric information, and firm value. This shift shows that the measure of success of green accounting is getting wider.

However, based on the available tables, it is not yet possible to definitively state that all studies produce the same relationship direction because information regarding the coefficients, significance, and direction of influence of each article is not included. Therefore, a more appropriate conclusion is that there is consistency in the theme and conceptual direction of the research, but empirical consistency regarding the strength and significance of the relationship still needs to be verified through the extraction of statistical results from each article.

This is important for SLR because differences in empirical results cannot be deduced based solely on the title of the article. Further extraction of coefficients, significance values, sample sizes, analysis methods, and object characteristics is needed to determine whether the relationship between green accounting and transparency and sustainability is truly consistent or results in diverse findings.

RQ8: What are the research gaps that still exist in the literature and the direction of research that can be developed?

The mapping of 15 articles shows several research gaps that are quite clear. First, there is a very strong geographical concentration on Indonesia. All articles use the Indonesian context, so there is still limited evidence on how institutional characteristics, regulations, capital markets, and business cultures in other countries affect the implementation of green accounting.

Second, research is still dominated by quantitative approaches. The approach provides information about the relationships between variables, but is relatively limited in explaining the implementation process. Qualitative research can be used to understand how companies develop green accounting systems, how management uses environmental information, and

how accountants face environmental measurement and reporting challenges. The mixed-methods approach can also be used to combine generalizations of quantitative results with contextual understanding.

Third, there is a gap in the aspect of transparency. Compared to profitability, financial performance, and firm value, the issue of transparency and asymmetric information is still relatively little studied. In fact, one of the strategic functions of green accounting is to produce environmental information that can be used by investors, creditors, regulators, and other stakeholders. Therefore, the next research can further test the relationship between the quality of green accounting, the quality of sustainability disclosure, asymmetric information, cost of capital, and investment decisions.

Fourth, research on carbon accounting can still be developed in a more specific way. The mapped article has included carbon emission disclosure, but the study can be expanded to include Scope 1, Scope 2, and Scope 3 measurements, the quality of emission data, assurance of carbon information, and the relationship between carbon accounting and corporate risk and investment decisions.

Fifth, the greenwashing aspect is also an important research opportunity. Increased sustainability disclosure does not necessarily indicate that a company has good environmental performance. Future research can compare the information disclosed by the company with the realization of environmental performance, environmental costs, and emissions to assess whether there is a gap between sustainability claims and actual practices.

Sixth, the driving factors and obstacles to the implementation of green accounting are still relatively underexplored. The next research can test the influence of regulations, ESG investor pressure, management commitment, accountant competence, information system quality, company size, and industry characteristics on the level of green accounting implementation.

Seventh, there is an opportunity to develop research that integrates green accounting with management accounting information systems. The integration can be directed to green budgeting, green capital budgeting, life-cycle costing, environmental cost control, division performance evaluation, and strategic decision-making. Thus, the research does not only see green accounting as an independent variable in statistical models, but as an information system that is used in real terms in the company's decision-making process.

Overall Synthesis

Overall, the results of the mapping of 15 articles show that research on green accounting has developed quite rapidly, especially in the period 2024–2025. Of the 15 articles, nine were published in 2024 and three in 2025, so most of the literature in the sample came from the last two years of the observation period. These developments show increasing attention to the relationship between environmental accounting practices and company performance, sustainability, CSR, carbon emissions, SDGs, and transparency.

Substantively, the literature shows that green accounting has expanded its meaning. Green accounting is no longer limited to recording environmental costs, but includes managing material flows through MFCA, environmental performance measurement, carbon emission disclosure, sustainability reporting, eco-efficiency, and integrating environmental information with economic decisions. This expansion shows that green accounting is increasingly evolving from an administrative function to a strategic function.

In terms of transparency, green accounting has the potential to strengthen the quality of company information by providing information on environmental costs, emissions, resource use, and sustainability performance. However, research that directly tests the influence of green accounting on transparency and asymmetric information is still limited. This is one of the main gaps that can be developed.

In terms of sustainability, the literature shows a tendency to connect green accounting with three main dimensions, namely economic, environmental, and social. The economic dimension is reflected in profitability, financial performance, and company value; the environmental dimension is reflected in environmental performance, carbon emissions, MFCA, and eco-efficiency; while the social dimension is reflected in CSR and SDGs. Thus, green accounting is increasingly positioned as a mechanism to integrate economic and sustainability interests.

However, the mapped literature still has limitations in the form of dominance of the Indonesian context, dominance of quantitative approaches, limitations of direct implementation studies, and relatively limited research on transparency, greenwashing, comprehensive carbon accounting, and inhibitory factors of implementation. Therefore, the next research agenda needs to be directed towards a more multidimensional and contextual approach.

Based on the overall findings, it can be concluded that green accounting has a potential position as a company's strategy to strengthen transparency while supporting sustainability. However, its effectiveness is not sufficiently determined by the existence of environmental recording or disclosure practices. The effectiveness of green accounting is highly dependent on the quality of data, the integration of environmental information with management accounting systems, the company's ability to use this information in decision-making, quality assurance, and regulatory support and human resource competence. Therefore, this SLR research can contribute by shifting the perspective from just "green accounting as a reporting practice" to "green accounting as a strategic information system for transparency and sustainable value creation".

CONCLUSION

Based on the Systematic Literature Review of 15 articles obtained through the PRISMA process from the initial 47 articles, the research shows that green accounting is growing rapidly and increasingly integrated with the issue of transparency and corporate sustainability. The research trend shows a shift from the initial focus on profitability and financial performance to broader issues, such as environmental performance, carbon emission disclosure, sustainability report, CSR, SDGs, eco-efficiency, and firm value.

The implementation of green accounting is mainly carried out through green accounting, Material Flow Cost Accounting (MFCA), environmental performance measurement, carbon emission disclosure, sustainability reporting, and eco-efficiency. The instrument shows that green accounting not only functions as a mechanism for recording environmental costs, but also as a means of cost control, resource efficiency, and the provision of environmental information for stakeholders.

In terms of transparency, green accounting contributes through improving the quality and quantity of environmental information and sustainability which can reduce the information gap between companies and stakeholders. Meanwhile, for sustainability, green accounting supports the integration of economic, environmental, and social aspects through improving efficiency, environmental performance, social responsibility, and achieving the SDGs.

The literature is dominated by quantitative research with corporate objects in Indonesia, especially in the manufacturing, mining, transportation, and logistics sectors. However, research that specifically examines the quality of transparency, asymmetric information, greenwashing, and obstacles to the implementation of green accounting is still limited. In addition, the dominance of the Indonesian context shows the need for cross-border research and qualitative and mixed-methods approaches.

Thus, green accounting can be seen as a strategy that not only supports environmental reporting, but also strengthens transparency and sustainability of the company. The development of further research needs to be directed at the quality of environmental information, carbon accounting, greenwashing prevention, drivers and obstacles to implementation, as well as the integration of green accounting with the company's management accounting information system and strategic decision-making.

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