Green Accounting in Indian Companies For Quintessential Viksit Bharat 2047

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DOI:10.37648/ijrssh.v15i05.018

[1] *Received: 01/11/2025; Accepted: 20/11/2025; Published: 25/11/2025*

Abstract

Viksit Bharat, India's ambition to become a developed country by 2047, will be achieved by developing all sectors and involving everyone, including the youth. The government's goal, Viksit Bharat 2047, is to make the nation a wealthy and self-sufficient economy by that year. The program's criteria include social empowerment, infrastructure development, economic growth, technical advancement, and sustainability. Eliminating environmental variables will not make any nation an ideal developed nation. Ecological preservation and economic growth coexist in a Viksit Bharat. The aim is to build a robust, inclusive, and environmentally friendly future for future generations. This effect can be quantified through green accounting. Green accounting. incorporating environmental factors into economic decision-making, this method guarantees sustainable development and considers the depletion of natural resources. An economic system known as "Green Accounting," or "Environmental Accounting," integrates the value of natural resources and environmental services into national and state-level financial statements. This paper tries to go through the various measures of green accounting strategies taken by Indian public sector undertakings and private companies for the protection of the environment, apart from the motive of profit-gaining, which received a rating in the CDP report. A qualitative technique has been employed to offer comprehensive insights and examine the intricacies of the problem.

Keywords: *Green Accounting; sustainable development; environmental accounting; carbon disclosure project; waste management; Viksit Bharat*

1. Introduction

An accounting technique that unites environmental expenses into conventional financial accounting is called “Green Accounting,” “environmental accounting,” or environmentally adjusted accounting. Recognizing the economic worth of ecological assets and the costs related to environmental consequences, the objective is to present a more thorough picture of a business's or nation's performance. On the other hand, Green Accounting uses the System of Environmental-Economic Accounting (SEEA), which analyses the costs of environmental deterioration and its mitigation while concentrating on the depletion of limited natural resources. By increasing the visibility of ecological effects in financial decision-making, green accounting attempts to promote sustainable development by bridging the gap between ecology and economics. The key factors in Green Accounting are environmental cost, natural capital

[1] **How to cite the article:** Sirimalla S (November, 2025) Green Accounting in Indian Companies For Quintessential Viksit Bharat 2047; *International Journal of Research in Social Sciences and Humanities*; Vol 15, Special Issue 5; 100-105, DOI: http://doi.org/10.37648/ijrssh.v15i05.018

accounting, sustainability reporting, and policy implications. **Viksit Bharat @2047** is India's bold leap toward a brighter, stronger future, where the nation emerges as a global powerhouse for the time it celebrates 100 years of independence. With inclusive growth, green progress, and smart governance at its core, this mission pulses with purpose. India's youth drive the momentum, brimming with ideas, energy, and ambition, leading the charge as change-makers and torchbearers. Innovation, self-reliance, and an unstoppable spirit define this journey toward a vibrant, future-ready India. On the journey to **Viksit Bharat @2047**, **Green Accounting** is the compass that keeps development aligned with nature. It transforms the invisible costs of environmental damage into visible data, guiding decisions which are as wise as they are ambitious. By recognizing the value of forests, rivers, and clean air alongside GDP, India ensures that its development trajectory is measured not only by economic indicators but also by environmental sustainability and ecological balance.

2. Review of Literature:

As Green Accounting is a newly emerging concept, only limited research has been conducted. Nevertheless, a few relevant studies have been reviewed.

i. (Abed & Singh, 2024): The Bharatiya banking sector has adopted green accounting to integrate environmental considerations into financial reporting and decision-making. This includes tracking emissions, energy and water use, and waste generation. Banks follow frameworks like the Global Reporting Initiative (GRI) and Principles for Responsible Banking (PRB) to disclose environmental, social, and governance (ESG) data. They also assess and mitigate environmental risks linked to their operations and investments. These practices promote transparency, accountability, and support sustainable development.

ii. (Rathod & Rupareliya, 2020): The paper presents a comprehensive overview of Green Accounting, defining it as the systematic recording of environmental costs and benefits. It highlights the early-stage implementation of Green Accounting in India and emphasizes the need for clear tracking of natural resource usage. The paper advocates for government intervention to mandate its adoption, especially among large companies, and underscores its role in promoting sustainable business practices. It also outlines the potential benefits for emerging economies, such as improved resource management, public health, and sustainable development.

iii. (Tambe, 2020): **Green accounting** integrates environmental and resource costs into traditional financial systems, revealing the true economic impact of industrial activities on **renewable and nonrenewable resources**. It helps organizations measure what they gain from nature, 65what they take, and offers a clearer view of **ecological costs** and **natural capital** in business decision-making.

iv. (Sharma & Kumar, 2023): Green accounting practices in Indian companies are essential for fostering sustainable development. They promote transparency in environmental reporting and strengthen corporate accountability. By integrating these practices, India can advance its Vikasit Bharat vision, ensuring that economic growth goes hand in hand with environment preservation

v. (Joy & Singh, 2019): The study investigated green accounting practices among Indian companies, focusing on the extent of their adoption. It also emphasized recognizing the environment as a valuable asset in corporate decision-making

vi. (Jhamb & Aggarwal, n.d.): The study outlines green accounting in India but is constrained by limited data, few case studies, and minimal regulatory insight, which affect the depth of its conclusions.

3. Research Gap:

- Most focus on large companies or the private sector. There is a lack of research on adoption by public sector units (PSUs) and small and medium enterprises (SMEs), which form a large part of the Indian economy.

- There is a noticeable absence of detailed case studies showcasing the successful implementation of green accounting in Indian firms.

4. Objectives:

- To conduct a comprehensive study of the green accounting practices adopted by government and public sector companies recognized in the CDP Report 2024.
- To critically examine the green accounting practices implemented by private sector small and medium enterprises (SMEs) featured in the CDP Report 2024

5. Research Methodology:

The present study is mainly a descriptive study about the Green Accounting practices of the Public and private sector companies that have secured a ranking in the CDP (Carbon Disclosure Project) Report 2024. CDP conducts evaluations of companies based on their environmental disclosures and initiatives concerning climate change, water security, and forest management, utilizing standardized questionnaires. Scores range from **D to A**. CDP scoring ranks reflect levels of environmental engagement: **A** indicates Leadership, **B** represents Management, **C** reflects Awareness, and **D** denotes basic Disclosure. This study includes examining the Green Accounting practices of six companies that received commendable rankings in the **CDP Report 2024**. The selected public sector enterprises are **Oil and Natural Gas Corporation (ONGC)**, **Indian Oil Corporation (IOC)**, and **Punjab National Bank (PNB),** meanwhile, private sector entities comprise **Godrej Agrovet**, **Aarti Industries Limited**, and **PGP Glass Private Limited**. The study examines the Green Accounting practices of companies, emphasizing environmental cost tracking systems, carbon footprint assessment, natural resource valuation, pollution control and waste management, renewable energy integration, and sustainability reporting.

6. Limitations of the study:

This study is limited by its focus on select large Indian companies, which may not represent all industries or SMEs. It relies on secondary data from public reports that may be incomplete or selectively disclosed. The lack of standardized green accounting frameworks in India hinders consistent comparison. Data reflects a specific time, possibly missing recent or long-term changes. The study emphasizes emissions, energy, water, and waste, overlooking biodiversity and social factors. It mainly reflects corporate views, excluding external stakeholder perspectives. Lastly, directly linking corporate practices to Viksit Bharat 2047 goals remains uncertain.

ONGC

ONGC minimizes its carbon footprint by targeting greenhouse gas emissions and reducing methane leaks through the Global Methane Initiative, enhancing safety and efficiency. ONGC enforces robust environmental management, continuously improving HSE practices to ensure sustainability. It minimizes air pollution by reducing gas flaring, controlling emissions, and monitoring air quality. Noise pollution is mitigated through acoustic enclosures, PPE, monitoring, and green belts. A tiered oil spill response system, regular drills, and collaborations ensure effective land and water protection. Bioremediation by OTBL reduces onshore oil spill contaminants below 0.5% TPH. HDPE liners prevent wastewater seepage at drilling sites. Produced water is treated and reused to conserve freshwater. Hazardous wastes, including oily sludge, are safely processed or recycled. The DISHA project digitizes office work, cutting paper use and boosting efficiency. ONGC promotes biodiversity via native tree plantations and conservation efforts exceeding regulations. Since 2006, ONGC has registered 15 Clean Development Mechanism projects with the UNFCCC, generating approximately 2.1 million Certified Emission Reductions annually. In response to increasing freshwater scarcity, ONGC is developing sustainable water management strategies to ensure long-term availability of

water resources. Net Zero Decarbonization Roadmap: ONGC's policy aims to achieve Net Zero operational emissions (Scope 1 and Scope 2) by 2038.(Sustainability Report 2023-24)

Indian Oil Corporation

Scope 1 sources and 98.5% comprise CO_2. Refineries and petrochemicals account for 97% of emissions. With upcoming expansions, emissions may surpass 40 $MMTCO_2e$ by 2030. Indian Oil balances its mandate of meeting national energy demands with its responsibility toward climate action. It is actively reducing emissions across operations, products, and the supply chain, and intensifying efforts to achieve net-zero targets. Indian Oil pursues net zero by enhancing operations, advancing cleaner fuels, and optimizing supply chains through expert audits, R&D, and partnerships. Future expansions will use renewable power to curb emissions. Serving 30 million daily customers, it promotes fuels like XP95 and IndiGreen. The company invests in low-carbon technologies—green hydrogen, CCUS, EVs—and drives emission reductions across its value chain. Indian Oil is committed to reaching net-zero operational emissions by 2046, addressing both Scope 1 and Scope 2 emissions in its decarbonization roadmap.(Sustainability Report 2023-24)

Punjab National Bank:

PNB is a member of the Partnership for Carbon Accounting Financials (PCAF) to measure and report funded greenhouse gas (GHG) emissions in compliance with global standards. It included emission statistics in its Business Responsibility and Sustainability Report (BRSR), which followed SEBI and RBI regulations. Its operational resource accounting carries out water and energy audits in all offices and branches, monitors waste production, paper use, and electricity consumption as part of internal resource accounting, encourages paperless transactions and digital banking to lessen its impact on the environment. Its environmental risk management takes into consideration social and environmental protections (such as approvals for pollution control and compliance with resettlement) while evaluating and authorizing projects, and conforms to high-impact finance principles, which are comparable to the Equator Principles. The bank helped sequester carbon by planting over 100,000 seedlings as part of Project PNB Palaash, and keeps track of the quantity and coverage of plantations as part of environmental offset criteria.
(Sustainability Report 2023-24)

Godrej Agrovet:

Godrej Agrovet is the first agri-business in India to commit to the Science-Based Targets initiative (SBTi). The company has set the following goals: Reduce Scope 1 and 2 GHG emissions by 37.5% by 2035, reduce Scope 3 GHG emissions by 16% by 2035, and achieve carbon neutrality by 2026 through structured measurement and reduction strategies. In palm oil operations, zero liquid discharge and zero waste to landfill were attained. It pursues a positive water balance across all facilities by monitoring water use efficiency. Tracks the amount of energy used for each production unit, reduces reliance on fossil fuels by investing in alternative energy (such as solar panels), and reports yearly gains in energy efficiency. Sustainable Products metrics target at least one-third of overall revenue and calculate the revenue share from green products, including Agri-inputs, animal feed, and environmentally friendly crop protection. (Sustainability Report 2023-24)

Aarti Industries Limited: To achieve net-zero emissions, Aarti Industries has formally joined the Science-Based Targets initiative (SBTi), which sets goals that are in line with science, and invested ₹18 cr. in biomass research to replace fossil fuels and renewable energy capacity (147 MWh/day). A 6.5 MW cogeneration unit recovers energy from sulphuric acid processes. An IT-enabled Energy Management System (EnMS) for real-time monitoring and optimization, and 2.35 MW coal-fired cogeneration with steam recovery—improving boiler efficiency and lowering

coal usage Eleven locations have implemented Zero Liquid Discharge (ZLD); 83–85% of the effluent is recycled internally, with the remaining portion being processed and securely disposed of outside and Reduced water extraction by more than 44% using water recycling, ZLD, and condensate recovery.
(Sustainability Report 2023-24)

PGP Glass Pvt. Ltd.: PGP Pvt Ltd adopted green accounting to systematically measure, report, and manage its environmental impacts in line with national and global sustainability standards. PGP Pvt Ltd implemented green accounting practices to monitor and manage its environmental impacts more effectively. The company tracked direct and indirect environmental costs—such as energy use, water consumption, waste generation, and emissions—and allocated these costs across departments for accountability. It measured Scope 1 and 2 greenhouse gas emissions and began partial tracking of Scope 3 emissions from its supply chain. Environmental data was disclosed per GRI and BRSR standards, highlighting progress in renewable energy use, pollution control, and waste reduction. Additionally, PGP adopted green procurement practices and evaluated supplier performance based on environmental criteria to strengthen sustainability across its value chain. (Sustainability Report 2023-24)

7. Discussion

The green accounting initiatives undertaken by ONGC, Indian Oil Corporation, Punjab National Bank, Godrej Agrovet, Aarti Industries, and PGP Glass Pvt. Ltd. significantly advance the objectives of **Viksit Bharat 2047** by embedding sustainability within India's developmental framework. These organizations consistently undertake measures to reduce greenhouse gas emissions, optimize resource utilization, and deploy environmentally sustainable technologies, thus ensuring that industrial and economic development progresses in alignment with environmental conservation principles. Through rigorous environmental reporting and adherence to international standards, these organizations strengthen transparency and accountability, thereby supporting India's commitments under global climate agreements. Additionally, their adoption of digital technologies enhances operational efficiency, while investments in biodiversity conservation and community welfare promote inclusive and sustainable development.

8. Conclusion

Green accounting has emerged as an indispensable framework for Indian companies striving to balance economic growth with environmental stewardship. By systematically integrating environmental costs, resource valuation, and sustainability metrics into their financial practices, businesses can enhance transparency, accountability, and long-term resilience. As India progresses toward the ambitious goal of Viksit Bharat 2047, green accounting will be quintessential in ensuring that development is both inclusive and sustainable—preserving natural capital while fostering innovation and competitiveness. Ultimately, widespread adoption of green accounting will empower Indian industries to drive a greener economy, align with global climate commitments, and contribute meaningfully to the nation's sustainable transformation. Fundamentally, the integration of green accounting and sustainability initiatives by corporations is crucial to cultivating a resilient, ecologically sustainable, and economically thriving India, which forms the foundation of the Viksit Bharat 2047

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