



To cite this article: Dr. V. Mohan Nayak (2026). NATURE-RELATED FINANCIAL DISCLOSURES AND GREEN ACCOUNTING: EMERGING PRACTICES AND CHALLENGES IN INDIA, International Journal of Research in Commerce and Management Studies (IJRCMS) 8 (5): 787-797 Article No. 908 Sub Id 1487

NATURE-RELATED FINANCIAL DISCLOSURES AND GREEN ACCOUNTING: EMERGING PRACTICES AND CHALLENGES IN INDIA

Dr. V. Mohan Nayak

Associate Professor,
Department of commerce,
Government Degree College for Men,
B-Camp, Kurnool (Dist), Andhra Pradesh, India.

DOI: <https://doi.org/10.38193/IJRCMS.2026.8550>

ABSTRACT

Nature and biodiversity are becoming seen as significant economic and financial matters rather than solely environmental considerations. Enterprises rely on natural assets and ecosystem functions, including water, land, forests, minerals, soil, biodiversity, and ecological equilibrium. Simultaneously, commercial endeavors can adversely impact the environment via pollution, resource depletion, habitat degradation, waste production, and overconsumption of natural resources. These linkages and effects can generate financial hazards and prospects for enterprises and investors. In this context, Nature-Related Financial Disclosures (NRFDs) have surfaced as a significant advancement in corporate reporting. The Taskforce on Nature-related Financial Disclosures (TNFD) offers a structure for entities to recognize, evaluate, manage, and reveal their dependencies, effects, risks, and prospects concerning nature. The TNFD framework is organized into four fundamental components: governance, strategy, risk and impact management, and measurements and targets.

Green accounting enhances nature-related disclosures by detecting, quantifying, and reporting on environmental expenditures, resource utilization, and ecological effects linked to corporate operations. In India, the Securities and Exchange Board of India (SEBI) has enhanced sustainability reporting for listed companies under the Business Responsibility and Sustainability Report (BRSR) framework. The framework encompasses disclosures linked to environmental factors such as air contaminants, water usage, waste management, activities in environmentally delicate regions, and effects on biodiversity. SEBI has implemented BRSR Core and assurance prerequisites, establishing a more robust framework for dependable sustainability data.

This study explores the developing connection between nature-oriented financial reporting and ecological accounting in India. The research exclusively utilizes secondary data to examine legislative advancements, global reporting standards, and evolving company behaviours.

KEYWORDS: Nature-Related Financial Disclosures, Green Accounting, Biodiversity, TNFD, BRSR, ESG, Sustainability Reporting, Environmental Accounting, India, Natural Capital.

1. INTRODUCTION

Environmental sustainability has traditionally been discussed in terms of climate change, greenhouse-gas emissions and energy consumption. However, the relationship between business and the natural environment is considerably broader. Organisations depend on a wide range of natural resources and ecosystem services for their operations. Agriculture depends on soil, water, pollination and biodiversity; manufacturing depends on water, minerals and raw materials; pharmaceutical industries depend partly on biological resources; tourism depends on ecosystems and natural landscapes; and financial institutions may be indirectly exposed to nature-related risks through their lending and investment portfolios.

Nature degradation can therefore become a financial issue. A business facing water scarcity may experience higher operating costs. A company dependent on agricultural raw materials may face supply disruptions because of soil degradation or biodiversity loss. A tourism business may lose revenue when ecosystems deteriorate. Similarly, financial institutions can face credit and investment risks when borrowers are exposed to nature-related disruptions.

This changing understanding has contributed to the development of Nature-Related Financial Disclosures (NRFDs). The TNFD has developed recommendations to help organisations assess, manage and disclose nature-related dependencies, impacts, risks and opportunities. Its recommendations are organised around four pillars: Governance; Strategy; Risk and Impact Management; and Metrics and Targets.

The development of nature-related disclosure is closely connected with the evolution of green accounting. Traditional financial accounting generally records transactions that have direct monetary consequences for an organisation. However, many environmental costs may remain outside conventional accounting systems. Pollution, depletion of natural resources, biodiversity loss, environmental restoration and ecosystem degradation may not be adequately reflected in conventional financial statements.

Green accounting attempts to address this limitation by identifying and measuring environmental costs and benefits and incorporating environmental considerations into accounting and managerial decision-making.

India provides an important context for studying this development. SEBI's BRSR framework requires

sustainability-related disclosures from the top 1,000 listed entities by market capitalisation. The BRSR includes several nature-related areas, including water, waste, air pollution, ecologically sensitive areas and biodiversity impacts.

Therefore, the emerging challenge is no longer simply whether companies should report environmental information. The more important question is how nature-related information can be measured, accounted for, assured and connected with financial decision-making.

2. CONCEPT OF NATURE-RELATED FINANCIAL DISCLOSURES:

Nature-Related Financial Disclosures refer to the disclosure of information concerning an organisation's dependencies, impacts, risks and opportunities associated with nature. The concept recognises that nature can influence business performance and that businesses can simultaneously influence nature.

The relationship can be represented as:

Business Activities, Dependence on Natural Resources, Environmental Impacts, Nature-Related Risks and Opportunities, Financial Consequences and Corporate Disclosure.

The TNFD framework provides a structured approach for identifying and reporting these relationships. Its four pillars are:

- Governance
- Strategy
- Risk and Impact Management
- Metrics and Targets

The framework is intended to help organisations integrate nature-related issues into business decision-making and risk management.

3. MEANING OF GREEN ACCOUNTING:

Green accounting, also known as environmental accounting or environmental management accounting in certain contexts, involves the identification, measurement, analysis and reporting of environmental costs and environmental performance.

Environmental costs may include: Waste treatment costs, Pollution-control costs, Water consumption costs, Energy consumption, Environmental restoration, Biodiversity conservation, Carbon-related costs, Resource depletion. Environmental compliance, Waste disposal and Environmental liabilities

Green accounting therefore extends the traditional accounting perspective by considering the environmental consequences of economic activity.

A simplified relationship is:

Economic Activity + Environmental Impact + Environmental Cost = Green Accounting Information

The objective is not simply to prepare an additional environmental report. Green accounting can support managerial decisions relating to production, investment, resource allocation, cost reduction and sustainability.

4. RELATIONSHIP BETWEEN NATURE-RELATED FINANCIAL DISCLOSURES AND GREEN ACCOUNTING:

Nature-related financial disclosures and green accounting are closely interconnected but are not identical.

Green accounting focuses primarily on measurement and accounting for environmental costs and impacts, whereas nature-related financial disclosures focus more broadly on dependencies, impacts, risks and opportunities related to nature and their relevance to business and finance.

Their relationship can be expressed as: Natural Resource Dependence, Environmental Impact Environmental Cost Measurement, Green Accounting, Nature-Related Risk Assessment, Nature-Related Financial Disclosure and Better Financial Decision-Making

Green accounting can therefore provide some of the quantitative information required to support credible nature-related disclosures.

5. OBJECTIVES OF THE STUDY:

1. To explain the concept and importance of Nature-Related Financial Disclosures.
2. To examine the relationship between nature-related financial disclosures and green accounting.
3. To analyse the emerging nature-related disclosure practices in India.
4. To examine the role of SEBI's BRSR framework in strengthening environmental and nature-related reporting.
5. To identify the major challenges associated with measuring and reporting nature-related information.
6. To examine the relevance of the TNFD framework for Indian businesses.

6. RESEARCH GAP:

A significant body of sustainability research has focused on climate change, carbon emissions, ESG disclosure and corporate sustainability. However, nature-related risks are broader than climate-related risks.

Nature-related issues include: Biodiversity loss, Water availability, Land degradation, Deforestation. Pollution, Ecosystem degradation. Resource depletion and Species loss. There is therefore a need for greater academic attention to the integration of nature-related information with accounting and financial decision-making.

The research gap is particularly relevant in India because BRSR has created a domestic sustainability reporting framework, while TNFD provides an emerging international framework specifically focused on nature-related dependencies, impacts, risks and opportunities. SEBI has already highlighted that BRSR contains key nature-related disclosures.

This creates an important research opportunity to examine how Indian companies can move from general environmental disclosure toward systematic measurement and accounting of nature-related financial issues.

7. RESEARCH METHODOLOGY:

The present study is conceptual and descriptive in nature and is based entirely on secondary data.

Sources of Secondary Data

Information has been collected from: SEBI reports and circulars, TNFD recommendations and guidance, IFRS/ISSB publications, Government publications, Sustainability reports, Annual reports, BRSR reports, Research articles, Books and academic literature, Reports of international organisations and Relevant institutional websites

The study uses documentary and conceptual analysis to examine emerging practices and challenges. No primary survey was conducted for this paper.

8. NATURE-RELATED DISCLOSURES IN THE INDIAN CONTEXT:

India has progressively strengthened its corporate sustainability reporting framework.

SEBI introduced the BRSR framework as a more quantitative and outcome-oriented sustainability reporting mechanism. The BRSR applies mandatorily to the top 1,000 listed entities by market capitalisation.

The framework contains several environmental indicators relevant to nature, including: Water consumption, Water discharge, Waste generation, Waste management, Air emissions, Operations in

ecologically sensitive areas, Biodiversity impacts and Environmental risks and opportunities

SEBI's BRSR Core framework introduced a selected group of key performance indicators for greater reliability and assurance. The original glide path provided for coverage of the top 150 listed entities in FY 2023–24, top 250 in FY 2024–25, top 500 in FY 2025–26 and top 1,000 in FY 2026–27.

SEBI has subsequently introduced measures intended to facilitate ease of doing business and modified aspects of value-chain reporting and assurance.

These developments demonstrate that India's sustainability reporting system is gradually moving toward greater standardisation and credibility.

9. TNFD FRAMEWORK AND ITS RELEVANCE TO INDIA:

The TNFD framework is particularly relevant because it provides a systematic structure for nature-related reporting.

Governance: Companies are expected to disclose how boards and management oversee nature-related dependencies, impacts, risks and opportunities.

Strategy: Companies should explain how nature-related issues affect their business model, strategy and financial planning.

Risk and Impact Management: Organisations should identify, assess, prioritise and monitor nature-related dependencies, impacts, risks and opportunities.

Metrics and Targets: Organisations should disclose relevant metrics and targets used to assess and manage nature-related issues.

The TNFD framework includes core global metrics and sector-specific metrics. It recognises that organisations may initially face difficulties in measuring all indicators because of limitations in methodologies and data availability.

10. EMERGING PRACTICES IN INDIA:

Several practices are becoming increasingly relevant to nature-related financial reporting.

Biodiversity Disclosure: Companies are increasingly identifying their operations located in or near ecologically sensitive areas and assessing their environmental impacts.

Water Accounting: Water-intensive industries are increasingly reporting water withdrawal, consumption and discharge.

Waste Accounting: Companies are measuring waste generation and reporting recycling, reuse and disposal practices.

Environmental Cost Measurement: Some organisations are identifying costs associated with pollution control, waste management, environmental compliance and resource efficiency.

ESG Integration: Environmental indicators are increasingly being connected with broader ESG reporting and corporate governance.

Value-Chain Reporting: Nature-related impacts may occur not only within a company's own operations but also in upstream and downstream value chains. SEBI's BRSR framework has therefore addressed ESG information relating to value chains.

Green Credits: SEBI has also introduced voluntary disclosure relating to green credits in the BRSR framework, reflecting the increasing connection between environmental action and corporate reporting.

11. MAJOR CHALLENGES:

Lack of Standardised Measurement: One of the biggest challenges is the absence of a universally accepted method for measuring biodiversity and ecosystem impacts in monetary terms.

Data Availability: Nature-related information can be difficult to collect because it may depend on geographical, ecological and sector-specific data.

Measurement of Biodiversity: Unlike financial profit, biodiversity cannot easily be represented through a single numerical indicator.

Monetary Valuation: Assigning a monetary value to ecosystem services, species diversity and natural capital is technically complex and sometimes controversial.

Supply-Chain Complexity: A company's nature-related impact may occur several stages away from its direct operations.

Cost of Reporting: Detailed nature-related data collection, verification and assurance can increase reporting costs.

Assurance: Reliable nature-related reporting requires credible measurement systems and independent assurance.

Lack of Skilled Professionals: There is a growing need for professionals who understand both accounting and environmental science.

Green washing: Inaccurate, incomplete or exaggerated environmental claims can reduce the credibility of sustainability reporting.

Comparability: Differences in industry, location, measurement techniques and reporting boundaries can make comparisons between companies difficult.

12. GREEN ACCOUNTING AS A SOLUTION:

Green accounting can help address some of these challenges by providing a systematic approach to environmental cost identification and measurement.

A possible framework for Indian companies is: Natural Capital, Resource Dependence, Environmental Impact Identification, Environmental Cost Measurement, Nature-Related Risk Assessment, Financial Impact Assessment, BRSR / TNFD Disclosure and Management Decision

This approach can help transform environmental information from a compliance-oriented activity into a strategic management tool.

13. PROPOSED CONCEPTUAL FRAMEWORK:

The following conceptual framework is proposed for integrating green accounting and nature-related financial disclosures: Natural Capital & Ecosystem Services, Corporate Dependence on Nature, Corporate Environmental Impacts, Green Accounting, (Environmental Costs + Resource Consumption + Environmental Liabilities), Nature-Related Risk & Opportunity Assessment, Financial Materiality Assessment, Nature-Related Financial Disclosures, Investor & Stakeholder Decision-Making and Sustainable Business Performance

The framework suggests that green accounting can function as an internal information system supporting external nature-related reporting.

14. IMPORTANCE OF NATURE-RELATED FINANCIAL DISCLOSURES:

Nature-related financial disclosures are important for several stakeholders.

For Companies: They help organisations identify resource dependencies and emerging risks.

For Investors: They provide information for evaluating long-term financial sustainability.

For Banks and Financial Institutions: Nature-related information can support credit-risk assessment and portfolio management.

For Governments: It can support environmental policy and sustainable development planning.

For Society: It improves transparency concerning corporate environmental impacts.

For Management: It can support resource efficiency, cost reduction and strategic planning.

CONCLUSION AND SUGGESTIONS:

Nature-related financial disclosure represents an important evolution in corporate reporting. Businesses are deeply dependent on nature, while their activities can simultaneously create significant environmental impacts. Biodiversity loss, water scarcity, land degradation, pollution and ecosystem destruction can therefore become sources of operational, financial and strategic risk.

The emergence of the TNFD framework provides organisations with a structured approach for identifying, assessing, managing and disclosing nature-related dependencies, impacts, risks and opportunities. The framework's four pillars—governance, strategy, risk and impact management, and metrics and targets—provide a useful foundation for integrating nature into corporate decision-making.

India has already developed an important foundation through SEBI's BRSR framework. BRSR

includes several nature-related indicators, while BRSR Core has strengthened the emphasis on reliable and assured sustainability information.

However, significant challenges remain. The measurement of biodiversity, ecosystem services and natural capital is complex. Companies face difficulties relating to data availability, standardisation, monetary valuation, assurance and supply-chain measurement.

Green accounting can play an important role in addressing these challenges. By systematically identifying environmental costs, resource consumption and environmental liabilities, green accounting can create a bridge between environmental performance and financial decision-making.

The future direction should therefore be: Nature → Measurement → Green Accounting → Risk Assessment → Financial Disclosure → Better Decisions → Sustainable Business

The integration of green accounting with nature-related financial disclosures can improve corporate transparency, strengthen investor confidence, reduce environmental risks and support sustainable economic development. For India, the challenge is to move beyond reporting environmental activities toward measuring the financial consequences of corporate dependence and impact on nature.

Integrate Green Accounting with BRSR-Environmental costs and resource-related information should increasingly be linked with BRSR disclosures. Develop Sector-Specific Indicators Nature-related indicators should reflect the characteristics of industries such as agriculture, mining, manufacturing, banking, pharmaceuticals and tourism. Strengthen Biodiversity Measurement-Companies should develop systematic approaches to measuring biodiversity impacts and dependencies. Improve Data Systems-Digital technologies, geographic information systems, satellite data and data analytics can improve the quality of nature-related information.

Develop Accounting Standards-Professional accounting institutions and regulators should encourage the development of guidance on environmental and natural-capital accounting. Strengthen Assurance-Independent assurance should gradually cover important nature-related indicators to improve credibility. Develop Human Resources-Commerce and accounting education should include environmental accounting, ESG reporting, biodiversity and nature-related financial risks. Encourage Integration with Financial Planning-Nature-related risks should not be treated only as sustainability-reporting issues. They should be integrated into capital budgeting, risk management and strategic planning.

REFERENCES:

1. Taskforce on Nature-related Financial Disclosures (TNFD). (2023). *Recommendations of the Taskforce on Nature-related Financial Disclosures*. TNFD.
2. Taskforce on Nature-related Financial Disclosures (TNFD). (2023). *Guidance on the Identification and Assessment of Nature-related Issues: The LEAP Approach*. TNFD.
3. Taskforce on Nature-related Financial Disclosures (TNFD). (2025). *Recommendations to Upgrade the Nature Data Value Chain for Market Participants*. TNFD.
4. Taskforce on Nature-related Financial Disclosures (TNFD). (2026). *Discussion Paper on State of Nature Measurement*. TNFD.
5. Securities and Exchange Board of India (SEBI). (2021). *Business Responsibility and Sustainability Reporting by Listed Entities*. SEBI.
6. Securities and Exchange Board of India (SEBI). (2023). *BRSR Core – Framework for Assurance and ESG Disclosures for Value Chain*. Circular No. SEBI/HO/CFD/CFD-SEC-2/P/CIR/2023/122.
7. Securities and Exchange Board of India (SEBI). (2024). *Industry Standards on Reporting of BRSR Core*. SEBI.
8. Securities and Exchange Board of India (SEBI). (2025). *Measures to Facilitate Ease of Doing Business with Respect to Framework for Assurance or Assessment, ESG Disclosures for Value Chain, and Introduction of Voluntary Disclosure on Green Credits*. Circular No. SEBI/HO/CFD/CFD-PoD-1/P/CIR/2025/42.
9. IFRS Foundation. (2023). *IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information*. International Sustainability Standards Board.
10. IFRS Foundation. (2023). *IFRS S2 Climate-related Disclosures*. International Sustainability Standards Board.
11. Global Reporting Initiative (GRI). (2021). *GRI Standards*. Global Reporting Initiative.
12. Ministry of Corporate Affairs, Government of India. (2018). *National Guidelines on Responsible Business Conduct*. Government of India.
13. United Nations. (2022). *Kunming-Montreal Global Biodiversity Framework*. Convention on Biological Diversity.
14. International Federation of Accountants (IFAC). (2023). *Sustainability Reporting and Assurance*. IFAC.

15. World Economic Forum. (2020). *Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy*. World Economic Forum.
16. Dasgupta, P. (2021). *The Economics of Biodiversity: The Dasgupta Review*. HM Treasury, Government of the United Kingdom.
17. OECD. (2015). *Environmental Policy: Green Growth and Sustainable Development*. Organisation for Economic Co-operation and Development.
18. United Nations. (2021). *System of Environmental-Economic Accounting—Ecosystem Accounting (SEEA EA)*. United Nations.
19. Taskforce on Nature-related Financial Disclosures (TNFD). (2025). *Additional Guidance for Financial Institutions*. TNFD.
20. Securities and Exchange Board of India (SEBI). (2025). *Speaking Notes on BRSR and Nature-Related Disclosures*. SEBI.