**Content is available at: CRDEEP Journals**
**Journal homepage: http://www.crdeepjournal.org/category/journals/ijssah/**

**International Journal of Social Sciences Arts and Humanities**

**(ISSN: 2321-4147) (Scientific Journal Impact Factor: 6.002)**
**A Peer Reviewed UGC Approved Quarterly Journal**


Research Paper

# Role of Green Banking in Promoting Environmental Sustainability: A Review of Evidence and Policy Implications in India

**Dr. Rashmi Rawat** *

*Department of Economics, Sri Guru Ram Rai University (SGRRU), Pathribagh, Dehradun, India*

**ARTICLE DETAILS**

**Corresponding Author:**
Dr Rashmi Rawat

**Key words:**
Green Banking, Environment, Sustainable, Policy, Implementation

**ABSTRACT**

Green banking has emerged as a strategic response of the financial sector to escalating environmental challenges and climate risks. In India, banks play a crucial intermediary role in mobilizing capital toward environmentally sustainable activities while mitigating ecological degradation. This review paper synthesizes existing literature on green banking practices in India and examines their contribution to environmental sustainability and policy outcomes. Drawing upon regulatory frameworks, empirical studies, and institutional initiatives, the paper highlights key mechanisms through which green banking influences sustainable development. Policy implications and future directions are discussed to strengthen the role of the Indian banking sector in achieving national and global sustainability goals

## 1. Introduction

Environmental degradation, climate change, and unsustainable economic practices have emerged as critical global challenges in the 21st century. Developing economies such as India face a dual pressure of sustaining economic growth while simultaneously addressing environmental concerns arising from industrialization, urbanization, and increased energy consumption (Sachs, 2015). Financial institutions, particularly banks, occupy a central position in shaping development pathways through credit allocation and investment decisions. Consequently, the concept of **green banking** has gained prominence as a mechanism to integrate environmental considerations into banking operations and lending policies (Jeucken, 2001).

The Indian economy has experienced rapid expansion over the last three decades, accompanied by increased carbon emissions, resource depletion, and ecological stress. According to the Ministry of Environment, Forest and Climate Change (MoEFCC, 2021), India is among the world's largest emitters of greenhouse gases, necessitating urgent interventions across all sectors, including finance. Banks influence environmental outcomes indirectly by financing projects that either contribute to or mitigate environmental degradation (Scholtens, 2006). This realization has prompted policymakers and regulators in India to encourage environmentally responsible banking practices.

Green banking refers to banking strategies and operations that promote sustainable development by minimizing the environmental footprint of banking activities and supporting eco-friendly investments (Bihari & Pandey, 2015). In the Indian context, green banking extends beyond paperless operations to include green financing, renewable energy funding, environmental risk assessment, and compliance with sustainability guidelines issued by regulatory authorities such as the Reserve Bank of India (RBI). The alignment of banking activities with environmental objectives is increasingly viewed as

*Corresponding Author can be contacted at rashmirawat.in@gmail.com
*Received: 22-12-2025; Sent for Review on: 25-12-2025; Draft sent to Author for corrections: 28-12-2025; Accepted on: 04-01-2026; Online Available from 09-01-2026*
*DOI: 10.5281/zenodo.18194181*

essential for long-term economic stability (RBI, 2022). Several Indian banks have adopted green initiatives, including financing renewable energy projects, promoting digital banking to reduce paper usage, and integrating environmental risk into credit appraisal systems (Goyal & Joshi, 2011). Public sector banks, private banks, and new-age financial institutions have gradually incorporated sustainability principles, albeit at varying levels of commitment and effectiveness. However, the extent to which these initiatives contribute to tangible environmental sustainability outcomes remains a subject of academic and policy debate (Narwal, 2015).

The relevance of green banking in India is further amplified by international commitments such as the Paris Agreement and the United Nations Sustainable Development Goals (SDGs). India's Nationally Determined Contributions (NDCs) emphasize climate-friendly growth, renewable energy expansion, and sustainable finance, placing the banking sector at the forefront of implementation (UNFCCC, 2016). Consequently, understanding the role of green banking in promoting environmental sustainability is crucial for policy formulation and institutional reform. Despite growing interest, the literature on green banking in India remains fragmented, with studies focusing on isolated dimensions such as customer awareness, green products, or regulatory guidelines. A comprehensive synthesis of evidence linking green banking practices to environmental sustainability outcomes and policy implications is limited. This review paper addresses this gap by systematically analyzing existing research, regulatory developments, and institutional practices related to green banking in India.

## 2. Objective of the Study

To critically review the role of green banking practices in promoting environmental sustainability in India and to examine the associated policy implications for the banking and financial sector.

## 3. Green Banking: Conceptual and Theoretical Foundations

### *3.1 Concept and Evolution of Green Banking*

Green banking refers to the strategic integration of environmental and sustainability considerations into banking operations, lending decisions, and investment practices (Jeucken, 2001). Unlike conventional banking, which primarily focuses on profitability and risk minimization, green banking emphasizes long-term ecological balance alongside financial returns. In India, the evolution of green banking has been gradual and largely policy-driven, influenced by global sustainability discourses and domestic environmental challenges (Bihari & Pandey, 2015). The origins of green banking can be traced to the broader concept of sustainable finance, which recognizes that environmental degradation poses systemic risks to financial stability (Scholtens, 2006). Indian banks initially adopted green practices in operational areas such as paperless banking, energy-efficient branches, and digital transactions. Over time, the scope expanded to include green lending, climate risk assessment, and financing of renewable energy and sustainable infrastructure projects (Narwal, 2015). Green banking in India is therefore both **preventive and promotive**—preventive in reducing the environmental footprint of banking operations, and promotive in supporting environmentally responsible economic activities. This dual role underscores the strategic importance of banks in steering the economy toward sustainability.

### *3.2 Theoretical Linkages between Banking, Environment, and Sustainability*

The relationship between banking and environmental sustainability is grounded in several theoretical perspectives. The **stakeholder theory** posits that banks have responsibilities beyond shareholders, including obligations toward society and the environment (Freeman, 1984). In the Indian context, public sector banks, which dominate the banking landscape, have a heightened responsibility to support national sustainability objectives. The **intermediation theory of banking** further explains how banks influence environmental outcomes by determining the allocation of financial resources (Scholtens, 2006). By prioritizing green projects and restricting funding to environmentally harmful industries, banks can indirectly shape production patterns and environmental performance. Additionally, the **risk management perspective** highlights that environmental risks translate into financial risks, such as stranded assets, regulatory penalties, and reputational damage (RBI, 2022). Integrating environmental considerations into credit appraisal is therefore not merely an ethical choice but a financial necessity for long-term stability.

## 4. Green Banking Practices in India

### *4.1 Regulatory and Policy Framework*

The regulatory framework for green banking in India has evolved significantly in the past decade. The Reserve Bank of India (RBI) has emerged as a key institutional driver by recognizing climate-related risks as systemic financial risks (RBI, 2022). Through discussion papers and supervisory expectations, the RBI has encouraged banks to integrate environmental risk assessment into governance and risk management frameworks. Priority sector lending norms have also played a critical role in promoting green banking. Renewable energy projects, including solar, wind, biomass, and small hydro, are included under priority sector lending, thereby incentivizing banks to support clean energy initiatives (Bhattacharyya, 2012). Additionally, government policies such as the National Action Plan on Climate Change (NAPCC) and India's Nationally Determined Contributions (NDCs) provide an enabling policy environment for green finance. Despite these initiatives, green banking regulation in India remains largely **guideline-based rather than mandatory**, resulting in uneven adoption across banks (Narwal, 2015).

*4.2 Green Financing and Credit Allocation*

Green financing represents the most visible manifestation of green banking in India. Indian banks have increasingly financed renewable energy projects, energy-efficient infrastructure, and sustainable transport systems (Ghosh & Nanda, 2019). Public sector banks have played a dominant role due to their extensive reach and policy alignment, while private banks have focused on innovative green products and partnerships. Empirical evidence suggests that green financing contributes to reduced carbon emissions and enhanced energy security (Bhardwaj & Malhotra, 2019). However, challenges such as high upfront costs, technology risks, and regulatory uncertainty continue to constrain large-scale green lending. Banks often perceive green projects as high-risk, highlighting the need for risk-sharing mechanisms and policy support.

*4.3 Digital Banking and Resource Efficiency*

Digitalization has been a cornerstone of green banking in India. The rapid expansion of online banking, mobile applications, Unified Payments Interface (UPI), and e-statements has significantly reduced paper consumption and energy usage (Goyal & Joshi, 2011). Digital banking also reduces customer travel, indirectly lowering carbon emissions. Studies indicate that digital banking initiatives have contributed to operational efficiency while simultaneously supporting environmental sustainability (Lalon, 2015). In the Indian context, digitalization has been accelerated by government initiatives such as Digital India, further reinforcing the green banking agenda.

*4.4 Environmental Risk Management and Disclosure*

Environmental risk management is an emerging but underdeveloped aspect of green banking in India. Some banks have begun incorporating environmental and social risk assessments into credit appraisal processes, particularly for large infrastructure and industrial projects (Narwal, 2015). However, the lack of standardized disclosure norms limits transparency and comparability across institutions. International frameworks such as the Task Force on Climate-related Financial Disclosures (TCFD) have influenced Indian policy discourse, but formal adoption remains limited (UNEP, 2016). Strengthening disclosure requirements is essential for improving accountability and aligning banking practices with sustainability goals.

## 5. Evidence on Environmental Sustainability Outcomes

*5.1 Impact on Carbon Emission Reduction*

Empirical studies indicate that green banking contributes to carbon emission reduction primarily through financing renewable energy and energy-efficient technologies (Ghosh & Nanda, 2019). Banks that actively support green projects enable a transition away from fossil fuel dependence, particularly in the power sector.

However, the overall impact remains modest relative to India's total emissions, suggesting that green banking initiatives need to be scaled up significantly to achieve meaningful environmental outcomes (MoEFCC, 2021).

*5.2 Promotion of Sustainable Industrial Practices*

Green banking has influenced industrial behavior by incentivizing compliance with environmental standards and adoption of cleaner technologies (Bhardwaj & Malhotra, 2019). Firms seeking bank financing increasingly recognize the importance of environmental performance, indicating a behavioral shift induced by financial mechanisms.

*5.3 Societal Awareness and Behavioral Change*

Beyond industrial impacts, green banking has contributed to increased environmental awareness among customers. Digital banking, green loans, and eco-friendly products encourage individuals and businesses to adopt sustainable financial practices (Lalon, 2015). This indirect effect on consumer behavior enhances the broader societal impact of green banking.

*5.4 Limitations in Measuring Outcomes*

Despite positive trends, measuring the direct environmental impact of green banking remains challenging due to data limitations and lack of standardized metrics (Scholtens, 2006). Many studies rely on proxy indicators rather than direct environmental outcomes, underscoring the need for improved measurement frameworks.

## 6. Policy Implications and Future Directions

*6.1 Strengthening Regulatory Mandates*

The review highlights the need for mandatory green banking regulations rather than voluntary guidelines. Stronger regulatory mandates can ensure uniform adoption of sustainability practices across banks and reduce greenwashing (RBI, 2022).

*6.2 Enhancing Institutional Capacity*

Capacity building within banks is critical for effective green banking implementation. Training in environmental risk assessment, climate finance, and sustainability reporting can enhance institutional readiness (UNEP, 2016).

*6.3 Aligning Banking Policies with National Sustainability Goals*

Green banking policies must be aligned with India's climate commitments, SDGs, and development priorities. Coordinated action between regulators, banks, and policymakers can maximize environmental and economic benefits (MoEFCC, 2021).

*6.4 Encouraging Innovation and Public–Private Partnerships*

Innovative financial instruments such as green bonds, blended finance, and credit guarantees can address risk perceptions and mobilize private capital for green projects (Ghosh & Nanda, 2019).

## 7. Conclusion

Green banking has emerged as a critical instrument for promoting environmental sustainability in India by integrating ecological considerations into financial decision-making. This review demonstrates that Indian banks, supported by regulatory initiatives and policy frameworks, have begun to play a meaningful role in financing renewable energy, reducing operational environmental impacts, and encouraging sustainable economic activities. While evidence suggests positive environmental outcomes, the scale and effectiveness of green banking initiatives remain uneven across institutions. Strengthening regulatory frameworks, enhancing environmental risk assessment, and fostering greater transparency are essential for realizing the full potential of green banking. As India advances toward its sustainability and climate goals, the banking sector must evolve from a passive financier to an active agent of environmental stewardship.

## References

Bhardwaj, B. R., & Malhotra, A. (2019). Green banking strategies: Sustainability and corporate responsibility. *International Journal of Business Excellence, 18*(1), 1–20.

Bhattacharyya, S. C. (2012). Energy access programmes and sustainable development. *Energy for Sustainable Development, 16*(3), 260–271.

Bihari, S. C., & Pandey, B. (2015). Green banking in India. *Journal of Economics and Sustainable Development, 6*(17), 1–6.

Ghosh, S., & Nanda, S. (2019). Green financing and renewable energy growth in India. *Energy Policy, 132*, 711–720.

Goyal, K. A., & Joshi, V. (2011). A study of social and ethical issues in banking industry. *International Journal of Economics and Research, 2*(5), 49–57.

Jeucken, M. (2001). *Sustainable finance and banking*. Earthscan.

Lalon, R. M. (2015). Green banking: Going green. *International Journal of Economics, Finance and Management Sciences, 3*(1), 34–42.

MoEFCC. (2021). *India: State of environment report*. Government of India.

Narwal, M. (2015). Green banking: A study of customer awareness in Indian banks. *International Journal of Engineering and Management Research, 5*(1), 93–101.

RBI. (2022). *Discussion paper on climate risk and sustainable finance*. Reserve Bank of India.

Sachs, J. D. (2015). *The age of sustainable development*. Columbia University Press.

Scholtens, B. (2006). Finance as a driver of corporate social responsibility. *Journal of Business Ethics, 68*(1), 19–33.

UNEP. (2016). *Green finance for sustainable development*. United Nations Environment Programme.

UNFCCC. (2016). *India's nationally determined contribution*. United Nations Framework Convention on Climate Change.