Fostering Green Finance through MSMEs for Sustainable India

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Abstract

The practice of Sustainable Finance (SF) contributes to both economic development and improved financial conditions. This study intended to analyze the Indian strategy for the development of the green finance market to meet goals and objectives of sustainable development by implementing it in the SME sector. Green finance is essential to inclusive, resilient, and cleaner economic growth. It helps reallocate funds from governments, corporations, and philanthropies to support sustainable development initiatives. Accordingly, the focus of the current research is on the many green financing government initiatives undertaken and its scope in Indian perspectives. The report highlights the many difficulties associated with green financing in India and suggests ways to overcome these difficulties. This study is descriptive in nature, and it draws its data from a broad variety of secondary data sources, including government documents released by the Government of India and reports published by commercial and public sector organizations and institutions in India.

Keywords: *Green Finance, Sustainable Finance, Green initiative, Sustainable development, Climate change, MSMEs.*

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Introduction

"Green finance" is any well-planned financial action, such as a product or service, to enhance the environment. It includes investments, financial arrangements, and loans to promote green initiatives, offset the climate effect of traditional enterprises, or both. To promote the transition to a low-carbon, sustainable, and inclusive economy, "green finance" (Kumar et al., 2022; Berrou et al., 2019) refers to any financial instrument whose revenues are used to fund environmentally friendly projects, programs, and policies.

Sustainable development is an approach to development that balances conflicting goals with an understanding of society's environmental, social, and economic constraints. Solar power generation for environmental improvement is an ambitious goal of both rich and developing nations. Thus, if we want to build a green planet, we must embrace solar advancements (Ahmed et al., 2022).

Too often, one necessity drives progress without considering larger or future implications. From large-scale financial crises caused by reckless banking to global climate problems (Adelphi, 2013; Alves et al., 2019) caused by fossil fuel dependence, this strategy is already causing damage. If we delay, unsustainable development will grow more common and severe, so we must act immediately.

Innovation is crucial for sustainable development (Ahmed et al., 2022), addressing social, economic, and environmental challenges. It leads to more efficient resource use, waste reduction, and the creation of sustainable products and services (Adelphi, 2013; Alves et al., 2019). Innovation also improves the quality of life, particularly in developing countries, by addressing poverty, hunger, and access to basic resources. It involves developing sustainable production processes, reducing waste, and promoting the circular economy. Innovation is not just about creating new products or services; it drives the development of sustainable solutions (Hassanien et al., 2023).

For the sustainable development of the country, a sustainable financial system brings into being values and transacts financial assets in ways that shape actual wealth to meet the durable demands of an impartial and environmentally sustainable economy. Although the terms green, climate and sustainable investment are not mutually exclusive, a mapping of associated terminologies indicated substantial agreement (UNEP, 2016). The term "sustainable finance" is widely accepted as the most comprehensive because it encompasses social, environmental, and economic issues (Ryszawska, 2016).

Green Finance Meaning and Definition:

"Green Finance" has captured the interest of all regulators and policymakers during the past few decades. Giving a general description of "Green Finance" is challenging because there isn't a formal definition of the term. Green finance refers to funding activities, businesses, and industries that preserve and protect the environment or lessen environmental harm (Hoshen,2017). It encourages initiatives and commercial ventures that center on aspects of environmental protection, such as sustainability, pollution control, all forms of sanitation, energy, biodiversity preservation, and the creation of green goods and services (Jha & Bakhshi, 2019).

According to UNEP, Green money is the expansion of financial flows from public, nonprofit, and private sectors to programs aimed at preserving the environment and promoting sustainable growth (GOI, 2018). Table 1 provides the meaning of Green Finance from different perspectives.

Table 1: Defining Factors of Green Finance

Defining Factors	Understanding
Economic Activities	It includes economics activities beyond change in earth climate like global warming
Economic Activities	Economic activities that are indirectly contributing to mitigating climate change and adapting to ecology
Policy & Regulations	"Green Finance" also includes policy, regulation and financial market related activities related to the environment.
Sectoral taxonomy	The green bonds
Demonstration	Demonstrate a clear and measurable environmental benefit
Negative screening	Listing of unfriendly economic activities which are damaging environment.

Defining the phrase "Green Finance" has been a contribution from the authors and academics."Green finance is a broad term that refers to financial investments in projects and initiatives for sustainable development, environmental goods, and regulations that promote the growth of a more sustainable economy" Climate financing (Ryszawska, 2016). is one component of green finance, but it is far from the sole one. These include:

Researcher emphasizes the importance of raising stakeholder understanding of climate change, creating "Green Finance"-related technology, establishing a policy framework, identifying harmful economic activities, and establishing quantifiable environmental benefits for each initiative, while also improving incentive-related capabilities for sustainable development.

Green Finance Framework

The government of a nation, business entities, and citizens are three important participants in the green financing system. The structure, guidelines, and laws necessary to implement green finance are provided by the government and regulatory organizations (GOI, 2008). Business organizations correctly implement the framework within its bounds, and citizens cooperate with the organizations and seek to pay for the necessary actions.

India's Tools for Green Finance

The Indian government and businesses utilize a wide range of tools to make India a more environmentally friendly nation. The following are the well-known tools employed as Green Finance efforts.

(a) **Green Bonds**: The only distinction between this bond and others is that the money earned by it must be utilized for initiatives that promote environmental efficiency, such as those involving renewable energy, reforestation, and the reduction of carbon emissions. Projects like energy efficiency, green building, clean transportation, wastewater and water management, renewable energy, pollution prevention and control, natural resources and land management, etc. are frequently financed with green bonds.

(b) Green Insurance: The risk cover insurance scheme is offered at a very low price and is known as green insurance to minimize the impact of climate change. These regulations can aid in the advancement of ecology and the repair of environmental harm. The market for pollution insurance is expanding, and a few businesses, like Tata AIG and ICICI Lombard, have introduced the product. There are numerous ways in which green insurance benefits both individuals and businesses. It facilitates the construction of green structures and certified rebuilding. Green insurance offers reductions on alternative fuel premiums, among other things, and can assist in encouraging green automobiles.

(c) Green Loan: Banks' contributions to the public and private sectors will be essential to India's infrastructure development (Sharma,2014).Green banking is gaining popularity in India, as it is discovered to have a direct impact on protecting the environment. Commercial banks have begun offering low-interest green financing for energy-efficient projects. Loans have been given to farmers to buy solar equipment, to individuals to buy electric vehicles, to homeowners to create green structures, etc. Capital Land has received a Rs. 1050 crore green credit from DBS Bank. The State Bank of India has given green mortgage loans. The State Bank of India has given green mortgage loans. A few instances of green loans include the loans provided to farmers by Punjab National Bank and other banks (Sharma,2014; Sharma & Choubey, 2021).

Over six billion dollars' worth of green bonds were issued in India during the fiscal year 2021. Since 2017 fiscal year, India's green bond issuance has fluctuated in volume. An environmental project is funded using the money from the green bond, a fixed-income instrument. For instance, investments made using bond proceeds include projects including clean energy, environmentally friendly transportation, green buildings, etc.

Green Finance Benefits and Feebleness

Going green is gaining popularity around the world day by day. As it encourages the flow of financial instruments and other related services for the development and implementation of sustainable business models, investments, and economic, environmental, and social projects, green finance's significance may be observed. Utilizing a country's financial sector effectively is essential for channeling investment to the country's economy and encouraging sustainable growth through its intermediary roles and risk management (Goel, 2016). It promotes healthy living for people by minimizing waste, maximizing the use of scarce resources, and reducing resource waste. The public is quickly drawn to the group employing green finance techniques for money raising. Since the government offers several tax breaks and grants, investors profit from green investments (Velenturf & Purnell, 2021).

The organization connected to green investment gains a positive reputation in the marketplace and improves its public relations. Green products are in high demand these days since consumers are so interested in them. Green finance has a significant impact on industries like banking, and most people employed in this field are quite supportive of this idea (Volz, 2018). Green finance also has some drawbacks. Implementing green technology typically has a higher initial cost. Going green requires a lot of work from the organization, the government, and the general public. India and other developing nations are focusing on improving their infrastructure. The construction of infrastructure necessitates the use of equipment, which produces pollution. Therefore, attracting green investment is becoming a difficult issue for rising economic nations. India's green financing supply is facing difficulty in keeping up with economic growth (Goel, 2016).

From Indian Perspectives, Green Finance

According to the UN Secretary-General panel on global sustainability, the world will need 30% more water, 45% more energy, and 50% more food by 2030. Renewable energy accounts for 13% of the world's energy, but 75% of it must be non-conventional. India concentrates on GDP growth, but it should also prioritise environmental changes. India's difficulty is focusing on "Green Finance" without sacrificing economic and social progress (Green Climate Fund, 2022). The sustainable development philosophy "Sarva Bhavantu Sukhina & Sarva Lok Hitaye." has underpinned Indian life and business. The Vedas believe that the market and its operations are essential to society and that enterprises should develop wealth ethically and in harmony with nature (Dawra et al., 2024). Modern India continues the traditional heritage of environmental protection. Even if only a few cities are in red zones due to extreme pollution, the nation's efforts are important. India promises to cut GDP carbon intensity by 30–35% by 2030 (Green Climate Fund, 2022).

India's green bond market has seen significant growth since 2015, with Yes Bank issuing its first green bond in February. Other banks followed suit, with IDBI Bank, CLP Wind, EXIM Bank of India, and Yes Bank issuing 1.1 billion USD in bonds. SEBI's statement in January 2016 boosted the green bond market. India is expected to be the 13th country to sell green bonds in 2020, with China leading the list.

Table 2: Meaning of Green Finance

Financial Mechanism	Area	Meaning
Sustainable Finance India SIDBI	Integrate Environment, Social and Governance	form of financial service that incorporates environmental, social, and governance factors into business or investment decisions for the long-term benefit of clients and society
Climate Finance India- National Adaptation Fund for Climate Change (NAFCC) National Clean Energy Fund National Adaptation Fund	A sustainable low carbon	Climate finance is "local, national, or transnational public, private, and alternative financing to support climate change mitigation and adaptation."
Green Finance	Reducing transportation and industrial pollutants, climate change, deforestation, and carbon footprint is a priority.	Green finance refers to the financing of ecologically sustainable initiatives that should lead to green growth in the country.
Green Bonds	Environmental and Climate projects.	The terms "green bonds" and "climate bonds" are interchangeable. Environmental and climate projects raise funds as a fixed-income instrument.
Investment/Funding	ESG Issues	portfolio of stocks or bonds in which the investment process incorporates environmental, social, and governance factors.

Global Perspective of Green Finance

Financial markets are turbulent due to corporate wars, cutting-edge technology, unequal growth in emerging nations, development, and most critically, climate change. Climate change impacts financial markets routinely. nearly every industrial subsegment faster. In 2021, climate change will stimulate low-carbon economic investments. A record $269.5 billion in global green bonds was issued in 2020, up 1.12% from $266.5 billion in 2019. Countries like China and Netherlands lead. UN Environment is collaborating with nations, financial market supervisory agencies, and the market to reform and fund the 2030 Sustainable Development Plan. More is happening internationally; to fix it, A London private equity investment firm's chief sustainability officer says green finance is improving. He advocated for substantial carbon taxes and green funding (Reddy, 2018). To govern and eliminate unequal usage of natural resources internationally, sustainability needs green money. Green finance marketplaces provide individual investors and project developers options. Private investment may be the key source of billions needed to close this gap and protect ecosystems. February 2021 saw Shell pledge $6 billion annually in green energy, including hydrogen, wind, solar, electric vehicles, and linked businesses. They argue the Sustainable Green Bond is crucial as global economies flourish.

Sustainable Stock Exchange Initiative

To lessen the impact of climate change, global leaders signed an ambitious agreement in Paris in 2015. The United Nations Sustainable Development Goals (SDGs) were ratified by all member states the same year, and they contain an urgent need for action to combat climate change. These worldwide objectives can only be achieved via a transition to green and sustainable financial systems. New forms of green and blended finance, such as those outlined in the Paris Agreement and the SDGs, need not just the explicit marketing of green commodities but also the greening of conventional financial markets (IFC,2015). This guidance is meant to serve as a road map for stock exchanges to follow when they launch or advance their own initiatives (Matta et al, 2022).

MSME Sector of India

MSMEs are significantly responsible for the country's middle-class growth. Due to its GDP and export contributions, the industry has grown in importance. The industry has helped expand entrepreneurship in India's semi-urban and rural areas. The 2006 MSMED Act divides MSMEs into manufacturing and service firm (Pandey et al., 2023).

Over sixty SMEs will issue equity financing on the BSE SME platform in 2021–2022. Sixteen SMEs raised Rs. 100 crore (US$13.74 million) in 2020 IPOs. In June 2021, the Bombay Stock Exchange (BSE) and the Electronics and Computer Software Export Promotion Council (ESC) partnered to promote listing to startups and small businesses. MSMEs should offer their products online, especially through the government-owned and operated Government e-Marketplace (GeM), from which Ministries and PSUs get supply. 4.73 million sellers and service providers fulfilled 10.55 million orders for 61,208 buyer organisations, totaling Rs. 266,533 crores, by July 14, 2022 (Pandey et al., 2023).

MSME and Green Finance

India aims to reduce its emissions intensity by 45% by 2030, with a goal of zero carbon emissions by 2070. The country's ZED program targets around one million small and medium-sized enterprises for energy efficiency, resource efficiency, pollution control, renewable energy usage, and waste management. Expanding energy-efficient technology in the MSME sector is crucial for meeting India's National Development Goals (NDC) targets. However, the MSME sector has been severely impacted by the virus, potentially slowing India's progress (GOI, 2020). Current barriers to climate-related vulnerabilities for MSMEs include lack of resources, information, and understanding of climate risks, and insufficient policies and regulations. Green financing can help address these issues, but India's financial sector remains small compared to real-world demands. The BEE-SME initiative has successfully implemented energy-efficient technology demo projects, resulting in cost savings of INR 1.5 crore per year and GHG reductions of 2426tn CO2 per year.

Way Forward

There has been a proliferation of tools over the last decade that can help get rid of these roadblocks. PFIs, especially state-owned promotional banks, have often been the first to fill in the financial shortages that micro, small, and medium-sized enterprises (MSMEs) face. Debt and equity financing opportunities, such as clean tech venture funds and specialized green lending programs, have been made available by the Montreal Group. There is now a clearer emphasis on environmental responsibility in the loan portfolios of commercial and stakeholder banks. MSMEs may close funding shortages with the support of the Principles for Positive Impact and other recent efforts. However, information on how banks meet the unique demands of MSMEs for sustainable financing is sometimes hard to come by (Kumar et al., 2021, Matta et al., 2022).

There are a variety of green bond financing alternatives for micro, small, and medium-sized enterprises (MSMEs), including mini-bonds issued by medium-sized businesses, securitization of MSME loans into asset-backed securities, and the issuing of green bonds by banks that pool MSME loans. Increased market openness is also beneficial for green bonds (GOI, 2020).

There is a growing pool of capital available for investment vehicles that actively seek for businesses with a track record of social, environmental, and financial success. Private equity and venture capital are two common sources of investment for growing businesses and mainstream MSMEs.

Conclusion

An example of a developing nation is India. Young people are becoming increasingly aware of the importance of starting their own businesses. It has been reported that the Government of India has provided help for new businesses. The persons who are currently working as or who desire to work as a micro, small, or medium-sized enterprise (MSME) have access to a wide variety of schemes. Green finance, on the other hand, is not a word that is commonly used for micro, small, and medium-sized enterprises (MSMEs) in India. With the help of green financing, a few micro, small, and medium-sized enterprises (MSMEs) have begun to develop sustainably and to raise funds. To a much lesser extent, however, the money are being utilized for environmental concerns. Even so, there is a significant opportunity for the government and financial institutions to cultivate an atmosphere that is conducive to the growth of sustainable micro, small, and medium-sized enterprises (MSMEs). Existing micro, small, and medium-sized enterprises (MSMEs) need to be educated about sustainability and the genuine impact it has on both the economy and the environment.

References

- Adelphi (2013). Facing the Impacts of Climate Change: Indian MSMEs and Adaptatio. Deutsche Gesellschaft für Internationale Zusammenarbeit. Accessed at: https://www.giz.de/en/downloads/giz2013-en-climate-risk-study.pdf
- Ahmed, Y. A., Rashid, A., Adeel, U., & Dutta, P. K. (2022). Proposing a framework for consumers' decision on solar innovations for smart cities.
- Alves, F., Leal Filho, W., Azeiteiro, U. (eds) Theory and Practice of Climate Adaptation. Climate Change Management. *Springer, Cham*. pp. 175-191.
- Berrou R., Ciampoli N., Marini V. (2019) Defining Green Finance: Existing Standards and Main Challenges. In: Migliorelli M., Dessertine P. The Rise of Green Finance in Europe. Palgrave Studies in Impact Finance. *Palgrave Macmillan*, Cham.
- Dawra, A., Ramachandran, K. K., Mohanty, D., Gowrabhathini, J., Goswami, B., Ross, D. S., & Mahabub Basha, S. (2024). 12Enhancing Business Development, Ethics, and Governance with the Adoption of Distributed Systems. *Meta Heuristic Algorithms for Advanced Distributed Systems*, 193-209.
- Goel, P. (2016). Green Finance: A Step Towards Sustainable Financial System. *Abhinav International Monthly Refereed Journal of Research in Management & Technology*, 22-31.
- Government of India. (2008). National Action Plan on Climate Change. Government of India.
- Government of India. (2020). Ministry of Micro, Small and Medium Enterprises Notification. Gazette of India.
- Green Climate Fund. (2022). MSME Pilot Programme. GCF. Accessed at: https://www.greenclimate.fund/msme. 68 Financing Low Carbon Transition for India‘s MSME Sector Gupta.
- Hassanien, A. E., Zheng, D., Zhao, Z., & Fan, Z. (Eds.). (2023). *Business Intelligence and Information Technology: Proceedings of BIIT 2022* (Vol. 358). Springer Nature.
- Hoshen, M. S. (2017). Green Financing: An Emerging Form of Sustainable Development in Bangladesh. *IOSR Journal of Business and Management (IOSR-JBM)*, 24-30.
- IFC (2015). "IFC Issues First Green Masala Bond." August, www.ifc.org/wps/wcm/ connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/ ifc+issues+first+green+masala+bond+on+london+stock+exchange
- Jha, B., & Bakhshi, P. (2019). Green Finance: Fostering Sustainable Development in India. *International Journal of Recent Technology and Engineering*, *8*(4), 3798–3801. https://doi.org/10.35940/ijrte.d8172.118419.

- Kumar, A., Syed, A. A., & Pandey, A. (2021). Adoption of online resources to improve the marketing performance of SMEs. *Asia Pacific Journal of Health Management*, 16(3), 137-144.
- Kumar, L., Nadeem, F., Sloan, M., Restle-Steinert, J., Deitch, M. J., Ali Naqvi, S., & Sassanelli, C. (2022). Fostering green finance for sustainable development: A focus on textile and leather small medium enterprises in Pakistan. *Sustainability*, 14(19), 11908.
- Matta, R., Kochhar, K., Mohapatra, A. K., & Mohanty, D. (2022). Board characteristics and risk disclosure quality by integrated reporters: Evidence from Indian banks. *Prabandhan: Indian Journal of Management*, 15(5), 27-42.
- Matta, R., Purohit, H., & Mohanty, D. (2022). Impact of CSR Committee on ESG Reporting Quality: Evidence from India. *Orissa Journal of Commerce*. 43(4), 174-185.
- Pandey, A., Kumar, A., Pujari, P., & Arora, M. (2023). Strategic Technology Adoption of social media in Indian SMEs. *International Management Review*, 19(1).
- Reddy, A. S. B. (2018). Green Finance-Financial Support for Sustainable Development. *International Journal of Pure and Applied Mathematics*, *118*(20), 645–652. http://www.acadpubl.eu/hub/2018-118-21/articles/21b/72.pdf.
- Ryszawska, B. (2016). Sustainability transition needs sustainable finance. *Copernican Journal of Finance & Accounting*, *5*(1), 185-194.
- Sharma, M. & Choubey, A. (2021), Green banking initiatives: a qualitative study on Indian banking sector, Environment, Environment, *Development and Sustainability* https://doi.org/10.1007/s10668-021-01426-9.
- Sharma, N. (2014) A study on customer's awareness on Green Banking initiatives in selected public and private sector banks with special reference to Mumbai, *IOSR Journal of Economics and Finance (IOSR-JEF)*, 28-35.
- Velenturf, A. P., & Purnell, P. (2021). Principles for a sustainable circular economy. *Sustainable Production and Consumption*, *27*, 1437-1457.
- Volz, U. (2018). Fostering green finance for sustainable development in Asia.