The role of green finance in achieving inclusive and sustainable economic growth: a systematic review

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Abstract

In order to combat climate change and advance environmental sustainability, green financing has become a crucial tool. Investigating how green finance contributes to equitable and sustainable economic growth is the goal of this systematic review. Key topics, trends, difficulties, and policy recommendations are identified in this analysis by examining a variety of peer-reviewed articles, policy papers, and institutional reports published between 2018 and 2024. Green finance promotes equitable growth, helps create jobs in green industries, and eases the shift to low-carbon economies, according to research. But obstacles still exist, including a lack of standards, restricted access in developing nations, and regulatory gaps.

Keywords: Green finance, Inclusive growth, Sustainable economic growth, ESG investing, Financial inclusion

Introduction

Economic growth, environmental sustainability, and social inclusion are interrelated aims that have been more prominent in academic, financial, and governmental debates worldwide in recent years. An important turning point in the global development agenda was the adoption of the Sustainable Development Goals (SDGs) by the United Nations in 2015, which called on countries to move toward inclusive and ecologically sustainable economic models. Green finance has become an essential instrument for accomplishing these two objectives in this setting. Financial contributions made toward programs and projects that support environmental sustainability, lower carbon emissions, and preserve natural resources are referred to as "green finance." Green bonds, green loans, climate funds, ESG (Environmental, Social, and Governance) investments, and green banking practices are a few examples of these. Despite its historical emphasis on environmental results, green finance is becoming more widely acknowledged for its capacity to produce a wide range of economic advantages, such as the creation of jobs, the reduction of poverty, and enhanced access to clean energy and infrastructure, particularly in underdeveloped and developing nations.

Simultaneously, it has become imperative to prioritize inclusive economic growth that guarantees equitable opportunities and benefits for all societal segments. Green finance creates opportunities for equitable development, especially for underserved communities, by directing funds toward climate-resilient industries including clean transportation, sustainable agriculture, and renewable energy. The connection between green finance and inclusive, sustainable growth is still poorly understood and dispersed in the literature, despite its increasing importance. By conducting a thorough analysis of previous academic research and institutional reports, this paper aims to close that gap by spotting trends, evaluating efficacy, and suggesting future paths for practice and policy.

Objectives of the study

- To assess the contribution of green finance to sustainable economic development.
- To identify key challenges and policy recommendations for enhancing green finance.
- To assess its contribution to inclusive growth.

Literature review

Green financing has developed into a crucial tool for nations looking to attain sustainable growth without sacrificing equality. In the past five years (2020–2025), experts from India and other countries have made important advances in our knowledge of the relationship between green finance, equitable growth, and sustainable economic change. In order to provide a comprehensive picture of the changing discourse, this literature review pulls from a wide range of research.

A. Indian perspectives on green finance and inclusive growth

India, with its dual challenges of rapid economic development and environmental sustainability, has become a vibrant ground for green finance experimentation and research.

Das and Mukherjee (2023) [7], in *"Green Banking in India: A Catalyst for Sustainable and Inclusive Development"*, emphasised the growing role of Indian banks in mainstreaming environmental risk assessments and introducing green credit lines. According to their research, targeted green funding has significantly improved sustainable agriculture, job creation in renewable industries, and rural energy access.

Roy and Sharma (2024) [15] explored gendered dimensions of green finance in *"Green Microfinance and Women Empowerment: A Study in South Asia"*. Their field study revealed a strong correlation between gender inclusion and green finance, showing that women's access to microloans for clean energy products such as biogas, solar lanterns, and clean cookstoves not only improves environmental outcomes but also increases women's agency, decision-making, and income-generation capabilities.

A study published in *Sustainability (2021)*, with Indian co-authors, examined green finance as a driver of SDGs, especially those related to poverty (SDG 1), clean energy (SDG 7), and climate action (SDG 13). However, it warned that without deliberate measures to include marginalised groups, green finance initiatives risk reinforcing existing inequalities.

Singh and Sharma (2024) [16] conducted an in-depth review titled *"Green Finance Instruments and Economic Development in Emerging Economies"*. They came to the conclusion that clean technology innovation and GDP are positively impacted by financial instruments such as green bonds and ESG-linked investments. However, they also identified some significant obstacles, including inconsistent regulations, a dearth of standard taxonomies, and restricted financing availability in India's rural and informal sectors.

Chakraborty et al. (2025) [3] made a significant methodological contribution through their development of the Inclusive Green Finance Index (IGFI) for BRICS and other emerging economies. This index integrated three key metrics green finance availability, financial inclusion, and green innovation capacity allowing for meaningful cross-country comparisons. Their results highlight the necessity of designing policies holistically, taking impact, affordability, and accessibility into account.

Further, Kumar and Jain (2025) [10] in *"Green Finance in the Global South: Bridging the Inclusion Gap"*, argued that although financial access in India has grown through digital banking and microfinance, green finance remains underpenetrated in Tier-2 and Tier-3 cities. They stressed the importance of blending digital tools with localised governance and environmental education to ensure inclusive green growth.

B. Foreign contributions to the green finance discourse

The potential of green finance to be a transformative force for equitable and sustainable prosperity in different places has been thoroughly examined by international experts.

Zhou et al. (2020) [22], in their widely cited study *"Green Finance and Sustainable Development Goals: Evidence from China"*, analyzed the impact of green credit on provinces with low incomes. They discovered that by directing investments toward greener manufacturing and cleaner infrastructure, green finance tools supported inclusive growth and regional development.

Chen and Li (2021) [5] extended this argument in *"Green Finance, Financial Development and Economic Growth"*, where they studied a panel of emerging markets. Their econometric analysis showed that when backed by strong financial institutions, green finance flows greatly improve environmental quality and economic growth. However, they issued a warning that unless supported by grassroots inclusion methods, top-down cash flows may overlook bottom-tier recipients.

Banga (2021) [1] offered a comprehensive evaluation in *"The Green Bond Market: A Potential Source of Climate Finance for Developing Countries"*. According to her research, green bonds are a valuable way to finance environmentally friendly projects, but they are still mostly found in high-income markets because of a lack of mechanisms for enhancing credit and low investor confidence in developing countries.

Taghizadeh-Hesary and Yoshino (2021) [19], focusing on Asia, underlined in their paper *"The Way to a Green Asia"* the importance of green SMEs and micro-lending schemes. They demonstrated that inclusive green finance policies targeting small and medium enterprises (SMEs) significantly enhance employment, reduce emissions, and promote clean energy transitions in developing Asian economies.

Kuzemko et al. (2022) [11] in *"Climate Finance for Inclusive Growth: Toward Transformative Pathways"* made a critical contribution by emphasizing that green finance must go beyond carbon targets and integrate employment, welfare, and equity as key performance indicators. They proposed a “just transition” framework that merges climate action with social protection systems.

Cheng et al. (2022) [6], in a multi-country analysis *"Does Green Finance Improve Environmental and Social Outcomes?"*, concluded that while green finance reduced carbon intensity, its success was amplified when paired with public accountability mechanisms and stakeholder participation particularly in low-income areas.

Wang and Sun (2023) [21], studying G20 nations in *"Green Finance, Technological Innovation and Sustainable Growth"*, found that inclusive innovation funding models such as clean tech grants for startups and community-based energy projects significantly improved outcomes in employment, health, and carbon reduction.

Rahman and Barua (2024) [13] examined the financial inclusion–green growth nexus in their study across 12 developing countries between 2004 and 2023. According to their findings, financial inclusion by itself has little effect unless it is specifically linked with sustainability objectives, whereas green innovation and foreign direct investment (FDI) greatly boost green economic growth. For significant change, they advise matching credit programs to environmental standards.

International Monetary Fund (2024) [9] published a strategic report *"Green Finance and Inclusive Recovery Post-COVID"*, which argued for national green finance strategies incorporating climate disclosures, standardized taxonomies, and green project pipelines. The report emphasized multilateral cooperation and capacity-building as prerequisites for inclusive impact.

The OECD (2022) [12] echoed similar sentiments in *"Green Finance and Investment: Mobilising Capital for Green and Inclusive Growth"*, advocating for harmonized regulations and tax incentives to attract private capital toward low-income and underserved sectors.

Lastly, UNEP FI (2023) [20] in *"Building Inclusive Green Financial Systems"*, presented case studies where digital green finance tools such as mobile green loans and carbon credit micro-payments enabled financial inclusion for farmers and informal workers in Southeast Asia and sub-Saharan Africa.

Although green finance is a potent force for sustainability, it must be purposefully created to guarantee inclusivity, according to the examined literature from both Indian and foreign academics. The necessity of integrated regulatory frameworks, technical and digital innovation, and localized access to green capital are important topics that show up in all of the studies.

Indian researchers have particularly focused on challenges like rural credit access, green microfinance, and gender empowerment, while foreign scholars have contributed frameworks for just transitions, green innovation, and global financial architecture reforms. The convergence of these ideas highlights that green finance must simultaneously address economic, environmental, and social dimensions to be truly transformative. To realise its full potential, green finance must be embedded within robust regulatory frameworks, transparent ESG standards, and inclusive digital infrastructure, ensuring that sustainability is not a privilege but a shared developmental pathway.

Research methodology

This paper examines how green financing contributes to equitable and sustainable economic growth using a systematic review methodology. This evaluation adheres to PRISMA criteria to guarantee a methodical, transparent, and repeatable methodology. It is qualitative and based on secondary data gathered from institutional reports, policy papers, and peer-reviewed journals that were published between 2018 and 2024. Reputable academic resources including Scopus, Web of Science, JSTOR, ScienceDirect, and Google Scholar were used to source the literature, as were international organizations like the World Bank, OECD, IMF, and UNEP. The criteria for inclusion were restricted to English-language publications that addressed green finance in relation to sustainable development or inclusive growth. Excluded were those that only addressed environmental science or engineering from an economic or financial standpoint.

Terms such as "green finance," "inclusive growth," "green bonds," "ESG investing," and "financial inclusion" were combined in keyword-based searches employing Boolean operators. Key focus areas for the thematic analysis of the chosen studies were financial inclusion, policy and regulatory frameworks, technological innovation, green financial instruments, ESG standards, and alignment with the Sustainable Development Goals (SDGs). The qualitative research was supplemented by quantitative data from institutional sources that covered geographical inequities, sectoral allocations, and trends in green financing flows. Additionally, the study uses a comparative lens to show how Indian and global ideas on green finance differ and are similar. By prioritizing peer-reviewed and institutionally validated resources and triangulating data sources, validity and dependability were guaranteed. This approach made it possible to fully comprehend how green finance works as a socioeconomic and environmental instrument for equitable and sustainable development.

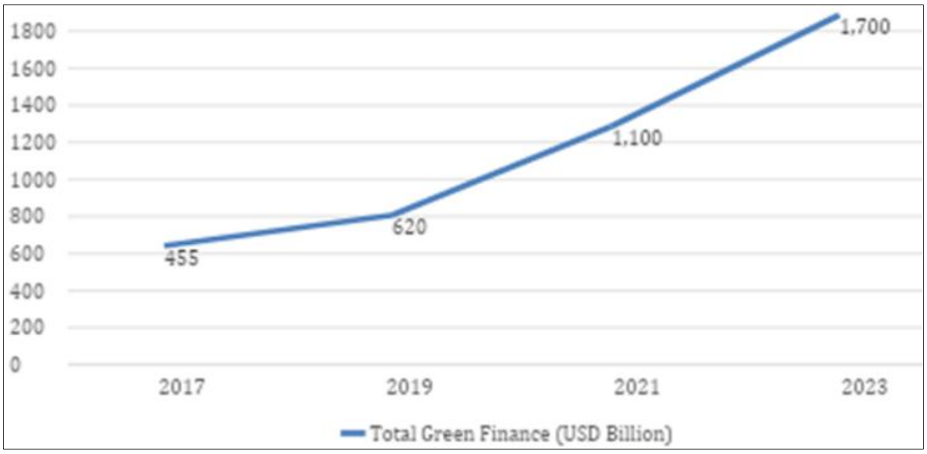
Data analysis

The analysis in this section is based primarily on secondary data sourced from reputed global institutions such as the Climate Policy Initiative (2024), OECD Green Finance Statistics (2024), and the International Capital Market Association (2024). The data highlights recent trends in global green finance flows, sector-wise allocation, and regional disparities in green bond issuance. The study intends to gain significant insights into the global trend toward sustainable finance and its consequences for inclusive economic development by analysing these statistics.

1. Trends in global green finance investments

Table 1: Trends in global green finance investments

S. No.	Year	Total Green Finance (USD Billion)
1	2017	455
2	2019	620
3	2021	1,100
4	2023	1,700



Source: Climate Policy Initiative (2024), Green Finance Flows Report

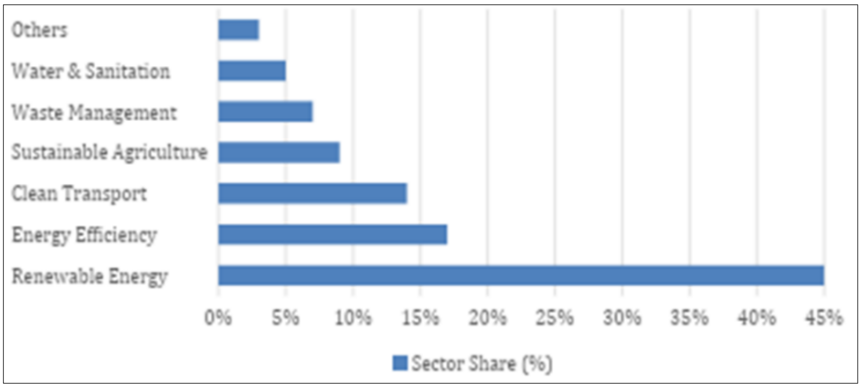
Interpretation

Green finance has seen a fivefold increase between 2017 and 2023, indicating growing global commitment to environmental and sustainable projects. This surge correlates with international policy interventions (e.g., Paris Agreement) and growing ESG investment mandates.

2. Sector-wise allocation of green finance

Table 2: Sector-wise allocation of green finance

S. No.	Sector	Share (%)
1	Renewable Energy	45%
2	Energy Efficiency	17%
3	Clean Transport	14%
4	Sustainable Agriculture	9%
5	Waste Management	7%
6	Water & Sanitation	5%
7	Others	3%



Source: OECD Green Finance Statistics (2024)

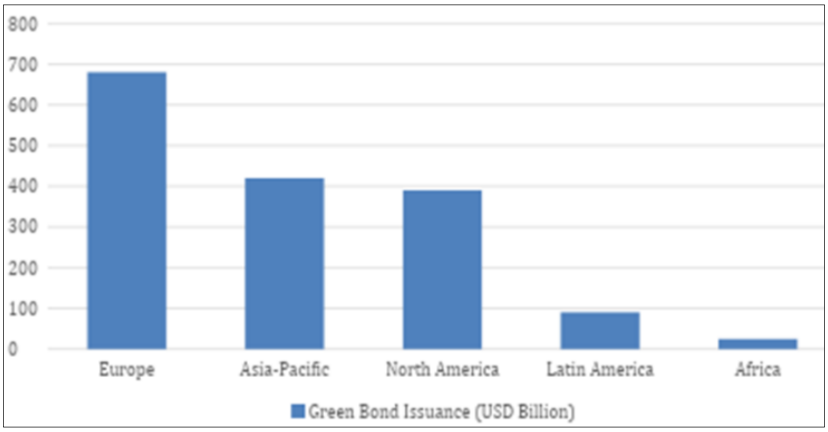
Interpretation

Nearly half of green finance in 2024 was directed toward renewable energy, reflecting its central role in sustainable economic strategies. However, lower shares for agriculture and water indicate potential underinvestment in areas critical for inclusive development.

3. Green bonds issuance by region (2024)

Table 3: Green bonds issuance by region

S. No.	Region	Green Bond Issuance (USD Billion)
1	Europe	680
2	Asia-Pacific	420
3	North America	390
4	Latin America	90
5	Africa	25



Source: International Capital Market Association (ICMA), Green Bond Report 2024

Interpretation

Europe remains the leader in green bond markets, but Asia-Pacific is rapidly closing the gap. The underrepresentation of Africa and Latin America underscores a regional disparity in green finance access, affecting inclusive growth prospects.

Findings and Discussion

With significant ramifications for employment, innovation, and environmental stewardship, the systematic analysis of literature, data trends, and institutional reports amply demonstrates the critical role that green financing plays in promoting sustainable economic growth. The beneficial effects of green finance on job creation, particularly in industries like energy efficiency and renewable energy, are among the most important discoveries. New job possibilities have resulted from investments in solar, wind, and clean transportation, demonstrating that shifting to a low-carbon economy can promote economic dynamism while achieving climate goals.

However, the review also brings attention to critical inclusion gaps. While green finance has successfully attracted funding toward energy and transport infrastructure, key sectors related to basic human needs—such as clean water, sanitation, sustainable agriculture, and food systems—remain underfinanced. This sectoral imbalance limits the broader developmental impact of green finance, especially in rural and marginalized regions where access to basic services is integral to inclusive growth. The role of institutional capacity emerged as another key determinant of inclusive outcomes. Countries with dedicated green financial institutions, such as national green banks, have demonstrated higher effectiveness in aligning green investments with social objectives. These institutions often act as intermediaries that bridge public and private financing, facilitate risk sharing, and promote innovative funding models tailored for developmental impact. Further, the review highlights significant regional disparities in green finance allocation. While developed regions such as Europe and parts of Asia-Pacific dominate green bond issuance and ESG investment flows, developing economies face high capital costs, limited project pipelines, and lower investor confidence. This leads to insufficient funding for climate-resilient infrastructure in areas such as parts of Latin America and Sub-Saharan Africa. As a result, the Global South continues to underutilize green finance's promise to support inclusive and fair economic development. These results highlight the need for a more comprehensive and equity-focused strategy to green finance, one that enhances socioeconomic inclusion while also promoting environmental objectives, particularly for marginalized communities and underdeveloped areas.

Policy recommendations

In light of the findings, the study presents a set of targeted policy recommendations to enhance the effectiveness and inclusivity of green finance frameworks:

a) Diversify sectoral focus: Green financial flows urgently need to be redirected away from massive renewable energy projects and toward underfunded but socially important fields like cheap green housing, smallholder agriculture, sanitation, and public health. These sectors have a direct bearing on poverty alleviation, food security, and human development, making them essential for truly inclusive green growth.

b) Enhance access for the global south: To bridge regional disparities, governments and international agencies must implement de-risking mechanisms such as blended finance models, first-loss guarantees, and credit enhancements to attract private investors to climate projects in developing countries. Additionally, fostering South-South cooperation, regional green funds, and technology transfer partnerships can empower low-income countries to develop resilient green finance ecosystems.

c) Improve monitoring and metrics: Current green finance metrics are predominantly focused on environmental performance (e.g., carbon reduction). Policymakers should develop a broader set of indicators that measure inclusive impacts, such as jobs created, poverty reduction, gender participation, and rural access to green infrastructure. Transparent, disaggregated data will support evidence-based policy adjustments and attract ESG-conscious investors.

d) Promote financial literacy and inclusion: For green finance to be truly inclusive, it must be accessible to marginalized groups, including women, rural entrepreneurs, informal workers, and micro-enterprises. In order for these groups to take part in and profit from green economic transformations, it is necessary to increase financial literacy, expand green microfinance, provide digital financial instruments, and implement capacity-building initiatives.

Conclusion

Green finance has become a potent tool at the nexus of environmental sustainability and economic growth. By directing investments toward low-carbon and climate-resilient industries like clean transportation, energy efficiency, and renewable energy, green financing clearly advances sustainable economic growth, according to this systematic study. But it has a significant potential to promote inclusive development by empowering neglected people, improving access to necessary services, and generating jobs. Its importance goes beyond its effects on the environment. Green finance and job creation, especially in the renewable energy sector, are strongly positively correlated, according to a review of data trends and available literature. Countries that have implemented robust green finance institutions and policy frameworks such as national green banks, clear taxonomies, and mandatory climate disclosures tend to experience more inclusive and equitable outcomes. These institutional arrangements play a critical role in attracting both public and private capital, ensuring better alignment of environmental goals with social priorities.

Despite these promising outcomes, the review also highlights critical challenges. There exists a clear sectoral imbalance, where major investments are funnelled into energy and transport infrastructure, while areas like sustainable agriculture, water and sanitation, and public health receive comparatively less attention. These underfunded sectors are crucial for addressing the needs of vulnerable populations and ensuring inclusive growth. Furthermore, the regional disparity in green finance flows, particularly the limited access in low-income and developing regions, continues to impede the equitable distribution of climate finance. A multifaceted strategy is necessary to fully realize the revolutionary potential of green finance. This entails creating inclusive effect indicators, expanding financial literacy at the local level, diversifying sectoral investments, and enhancing access to financing in the Global South through blended finance and de-risking techniques. Integrating green finance with more comprehensive socioeconomic development plans that put equity, resilience, and long-term sustainability first is equally crucial. In summary, green finance should be seen as a strategic facilitator of equitable and sustainable economic development rather than only as a means of funding environmental projects. To guarantee that the advantages of green finance are distributed fairly among all areas and societal segments, policymakers, financial institutions, and international organizations must cooperate to eliminate current obstacles, improve institutional capabilities, and advance regulations. Only then will green finance be able to deliver on its promise of creating a more inclusive, equitable, and greener global economy.

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