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A STUDY ON THE ROLE OF GREEN FINANCE IN ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS (SDGs) AND ECONOMIC GROWTH WITH SPECIAL REFERENCE TO INDIA

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ABSTRACT
Green-Finance is the central to the overall discussion on Sustainability of economic growth. The environment is frequently sacrificed in order to achieve rapid economic growth. Green-Finance is a part of a broader-occurrence, from the incorporation of various non-financial or ethical concerns on to the financial universe. Generally, Green Finance is concerned as the financial support for green growth which reduces green-house gas emission and air-pollutant emission significantly. Dwindling natural resources, degraded environment and rampant pollution are hazardous to public health and pose challenges to the sustainable economic growth. In order to move to low carbon and climate resilient economy, it is integral that there is an adequate source of investment and private capital to support the commercialization of new technologies. Green-Finance is a broader term that can refer to financial investments flowing into sustainable development projects and initiative, environmental products, and policies that encourage the development of a more sustainable economy. In this paper, an attempt has been made to describe the role of Green-Finance in the perspective of the sustainable development in India.

KEYWORDS: *Green-Finance, Sustainable Development, Environment, Commercialization, Economic –Growth.*

INTRODUCTION

Green-Finance defines as financial support for green-growth which reduces Green-House Gases (GHGs) and air-Pollutant emissions significantly. Green-growth indicates as growth-make through the harmony between the economy and the Environment. Finance in industrial and economic advancements with the reduction of green-house gas emissions and other Environment-Pollution in green-finance. Green-growth is the solution to three current threats to the global economy namely climate change, energy consistent and financial crisis. And sustainable development is the organizing principle for meeting humans has been under the lens to contribute towards environment sustainability. In this backdrop "Green-Finance" has become a hot topic among corporate globally. Green-Finance means to include all public and private entities which provide Financial assistance for sustainable developments initiatives. Green-Finance is a term that can refer to Financial Investments flowing into sustainable development projects and initiatives, Environmental products and policies that Encourage the development of a more sustainable economy. India which hopes to reduce its emissions intensity by 33-35% by 2030(from 2005 levels) and to make 40% of its population rely on renewable energy in order to meets it Nationally Determined Contribution (NDC) goals, must rely on external funds to finance this green transition. The involvement of Indian banks and Development Financial Institutions (DFIs) as a facilitator of green growth becomes crucial in order to finance this green transition. There are several ways in which these banks and DFIs can contribute to green growth. Firstly, they can revamp their internal system to move towards energy efficiency and move to e-transactions and e-statements, converting their efficiency into green premises. Secondly, they can assess environmental, social and governance (ESG) risks while appraising projects for financing and thirdly they can introduce green financial products such as green bonds.

The green finance landscape in India has three notable features. Firstly, the cost of green capital is higher due to its unique nature, the risks involved and the lack of a supportive regulatory framework. Second, there is a lack of solid and verifiable Green financial products in the market. The instruments that exist favoring debt instruments only partially protect the risk and size of long-term funding. Finally, there is a predominance of renewable energy capacity building projects with small allocations to energy efficiency. Difficult areas such as infrastructure, industry, resource efficiency, transportation have few projects. The challenge for developing economies like India is to integrate green finance to include environmental Impact in commercial lending decisions while balancing economic growth with the needs of social development. . Green Finance is at the heart of low-carbon green growth as it links the financial sector,

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improves the environment and economic growth, and all of these are necessary for a country like India to be successful. Maintained in the long term. In June 2017, YES Bank, the fourth largest private sector bank in India and FMO, together with DEG and Proparco, organized an investment symposium on "Opportunities for Green Finance in India" degree", where four banks signed a charter to protect the green environment. Finance. In India. Enhancing green finance requires access to diverse sources of capital, Involvement of the public and private sectors, and the right financial structure. India recently ramped up its climate on targets that go beyond previously set Nationally Determined Contribution (NDC) targets to achieve non-fossil energy, 500 GW capacity, and reduced energy intensity. Economy's carbon footprint to below 45% by 2030, and net zero emissions by 2070. At the same time, India also realizes that it needs to mobilize nearly $1 trillion in green financing to achieve it.

REVIEW OF LITERATURE

Nenavath and Mishra (2023) This research examined how green finance and financial technology impact sustainable financial progress, using data from Indian states between 2010 and 2021. Employing panel regression and a two-step GMM approach to address endogeneity issues, the study depicts that green finance dominantly contributes to quality economic growth by improving financial structures, effectiveness, and environmental protection. Additionally, fintech enhances green finance's impact on financial structures and ecological safety but does not Impact its relationship with economic effectiveness. The paper suggests that policymakers and the Indian government should integrate fintech with green finance, develop environmental disclosure frameworks for state governments, and establish to encourage sustainable finance in the private sector.

Khan, Akbar, Nasim, Hedvičáková, and Bashir (2022) This research significantly enhances the literature by analyzing how green finance affects environmental sustainability. It uses GDP, investment in renewable energy, R&D funding for eco-friendly projects, and public-private partnerships in renewable energy initiatives to Represent the extension of green finance. The study reveals a notable geographical clustering effect in green finance development, highlighting considerable regional differences.

Ranjan, Ghosh, and Nath (2021) This paper examined the progress of sustainable finance around the world and in India. We utilize various data sources to evaluate public awareness (Google Trends) and financing options (bank credit and bond issuances) for green initiatives.The findings indicate that despite improvements in public awareness and financing opportunities in India, enhancing information management systems and fostering greater coordination among stakeholders could facilitate sustained economic growth that is environmentally and socially responsible in the long term.

Guest. (2021) described India as a center for sustainability financing and green taxonomy, which aims to increase awareness of green sectors and mitigate greenwashing. Green finance includes: 1) funding green investments in environmental products and services,preventing environmental and climate damage; 2) supporting public green practices that induce environmental projects and initiatives; and 3) establishing a sustainable financial chain focused on green financial funds.

Sharif Mohd and Vijay Kumar Kaushal (2018) defined that green financing hasthe remarkable role in reducing Green house emissions. India has greater potential to maintain green infrastructure needed for sustainable financing.

Akgun, et al. (2015) This study tried to address this question through three main stages: providinga current overview, identifying key influencing factors, and developing scenarios for sustainable development. To achieve these goals, we utilized the pentagon model and conducted multi-criteria analysis, specifically regime analysis. Data were assembled from field surveys conducted across 60 rural areas in Europe and 17 in Turkey. The findings indicate differing future priorities among rural residents, with European communities showing a stronger focus on sustainable development compared to Turkish villages, where economic development remains a primary concern.

Sharif Mohd et al (2018) examined the role played by Green Finance as a solution to bring harmony between the environment and the economy and also discussed the various Green financial instruments available and the sustainability initiatives in India and opined that India has a great potential to create a green infrastructure needed for green finance.

Parvadavardini Soundarrajan et al (2016) described Green finance as the core part of low carbon growth connecting, financial industry, environmental improvement, and economic growth and concluded that sustainable finance is the future and Indian banks should continue to play the role of change agent with the overall emphasis on three P's of People, Planet and Profit.

Dr. Karthrin Berensmann et al (2016) discussed the role of major actors driving the development of green finance including banks, institutional investors, and international financial institutions. The researchers concluded that the extent to which the ambitious climate and sustainability goals can be achieved will largely depend on the determination with which the above-mentioned actors drive the development of green finance forward. **Dipika (2015)** studied the tendency that business organizations and the stakeholders are giving more importance to environmental protection and sustainable development. The researcher concluded that Green banking helps in Improving economic growth and protects the environment. Thus, green lending should be given priority as part of sustainable development.

Keerthi B.S. (2013) analyzed the recent trends, challenges, and opportunities of Green finance in India. Further, the researcher has discussed creating of Green jobs and concluded that promoting sustainable equitable agriculture and rural prosperity

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is needed and this can be achieved through the measures like effective credit support, related services, institutional development, and other innovative initiatives.

OBJECTIVES OF THE STUDY

- To study the various aspects of green finance that helps in attaining sustainability goals.
- To identify the needs of green finance in India .
- To analyze the role of various banks in green financing.
- To Study the future potential and opportunities in the green finance sector in India.
- To Study the role of green finance in fostering Sustainable Development in India.
- To Study role of green finance in achieving SDGs.

RESEARCH METHODOLOGY

The research paper is descriptive in nature. The data is collected from secondary sources collected through published sources such as reports, journals, research articles, and websites.

Green Finance

Green finance refers to the use of financial instruments and investments to support projects and businesses that promote environmental sustainability and reduce climate change. This approach aims to mobilize private sector capital to support the transition to a low-carbon economy, while also providing investors with opportunities for long-term growth and returns. Green finance encompasses a range of financial products and services, including green bonds, impact investing, and environmental, social, and governance (ESG) investing. Green bonds, for instance, are specifically earmarked for projects that promote sustainability, such as renewable energy, energy efficiency, and green infrastructure. Impact investing, on the other hand, involves investing in companies or projects that generate both financial returns and positive environmental or social impact. ESG investing considers the environmental, social, and governance performance of companies in addition to their financial performance, providing investors with a more comprehensive view of their investments. By channeling financial resources into sustainable projects and businesses, green finance plays a critical role in addressing climate change, promoting sustainable development, and supporting the achievement of the United Nations' Sustainable Development Goals (SDGs). As the demand for green finance continues to grow, it is becoming increasingly important for financial institutions, investors, and policymakers to work together to create a supportive environment for green finance to thrive.

Need for Green Finance in India

The need for green finance in India is imperative, driven by the country's rapid economic growth, rising environmental concerns, and increasing commitment to sustainable development. As India strives to achieve its sustainable development goals, green finance emerges as a vital tool to mobilize financial resources in support of environmentally friendly projects and businesses. The country's ambitious renewable energy targets, infrastructure development plans, and environmental protection goals necessitate significant investment in green initiatives. Green finance can play a pivotal role in bridging this financing gap by providing innovative financial instruments, such as green bonds, impact investing, and environmental, social, and governance (ESG) investing. Furthermore, green finance can help Indian businesses mitigate environmental risks, capitalize on new market opportunities, and enhance their brand reputation. To unlock the full potential of green finance, India requires a supportive policy framework, increased investor awareness, and standardization of green finance products. By leveraging green finance, India can accelerate its transition to a low-carbon economy, promote sustainable development, and ensure a greener future for its citizens.

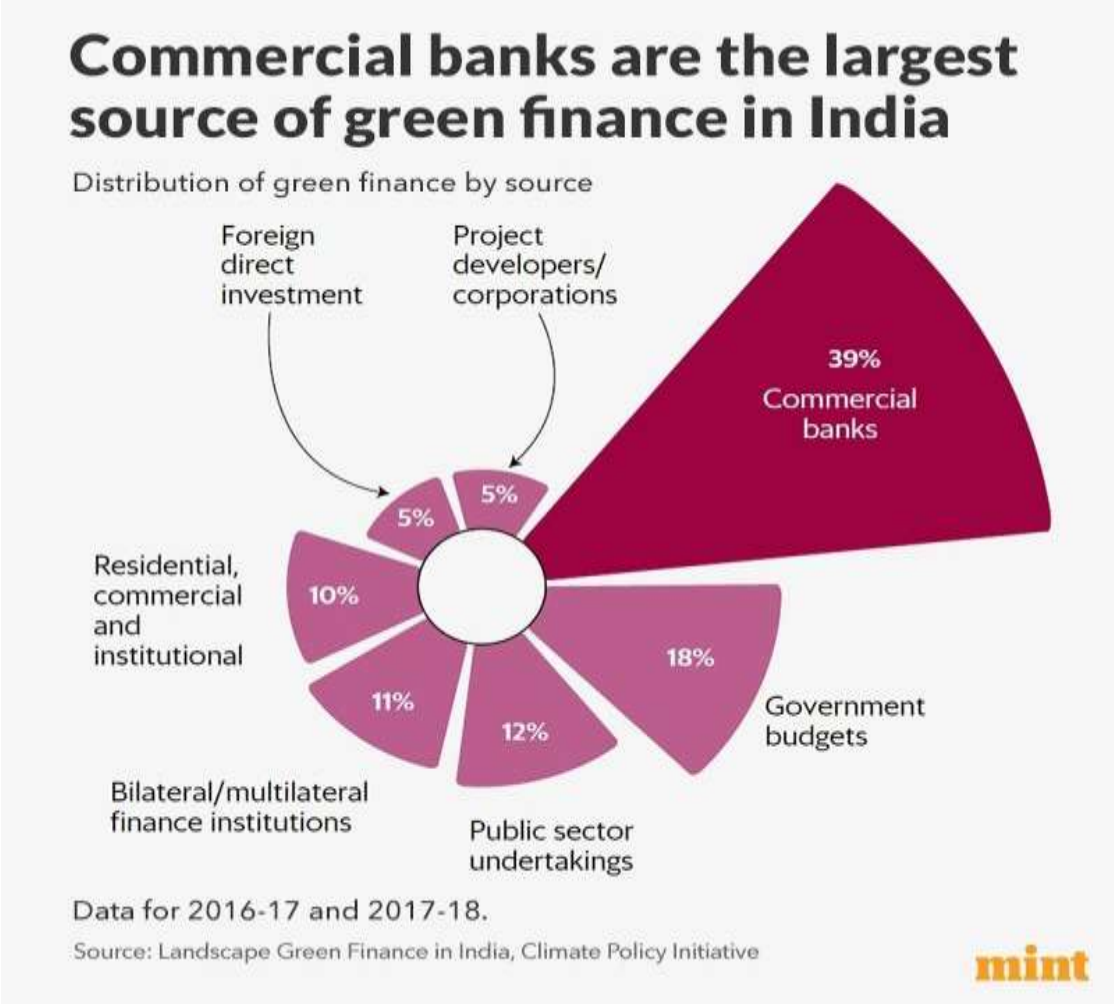
Role of Green Finance in Achieving Sustainable Development

Green finance plays a vital role in achieving sustainable development by mobilizing financial resources to support environmentally friendly projects and businesses. Here are some ways green finance contributes to sustainable development:

Mobilizing Finance for Sustainable Development

1. Financing Renewable Energy: Green finance supports the development and deployment of renewable energy sources, reducing dependence on fossil fuels and mitigating climate change.
2. Sustainable Infrastructure Development: Green finance enables the development of sustainable infrastructure, such as green buildings, sustainable transportation systems, and eco-friendly water management systems.
3. Environmental Protection: Green finance supports projects that protect and restore natural ecosystems, promote biodiversity, and reduce pollution.

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Promoting Sustainable Economic Growth

1. Creating New Job Opportunities: Green finance supports the growth of industries that promote sustainable development, creating new job opportunities and stimulating local economies.
2. Increasing Economic Competitiveness: Companies that adopt environmentally friendly practices and technologies can enhance their brand reputation, improve their economic competitiveness, and access new markets.
3. Reducing Environmental Risks: Green finance helps companies mitigate environmental risks, reducing the financial impacts of environmental degradation and promoting sustainable economic growth.

Supporting Climate Change Mitigation and Adaptation

1. Reducing Greenhouse Gas Emissions: Green finance supports projects that reduce greenhouse gas emissions, promoting climate change mitigation and supporting countries' efforts to achieve their Nationally Determined Contributions (NDCs).
2. Promoting Climate Resilience: Green finance enables the development of climate-resilient infrastructure, supporting communities' efforts to adapt to the impacts of climate change.

Encouraging Sustainable Consumption and Production Patterns

1. Promoting Eco-Friendly Products and Services: Green finance supports companies that develop and market eco-friendly products and services, promoting sustainable consumption patterns.
2. Encouraging Sustainable Supply Chain Management: Green finance encourages companies to adopt sustainable supply chain management practices, reducing environmental impacts and promoting sustainable production patterns.

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Figure II: Green Bonds Issuance by Different Entities in India in the Year 2018.



Source: CARE Ratings Report, 2018

Role of Various Banks in Green Financing

The role of various banks in green financing has been instrumental in promoting sustainable development and mitigating climate change in India. Several banks, including State Bank of India (SBI), HDFC Bank, ICICI Bank, Yes Bank, and Axis Bank, have taken a proactive approach to green financing by launching dedicated green banking initiatives, products, and services. These banks have committed to financing renewable energy projects, such as solar and wind power, energy efficiency projects, and sustainable infrastructure development. For instance, SBI has committed to financing renewable energy projects worth USD 10 billion by 2025, while HDFC Bank has launched a green banking Initiative to promote environmentally friendly banking practices and products. ICICI Bank has issued green bonds worth USD 1 billion to finance renewable energy and energy efficiency projects. Yes Bank has committed to financing renewable energy projects worth USD 5 billion by 2025, while Axis Bank has launched a green credit program to provide financing for environmentally friendly projects. These initiatives demonstrate the banking sector's commitment to supporting India's transition to a low-carbon economy and promoting sustainable development. By providing financial support to green projects, banks can help reduce greenhouse gas emissions, promote energy efficiency, and support the development of sustainable infrastructure.

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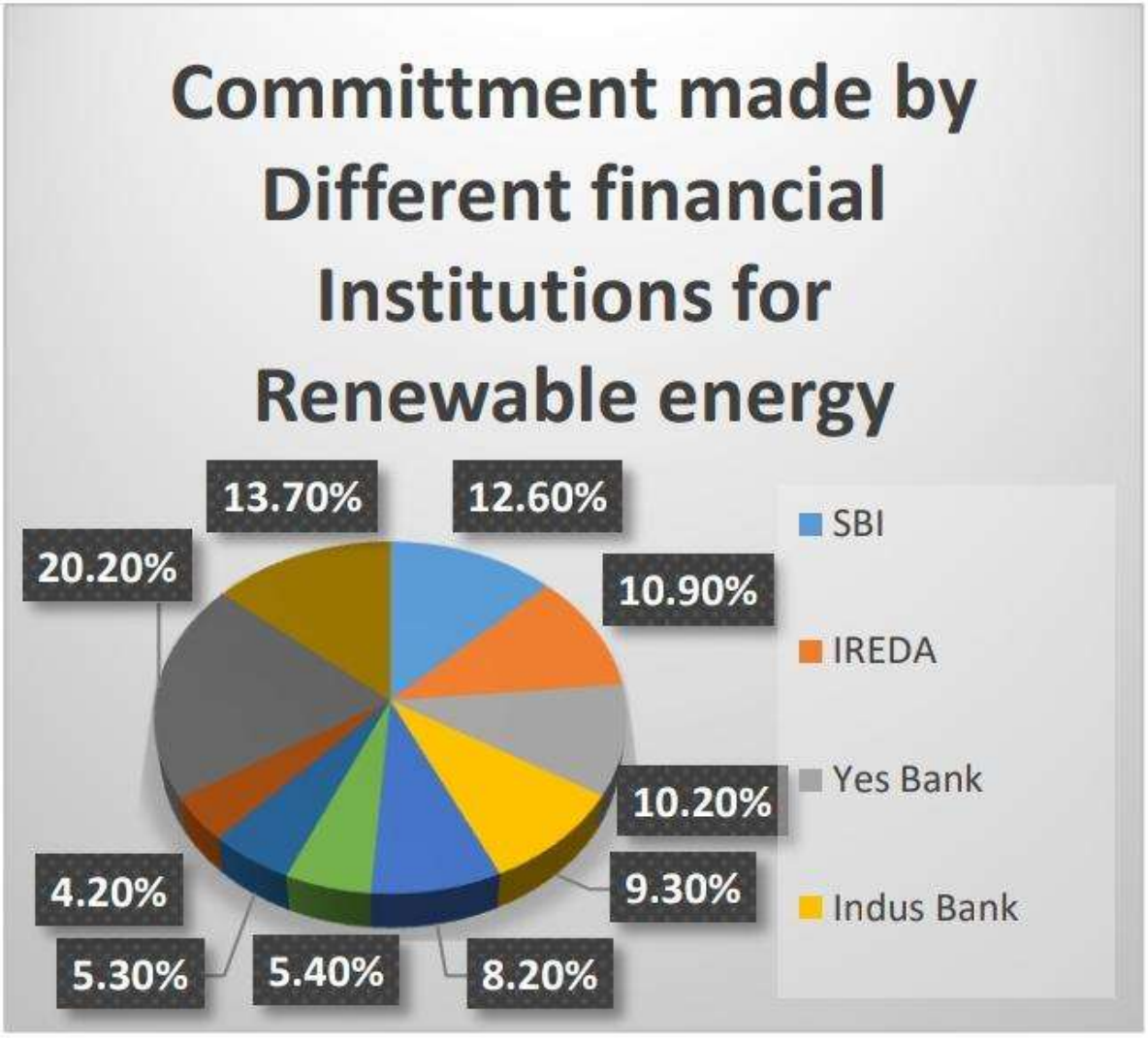


Figure I. Funds Committed by Different Financial Institutions

Green Finance: the way for India's Sustainable Future

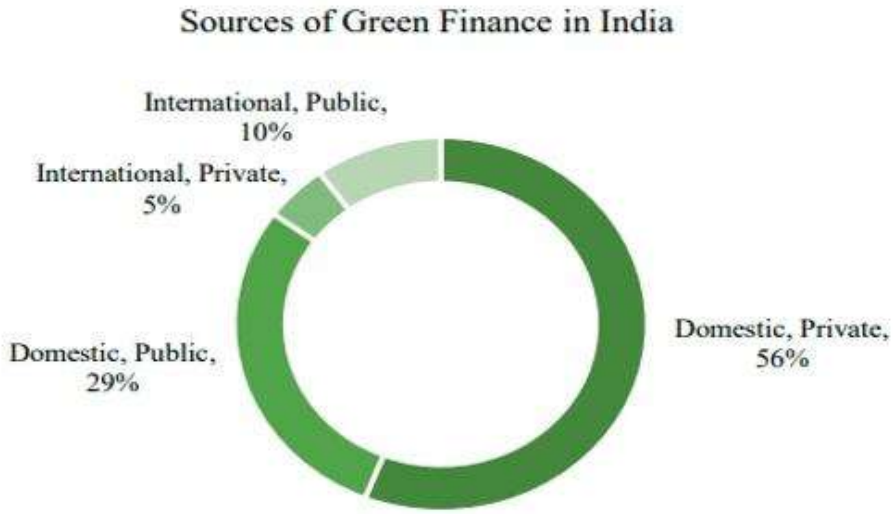
Green finance is a vital tool for India's sustainable future, enabling the country to achieve its environmental and developmental goals while minimizing harm to the environment. As India continues to experience rapid economic growth, it is imperative that this growth is sustainable and environmentally conscious. Green finance provides a solution by promoting sustainable practices, reducing carbon emissions, and supporting the achievement of the United Nations' Sustainable Development Goals (SDGs). Through green finance instruments such as green bonds, sustainability-linked loans, and environmental, social, and governance (ESG) investing, India can transition to a low-carbon economy and reduce its environmental footprint. Furthermore, green finance can provide India with access to new sources of capital, enhance its brand reputation, and create new job opportunities in the green sector. However, to fully harness the potential of green finance, India must address the challenges of limited awareness, higher costs, and the need for a supportive regulatory framework. By overcoming these challenges, India can unlock the full potential of green finance and create a sustainable future for generations to come.

Green finance is a crucial tool for India's sustainable future, enabling the country to achieve its environmental and developmental goals while minimizing harm to the environment.

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Why Green Finance Matters in India

1. Rapid Economic Growth: India's rapid economic growth has led to increased environmental degradation and greenhouse gas emissions.
2. Environmental Challenges: India faces significant environmental challenges, including air and water pollution, deforestation, and climate change.
3. Sustainable Development Goals (SDGs): India has committed to achieving the SDGs, which require sustainable development and environmental protection.



Future potential and opportunities in the Green Finance Sector in India

The green finance sector in India holds immense future potential and opportunities, driven by the government's commitment to sustainable development and the increasing demand for environmentally responsible investments. With India requiring an estimated $10 trillion to achieve its net-zero emissions target by 2070, the green finance sector is poised to play a vital role in funding sustainable projects, including renewable energy, green infrastructure, and sustainable agriculture. The market for green bonds is growing rapidly, with several Indian companies issuing green bonds to finance sustainable projects, while investors are increasingly seeking sustainable investment opportunities, driving demand for ESG (Environmental, Social, and Governance) funds and other sustainable investment products. Furthermore, banks and financial institutions are offering green loans with favorable terms to businesses investing in sustainable projects, and the government is exploring carbon pricing mechanisms, which could create new opportunities for green finance. The Indian government has also launched several initiatives to promote green finance, including green finance guidelines, a sustainable finance framework, and initiatives to promote green infrastructure, such as green buildings and sustainable transportation systems. Overall, the green finance sector in India is expected to witness significant growth, driven by government support, increasing demand for sustainable investments, and the need for businesses to adopt environmentally friendly practices.

Green Finance: Fostering Sustainable Development in India

Green finance is playing a vital role in fostering sustainable development in India by mobilizing financial resources to support environmentally friendly projects and businesses. As India continues to experience rapid economic growth, green finance is essential for promoting sustainable practices, reducing carbon emissions, and supporting the achievement of the United Nations' Sustainable Development Goals (SDGs). Green finance instruments, such as green bonds, sustainability-linked loans, and environmental, social, and governance (ESG) investing, are increasingly being used to finance renewable energy projects, energy-efficient buildings, sustainable transportation systems, and green infrastructure. The Indian government has also launched several initiatives to promote green finance, including green finance guidelines, a sustainable finance framework, and incentives for green bond issuances. Furthermore, green finance is providing investors with new opportunities for long-term growth and returns, while also enhancing the brand reputation of companies that adopt green finance practices. However, despite these efforts, challenges remain, including limited awareness about green finance products and services, higher costs associated with green finance, and the need for a supportive regulatory framework. Nevertheless, the potential for green finance to foster sustainable development in India is vast, and ongoing efforts to promote green finance are expected to drive significant growth in the sector in the coming years.

Conclusion

In conclusion, this study has highlighted the critical role of green finance in achieving the Sustainable Development Goals (SDGs)

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in India. Green finance has emerged as a vital tool for mobilizing financial resources to support environmentally friendly projects and businesses, promoting sustainable development, and reducing environmental degradation.

Key Findings

1. Green finance is essential for achieving the SDGs: Green finance can help India achieve its SDG targets by promoting sustainable development, reducing carbon emissions, and supporting the development of green infrastructure.
2. Green finance instruments are increasingly being used: Green bonds, sustainability-linked loans, and ESG investing are being used to finance renewable energy projects, energy-efficient buildings, sustainable transportation systems, and green infrastructure.
3. Indian government initiatives are promoting green finance: The Indian government has launched several initiatives to promote green finance, including green finance guidelines, a sustainable finance framework, and incentives for green bond issuances.

Recommendations

1. Increase awareness about green finance: There is a need to increase awareness about green finance products and services among investors, issuers, and other stakeholders.
2. Develop a supportive regulatory framework: A supportive regulatory framework is necessary to promote green finance and address the challenges associated with green finance.
3. Encourage innovation and growth: There is a need to encourage innovation and growth in the green finance sector, including the development of new green finance products and services.

Future Research Directions

1. Assessing the impact of green finance on SDG achievement: Future research can focus on assessing the impact of green finance on SDG achievement in India.
2. Evaluating the effectiveness of green finance instruments: Future research can evaluate the effectiveness of different green finance instruments, such as green bonds and sustainability-linked loans.
3. Examining the role of green finance in promoting sustainable infrastructure development: Future research can examine the role of green finance in promoting sustainable infrastructure development in India.

In conclusion, green finance has the potential to play a critical role in achieving the SDGs in India. However, there are challenges that need to be addressed, including limited awareness, higher costs, and the need for a supportive regulatory framework. By promoting green finance, India can accelerate its transition to a low-carbon economy, promote sustainable development, and achieve its SDG targets.

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