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BANKING FOR SUSTAINABILITY: EXPLORING GREEN INITIATIVES AND STRATEGIES TO COMBAT CLIMATE CHANGE IN INDIA

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ABSTRACT

To achieve the sustainable development goals particularly SDG 13, related to climate action and to cut emissions to net zero by 2070, the role of the banking sector in promoting sustainability becomes paramount as banks play a crucial role in the Indian economy. India's banking industry is addressing sustainability challenges by implementing green banking practices to support a green economy. The study focuses on recent advancements in sustainability in Indian banks using suitable green banking techniques. This study is based on a secondary data analysis approach, it seeks to provide a detailed understanding of how Indian banks are integrating sustainable strategies and promoting environmental sustainability. The purpose of this study is to explore how Indian banks are promoting a green financial ecosystem, enhancing environmental resilience, and embracing sustainable practices. It also examines the internal sustainability initiatives adopted by Indian banks, such as evaluating and reporting carbon footprints, implementing energy-efficient mechanisms, and following sustainable operational procedures. In conclusion, this study investigates sustainable finance in the Indian banking industry, aiming to inform policymakers, stakeholders, and the public about initiatives and strategies to combat climate change.

Keywords: *Green Finance, Sustainability, Green Banking Initiatives, Sustainable Finance, Climate Change.*

Introduction

The banking sector plays an important role in the country's environmental aspects as it is the provider of money. The goal of this study, "Banking for Sustainability: Exploring Green Initiatives and Strategies to Combat Climate Change in India" is to perform a thorough analysis of the green banking programs that Indian banks have put in place. The aim of this research paper is to see how Indian banks are addressing the pressing issue of climate change and the kind of initiatives that can reduce the impact of carbon emissions.

According to T. C. & Melvin (2022). Every industry's objective has changed from "Profit only" to "Planet, People, and Profit" due to the continued threat of climate change and global warming. The banking industry has acknowledged the realities of the current day and its vital role in environmental protection and long-term growth. It is a major factor in India's economic prosperity and progress, and it serves as the direct or indirect backbone of all industries.

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Banks are expected to have a key role in facilitating the $3.8 trillion annual investment required to drive the transition to net zero. Banks that can pinpoint how and where they can reduce the adverse effects and maximize the favourable outcomes of moving away from a carbon-dependent economy are likely to reap significant rewards. (Beal et al., 2024)

Here the green initiatives of Indian banks are explored with the help of taking cases from one public sector bank-State Bank of India (SBI) and one Private sector bank-Housing Development Finance Corporation (HDFC).

In terms of funding coal plants, Indian banks are in fourth place worldwide, having given $155.6 billion (about Rs 11.1 lakh crore at current exchange rates) in loans between 2012 and 2019, according per the findings of Oil Change International's research, "How Central Banks are Fueling Climate Crisis." The Bloomberg Terminal, which offers real-time financial market data, was the source of data used in the analysis for the 60 biggest banks and 12 central banks.

What Exactly Banking for Sustainability or Green Banking Refers to?

There is no single or formal definition of green banking is available, there is still some standardization is needed, here researcher attempted to quote the definitions to give some clarity over this term.

The term "green banking" has gained popularity over the past few years among both the general public and the financial and banking industries *(Zhixia et al., 2018).* The adoption of green banking has increased over the last few decades in both developed and developing economies *(Bukhari et al., 2020)*. Green banking is a step towards full digitalization and branchless banking *Asim et al. (2020)*. As a responsible member of society, banks that engage in "green banking" activities conduct their everyday business while considering both internal and external environmental sustainability. Green banks, ethical banks, and socially responsible banks are all terms used to describe banks that carry out these types of banking activities (*Zhixia et al., 2018)*.

So it can be said that Green Banking is a catch-all term for strategies and ideas that make banks more economically, environmentally, and socially sustainable.

Significance of the Study

This study adds to the corpus of knowledge by providing a sophisticated analysis of the environment of green banking in India's private banking industry. Policymakers, regulatory agencies, financial institutions, and sustainability practitioners are anticipated to find value in the findings, which offer practical suggestions for advancing the incorporation of sustainable practices in the private banking sector.

Significance of Sustainable Banking in the Context of Climate Change

Sustainable banking is in line with international agreements such as the Paris Agreement, supporting the joint goal of reducing global warming and advancing a sustainable future. This helps to improve the reputation of banks on a global scale, drawing in investors who prioritize social responsibility and encouraging partnerships with organizations dedicated to tackling climate change.

Sustainable banking plays a proactive role in financing renewable energy projects by redirecting financial resources towards clean energy sources like solar, wind, and hydroelectric power. This helps reduce carbon emissions and decreases reliance on fossil fuels, aligning with global targets for a low-carbon economy.

It also plays a role in risk management, especially as climate change introduces new risks to industries like finance. By integrating sustainability criteria, banks can better assess and manage environmental and social risks, protecting the financial sector from potential liabilities associated with climate change.

Overview of Climate Change Scenario in India

The 2015 Paris Agreement marked a significant shift in global efforts to reduce carbon emissions, aiming to keep global warming below 2°C and 1.5°C. It included nationally determined contributions (NDCs), with many nations committing to net zero emissions by 2050.

India, as a participant in the 2015 Paris Climate Agreement, is targeting a reduction of one billion tonnes in carbon emissions by 2030 and aims to decrease intensity by more than 45%, with the ultimate goal of achieving net-zero emissions by 2070 (Times, 2023).

Leading the Mission on Net Zero in India

We are all aware that climate change is becoming a major topic of conversation around the world and is posing an existential threat to humanity. India has a significant role to play and the next few years present a tremendous chance to start taking steps towards a sustainable and livable future for everyone. India, currently in a diverse, lively, and evolving stage of growth, has an important part to play.

The country has committed to achieving net-zero goals through the 'Panchamrit' objectives, reducing carbon intensity and increasing non-fossil fuel sources in power generation. At COP26, India presented five 'Panchamrit' commitments for a greener India.

Need for the Study

The 'Still Unprepared' report, which is based on an evaluation conducted in 2022, concludes that there are still large gaps in the Indian banking sector's ability to measure, manage, and mitigate climate risks, even in light of the growing effects of climate change. India's top banks are still ill-equipped to handle climate hazards, according to research released on Wednesday by Climate Risk Horizons.

India saw severe weather on 314 of the 365 days in 2022. The cost of these extreme weather events, such as heat waves and floods, is mounting, and science indicates that as long as carbon emissions keep rising, things will only get worse before getting better.

The Climate Risk Horizons report highlights the need for shared frameworks to manage climate risks and necessary rules from the RBI on climate-related disclosures. It also maps out the possible climate change risks that India's banking sector may face based on sector-wise exposure.

For example, according to disclosures from the top 30 banks in India, SBI and HDFC Bank have the most exposure to carbon-intensive industries, with SBI's exposure being mostly coal-related.

Therefore to bridge this gap, the researcher analysed the steps taken by Indian banks in this area with specialised focus on cases drawn from SBI and HDFC banks.

Problem Statement

Climate change threatens global economies, requiring sustainable practices in financial sectors. India's burgeoning economy faces unique challenges, necessitating a significant shift in its financial sector.

According to (Beal et al., 2024) few banks are effectively integrating social considerations into their net-zero strategy A global survey conducted by BCG inferred, 250 banking executives found that while 90% consider social impacts of climate activities important, only 33% report that social considerations often influence climate-related decisions.

The lack of action by banks in addressing the concept of just transition, as shown in the study by (Beal et al., 2024), has been evident until recently, with little direction or motivation to do so. However, there is now growing momentum with the introduction of new regulations, policies, and guidance worldwide.

The banking industry in India is lagging in implementing green projects, a significant issue in mitigating climate change. Closing this gap is crucial for the sector to become an active partner in climate resilience efforts and shape sustainable banking practices. Thorough investigation of environmentally friendly efforts is needed to assess their effectiveness in meeting SDG 13 targets..

Exploring Green Initiatives in Indian Banking Sector

These initiatives encompass a wide range of strategies aimed at mitigating environmental impact, promoting social responsibility, and aligning with global sustainability goals

- **Innovative Green Financial Products:** Indian financial institutions are rolling out a range of innovative green finance products designed to back environmentally friendly initiatives like green mortgages, green bonds, green sovereign bonds etc.
- **Funding for the field of renewable energy**: Solar, wind, biomass, and hydropower projects are among the renewable energy projects that Indian banks are actively funding. Banks support India's transition to clean and sustainable energy sources by contributing finance and expertise to the development of renewable energy infrastructure and the reduction of greenhouse gas emissions.

- **Energy Efficient Loans:** Banks provide loans and other financial incentives to companies and sectors that implement energy-efficient practices and technology in an effort to encourage energy efficiency and conservation. These programs support financial investments in energy-efficient machinery, building retrofits, and other actions meant to lower energy use and carbon emissions.
- **Environmental and Social Risk Management:** Indian banks are starting to consider risks such as social and environmental, while making lending decisions. This entails evaluating projects' possible environmental and societal effects to guarantee adherence to sustainable standards and ethical banking procedures. Banks protect their investments and advance sustainable development by recognizing and reducing risks.
- **Promotion of Green Technologies:** Promotion of Green Technologies: By forming alliances with government organizations, academic institutions, and IT companies, banks are actively assisting in the adoption and application of green technologies. This will hasten the shift to a low-carbon economy by providing funding for waste management systems, electric cars, energy-efficient appliances, and renewable energy technology.
- **Awareness and Capacity Building:** To inform staff members, clients, and other stakeholders about environmental concerns, sustainable business practices, and green finance options, banks hold awareness campaigns, training sessions, and seminars. Banks enable people and organizations to make well-informed decisions that support sustainability by raising knowledge and developing capacity.

Literature Review

(Tara et al., 2015), this article explores green banking and sustainability in India, focusing on its stages, programs, benefits, and future prospects. It analyzes environmental conservation guidelines and initiatives by State Bank of India and ICICI Bank. The research collects primary data through personal visits and interviews with branch managers. By considering environmental factors, banks can ensure positive returns on investments.

(Sharma et al., 2022) The paper discusses the banking industry's role in achieving net-zero goals, including initiatives, strategies, and economic models. It also discusses climate change and bank investments in fossil fuels. The analysis finds a connection between climate change effects and bank investments in seven sectors, with JPMorgan Chase having the largest investments. The Rainforest Action Network provides information on bank investments in these sectors.

(Lamperti et al., 2021) The study examines the relationship between credit, economic dynamics, and climate change using a macro-financial agent-based model. It reveals that the banking industry is more vulnerable to climate-related crises, and providing credit can boost a company's output but exacerbate climate change consequences. The study tests "green" finance policies, including green public guarantees, Basel-type capital requirements, and carbon-risk adjustment in credit ratings.

In their study (Ravichandran & Roy, 2022), The authors emphasize the importance of green funding in reducing greenhouse gas emissions and achieving net zero carbon emissions through sovereign green bonds (SGBs). They argue that green finance is crucial for sustainable economic and financial development, and India can contribute to this by constructing green infrastructure and raising awareness among corporate citizens. The study uses secondary data from government reports and Indian banks.

(E.S. & Vennila, 2022) This study explores the role of sustainable financing innovation in India and how Indian banks can contribute to achieving the Sustainable Development Goals by 2022. It emphasizes the importance of "going green" and encourages banks to comply with laws and incorporate climate change into their financial policies. Secondary data sources and 17 Sustainable Development Goals were used for data collection.

(Narayanan & Chandrasekaran, 2023) The article examines customers' perception and utilization of green banking initiatives in Tamil Nadu, India, highlighting the increasing popularity of green banking efforts in both public and private sectors. The authors examine the conceptual assessment of green banking initiatives, their development trends, and the awareness of customers in these initiatives, highlighting the need for further effort in green banking projects.

(T. C & Melvin, 2022) The study discusses Green Banking Channels, a part of Green Banking initiatives aimed at promoting long-term sustainability by reducing environmental impact in banking operations. The authors argue that the Go Green slogan has contributed to the adoption of Green Banking, suggesting that adopting these channels should become ingrained in customer behavior to protect the environment and achieve sustainability.

The relationship between climate change and the financial sector is the main topic of the study (Bowman, 2010).It focused on how banks can affect other corporate actors' emissions and business practices. The study examined how risk assessment, funding, and influencing other business actors' practices might assist the banking sector in voluntarily reducing its impact on climate change and facilitating the shift to a low-carbon economy. In light of regulatory uncertainties, the authors of this paper contend that voluntary action on the part of the banking sector could aid in mitigating climate change and accelerating the shift to a low-carbon economy. Banks can impact the business practices and greenhouse gas emissions of other companies.

(Hauke et al., 2023)The authors of this article gave an overview of how banks, in their capacity as financial intermediaries, are exposed to risks related to climate change, both transitional and physical, and they offer recommendations for regulatory action that will support banks in managing their risk and fostering a sustainable transition. A sustainable economy is made possible in large part by banks. They discovered that quantifying and pricing physical and transition risks is difficult. According to the findings, banks must efficiently manage both their exposure to climate risks and their financial stability.

Research Questions

- What is the role and significance of banking in supporting sustainability and addressing climate change on a global scale?
- How have Indian banks specifically contributed to green initiatives, and what are the distinct categories of these initiatives?
- What are the key green banking practices adopted by Indian financial institutions?
- What internal sustainability practices have Indian banks implemented, and how do these practices contribute to their overall commitment to environmental responsibility?

Research Objectives

- To understand the significance of banking in supporting sustainability and climate change.
- To know the banking for sustainability and how this can contribute towards SDG 13.
- To Identify and categorize specific green initiatives undertaken by Indian banks.

Research Methodology

This study seeks to enhance the existing knowledge on sustainable finance in the banking sector through a methodical examination of secondary data. By shedding light on the efficiency and obstacles of green initiatives, the research aims to influence upcoming policy choices and industry approaches, promoting a more sustainable and adaptable financial environment amidst the challenges of climate change. The researcher analyzed the green initiatives of one public sector bank and one private sector bank based on their net profitability to understand their contributions towards the Sustainable Development Goals (SDGs)

Green Banking Initiatives by SBI

In an effort to reduce climate risks, SBI Chairman Dinesh Khara stated that the company is tracking the carbon footprint of its Rs 33-lakh crore portfolio.

According to an article, on December 21, 2023, State Bank of India (SBI) and the European Investment Bank (EIB) will sign a 200 million euro Line of Credit (LoC) to promote climate action projects in India.

- **Windmill Installation**

Being the first Indian bank that installed ten 15 MW windmills in multiple states to generate green energy. SBIcollaborated with Suzlon Energy which is installing windmills to promote environmentally friendly practices in India, offering cheaper interest financing under the "Carbon Credit Plus" scheme (Kaur & Sandhu, 2019).

- **Financing for Rooftop Solar Project**

To lower carbon emissions and promote India's renewable energy targets, a World Bank-sponsored project with SBI to build 100 MW of solar panels, valued at INR 4 billion (Kaur and Sandhu, 2019, Singh and Zaheer, 2023).

- **Green Channel Counter System**

SBI launched an initiative in 2010 to change its paper based banking system to a new (GCC) green channel counter system (Kaur & Sandhu, 2019).

- **Green Bond and Green Financing**

In order to finance eco-friendly projects, SBI launched green bonds (Das et al., 2023).The profits generated from green bonds are restricted to projects that have received approval from the appropriate authorities (India CSR Network, 2018).

- **Solar ATMs**

According to a study conducted by (Mittal et al., 2023), with a large number of solar-powered ATMs in India, the bank has implemented recycling initiatives and energy-saving procedures at its corporate headquarters and branches

Green Banking Initiatives by HDFC

Through the sale of its first-ever sustainable bonds, HDFC Bank has raised $300 million, with the money raised going toward financing green loans and electric car purchases. These bonds will be listed in the GIFT International Financial Services Centre (IFSC) on the Indian International Stock Exchange (India NIX).

Below are the few main green initiatives of HDFC bank towards addressing climate change and to make a greener economy:-

- **Carbon Neutral**

HDFC Bank today announced plans to become carbon neutral by 2031-32. As part of this initiative, the Bank is looking at reducing its emissions, energy, and water consumption. The Bank will continue to incorporate and scale up the use of renewable energy in its operations

- **Strategy for Carbon Neutral**

Reducing consumption, switching to renewable energy, and compensating for its carbon emissions are among the three strategies HDFC uses to become carbon neutral.

- **E- For the Environment**

The Bank's ESG strategy includes focusing on lowering interest rates on loans for environmentally friendly items like electric cars and using ESG scores to inform lending choices. In addition, the Bank is developing a structure for issuing green bonds. This strategy calls for a reduction in both absolute emissions and energy consumption to maintain current levels of 315,583 MT CO_2 emissions.

- **Carbon Footprint Calculator**

The Bank promotes environmental awareness through its Carbon Footprint Calculator, accessible at https://www.hdfcbank.com/htdocs/aboutus/csr/Carbon-FootPrint-Calculator/index.html.

- **Measures Taken**

The Bank has made efforts to educate its stakeholders about a range of emissions reduction strategies, such as the use of digital banking channels, energy efficiency programs, and paper conservation efforts. In addition to this, by 2022, the Bank aims to lower its overall energy consumption by 3%, its energy intensity by 5%, its absolute Scope 1 & 2* emissions by 3%, and its Scope 1 & 2 emissions intensity by 10

Conclusion

In conclusion, green activities in Indian banking are indicative of a rising understanding of the role that sustainability plays in promoting social welfare, preserving the environment, and accelerating economic progress. Banks are making a major contribution to the global fight to combat climate change and to the advancement of India's sustainability agenda by utilising their financial resources, knowledge, and influence.

The significance of implementing green banking practices is underscored by banks' direct and indirect impact on the environment. Paperless banking, green building efforts, green finance and loans, and green mortgages are just a few examples of the many ecologically friendly financial goods and services that have arisen.

The study recommends government awareness campaigns on green banking practices, encouraging sustainable decision-making by banks and consumers. Emphasizing low-interest financing and environmentally friendly goods, green finance programs should focus on clean energy in developing nations.

Thus, it would be appropriate to create banking programs that are only dedicated to assisting poor nations with their clean and inexpensive energy projects. The installation of climate mitigation projects, such as tree plantations, solar energy projects, renewable energy endeavors, mini-power plants, and other sustainable development initiatives, should be funded by these programs. With this strategy, India can advance significantly in their pursuit of the SDGs.

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