

An Evaluation of Green Banking Initiatives of Indian Banking Sector

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ABSTRACT

One of humanity's most difficult challenges is climate change. People are becoming increasingly conscious of global warming and its possible consequences for human life. So, in order to live, we must adapt, and we must make ongoing efforts to manage the environment in a sustainable manner. Green banking enables financial institutions to contribute to long-term development and environmental protection. Green banking is the practice of operating a bank in a way that carbon emissions are reduced both outside and internally. This research is mostly based on secondary data acquired from a variety of journals, websites, and yearly bank reports. The study's major objective is to see how public sector banks (SBI, PNB, Bank of Baroda and Indian overseas) and private sector banks (AXIS, HDFC, ICICI and Kotak Mahindra bank) are doing in terms of green initiatives from 2018-19 to 2020-2021. As a result, the current research attempts to comprehend these institution's green banking initiatives throughout the past three years. And also, it includes SWOC analyses of green banking. The study found that Indian banks are actively involved in green processes, strategies, and infrastructure, as well as the production of a wide range of green products and services, including water harvesting, tree planting, waste management, energy conservation, and green buildings.

Keywords: Global warming, green initiatives, waste management, water harvesting, energy conservation, green building.

I. INTRODUCTION

One facet of globalization is that we are severely missing through the twenty-first century is the loss of greenery. Businesses and corporations have begun to adapt their operations in an effort to enhance greenery to the greatest extent possible, as individuals in modern society become increasingly worried about the environment (Dipika, n.d.).

These Concerns about the environment have pushed the banking industry to take a number of initiatives at the corporate, national, and global levels. Many banks have developed their own policies and compelled to act only in the interests of the environment and society. Central banks have worked with and under the supervision of government ministries at the national scale to align national rules with international environmental standards. The banking industry needs to change consumer behaviour for long-term, sustainable development, and green banking is a critical first step in that direction. Banks all over the world are starting to take sustainability into account when making investment decisions (Barua, 2020). Banks use the phrase "green banking" to describe their efforts to become more environmentally conscious. Green banking is defined as the advancement of sustainable environmental practices and the elimination of a bank's carbon footprint (Shakil et al., 2014). Online and mobile banking are the most practical methods for implementing green banking since they require less paper, which lowers operating costs for banks. The RBI, the country's central bank, issued a circular in 2007 urging banks to act responsibly and advance sustainable development in order to lessen the effects of global warming (Gupta & Jeena Gupta, 2015). Sustainability can be enhanced by using electronic transactions because electronic transactions are more practical for both banks and customers. These transactions required less paperwork and less paperwork means fewer trees need to be cut down. Environmentally responsible practices improve banks' asset quality; hence they should support environmental finance standards. The bank's actions have a big impact on how environmentally conscious its customers are as well (Cholasserri, 2016.). Green banking is comparable to traditional banking in that it takes into account all social, environmental, and ecological concerns in order to conserve natural

resources and protect the environment (Trehan, 2015). Green banking facilitates environmentally friendly projects and places a premium on financing to businesses that have gone green or are in the process of doing the same, so aiding in the restoration of the natural environment. Banks are actively involved in green processes, strategies, and infrastructure, as well as the introduction of a wide range of environmentally friendly products and services (Vadrle and katti, 2016). Banks contribute to environmental conservation through lowering paper, water, energy consumption, and natural resource consumption. This can be accomplished through the use of online banking, mobile banking, green loans, green mortgages, and green certificates of deposit. In addition, banks might provide green loans, contribute financially to local environmental initiatives, and aid organisations that support the environment. It is a little more difficult to locate banks that make the same claim by only providing online services than it is to find banks that go to such tremendous measures to be ecologically friendly. The green banking trend is promoted by banks by attracting online banking customers with price rewards on Certificates of Deposits, brokerage accounts, online bank deposits, and checking accounts (Dipika, 2018). In comparison to Indian banks, forging banks are more interested in green banking. Green banking is still a long way off for Indian institutions. India's public sector bank SBI, has built windmills for captive use, making it the country's first bank to invest in green energy generating (Prabhu, 2021). Private banks also contribute in sustainable development by participating in various environmental projects. Green banking contributes to the development of viable and far-reaching market-based approaches to a variety of environmental issues, such as global warming, deforestation, air quality problems, and resource depletion, while also identifying and securing possibilities that benefit customers (Kundalwal et al., 2014a). Because of worries about the sustainability of the environment, the concept of corporate social responsibility has become widely accepted. Due to its potential advantages, the idea has caught the interest of government agencies, the general public, NGOs, employees, customers, and international organisations. In this way, "green banking" sprang from banks' concern for environmental sustainability. The banking industry, which acts as the primary intermediary in a developing country like India, should be particularly concerned with environmental management. This will help companies in developing nations to address the issue of

sustainability while maximising the use of their limited resources without putting the environment in danger (Fulekar, 2018). India's financial institutions are committing funds to projects that are environmentally sustainable. SBI, HDFC, and AXIS banks are the world's largest financial institutions which provide money for fossil fuels (Global Climate Action). Thus, in this paper, the researcher investigates the major green initiatives of Indian public and private banks in last three years.

II. REVIEW OF LITERATURE

Today's world economies are quickly expanding, which has negative consequences for the environment. The globe is currently dealing with a major problem of pollution and global warming, necessitating the need for long-term development to protect the environment. Banks play a crucial part in the economy's long-term development by funding various green projects. Banks have made a number of steps to protect the environment around the world. This part of literature presents the previous research on green banking initiatives in India and other countries. Green banking is a new phenomenon that takes environmental concerns and corporate social responsibility into account when conducting banking operations. However, green banking is not yet at a satisfactory level, so the government and banks must take steps to encourage people to use green products and services, as well as develop green policies to protect the environment (Chandra Das JatiyaKabiKazi Nazrul et al., 2013). Businesses should lead to environmental issues instead of profit when performing their tasks. Green banking is a pivotal step in this direction that assures banks utilize environmentally friendly process to prevent carbon footprints (Bhat, 2021). Banks, both private and public, are aggressively pursuing sustainable banking practices such as trash disposal, water recycling, green construction projects, photovoltaic equipment, and electronic transfers, as well as developing environmental awareness to the people and bank workers (Vadrle and katti, 2016). These initiatives are insufficient; banks still need to raise more environmental awareness among bank personnel and consumers through green banking while banks are not required to disclose green banking, they do so as part of their sustainability report (Vyas, n.d.2021). Banks participate in a variety of environmentally friendly activities, including tree planting, waste disposal, internet banking, paperless banking, rainwater harvesting, and greenhouse gas reduction projects,

but they continue to overlook other green initiatives, such as carbon disclosure, green construction, and mass transportation (Vyas, 2021). Banks' green banking policies and practices have a substantial impact on their environmental performance, so the government should hold various training programs and seminars for bank workers, customers, and the general public to raise knowledge about green practices.(Chen et al., 2022). According to (Jacob Kurian, 2022), Green banking employs mobile banking, electronic statements, online transactions, and solar ATMs to reduce carbon emissions, although banks' green activities are limited in a few ways. Environmental considerations must be addressed in all parts of a bank's operations and investment decisions.(Hassan Shakil et al., 2014) conducted an analytical study to know the green practices of Bangladesh state commercial banks, private commercial banks, special development banks and foreign commercial banks. They discovered that while 47 institutions in Bangladesh have established green banking policies and budgets, the use of green banking budgets by state commercial banks and state development banks is insufficient. SCBs and SDBs have relatively limited online banking and ATM facilities. According to the researchers, green loans for ecologically friendly initiatives have expanded in recent years. They came to the conclusion that certain Bangladesh banks have implemented green policies and those others are in the process of doing so. (Kundalwal et al., 2014)conducted a study to know the benefits, challenges and strategic aspects of green banking in India. The condition of green banking adoption in India was also investigated in this study. The study's findings revealed that Indian banks' implementation of green banking practices is still insufficient. According to the study, banks should be required to conduct green projects in order to protect the environment. (Shaumya&Arulrajah, 2016) investigated the green practices of Sri Lankan banks. Secondary data was gathered through three years of annual reports, from 2013 to 2015, while primary data was gathered from 155 employees of chosen institutions. This study discovered 98 green initiatives used by Sri Lankan banks to assist them in becoming more environmentally friendly.(Sharma & Choubey, 2022) analyses the impact of three green banking activities-green product manufacturing, green CSR, and green internal processes-on two potential outcomes, namely green brand image and green trust. It also presents a framework for green banking initiatives. The researcher used a qualitative methodology and

semi structured in-depth interviews with 36 middle- to senior-level managers from twelve public and private Indian banks. The findings of the study revealed that 63 percent of all respondents thought their bank was developing so many green banking products and services, 53 percent of bankers thought their bank had incorporated green internal procedures into everyday activities, and 78 percent of respondents thought their bank was engaged in many green CSR practices. The findings of the study also revealed that more than 60% of respondents believed that green banking initiatives improved the reputation of the green brand and helped to reestablish client trust.

Objectives

- To know the major green initiatives of selected Indian public and private sector banks in last three years.
- To analyses the strength, weakness, opportunities and challenges of green banking in India.

III. METHODOLOGY

The current study relies on secondary data acquired from bank's annual reports. The banks were selected on the basis of market capitalization. Therefore, four public and four private banks are chosen. SBI,PNB, Bank of Baroda and Indian overseas are public sector banks, and private sector banks are (AXIS, HDFC, ICICI and Kotak Mahindra bank). The data is collected from last three years. The information on green banking activities performed by the banks was mostly drawn on annual reports, Business Responsibility Reports, ESG reports and CSR Reports from 2018-19 to 2020-21. Furthermore, data is gathered from bank websites, newspapers, and various periodicals and articles. The data are analyses in aspect of different initiative taken by banks in favor green banking and also analyses the different practices adopted by the bank.

Green Banking Initiatives Undertaken by Banks

Both the Public and private sector banks in India are participating in green banking initiatives. In India there are 12 nationalized public sector banks and 21 private sector banks. Public sector bank is one in which the government owns a majority stake, whereas a private sector bank is one in which private shareholders own a majority position. This study examined the green initiatives of both public sectors and private sector banks of India. Therefore, four public sector banks and four

private sectors banks are selected on the basis of their market capitalization (Table no.-1).

Public Sector Banks		Private Sector Banks	
Banks	Market Capitalization(Rs Billion)	Banks	Market Capitalization (Rs Billion)
State Bank of India	3684.08	HDFC Bank	8145.46
Punjab National Bank	445.4	ICICI Bank	4360.79
Bank of Baroda	415.26	Axis Bank	3482.56
Indian Overseas Bank	373.22	Kotak Mahindra Bank	2255.91

(source: www.statista.com)

Table no.-1

Major Green Initiatives of Banks in India:



Figure: Developed by Authors

GREEN BANKING INITIATIVES OF PUBLIC SECTOR BANKS PUNJAB NATIONAL BANK

- To combat global warming and pollution, the Bank has implemented a variety of strategies. All current and new buildings at the bank are using energy-saving techniques. CMD has

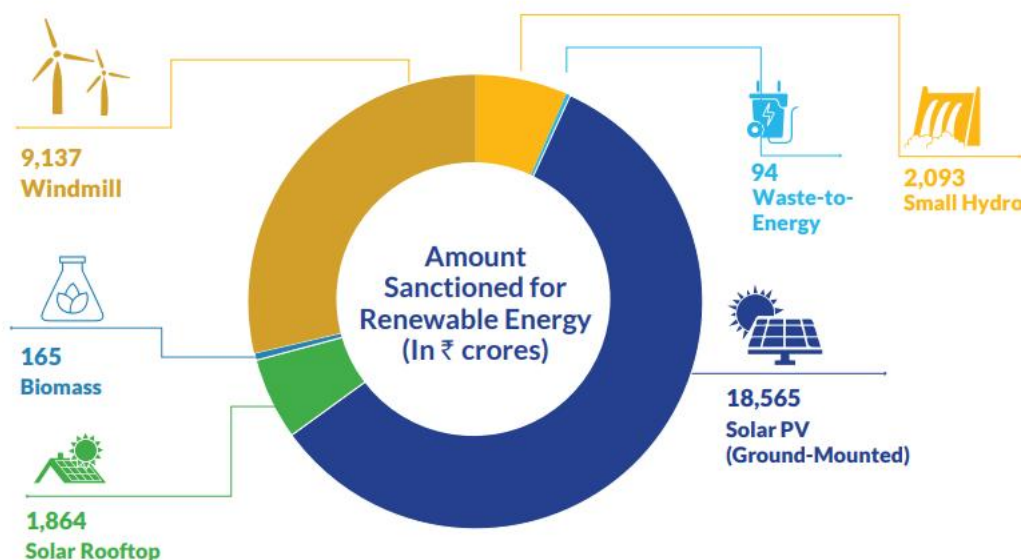
signed a "green commitment" on behalf of the bank, highlighting the importance of embracing new approaches for the construction of green buildings.

- Before taking out term loans, the bank ensured that the enterprises had obtained all necessary legislative and regulatory licenses, from the board of pollution control for the sake of environmental protection.
- To reduce greenhouse gas emissions, the bank lends money to projects that generate clean energy, such as solar, wind, and hydroelectric power.
- The bank has developed thorough criteria for funding carbon credit and windmill projects, including a one percent exposure ceiling for windmills alone.
- The bank has taken steps to conserve the environment by supporting rainwater harvesting, using email for inter-office communication, reducing paper usage, and launching tree-planting projects.
- The bank has established an independent order sheet to monitor the performance and effectiveness of green initiatives, and it has also initiated an energy saving programme with an electrical assessment of its premises.
- As part of the bank's green initiative, the Ernakulam circle has constructed a butterfly garden in the Guruvayur Temple courtyard, which has 18 different therapeutic plants.

- The Bank has issued guidelines to limit the financing of ozone-depleting units.
- In 2010-11, the bank approved nine wind power projects with a total budget of 185.81 crores to promote wind energy, and the bank is striving to popularize solar power to encourage wind energy in rural regions.
- Rainwater harvesting in existing buildings is being worked on by the bank, and eco-friendly building construction is being encouraged.
- In different years, the bank has begun a tree-planting campaign. 257 seedlings were planted in 15 Tree Plantation Camps in 2018-19. 229 seedlings were planted in 23 Tree Plantation Camps in 2019-20. Due to government-imposed covid -19 restrictions, tree planting could not be done efficiently in 2020-21.

STATE BANK OF INDIA

- The Bank has built a Grid-connected Rooftop solar PV Projects with a capacity of 1MW to popularize the use of renewable energy in industrial buildings and commercial organisations with small roofs. Bank has sanctioned fund for renewable energy in 2020-2021 in different projects such as: windmill, Biomass, Solar Rooftop, Waste to energy, small Hydro and solar PV. Below diagram are represent the sanction amount for different renewable projects.



(Source: <https://sbi.co.in>)

- Solar photovoltaic pumping systems, a long-lasting, cost-effective, and easy-to-use alternative to standard diesel and electric pumps, are being funded by the bank to ensure farmers' long-term profitability.
- E-rickshaws are an environmentally friendly and cost-effective means of transportation that helps to reduce air and noise pollution. SBI had sanctioned '14.21 crores for E-rickshaws as of March 31, 2021.
- The Indian Green Building Council awarded the bank certification for incorporating eco-friendly practices.
- To raise awareness about the importance of living an eco-friendly lifestyle, the bank marks World Environment Day by organising activities such as tree planting and beach cleanup. The bank collaborated with the Bhamla Foundation and the Ministry of Environment, Forest and Climate Change on the issue of "Air Pollution."
- To commemorate Global Sustainability Awareness Day, the bank organises tree-planting activities. Through a tree-planting campaign, the bank has planted almost four lakh trees.
- To promote energy conservation, sustainable energy use, and GHG emission reduction, the bank has placed rooftop solar panels across multiple offices. This assists the bank in lowering its reliance on fossil fuels. As of March 31, 2020, the bank had installed renewable energy with a capacity of 35 MWp at its offices, branches, and ATMs, and had spent 1413.12 crore on energy usage, which equated to approximately 4.63 million GJ of electricity and 0.88 million GJ of fuel consumption.
- The bank saved 10.84 GWh of energy and approximately 1 million cubic meters of water by using IPM+ desktop software to optimize the distribution and use of electrical power in data centers and computer systems.
- The Bank has devised a carbon-neutral strategy, with the goal of being carbon-neutral by 2030. The bank built a solar power system with a 35 MWp captive RE power capacity instead of employing generator sets.
- The bank has 68 waste management units throughout its various branches as of March 31, 2020. The bank has switched to glass, steel, and copper bottles and jars to reduce plastic waste.
- The bank has begun collecting rainwater at numerous branches to ensure long-term water availability, which is then used to satisfy housing demands. The bank has also set up a system that recycles wastewater from the dormitory and administrative buildings and utilizes it to irrigate the gardens. As a result, water use on campus was cut in half.
- The bank has developed the Green Channel Counters service to help save paper, which will save 445 MT of paper and 11,700 trees.
- The bank has issued green bonds totaling \$800 million since fiscal year 2018-19, while a green loan for €50 million was raised in fiscal year 2020-21.

BANK OF BARODA

- The bank has established a number of programmes, including financing for solar lighting, solar water heating, photovoltaic pumping systems, and PV system installation, to increase the use of solar energy for lighting and water heating in rural areas.
- To fulfil a promise, it had made to the Ministry of New & Renewable Energy to offer funding for projects in the renewable energy sector, including wind, solar, and other renewable energy projects, the bank needed close to Rs. 6500 crores.
- When sponsoring a business venture, BOB seeks to support green initiatives that protect the environment, such as solar power projects, biomass power plants, and wind mills that help create carbon credits.
- Bank's commercial real estate projects reduce pollution and protect the environment by using solar energy, LED lighting, mobile cabins, five-star AC, and rainwater collection during construction.
- The bank actively worked to reduce the use of paper; as a result, the bank advised customers to open accounts via mobile banking to avoid using paper. The bank also promoted the use of plastic cards and mobile banking, net banking, and e-transactions. Additionally, the bank promotes the usage of paperless transactions such as UPI payments, Aadhar pay, and Bharat QR codes. Additionally, the bank has adopted a green building idea for its planned new offices and uses eco-friendly materials to protect the environment.
- To reduce energy usage, the bank has installed hybrid inverters with solar panels at several branches. Additionally, the bank has replaced

obsolete AC units, fans, and traditional lighting with LED lighting and other energy-efficient products.

- In order for shareholders who owned shares in physical form to receive future communications, such as paperwork, notices, and annual reports, the bank asked them to register their email addresses. Shareholders who have shares in demat form are also asked to register their email addresses with the appropriate depository in order to make future communication easier.
- According to the recommendations of the Indian Green Building Council, the Bank constructed buildings in Varanasi and Jaipur. For the outside lighting, stair lighting, and basement brightness, 5 KW solar panels were placed(www.bankofbaroda.in).

INDIANOVERSEAS BANK

- The bank encourages the use of renewable energy and has erected solar, wind, and micro hydel plants to safeguard the environment and reduce pollution.
- The bank has taken steps to improve the amount of greenery in its structure.
- The bank has taken initiatives to transition to paperless banking in order to reduce the use of paper. To this end, the bank encourages the use of UPI payments, mobile banking, online banking, and other electronic methods. The bank also encourages customers to use POS devices, M-passbooks, and online transactions.
- Rather than collecting cash and checks from educational institutions and other organisations, the bank has established a tailored collection strategy through IOB pay. As a result, almost 470 institutes have signed up for IOB Pay.
- The bank launches the Bharat Bill Payment System for users to pay bills online and allows the green pin for ATM debit cards. Additionally, the bank introduced the BHIM IOBUPI Unified Payment Interface, and as of March 31, 2020, nearly 30 lakh clients were already using UPI platforms.(www.iob.in.)

GREEN BANKING INITIATIVES OF PRIVATE SECTOR BANKS:

HDFC

- The bank began mapping its carbon footprint and will continue to do so.
- It is currently implementing a solar electrification project in which solar panels

with 2-way mete are placed, allowing the solar electric system to deliver excess electricity to the main grid. As of March 31, 2020, the bank had installed solar in five cities, including Jaipur, Pune, Noida, Bhubaneswar, and Chandigarh, with a total capacity of 145.5 KWP till now which was 135.5KWP earlier in 2018.

- The bank has an all-India e-waste management system, and authorised recyclers have disposed of approximately 7,016 kg of e-waste. E-waste providers have provided this bank with green, disposable, and recycling certificates.
- The bank developed a variety of user interfaces for its customers, including online banking, phone banking, and ATMs, as well as encouraging them to subscribe to e-statements and use electronic media over paper communications.
- For farmers in dairy societies, the bank has built multi-function terminals known as Milk to Money ATMs.
- The bank determines the environmental and social risk of large loans using a Social and Environmental Management System (SEMS). In addition, the Bank maintains an Environment Policy that provides as a framework for assessing and managing environmental risks, consequences, and opportunities.
- To maximize the efficiency of energy bank-installed VRF/VRV ACs, inverter-based star-rated ACs, and LED lights in place of traditional ACs and CFLs, as per ISEER requirements. Currently, CFL lights have been effectively replaced with LED lights in 69 percent of bank branches.
- In 384 branches, the bank set up switch rooms to limit the usage of air conditioning, resulting in a 14 percent reduction in electricity costs.
- The bank encourages the use of biodegradable trash bags, reusable plates, cutlery, and wooden stirrers in place of single-use plastics.
- The bank planted 41695 trees in a total area of 45000 sq. ft. using the Japanese Miyawaki plantation method.(BUSINESS RESPONSIBILITY REPORT 2020-21.)

ICICI BANK

- The bank focused on lowering its environmental footprint in order for its operations to have a positive impact, which resulted in a number of operational changes

such waste reduction, recycling, and item reuse.

- Four upkeeping of environmentally friendly workplaces, internal operations, promotion of the use of digital banking, etc., are major focal areas.
- A total of 775000 trees, including 35000 that were planted in 2021, were planted by the bank throughout the course of the previous three years.
- Three million kilowatt hours of renewable energy were produced by the bank, which is a 66 percent increase from the previous year.
- At the branches where energy usage was substantially greater, the bank was able to conserve 6.52 million kilowatt hours of energy.
- The bank made significant steps to reduce its usage of paper, saving 9 million A4 pages, which is comparable to saving 1100 trees and 4.5 million liters of water. The bank's premises added 97.5 kilowatts of peak solar power in 2021 (ICICI-Bank-ESG-Report-2021).
- Ninety percent of all transactions take place on various digital channels.
- Bank has replaced paper toll receipts with FASTags, which improved FASTag collections by 51%, less paper was used.
- The bank replaced outdated fire extinguishers with eco-friendly ones in 1900 of its branches.
- All of the bank's recently constructed buildings adhere to the standards of the Indian Green Building Council. (ICICI: Natural Capital, 2021.)

KOTAK MAHINDRA BANK

- The bank consistently supports eco-friendly technologies. The carbon footprint and greenhouse gas emissions have been reduced through various efforts.
- The conservation of 876 trees by avoiding the use of almost 73 lakh A4 sheets of paper
- The bank's enormous headquarters will stop 1188 tones (t) of carbon dioxide (CO₂) equivalent (e) GHG emissions throughout the course of the 2020–21 financial years.
- The huge workplaces used less water and energy overall, saving 1431 megawatt hours, respectively.
- The bank has used the "Cold Aisle" for data centers with low and high density.
- To cut down on the amount of power used, hybrid air conditioners were fitted. Sensor based lightings were also used to decrease the

consumption of electricity. A common discipline was made to switch off the lights or other electrical appliances when not in use.

- Efforts have been made to decrease the carbon footprint in branch offices through UPS battery refurbishments.
- To improve the optimisation of energy, Digital LED signage was also used so that the carbon emission can be reduced.
- In the financial year 2018-19, the electricity consumption was 27402 MWh, in 2019-20 it was 27367 MWh and 22921 MWh in the financial year 2020-21.
- In order to assess the social and environmental risk posed by borrowers, the organisation developed the "Social, Environmental Management System Plan" (SEMSP), which is based on the sustainable framework and performance standards of the IFC.
- To reduce the use of fresh water, recycling facilities were set up. However, because of the COVID-19 Pandemic and the partial closure of the offices at that time, the water consumption fell from 95998 kiloliters in FY 2019–20 to 61491 kiloliters in FY 2020–21.
- The bank has established an appropriate system for managing e-waste in order to protect the environment. As a result, the bank has a buyback agreement with original hardware's makers, and hard discs containing sensitive data are disposed of by authorised e-waste organisations. The bank has also switched from single-use plastic bottles to glass dispensers. (Business Responsibility Report, 2022.)

AXIS BANK

- The Bank has set a goal of reducing intensity emissions by 5% per employee year, as well as continuing to reduce GHG and scope 3 emissions. As a result of these actions, a considerable amount of GHG 15359.83 MT energy was saved in the last financial year 2020-2021. (Axis Bank Limited Business Responsibility Report 2020-21)
- In 2021, the bank will introduce the 'Sustainable Lending Policy and Procedures,' which will integrate environmental and social risk into its credit appraisal methodology.
- As a private placement, the bank has begun issuing green bonds. The bank issued a smaller USD40 million green bonds in 2019.
- As of March 31, 2021, the bank had installed renewable energy in 245 branches with a

capacity of 7.05 MW, generating roughly 87170 GJ of power.

- 3.1 MT of wet waste was composted, 18.31 MT of dry waste was recycled, and 12.60 tons of e-waste was disposed of by authorized vendors as part of the bank's waste management initiatives.
- The bank is actively attempting to conserve water, and as part of this effort, it has begun water recycling efforts, recycling 150 KL of

water every day through a Mumbai sewage treatment plant.

- The bank installed grid inverters in 260 branches, up from 100 earlier, to reduce fuel usage in rural branches, saving roughly 2.22 lakh gallons per year.(Business Responsibility Report 2020-21)
- The bank has begun the process of setting up electric vehicle charging stations in Mumbai, Noida, and MIDC Andheri.(Natural Capital, n.d.)

SWOC Analysis of Green Banking in India

Strength

- Efficient client Care
- Mini. Operation Exp.
- No Particular Location
- Minimizing carbon footprint

Weakness

- Lack of Knowledge
- Hidden cost fear among customers
- Lack of Government
- Lack of equal contribution

Opportunities

- Increased Revenue source
- Reducing long term cost
- Encourage R&D

Challenges

- Initial Stage
- Implementation hurdles
- Misunderstanding among public
- Risks

Following are the strength, weakness, opportunities and challenges of green banking:

Strengths of Green Banking

- Efficient customer service: The green banking system ensures efficient customer service while shortening transaction times for both the bank and the service user.
- Reduce Operating Costs: This makes business operations easier and brings down operating costs for customers and banks.
- No Particular Location: neither the transaction's location nor its timing is set in stone. It is possible whenever and wherever. Online transactions using mobile and internet banking are included in green banking.
- Minimizing carbon footprint: green banking reduces carbon footprint by providing funding for solar and wind energy projects. Additionally, it encourages the adoption of five-star AC and LED lighting.

Weakness of green banking

- Lack of Knowledge: Customers and bank workers are not familiar with the idea of "green banking," and even if they are, their knowledge is not dependable.
- Hidden cost fear among customers: Customers are afraid of hidden costs since banks impose a fee for each transaction; as a result, some customers chose not to pay the price, which led to fewer green transactions.
- Lack of Government support: The government is not providing the adequate support to the green banking as it should be. RBI has not formed any special or mandatory legislations or regulations regarding this.
- Lack of equal contribution: all the banks are not equally contributed towards green initiatives. Some of banks have efficiently implemented green practices and some of banks are in their initial face.

Opportunities of Green Banking:

- Increased Revenue source: Banks are already selling non green products, adding green products shall definitely increase revenue.
- Reducing long term cost: The green banking shall lead to decrease in cost in many ways like using digital process will result in paper saving etc.
- Encourage R&D: The Research and Development shall increase in ecofriendly products which is a good sign of promotion of green products.

Challenges of Green Banking:

- Initial Stage: The concept of green banking is new and banks are unable to generate profit out of its products. It shall take approximately 4-5 years to normalize green banking.
- Implementation hurdles: The banks finding it very difficult to implement the green banking procedures. As the consumers are unaware and hesitate in using the new technology or products.
- Misunderstanding among public: The consumers misunderstand the green banking with digital banking. According to them, they have done their part if they opted for digital banking.
- Risks: Along with green products, if bank does something which is harming the environment can lead to negative image of bank.

IV. LIMITATIONS OF STUDY

This study is based only on the secondary data, gathered from the official websites of the respective banks. The study gathers data for 2020-21 also, when the corona pandemic was on peak, many organisations could not take initiatives in that year.

V. CONCLUSION

The world is currently concerned about global warming and pollution. Indian banks are contributing significantly to environmental protection. This study finds that banks are taking different green initiatives through various schemes and policies for sustainable growth. India's public sector bank SBI is the first bank which indicates for green banking by starting windmills project to invest in green energy generation. The State bank of India sanctioned 18565 crore rupees for ground mounted Solar PV and 1864 crore rupees for rooftop solar panels. Rupees 9137 crores for windmill, 2093 crore rupees for hydra projects and

many more in 2020-21. The Bank has received many awards and got recognized for its initiatives. The Punjab national bank was doing very good in the field of tree plantation in past years but could not do well in 2020-21 due to corona pandemic. The Bank of Baroda worked in solar sector and reduced paper consumption to significant level. The bank also constructed its branches according to the standards of Indian Green Building council. The Indian Overseas Bank encouraged its customers to pay bills digitally and use its application to save paper and help the environment. HDFC bank planted more than 40000 trees from 2019 to 2021 and has installed solar plants of approx. 145.5 KWP capacity which was 135.5KWP in 2018. The ICICI bank has also installed 97.5KW peak solar power in its premises in 2021. The bank is also using eco-friendly fire extinguishers to replace outdated extinguishers and FASTAGs to save paper used in toll receipts. The Kotak Mahindra Bank used cold aisle for data centres and hybrid air conditioners. The bank is also using sensor-based lighting to reduce electricity consumption and water recycling facilities to reduce water consumption. The Axis bank is installing electric vehicles charging stations at different locations to help the environment and generates approx. 87170GJ of power from 245 branches as on 31st march, 2021. Banks utilize green banking to increase environmental awareness among staff, customers, and the general public. Green procedures, strategies, and infrastructure, as well as the creation of a variety of green products and services, including as online banking, green cards, water harvesting, tree planting, waste management, energy conservation, and green buildings, are all being pursued by Indian banks. However, green banking in India is still in its infancy. As a result, banks must enact robust policies to encourage green banking. This study finds that banks are taking different green initiatives through various schemes and policies to protect environment.

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