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# RESEARCH ARTICLE

## SUSTAINABLE DEVELOPMENT THROUGH GREEN BANKING: A STUDY ON INDIAN BANKING SECTOR

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# **ABSTRACT**

The increasing concern for environmental sustainability by the banks has given rise to concept of Green Banking. Green banking is concerned with promoting the environmental friendly practices thereby reducing carbon footprint from banking activities. The banks and financial institutions can play an important role in promoting environmental sustainability through green banking practices that can influence the attitude of the stakeholders towards the environment. Green banking is always considered a boon to the growing society and is linked to environmental protection and sustainable development (Drakshayani, 2019). Many countries have adopted green banking practices in an attempt to address the issue of sustainability. Green banking is proactive in nature and a smart way to think towards future sustain ability. Keeping this in mind, the present study aims to examine the green banking initiatives and the green practices adopted by the Indian Banking Sector. The key benefits of green banking for various stakeholders are also studied. The study is exploratory in nature and uses secondary sources of data collection. The most common green banking practices adopted by the Indian Banking Sector have been identified as online banking, mobile banking, fund transfer, bills payment etc. but still a vast area of green banking like innovation of green products and services such as green mort gage, green fund, investment in renewable energy, energy efficiency techniques etc. is un touched.

### INTRODUCTION

The concept of green banking consists of two terms: "green" is related to the protection of the environment and "banking" is defined as the act of using the services of a bank, therefore, green banking is considered to describe everything that connects the entire economy and the aspects related to environmental protection (Ziolo et al., 2019). Green banking is concerned with promoting the environmental friendly practices thereby reducing carbon footprint from banking activities. Sustainable development and preservation of the environment are globally considered as a serious issue to protect the planet from the destruction by mankind. Based on the recent research studies (Parameshwari and Balaji, 2019; Herath and Herath 2019; Kapoor et al. 2016), the prevailing condition of the environment degradation can be effectively addressed through fin ancial institutions and banks. The concept of green banking was developed in the western countries and was formally started in 2003 with a view to protect the environment. It is considered as an important strategy to address sustainable development concern and create awareness environmental responsibility(Chakrabarty, 2013). With the aim to establish a green bank under the ownership of the U.S. government, Congressman Chris Van Hollen introduced a Green Bank Actin March 2009.

\*Corresponding author: Dr. Neelam Dhall, Professor, Jagan Institute of Management Studies. As per definition given by the Indian Banks Association, "Green Bank functions like any other normal bank while taking into account environmental and social factors for the protection of the natural resources". According to RBI (IDRBT, 2013), green banking means to make physical infrastructure, information technology and internal bank processes effective towards environment by reducing their negative impact on the environment to the minimum level. It is any form of banking from which the nation gets environmental benefits through social and environmental considerations (Lalon, 2015). Green banking is proactive in nature and a smart way to think towards future sustainability. Traditional banking involves a lot of paperwork to be done in order to perform its banking functions properly which involves deforestation and has an adverse effect on the environment. Thus, green banking is a banking system that will aid in reducing the environmental pollution. Green banking has two facets: first is the way the banking business is done i.e. paperless or not; second relates to where the banks put money i.e. encourage environmental friendly investments and lending to those industries which have already turned green or are trying to turn green to help restore the natural environment (Chakrabarty, 2013). Green banking practices include online banking, paperless banking system (green channel counters), green lending policy, mobile banking, e-statement, solar ATMs etc. Also, within the global banking industry going green has become huge trend (Herath & Herath, 2019).

The increasing concem for environmental sustainability by the banks has given rise to concept of Green Banking. Banks are now expected to perform optimistic role to go green and include environmental and ecological factors in their policies (Rajput *et al.*, 2019). In view of the increasing expectations from banks to adopt green banking, the present study tries to explore the green banking initiatives and practices adopted by the Indian Banking Sector. This research paper is divided into following sections: Section 2 discusses the literature review on green banking; Section3presents the objectives and methodology of research; Section 4 explains green banking initiatives and practices adopted by the Indian B anking sector. Section 5 presents results & discussion and Conclusion & Implications are provided in Section 6.

#### Literature Review

Green banking is considered to be of immense importance to the banks and the society at large and the growing interest of academicians and researchers in this field brings in the need to study the existing literature to get the basic understanding of the green banking concept. Numerous studies have been conducted on the prominence of Green Banking and its adoption in India and worldwide. For instance a study by Parameshwari and Balaji (2019) highlighted that banks are responsible for promoting the green banking activities in the society and by promoting environmental friendly practices banks help develop a sustainable and healthy economy. Another study by Drakshayani (2019) underlined the fact that although banks have never been considered as a polluting industry but the present scale of the banking operations have considerably increased the carbon footprint due to massive use of energy, high paper wastage etc. and thus banks are required to adopt products, process and technology which result in substantial reduction of carbon footprint and develop sustainable business. The study concluded that banks need to apply the principle of sustainability to their business model, strategy formulation, daily operations and financing activities to become stronger as banks face intense competition in the global market due to continuous changes in environmental factors. Additionally, Bhukhari et al., (2019) concluded that the role of stakeholders is imperative in influencing and facilitating the adoption of green banking. Different stakeholders (top management, customer, competitors & community) pressures can have positive impact on the adoption of green banking. Thus, green banking has gained tremendous significance in the last few decades all around the world.

Herath and Herath (2019) researched on the area of green banking in the context of Sri Lankan banking industry and highlighted that the concept of green banking motivates banks to introduce paperless and technology driven services while minimizing the environmental impact and help perform their role as corporate citizen on sustainable development. Similarly, Lalon (2015) focused on green banking practices of commercial banks of Bangladesh and found that green banking motivates a type of banking that reduces the paperwork and create brand image. He concluded that green banking has become very popular word in today's banking world and going green should be the motto of all the commercial banks. In Indian context, Kapoor et al., (2016) stated in their research article that in the era of globalization the depletion of greenery is being completely ignored. In a sincere attempt to increase greenery to the maximum possible, banks are the real catalyst

as they play an important role in the development of an economy and thus should implement green banking in India. If implemented properly, Green banking can act as an effective preventive measure for the polluting industries. Further, Raj and Ranjan (2017) explained green banking as the corporate social responsibility (CSR) of every bank. He concluded that green banking initiatives taken by the Indian banks are appreciable but they lag behind when compared globally. Banks should not be satisfied with green banking products & services they currently possess rather must be continuously involved in the introduction of innovative product &services for their as well as society's benefit. Another study by Rajput et al., (2019) revealed that Indian banks are lagging behind from developed nations in respect of green banking. The growth in Indian banks is sluggish though the consciousness among public and private sector banks about green banking is huge but the implementation is less. As environmental issues are gaining importance, the pressure on banks to go green is increasing as banks adopting green banking can really promote economic growth. In the same year, Rao et al. (2019) concluded that in a rapidly changing market economy where globalization has intensified the competition banks should play an important role to take ecological and environmental aspect as a part of lending principle thereby pushing industries to go for mandated investment for environment management and also, banks & financial institutions should be made to do work for sustainable development. The researchers observed that green banks are at start-up mode in India. Even though they have started adopting green banking practices still a lot of avenues are unutilized by the Indian banks which they can exploit. A recent study by Suresh (2020) highlighted that green is becoming a symbol of eco-consciousness around the world. It is important for the Indian banks to understand their responsibilities towards the environment as well as the society in order to compete and survive in the global market. Moreover, Chandrasekaran and Narayanan (2020) emphasized that adoption of green banking practices makes banking sector a responsible corporate eco-friendly citizen and also that the sustainable development of Indian economy is based on banks and financial institutions. Though green banking helps in reducing paperwork, environmental pollution and promote economic growth and sustainability, Indian banks are still lagging behind developed nations in regard to green banking. Also, India is ranked 168<sup>th</sup> out of 180 countries in the Environmental Performance Index (EPI) 2020. India's low EPI score indicates its struggle to perform well on several environmental issues such as air & water quality, biodiversity, climate change etc. and denotes that greater attention needs to be given to the spectrum of sustainability requirements. Thus, in light of this situation, various green banking practices adopted by the Indian Banking sector contributing towards sustainability, needs to be studied. Moreover, there is dearth of studies examining the participation of Regional Rural Banks (RRBs) in the context of green banking. Thus there is a research gap. The present study aims to fill this research gap by investigating the green banking practices adopted by RRBs as they also form a part of Indian banking Sector in addition to Public, Private and Foreign banks.

# Research objectives and Research Methodology

# **Objectives**

To examine the green banking initiatives and the various green banking practices adopted by the Indian Banking

Sector (taking into account public, private, foreign & regional rural banks).

 To study the key benefits of green banking for various stakeholders.

## RESEARCH METHODOLOGY

The research is exploratory research and uses secondary sources of data collection like annual reports of banks, Environment reports and Sustainability reports of the banks, research papers from national and international journals, articles from magazines and periodicals, research reports of various organisations such as Deloitte, IDRBT, bank's website and various other websites and is based on some cases taken from the Indian Banking sector.

# **Green Banking**

# Green Banking Initiatives and practices adopted by the Indian Banking Sector

Green banking Initiatives: The various green banking initiatives undertaken include online banking- access account through internet, mobile banking/SMS banking, E-mail correspondence instead of postal, E-statements, SMS banking alert, E-fund transfers, E-mails and internal network communication, video conferencing in place of meeting, Green channel counters, installation of solar power/wind power facilities, use of recycled paper and waste, waste management, Green buildings, Social responsibility services (like tree plantation campaigns, maintenance of parks), Document management system, employee training on green initiatives, innovative fin ancial products and services (like green deposits, green loans, green mortgages), promoting environmental literacy i.e. conducting awareness programs on green banking.



Fig-1.G reen Banking Initiatives

# Green Banking practices adopted by the Indian Banking Sector

SBI Bank: SBI is the first Indian bank into generation of green power by installing windmills for the captive use. It has launched "Yono SBI" to convert paper-based banking into digital banking. SBI is focused on aligning its environmental initiatives such as lending at concessional rates for renewable energy projects, establishing digital banking platforms,

implementing energy conservation initiatives like setting up of solar ATMs across India, waste management, reducing paper and water consumption, reducing greenhouse gas emissions etc. SBI launched Green fund which include activities such as tree plantation, water conservation, waste managementavoidance of single use plastic, solar lights/panels for protection of natural environment. In 2019, announced the India's first SBI Green Car Loan (Electric Vehicle) to encourage customers to by electric vehicles. SBI launched SBI Green Home Loan to promote green housing/green home/green building which reduce carbon emissions & promote renewable energy. Green Channel Counters have be en installed at all SBI retail branches across India. The bank offers Green Remit card (simple Magstripe based card without PIN) and provides satellite-linked SBI FAST (Funds Available in the Shortest Time) platform which is totally a technologydriven cash management product.

PNB Bank: PNB focuses on continuously enhancing digitization through constant innovation and up-gradation of existing products and services. In addition to Internet & Mobile Banking Services (IBS), the bank recently launched a unified mobile application "PNB One"- all-in-one application facilitating multiple features through single platform. PNB's Instant Help for You (PIHU) chat bot in Mobile banking (PNB One) and in IBS has been made live to provide instant help to its customers. FASTAG integration has been made available to both retail and corporate banking customers for issuance and recharge facility. PNB introduced the concept of paperless Green PIN. In its "Swachchata hi sewa" campaign, the bank planted 257 saplings. The bank launched digitized Performance Management system (PMS) in accordance with the Enhanced Access and Service Excellence (EASE) agenda of Ministry of Finance, GOI, with an objective to make the existing Performance Appraisal System (APAR) more objective and transparent. Also, HRMS Mobile app - PNB PARIVAR has been interlinked with e-circulars. Additionally, bank promotes wind energy and solar energy usage in urban as well as rural areas.

Axis Bank: Axis bank launched Green Bond Framework was launched in alignment with Climate Bonds Initiative's Standard. 'Sustainable Lending Policy and Procedures' (SLPP) of bank integrate E&S risk factors in investment and lending decisions. The bank strived to enhance sustainable financing portfolio and lending to the sectors including renewable energy generation, low carbon infrastructure and waste management. Axis bank supports the "Go green" initiative of the Ministry of Corporate Affairs and promotes environmental sustainability through tree plantation, waste management and energy efficiency techniques. One key strategic initiative of the Axis bank is a project named 'Pratham' for digitisation of products, services and processes (e-statements, e-copies of annual report). The 'Green banking' messages at the ATM alert the user to avoid printing the transaction slip. 'Axis House'-bank's corporate office building is a Platinum rated LEED (Leadership in Energy and Environment Design) certifies green building to lower environmental impact. Axis bank is also strategically investing in solar energy and has installed total 5MW capacity of solar energy for their operation. The bank is focused on promoting environmental sustainability by adopting green banking practices.

**HDFC Bank:** HDFC bank has been focused to identify, assess & address environmental concerns and measure its greenhouse

gas (GHG) emission since 2010. The bank is committed to the climate change mitigation & environmental conservation and regards them as essential elements of sustainable business. HDFC emphasize on promoting environmental sustainability through green banking. To reduce the consumption of paper the bank has gone digital in line with its digital strategy and saved more than 51000 A4 sheets of paper in FY 2018-2019. For Water Conservation- various initiatives taken by the banks are provision of sensors on urinals and faucets. For Waste management- bank constantly looks-out for opportunities to recycle waste (e-waste, dry waste & wet waste) and has sewage treatment plant within the premise at select large offices. HDFC has also undertaken adopted Energy Efficiency Management System (EEMS) to reduce energy consumption and has undertaken GHG Assurance from a third party. Two of HDFC bank's buildings are green buildings and LEED certified. Additionally, bank is committed to utilize renewable energy in its business operations and has installed total solar capacity of 135.5 KWP as on 31/03/2019.

Citibank: Provides online banking platform. For mobile banking free Citi mobile app can be downloaded from App store/Google play and can also buy, sell and manage mutual fund investment apart from other banking services. The bank sends credit card/ bank account statements via e-mail (estatement). Utility bills (Insurance, DTH, mobile bills, EMIs, credit card payments) can be paid on Citibank online; offers online fund transfer. Citibank's E-pay allows non Citibank account holders pay credit card bills online. In development of green bond mark et Citibank has been a leader and is also a cofounder of the International Capital Market Association (ICMA) Green Bond Principles (set of voluntary standards for issuers of green bonds). Citibank issued its first green bond in January, 2019 for €1 billion 3-year fixed rate note for funding water conservation, sustainable transportation, energy efficiency, green building projects and renewable energy. Citi in 2017 signed a statement to support the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

HSBC Bank: HSBC offers all digital services including online banking, mobile banking and electronic fund transfer, estatements. HSBC is a member of ICMA executive committee for the Green Bond Principles and HSBC's green bond framework is consistent with these principles. In transforming to a low-carbon world, HSBC is recognized as a leading partner. The bank launched HSBC simply Pay app(UPI app) to pay and collect money in real-time and enhanced bill payment system powered by Bharat Bill Pay System (BBPS) for realtime bill payments. HSBC is committed to provide \$100 billion by 2015 to develop clean energy, low-carbon technologies; to source 100% of electricity from renewable sources by 2030; sustainable finance & investment. HSBC has adopted the recommendations of TCFD. HSBC group issued green bon for the first time in 2015 for €500 million for funding sustainable waste and water management, renewables, energy efficiency, transportation, sustainable land use, climate change adaptation and clean buildings project. In 2019, HSBC was named the World's Best Bank for Sustainable finance.

**Kerala Gramin Bank:** Kerala Gramin Bank Internet Banking services (KGB Net) offers facilities like viewing account statements, fund transfers, e-statements, request for cheque book etc. The bank offers mobile banking services via KGB mPay (Mobile banking app). KGB launched 'Little KGB: kids

go banking' a fun based app designed by their team to inculcate banking & saving habit in kids through stories. KGB also launched 'Digi bank' a selfie account opening application. KGB integrates to Bharat Bill Pay powered by NPCI and to UPI. KGB's online platform 'Gramin Galaxy' is a 3-in-1 account which facilitates Demat, trading accounts and saving banks under a single umbrella where buying and selling of equity shares, mutual funds, bonds, derivatives etc. are done. Keral a Gramin Bank is the process innovation winner of Infosys Finacle Client innovation Awards 2020.

Maharashtra Gramin Bank: Maharashtra Gramin Bank (MGB) is one of the RRBs which provides online banking services (e-banking) like account enquiries, cheque book request, cheque status enquiry etc. The bank introduced the new Mobile Banking Application (MGB Mobile Banking) to facilitate banking transactions and fund transfer (NEFT). The bank also supports BHIM app and UPI app. Further bank is involved in tree plantation activity. Additionally, the emphasis is on taking technology to rural masses.

#### **Benefits to Stakeholders**

- Customer Satisfaction: Green banking practices like online & mobile banking, NEFT, e-statements etc. reduces paperwork and enable the customers to do their work just at the click of mouse. Now, they are not required to visit banks frequently and stand in queue in front of bank officials for their work. They can do all their transaction sitting at home or office or while travelling according to their convenience. This leads to customer satisfaction as it saves their time, effort and expenses.
- Corporate Clients: banks are one of the main sources of capital for the companies and projects. Banks adopting green practices provide ease in loans to the sectors or industries which are environmental friendly or are indulge in the production of environmental friendly products like renewable energy generation, low carbon infrastructure etc. at a lower rate of interest with the aim to promote environmental protection. Thus, the banks encourage their corporate clients to undertake environmental friendly projects and gain advantage due to ease in grant of funds at lower rate so that projects that have negative impact on the environment can be excluded. Moreover, such corporates are even able to gain customer con fidence as people see these companies as environmental conscious companies.
- Shareholders: banks which are environmental conscious are in a better position to survive for longer period of time and gain public confidence resulting in enhanced image & reputation of the bank. Moreover green banking helps bank lowering their operation cost and optimum utilization of available resources. This enhances the profitability of the banks. More profits mean more returns to the shareholders. Green banking helps reduce the rate of loss with improved portfolio (green products & services) quality and increases the value of banks (Linh & Anh, 2017).
- *Employee*: implementing green banking practices in bank's core strategies and day to day requires involvement of employees and also training and motivating employees plays an important role in respect to adoption of such practices. This will ultimately lead to employee engagement & satisfaction.

• Society and Economy: It is the responsibility of banks, in fact every business to work for the betterment of society or environment in which they operate. Green banking helps in reducing environmental & social risk as they are directed towards environmental protection. Green banking positively helps to maintain a balance between banking activities, environment, society and the economy and sustainability.

Adoption of green banking system helps bank to reduce credit, legal and reputation risk.

Green banking system helps bank fulfil their objectives and social responsibilities in a better way, reduce cost and eam higher profits by adopting green approaches and enhance reputation.

# **RESULTS AND DISCUSSION**

There are certain findings which have emerged from the study, which have been discussed below:

- The most common green banking practice adopted by almost all private, public and foreign banks is digital banking i.e. online banking, mobile banking, fund transfer, bills payment etc.
- The data reveals that 90.69% of Regional Rural Banks (RRBs) have actively adopted basic green practices like internet banking, mobile banking, NEFT/RTGS to contribute towards customers, society and environment. Amongst these, the best performing RRBs are Kerala Gramin Bank, Telangana Grameena Bank, Baroda Rajasthan Kshetriya Gramin Bank as they have won 'Technology Banks of the Year' awards. However, the remaining 9.31% of RRBs still needs to be motivated to adopt digital banking practices as a part of green banking system.
- The facts reveal that foreign banks are actively involved in green banking practices by undertaking all the initiatives into account from digital banking to green products and services to use of renewable energy and waste management.
- Moreover, SBI, Yes bank and Axis bank are the only banks among the public & private sector banks that have undertaken development of innovative green products like green bond etc. and also have issued these green bonds in the international market. Though HDFC is actively involved in green initiatives like waste management, use of renewable energy, water conservation, green building but has not entered into new green products like green bonds, green mortgage, green car loan, green home loan etc.
- The green banking initiatives where most of the public and private sector banks are lacking is innovation of green products like green bond, green mortgage, investment in renewables etc. They should start focusing on other green banking strategies apart from digital banking services.
- RRBs need to be motivated to adopt other green banking practices like green products, use of renewables, energy efficiency techniques etc. as they also form a part of the Indian banking sector and can contribute positively in the development of an economy.

# **Conclusion and Implications**

This study tries to identify the various green banking practices adopted by the Indian Banking sector taking into account public, private, foreign and Regional Rural Banks. It can be concluded that although Indian banking sector has actively adopted some of the common green practices including online banking, mobile banking, NEFT/RTGS, e-statements etc. but still a vast area of green banking is untouched by many especially the RRBs. Public and private sector banks and RRBs should be encouraged to focus more on the innovation of green products and services like green mortgage, green deposits, green mutual fund, energy efficient techniques, use of renewables, waste management etc. as these products and services are likely to be the future of banking industry. Thus, banks and financial institutions can play an important role in promoting environmental sustainability and thereby contribute towards sustainable development. Here, the role of RBI would also play an important role in promoting and encouraging adoption of Green banking practices. The findings of the research will help the banks understand that how adoption of green banking practices by them adds to sustainability. Also banks and various stakeholders will be able to know the benefits of undertaking green banking practices. For academicians, this research would serve the purpose of literature. Additionally, a similar study can be conducted in the future using primary data. Further, green banking practices of co-operative banks can also be studied.

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