Green Banking Initiatives: A review of Indian Banking Sector

Dileep G Menon
Department of Management
Amritapuri Campus,
Amrita Vishwa Vidyapeetham
Kollam, Kerala, India
dileepgmenon@gmail.com

Sreelakshmi S G Department of Management Amritapuri Campus, Amrita Vishwa Vidyapeetham Kollam, Kerala, India Avinash Shivdas
Department of Management
Amritapuri Campus,
Amrita Vishwa Vidyapeetham
Kollam, Kerala, India

Abstract— Energy conservation and environmental sustainability has been a focus area since 1970s. Post financial crisis in 2007, these are also the buzz words in financial industry. Long term sustainability of economy is important for all businesses to survive. The borrowers should exist over long term for lenders to achieve their goals. All these have a huge momentum in banking industry and the green initiatives in banking industry will ensure new methods of energy conservation that will eventually result in long term sustainability of the firm and economy at large. We examine the development of various green initiatives in banking sector with major focus on Indian banking industry. Further we study in detail the green initiatives of five major Indian banks.

Index Terms—Green Banking, Green Energy, Sustainability, Green Finance

I. INTRODUCTION

Finance is the lifeblood of business. Every business firms directly or indirectly depend on the financial institution for their fund. Among these financial institutions, banks are the major source of financing instruments for commercial projects. According to [1], the major role of a bank in encouraging environmental protection is by investing in environmentally and socially responsible projects that save costs, minimize risk, enhance bank reputation and also contribute the customary good that will help to build the sustainability development. So, it helps the bank to serves both the commercial objective of the bank and also its social responsibility. [2] explains banking sector as the major lending agent that affects almost the entire industrial activity and the most economically relevant sector in rising of the nation.

A. Why should we do green banking?

The biggest challenge faced by the Indian industry nowadays is the controlling of the environmental impact of the business. The development process equally creates side effects to enormous loss of biodiversity, climate change, environmental damage etc. [3] says that business has grown exponentially, ignoring the environment and the social part, and the result was the increasing carbon footprint, globalization etc. Global warming (Greenhouse impact) being a result of various gases like carbon dioxide, methane gas emission. These gases are responsible for distortion in climatic change and also create harmful effects to human beings. The cause of

greenhouse effect is due to excess cut down of trees and construction of multi-storied buildings. In general, there is lack of adequate awareness and also an urgent need to take precautionary steps for consistent development and to increase social responsibility of business. [4]mentioned about the challenges for the green initiatives, the process of green development and the importance of the sustainable growth. [5]argued Green Credit Policy as a tool for achieving sustainable development. [6]conducted a study on 100 percent reserve banking (C-peRB) and its various arguments and criticism. [7] examined the initiatives implemented by the BRICS nations. "The supreme reality of our time is...the vulnerability of our planet" – by[8]

In order to prevent these challenges, the measures of green projects are implemented rapidly. The responsibility of protecting the earth lies in the hand of each individual and businesses. In their article, [3] explain that "business is the area where green philosophy needs to be appreciated and implemented for providing stability and social responsible environmental alike." Green movement for the protection of the environment has brought the way a business is managed. Today the attitude of society, towards the environment has been changed and as a result of that go green mantra has become relevant in each and every aspect of the business. India is also one of the fastest growing countries in terms of emission of greenhouse gases. Among the major cities in India, Delhi, Mumbai and Chennai are there in top ten most polluted cities in the world. So in order to highlight the role of banks in corporate social responsibility the RBI circulated a notice on 20th December 2007 for all scheduled commercial banks with the title "CSR - sustainable development and non-financial reporting". [9] tried to analyses the concept of green banking in accordance with the tax deductibility concept and also identify various economic concepts.

B. What is Green Banking?

[1]Described Green bank as a normal bank with an aim to provide better service to the banking beneficiaries and society. Apart from reducing risks, green banking also opens new ways for marketing different products and services. By this process, banks will be able to satisfy both the commercial objective of the bank and also its social responsibilities. Indian commercial banks are implementing green banking technology for the purpose of rending timely and valuable services to the banking

beneficiaries. It also rends valuable innovative services to the banking beneficiaries. The innovative services rending are core banking, re-engineering and revise engineering scheme which increases the efficiency of the bank. [10] has stressed on the effect of the banking sector on the economy. [11] defines the role of banks in promoting the green construction and the article talks about the various initiatives taken up by the state, local and public authorities for the development.[12]talks about the Green Banking established in the year of 2009 which states about the importance of establishing a green bank under the US government that will offer financial assistance and helps in reducing the environmental pollution. [13] focused on the green Banking benefits, various benefits for green banking and the back office benefits.

Green banks are those banks, in which their internal operations are eco-friendly and satisfy the social responsibilities such as lowering energy consumption, paper use etc. and the external operations are the activities connected to the society, customers and stakeholders. Green banks encourage the online transfer of funds, checking the account balance online, reduce paper usage of business and clients operations, green housing loans, green car loans, green cards, green education, green transport etc. that will increase their image, goodwill and reputation, attracts capital, partners and reduce costs. It also helps in retaining customers and partners, increase the environmental friendly loans, competitiveness, environmentally friendly resources.

The main reason for green banking is that it reduces electricity consumption and electricity prices of the firm. Increase in the demand for eco-friendly products. It protects the environment from the side effects of pollution. Here bank wants to work with all their partners to achieve the goal. It helps the bank to perform its social responsibility and also its business operations efficiently. While doing credit rating of banks, both the infrastructure and operations of the banks are being considered. So in order to get higher rating banks will also promote the green projects. Bank will be judged based on the rate of carbon emission out of their operations. Nowadays banks are evaluated on the basis of the number of environmentally viable projects financed by them and the effort taken by the banks to make the idea into reality are also recognized and awarded. [14] described various external financing with an aim of low carbon society. [15] recognize the use of certain strategies in the process of environmental protection and also the importance of creating awareness among the people for acquiring sustainable development.

C. Global Initiatives

[16]defines about the need and relevance of introducing the parallel system of exchange in the process of sustainable development.[17] Talks about the relevance of the introduction of Green Banking policies in G20 countries that are similar to the Chinese Green Credit Policy that supports banks to finance the green economy.[2] highlighted the role of banking, financial service and service sector in the green banking process and it also mentions about a good thing that nowadays people start to realize the fact and there are many awareness

programs conducted and as a result of that, the commitment of public towards the society also increases. They also mention that environmental degradation has a severe impact not only on current generation but also on the future generations. As a part of prevention process, corrective action is made by the overall industry and business sector. Nowadays there are several organizations to create a common protocol to manage environmental concern. [18] describe United Nation Environmental Program Finance Initiatives (UNEP FI) and Equator Principle are two key initiatives. UNEP FI was introduced with an aim of successful adaptation and implementation of the sustainability principles at every level in the financial institution, through the collaboration of social, environmental and governance factor in the risk analysis process. Equator principles are the basic ground rules for assessment, classification and management of environmental and social risks in the process of project financing. Equator Principles are primarily set up on the basis of International Finance Corporation Performance Standards on social and Environmental sustainability and on the World Bank Group's Environmental Health and Safety (EHS) Guidelines.

At present, 78 financial institutions in 32 countries officially practising the Equator Principle system. Reserve Bank of India (RBI) issued a circular (R20072008/216) in December 2007 highlighting the relevance of banks in India and about the way a bank want to act responsibly for the welfare of the economy and also states about different methods that the banks can adapt for bringing environmental safety.

[19] Tries to understand the concept of Green Banking and its liability in bringing sustainable development and elicits the different programs organized by various banks to protect the natural resources and brings the concept of sustainable development in the economy, preserving the scarce resources for the next generation is also as important as protecting the natural resources. These resources should be maintained properly with an objective of giving back to the coming generation. It is our responsibility to ensure the protection of the natural resources as well as the economy.

[20] describes the green banking from a different angle, She defines about the various opportunities in the present market that will help the banks to gain advantage in the market by making changes in their present strategy and also recommend the banks to be more active in interacting the green banking concepts and its benefits to the customers. The prime benefits of Green Banking approach is the sustainable development by protecting the natural resources.

[17] in his paper defines the advantages of Green Banking Guidelines on the Sustainability activities of the Banks' highlighted the result of the environmental and social performance of Chinese banks improved significantly between the period of 2009 and 2013 the main reason is the Green Credit Guidelines helps banks to become active in integrating environmental risk into their credit risk assessment procedures. It is said that the Chinese green credit policy seems to be a successful approach ,It helps Chinese banks to assimilate societal and ecological issues into profitable strategies, products as well as service. From these studies done in India

and abroad, it is clear that people all over the world start to realize the need for going green and also the relevance of sustainability development.

We look at green banking as a tool for sustainability that can have impact at two levels. First, banks going green by themselves that would bring in efficiency at firm level and create an impact for their sustainability. Second, by promoting green financing, banks can create a larger impact on the economy as it helps other firms and projects to be environmentally sustainable. We further examine various Green Banking Initiatives by five banks in India.

II. BANK AS A GREEN ENTERPRISE

[7] describes the Green economy as a concept around 1970's but gained relevance in the monetary recession of 2009. The government officials viewed the scenario as a new opportunity for economic growth. Green technologies represent the growing segment of the global economy. Green banking simply is the process of promoting eco-friendly activities and decreasing carbon footprint from bank's internal and external functions. Green banking (Ethical banking/ sustainable banking) is the process of leading the banking operations in a way that benefits the overall decrease in the external carbon emission and internal carbon footprints. In order to reduce the external carbon emission, the bank should finance the green technology project that reduces the pollution. Sustainable Banking contemplates all the social and ecological factors with an intention to ensure the safety of the nature. An ethical bank has started with an intention of providing safety to the environment and to the various resources. Sustainable banks provide extra weights to ecological factors. Their main motive is to build a good business environment where the businesses are giving more importance to the environmental factors.

Green movement has changed the way a business is managed. As per [18] in order to highlight the role of bank in CSR, Central Bank circulated a notice on 20th December 2007. It clearly states that all the commercial banks should involve in the process of sustainable development and non-financial reporting under the heading compulsory CSR service.

[8]Green Banking is a normal bank which is established with an aim to mitigate risk, provide better services to banking beneficiaries and to the society. In order to mitigate risk green banking find new markets for product differentiation that will serve the commercial objective of banks and also its social responsibility. Indian banks are adopting the sustainable banking technology is providing timely and advanced benefits to their various banking beneficiaries. Banks are also providing various services like core banking, re-engineering, revise engineering schemes etc. which will helps to increase the efficiency and goodwill of the banks as a financial Institution.

Green Banks are those banks whose internal activities are eco-friendly and which will reduce electricity and paper use. Green banks themselves prefer online transaction which will reduce the paper works and also reduce the electricity usage. It promotes mobile banking, video conference, green housing loan, green debit card, green car loan, green transportation

facility, green education facilities etc. that will increase the reputation, goodwill and image also. It will also reduce the cost and attracts more partners and raise the capital.

Here what the bank is trying to do is that they are trying to mould the increasing consumer demand or want in an ecofriendly manner. Green banking can be defined as an avenue for reducing the pollution and bringing a safe environment to the society. It is one of the powerful tool for sustainable development. Banks are working with all their existing partners to achieve its objective. Here this will helps a bank to achieve its multiple functions both as a business organization which has responsibility towards the public or economy and also the as a business organization which wants to fulfil its business operation. These business operations are considered at the time of rating a bank, a bank's basic infrastructural facilities and their business operations etc. are measured at the time of rating a bank. Nowadays for getting higher rating many banks are also introducing new green initiative project. Banks should also consider the environmental issues relating to its operation. Banks are also rated on the basis of the emission out of their banking operation. The quantity of reuse, restore and recovering concept being used in their structure furnishing in the systems used by them such as computers, networks etc. Banks will evaluate on the basis of the number of green projects that they are initiated and funded and the kind of effort they are paying to turn the business into green.

Ethical banking simply means banking activities carried out in a way that decreases the external carbon emission and internal carbon footprint. Ethical banking encourages ecofriendly practices and took the preventive measures to reduce the pollution in this field. Some of the measures are (1) Promoting banking activities through online platforms, (2) Opening accounts in online banks and making the payment using them, and (3) Identifying the local bank in our area and providing various supports to that bank for its future growth.

A. Green lender

Ethical Banking concepts are introduced in two ways. The first one includes the manner a business is done. Whether it conducts the activities by promoting the online channel or by paper works. There are many initiatives from the side of the central bank of India in order to promote e banking in the banking sector. The second one includes where the bank invest their money. Ethical banking promotes environmental friendly investment and gives more priorities to the projects that encourage green ideologies and also return to the nature. There is no certain regulation for central banks on ethical banking but in the circular of RBI it is mentioned about CSR initiatives that the financial institution primarily wants to adopt.

B. Origin of Green Banking

[18] First Green bank was a commercial that was based on Florida and it is called Mt. Dora and it was a united state based bank and begun its operation in 2009. Bank was recognized for their environmental friendly initiatives. One of the specialty of the organization was the employees in the organization have a LEED accredited professional designation. It was one of the criteria that were set by the bank.

C. Green Process

As a part of the green initiatives, first a bank want to make changes in their entire business activities and on the basis of that they want to adopt changes to the each functional department accordingly. Now days there are many opportunities for banks to changes itself into a green initiative.

We now discuss different phases of Ethical banking[8]. Banks promote the activities into online platform. This process involves converting the entire manual and paper works into an online platform. This process of payment of bill, transfer of fund etc. The main objective of this process is to reduce the paper works that will reduce the cutting down of trees. It finally results in reduce the paper cost. With the help of Green checking accounts accounts customers can check their account information. For example customer checking the ATM card balance and related information of an individual accounts. Ministry of Nonrenewable resources has taken many initiatives for the nationalized and scheduled banks such as SBI provide various concessions to Green loans for home improvement. Banks can directly contribute for the projects that will help for the environmental sustainability such as controlling the climate change, power saving equipment etc. The bank will donate green credit card to the eco-friendly non-profit organizations and to the individuals also. Banks promote online transaction that will to reduce the paper works of the organization. Reducing paperwork will encourage the online works and work can be completed faster and efficient. And it reduces the number of cutting down of trees. So indirectly it is protecting the environment by saving the trees. SBI was the first bank in the country that has been using the windmill for power generation. As part of ethical banking initiatives they introduced 10 windmills with an aggregative capacity of 15MW in Tamilnadu, Gujarat and Maharashtra. Using Mobile banking application customers can check their balance, transfer fund or pay bills etc. There are many techniques such as Drop shipping, Cross-Docking, Bulk shipment etc. Proper inventory management will result in reduce the cost, eliminate wastage and put an end to inefficiency operation. A well design network design will result its self is a success for a firm. It will help the organization to understand how a design plan contributes to the consistent and predictable network. The organization will choose the suppliers on the basis of promoting the concept of the sustainability regarding their product and service and also on the basis of their rating standard. The banks will design and offer products that will help them to grow as in operation wise and also as a green institution which stands for the sustainable development. At the last process is to implement the various techniques, green products and services etc. for bringing sustainable development in the economy which will finally result in the protection of the environment.

These will helps the banks for operating in an effective manner which will helps for sustainability development also.

D. Green services provided by the bank:

Bank provided the goods and services in order to meet the need of the customer and also to satisfy its role in sustainability development. Banks are using electronic and telephone banking, which helps the customers to get access to the banking process at anywhere at any time. Automatic payment reduces the role of the customers to write, so the customer can send the cheque and also have the facility to cheque and know the current position of the cheque. Bank provides the financial statement such as the income statement and position statement in the electronic form instead of the paper format. Banks focus and promote mutual funds that focus on investment in green companies. Banks also offer special line of credit to help the homeowners. Banks offers credit cards co-branded with environmental charities.

E. Advantages of Green Branches

Banks incur huge infrastructure expense in setting up its branch network for business expansion. The main advantage is that it provides cost-effective solution. It means carries low cost for the benefits provided. The recent report of ASLA states that the green infrastructure offers benefits and its maintenance expense could be less. During the initial stage the green infrastructure is costly but as a long-term process, it provides many financial benefits. Green infrastructure project is more content specific. The advantages of Green Infrastructure are: (1) It will reduce the equipment, installation cost etc, (2) It will be able to reduce the operation cost, (3) Reduce off-site costs, (4) Reduce land acquisition cost, (5) Reduce repair and maintenance cost, (6) Reduce Infrastructure replacement cost.

These are the various advantages of adopting Green Infrastructure. This will help the organization to reduce the cost that will help them to achieve the profit.

III. GREEN FINANCING

Green financing means it is the process of investing our valuable fund and resources in a manner which would not affect the environment. Investing in a sustainable friendly manner. As a step to build green economy, banks finance green projects that reduce the pollution. Banking industry is not an infesting industry. Nowadays the energy consumption is becoming more and more it increases the carbon emission and as sometimes banks are completed to finance for projects which are not environmental friendly, increasing paper waste, large number of non-ecofriendly buildings etc that will create problems to the economy. So green financing will help to overcome these issues to an extent. As a part of moving green banks will adopts the process, products and technology which are eco-friendly and help in sustainable business.

According to [21], Green banking products and services are mainly classified as four. They are (1) Retail Banking (2) Corporate Investment Banking (3) Asset Management (4) Insurance

A. Retail Banking

Various retail banking products emerged in banking industry with focus on environmental sustainability and green financing. They are:

a. Green mortgages

Green mortgage considers the utility cost of the proposal. The idea behind this is, when the borrower's expenses are lower, they can invest more in mortgage payment. It increase the ability of customers to borrow more money, also improves the chance to get a better house. Mortages are the agreement between financial institution and the person interested to the loan(borrower) and the borrower is liable to pay a set of amount the financial institution.

b. Green Credit Cards

A credit card will provide us fund for the purchase. The importance of the green credit card means it will help us to reduce the carbon foot print level for every transaction.

c. Green loans

Loan can be defined as a sum of money that is borrowed by keeping collateral securities or not (secured/ unsecured loan) with an expectation to repay the principal amount along with the interest rate at the point of a specified interval. Green loan means it is mainly for providing services to small business and individuals for commencing or expanding the business for ecofriendly products. The banks are also providing Green home equity loans to the housing sectors. There are Green car loans which are provided to the customers for purchasing the high fuel efficiency vehicle.

d. Green commercial Building loans.

It includes the process of lower energy consumption, reduce waste and less pollution than traditional building projects.

B. Corporate Investment Banking

a. Green project Finance

Now days are promoting large scale renewable project. For these they are initiating the project with the companies they are having large scale renewable energy system.

b. Green Securitization

Banks have started to introduce various environmental securitization technique such as forest bond, pilot program etc.

c. Green Venture Capital

Banks are playing vital role of providing assistance for cleaning, at the time of the issue of various capital market securities and also at the time of raising the IPO.

d. Green Index

There are many banks, who introduced index according to the environmental opportunities and challenges.

C. Asset Management

a. Green Fiscal fund

By purchasing the shares of green initiatives the citizen are exempted from the payment of capital gain tax.

b. Green Investment Fund

By investing in the sustainable development fund have evolved through three generation. Where the complexity hasrisen from easy level.

c. Carbon Fund

Now day's banks have collaborated with the multi-lateral development bank and have led to the evolution of <u>variety</u> of carbon funds to help finance GHC emission reduction projects that are aimed to maintain the good climate in the economy.

D. Insurance

Mainly there are two types of insurance green insurance and carbon insurance.

a. Green Insurance

These comprise of two product areas. They are:

- 1) Insurance product with insurance premium having environmentally related characteristics.
- 2) Insurance for clean technology and emission reducing activities.

b. Carbon Insurance

E. Other securities

a. Green saving accounts

Saving is a type of bank account, which help the public to deposit the amount and help them to earn a certain rate of interest. Green saving accounts is a regulated saving account or regulated saving deposit.

b. Green CDs

A Certificate deposit is short term securities that are issued by commercial banks and special financial institutions to individuals, corporations, trust, funds and association at a discount rate freely determined by the issuer and the investors. The maturity period of CDs ranges from 91 days to one year. These securities are freely transferable from one person to other person. The minimum size of the issue of certificate of deposit to a single investor is 5 lakhs.

Green CDs guaranteed the customer a fixed rate of interest. These interests are compounded annually and the amount will be transferred to green bank deposit account or monthly paid by cheque.

c. Green money market

It is a place where money or the securities less than a maturity period of one year are traded. Money market is a place where the government and the large institution manage their shortage in fund. Green money market gets a higher rate of dividend for using the green products and it require minimum withdrawal fee. The minimum amount required needed to open the deposit is \$100.

d. Online banking

It is the process of conducting business transaction electronically instead of the normal business operation.

e. Mobile banking

It provides a platform for carrying the business activities using cellular mobile phones or smart phones. It helps the banks to reduce the paper works and also increase the efficiency and speed of the operation.

IV. VARIOUS GREEN INITIATIVES INTRODUCED BY DIFFERENT BANKS

It is important to know various initiatives by banks in India to contribute themselves to the environmental sustainability. These green energy initiatives will ensure long term sustainability of the economy. Here we consider State Bank of India, Punjab National Bank, Bank of Baroda, Canara Bank and HDFC Bank for analysis.

A. State Bank of India

As a part of going green activities SBI launched a "wind based power project". The main aim of SBI by this project is to produce the energy for their banking operation uses. And as a part of the project SBI established wind mills in Gujarat, Maharashtra and Tami 1 Nadu. [22] found that the migrant workers who live in rural area are using SBI green card to remit money. As a part of the Introduction of the green channel banking, SBI initiated solar ATMs. They established a pilot project for knowing the level of carbon foot print in the organization and in order to reduce it the bank has also planned certain SMART goals.SBI also entrenched a recycling plant house at SBI Bahavan. As a result of going Green process 54000 SBI ATMs and cash deposit machine (CDMS) deceived that there is an extensive cutback in the paper consumption.SBI also concede a renewal energy projects at 75000 crores over the next five years.SBI planned for a GOI target that are planned to generate 10,000 MW renewable energy by the year of 2019 subject to viability/feasibility. All along the last three years bank planted 4, 50,000 trees. The bank also initiated a rainwater harvesting projects have been carried out in a numerous banks building across the country.

B. Punjab National Bank (PNB)

As a part of Energy Conservative Initiative the PNB bank has planned to conduct electricity Audit in the offices of the PNB banks and the bank has supported more than 290 tree plantation drive. Presently bank focuses on green building practices such as reducing the use of electricity, decreasing the wastage of water, paper etc. PNB and the Ministry of New and Renewable energy has signed an agreement called "Green Pledge"

As a part of the agreement bank had started a Butter fly park near to the Guruvayur temple in Kerala. The park deals with 18 types of variety of medicinal plants. With a limit of 185.81 crore the bank had sanctioned with nine wind energy project. The bank sponsored second prize for the Best Wind Energy Power Financer in India in the year of 2011.

C. Bank of Baroda

As a part of the green initiative process for the easy updating of statement of accounts the bank has installed 1,200 self-service passbook printers and also installed 85 Bunch Note Acceptor (BNA).Bank also initiated circulating KCC Card and Debit Cards for RRBs. Bank of Baroda has initiated Mobile Banking Rewards Campaign with an aim to increase the activation and the usage of the banking products and services. The bank has initiated the IVR facility at the Contact Centers and also launched Baroda SMS Banking Facility. For the automated clearing the bank had set up NACH facility.

D. Canara Bank

Bank presented various eco-friendly practices as a part of the green banking process. For the sake of the rural people back carried out many activities in their day to day operations. Canara bank introduces many banking solutions like telebanking, solar powered biometric ATMs etc. Bank introduces E-lounges facility in connection with high tech banking facilities like online banking, online trading etc. During this year bank has a plan to implement more number of E-lounges. The Canara bank gave more importance to its employees also, it internally introduced an online system for its HR Management. They encouraged the projects by funding biogas, solar and wind mill projects. The bank has also received certain lending policy that are giving weightage and due preference to incur credits like windmills, solar energy projects. The bank is not providing any finance assistance to the business units that are involving in the process of creating various gases which are harmful to the economy.

E. HDFC Bank Ltd

The bank has encouraged their employees for the proper utilization of scare resources and also suggests the employees to take preventions to avoid various greenhouse gases. The bank has taken initiatives to reduce the use of paper works in the organization by promoting the mobile banking and online banking that are done with the help of electronic media such as mobile phones; computers etc. and this information are also communicated to the customers. The bank also involved in the process of reducing electricity uses by using the CFL lambs ,All the bank branches will switch off their lights after 11pm and also taken corrective actions to reduce the wastage of electricity use. The HDFC bank Ltd. has constructed 20 solar ATMs and a pilot ATM was built in Bihar, For maximizing the renewable energy source, the bank introduce a facility of swapping batteries in ATMs with Lithium-ion batteries. Bank follows a proper mechanism for the waste management by entering an agreement with suppliers for the recovering of paper and plastic

V. GREEN TECHNIQUES USED IN VARIOUS BUSINESS OPERATIONS

A. Enterprise Resource Management

It includes various techniques for the work force, part optimization and for the intelligent device management. It uses online platform and promote paperless transaction.

B. Supply Chain Management

The supply chain management that comes under the operation department adopts various techniques to reduce the inventory levels and wasted freight. It also adopts network design using carbon footprints.

C. Product Life Cycle Management

The main aim of the green banking is to reduce the carbon footprint, so the bank design and offers the banking product and the services in a manner that uses less energy, resources as a result the bank will be able to reduce the carbon footprints.

D. Customer Relationship Management

Maintaining contacts with the customers are an important process of the organization. Now day's banks are maintaining this relation by using the online platform instead of the paper work. It will also result in the paper works of an organization.

VI. CONCLUSION AND SUGGESTIONS

In the current scenario Indian cities are listed among the most 10 populated cities in the world. The main reasons for these issues are excessive cut down of trees and construction of multi storied building and the emission of hydro-fluro-carbon, nitrous oxide etc that pollute the environment. So in order to recover from these issues the best way is to adopt changes in a way that is sustainable to the environment. If the Indian banks are implementing the green banking techniques in an effective manner it will act as a catalyst for protecting our environment. Now the banks and the financial institutions have adopted the equator principles as a ground rules. Green Banking process helps the banks for creating cost efficient automated channels to build consciousness and awareness among its various participants like customers, business institutions and other financial institutions. Green banking involves in the process of reducing paper works are possible since all the transactions are done through online channels. Bank also introduced many products like green credit cards, green mortgages etc. as part of the green projects. As a part of their CSR activities many banks are also taken initiatives to create awareness among the business class and the public and also states about the importance of the going green policy. Banks are also following environmental standards for the lending and borrowing process. The concept of sustainable banking is good for all the sectors in the public. [23] have stressed the importance of frugal innovation for sustainability and improved resource utilization in business. Since it acts as a reminder for the human beings who are involved in the process that effects the economy. Ethical Banking not only involves in the process of making the institution green but also involves in increasing the rating of the banks, making the operation efficient and also improves the quality of the assets of the banks. Ethical banking helps a bank to satisfy both its internal operation and also it satisfies the responsibility of the bank towards the economy and it also increase the rating of the bank.

REFERENCES

- [1] D. AR.Annadura, "Effectiveness of Green Banking Technology of the Commercial Banks in India," vol. 5, pp. 98–101, 2014.
- [2] D. Biswas, "A Study of Conceptual Framework on Green Banking," J. Commer. Manag. Thought, vol. 7, no. 1, pp. 39–53, 2016.
- [3] R. Tara, K., Singh, S.,& Kumar, "Green Banking-Green Marketing-Green Environment," *Int. J. Res. Commer. Manag.*, vol. 5, no. 3, pp. 11–14, 2014.
- [4] R. Gandhi, "Green finance early initiatives," Delivering a Sustainable Financial System in India, BIS central bankers' speeches, 2016. [Online]. Available: http://www.bis.org/review/r160517b.pdf. [Accessed: 01-Sep-2017]
- [5] J. Duan and M. Niu, "The paradox of green credit in China," Energy Procedia, vol. 5, pp. 1979–1986, 2011.
- [6] K. Dittmer, "100 percent reserve banking: A critical review of green perspectives," Ecol. Econ., vol. 109, pp. 9–16, 2015.
- [7] G. P. Rao, "BRICS banking: review of green banking initiatives among the BRICS nations," vol. 9, no. 1, pp. 3–4, 2017.

- [8] G. M. Zafaruddin and H. Jadhav, "Abhinav Abhinav," Abhinav, vol. II, no. May 2013, pp. 98–102, 2013.
- [9] B. Scholtens, "Borrowing green: economic and environmental effects of green fiscal policy in The Netherlands," vol. 39, no. 2001, pp. 425–435, 2001.
- [10] S. C. Bihari, "Green banking-towards socially resonsible banking in india," Int. J. Bus. Insights Transform., vol. 4, no. 1, pp. 82–87, 2010.
- [11] B. G. E. Pfeiffer, A. C. Engineers, and I. Colorado, "Banks are banking on a green future Green and Lean: Why Préfabrication Makes Sense," no. 2008, 2010.
- [12] D. Mahboob Hossain Ahmed Talib Sadiq Al Bir Kazi Md Tarique Abdul Momen and D. Mahboob Hossain Associate Professor, "Disclosure of Green Banking Issues in the Annual Reports: A Study on Bangladeshi Banks," Middle East J. Bus., vol. 7, no. 1, 2016.
- [13] E. Banking, R. To, and S. Sustainable, "Green Banking Development," no. 2009.
- [14] E. Campiglio, "Beyond carbon pricing: The role of banking and monetary policy in financing the transition to a low-carbon economy," Ecol. Econ., vol. 121, pp. 220–230, 2016.
- [15] G. Kaur, "Green Initiatives of Banks in India: A Paradigm Shift," J. Commer. Manag. Thought, vol. 7, pp. 488–500, 2016.
- [16] G. Seyfang and N. Longhurst, "Growing green money? Mapping community currencies for sustainable development," Ecol. Econ., vol. 86, pp. 65–77, 2013.
- [17] C. Orga, "The Impact of Consolidation on the Performance of Banks in," vol. 6, no. 10, pp. 47–52, 2014.
- [18] D. Biswas, "A Study of Conceptual Framework on Green Banking," vol. 7, pp. 39–53, 2016.
- [19] R. Kavitha, "Green Banking towards Sustainable Development," vol. 5, no. 2, pp. 339–345, 2016.
- [20] S. Garg, "Green Banking: an Overview," no. 8, pp. 1291–1296, 2015.
- [21] K. S. and Dr.K.M.Chinnadorai, "A Study on Customer's Awareness on Green Banking Initiatives in Selected Private Sector Banks with Special Reference to Coimbatore City," Int. J. Bus. Manag., vol. 2, no. 4, pp. 160–163, 2014.
- [22] D. G. Menon, N. Narayanan, and S. Ray, "An Empirical Study on Access and Use of Formal Money Transfer Mechanisms among Migrant Workers in Kerala," *Int. J. Appl. Bus. Econ.* Res., vol. 15, pp. 139–147, 2017
- [23] A. Shivdas and J. Chandrasekhar, "Sustainability through Frugal Innovations: An Application of Indian Spiritual Wisdom," *Prabandhan Indian J. Manag.*, vol. 9, no. 5, pp. 7–23, 2016.