

## ***Green Banking: With Reference to Sustainable Development***

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### **Abstract**

*This study aims to understand the philosophy of Green Banking and its role in achieving Sustainable Development through Green Banking. It also elicits the role of Islamic banks in adaptation of Green practices to protect the environment and ensure sustainable development in the society. It is not only corporate social responsibility of the banks, but also a banking with environmental preservation. Green Banking is considered as the need of the hour for sustainable development in the country. In this study, triangulation was used along with purposive sampling for data collection. The detail analysis identified new themes including Green Banking practices through which Islamic banks can achieve sustainable development. The study also identified existing practices mentioned in literature review, including paperless banking, awareness regarding environment, e-banking and use of solar energy and wind energy. This research paper will contribute to Green Banking, its adaptation by Islamic Banks and achievement of sustainable Development. It also highlights new practices of Green Banking which are ingredients for sustainable development.*

*Keywords: Islamic Banks, Green Banking, Sustainable Development, Green Practices*

### **1. Background of the Study**

The recent floods and extreme heat motivate people to think about the global warming and its impact on the world. Global actors push to leave no stone unturned to protect the planet earth from its consequences imposed on mankind (IDRBT, 2013). Sustainable development (SD) and preservation of the environment is now an essential problem which is recognized globally. To protect the planet from ravages inflicted due to mankind many global initiatives are undertaken to minimize the negative impact currently faced by the living beings due to climate change and global warming.

The main purpose of all these initiatives is to minimize the demand for fossil fuels with the implementation of the 3r's formula which is reduce, reuse and recycle. Financial institutions and banks can play important role in the implementation of these global forces for the benefit of our planet to make it a better place for living (Kavitha & Rani, 2016). Banks are considered to be environmentally friendly and do not affect the environment through their internal operations as compared to other industries. On the external side of banking activities, effect on the environment is substantial (Barhate & Tamboli, 2016). The banking system is one of the major financiers of industrial project such as power, textiles, cement, fertilizers and steel, etc., which

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are the reason of carbon emission. Therefore, banking industry can play the role of intermediary between economic development and environmental protection for the purpose to promote environmentally sustainable and socially responsible investments. This kind of banking is known as “Green Banking” (Masukujjaman & Aktar, 2014). As financier of industry, banks can make sure that every businesses will be benefiting the environment by adopting environment friendly practices. Banks can also provide incentives to those businesses which adopt green technologies for the benefit of the environment. As a leader of the market, bank itself can adopt green practices that leads to sustainable development

## **2. Literature Review**

### **Sustainable Development**

Sustainable development according to Brundtland (1987) is using resources in a way that fulfill the need of the present generation without compromising on the resources of future generation to meet their needs. Brundtland (1987) also defined sustainable development in terms of need and limitation, whereas need is the necessity of life and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs. As per Lele (1991), the purpose of Sustainable development is to maintain the economic progress and advancement along with protection of strategic value of environment which provide integration of policies for conservation of environment and strategic development.

To achieve sustainable development, we have to use resources on those developments which are environment friendly, economically realistic and socially responsible. Environment requires proper attention of economic players to every environmental dimension in their operations and also counts ethical and moral consideration too in their operations. Society and organizations have to change their traditional decision bottom line approach of profit to triple bottom line approach, which means that they have to consider all the three sustainable development dimensions i.e., environmental, economic and social (Pintér et al 2006).

The concept of development in Brundtland report (1987) is not limiting the scope of sustainability. However; it focuses on the intergenerational equity for sustainability. The concept of resources conservation for future generation is the basic feature that differentiates traditional environmental policy from sustainable development policy which pursues the internalization of the environmental degradation externalities. According to Gladwin et al (1995), sustainable development is only possible with the integration of the three pillars of development; economic, environmental and social.

According to Hopwood et al (2005), from the last couple of years people were of the view that environment and socio-economic development are separated from each other. With the extensive increase in the interest and support for sustainable development people understand the relationship between people and humanity with the nature. Sustainable development is possible

only when all the three factors i.e. economic, social and environmental will be considered during the process of development.

Elkington (1994) argues that sustainable development can be achieved when markets works in a proper framework with cost effective regulations and economic gadgets. The major economic agent which affects the industry and its economic growth is the banking sector. It affects the development and economic growth in terms of quality and quantity. The banking sector is the major source of finance for investment projects which are considered to be the most important activities for economic growth. Due to these reasons banking industry can play a significant role in the advancement of environmentally sustainable and socially responsible investments.

### **Role of Banking in Sustainable Development(SD)**

Umar &Khamidi (2012) stated that the rights of humans to get benefits from nature are related to responsibilities and preservation or maintenance of the resources. The important legitimate rule set up by Prophet Muhammad S.A.W is *“the benefit of something is attached to its use if you get benefit from something you will also be liable for its loss” [Sahih Al-Bukhari]*. A lot of environmental destruction is due to people’s lack of knowledge of what Allah demands of them. People need to understand that conservation of natural environment is a religious responsibility which is required by Almighty Allah. Allah has stated *that “Do good to human and environment as Allah is good to you and do not misuse resources on earth as Allah dislike misusers [Al Qasas 28:77]*.

In the development and prosperity of human society some industries’ production and consumption brings great change in the environment. Within the boundary of financial industry, banks have important role by supporting industries and its development projects by providing funds to its various projects. Due to high influence on the industry, banks have significant control on their clients, their operations and their negative impacts produced that effect environment due to which environmental concerns are considered critical for banks to be addressed. In recent years, civil society as environment agents has traced some companies that were involved in operations which were not environment friendly rather highly toxic for environment and for the people. The loan providers to these companies were banks and they ignored the environmental and social impact triggered by the company’s projects they funded. However, after occurrence of several environmental accidents the companies were considered for the loss and penalized but not those banks which provided funding for those environmentally hazardous projects (Bai, 2011).

Thombre (2011) further elaborated that the impact of banks external activities on environment is very vast to estimate. Thus, the main focus will be on environmentally responsible investments and dealing in environment friendly products (Sahoo and Nayak, 2008). Islamic Banks (IBs) should follow the strategy of going green and play active role in

environment and ecological aspects as part of their investments and environment friendly strategies, which will force industries to keep the environment on priority and also adopt appropriate technologies and management systems (Rahman et al 2013). Reuther (2011) stated that Islamic banking industry should focus on the three P's strategy which is 'people, planet & profit' which leads Islamic banks to sustainability rather than focusing on profit three P's formula which is profit, profit and profit. Green banking is used for the purpose of using resources with the responsibility of avoiding waste and giving preference to environment and society.

Chisty (2013) stated that international banks are concerned for development and make sure to manage only environmentally responsible investment projects, which do not harm the environment. Banking and other financial institutions can achieve this goal very efficiently by playing the role of intermediary between economy and environment as they influence the investors towards environment friendly or socially responsible investments. Banking industry is one of the primary stakeholders for environment preservation as it influences environment positively and negatively both. It is important for banking industry to pursue certain environmental estimation before financing projects because there is a strong link between environmental performance and financial performance. Thus, it is vital for financial institutions considering environmental performance while making investment decisions whether the business has environment friendly impacts or not. Traditional practices of banking sector did not anticipate the environment friendly investments, however, now environmental preservation strategies are prioritized and considered highly profitable.

### **Green Banking (GB)**

The term Green banking refers to the banking system through which environment can get benefit in the form of its preservation and well maintenance. A bank can be a green bank by directing its banking operations to environment friendly activities such as avoiding printing excess of paper and many more practices to support the nature (Meena, 2013). According to Bahl (2012), the purpose behind GB is to reduce carbon emissions and pollution. The concept of GB is used for the promotion of environment friendly practices and this strategy also can be used as a business model. He further added that GB works for the brighter and green future as it has direct impact on the environment. Keeping in mind the environmental sustainability, a bank can also develop sustainable products which work for socio-economic development of the society.

According to Prasetyo (2016), Ruth A. Sekaryuni, Executive Director, Bank Indonesia, stated that GB is the theory of doing business which is based on the moralities of SD. While doing business transactions like giving Qard e Hasana and financing, the bank must ponder the ecological balance, human welfare, social and cultural development of the society. According to Maulani (2015), GB is based on four elements which are the following; nature, economy, well-being and society. By implementing the concept of Green banking, banking activities will not be

disturbed rather its profitability will be increased as well as its social acceptability. The important features of Green Banking are as follows;

- Banks promote environment through adopting new technologies
- GB ensure social development and can change the negative impacts of the society
- During providing financing to different projects bank can consider those investors which are low risky for the environment
- GB always gives priority to sustainable and green economic growth of industry for social purpose
- It generates a friendly atmosphere inside and outside the bank
- Green Banking consider customers as family members and guide and supervise them to minimize pollution by implementing scientific methods
- It saves energy and reduces cost which benefit the country in long run

Garg (2014) explained the following Green banking practices which are followed by different banks across the world;

- **E-Banking**

E-banking is a new developing concept of banking which helps in environment preservation and conservation of energy by adapting to techniques like online billing payment, remote deposit, online funds transfer, and E-statements. E-banking encourage paper saving, energy saving and also minimize use of resources of banking activities. Customers also get benefit from E-banking by avoiding penalties and standing in queues.

- **Green Checking Accounts**

Customer in the bank can check their account balance on ATM or specially installed touch screens in the bank for the purpose to promote environment friendly banking. Banks can also promote Green banking by providing discounts rates to green checking accounts holders.

- **Power Saving Mode**

Banks can also contribute to climate change by installing energy savers in all branches, offices and residential areas to promote Green banking. Banks can also install solar powered ATM to its Green banking project for the preservation of environment and conservation of energy.

- **Use of Solar Energy and Wind Energy**

Using solar and wind energy promote Green banking and also has a direct effect on the environment.

- **Mobile Banking**

Mobile banking saves energy and time of the customers. It also helps the bank in reducing the paper use and energy consumption in going through lengthy procedures.

### **Sustainable Development (SD) & Governance**

Paltje (2008) stated that good governance is determinant of sustainable development. It is related to policy development and good decision making procedure which helps in institutional change to achieve sustainable development in true sense without affecting the resources of coming generation. Good governance is only possible in the presence of the following elements; accountability, transparency, lack of corruption, avoiding subsidiary principles, effectiveness and coherence. Consultation and participation are essentials of sustainable development while Muslim countries still lag behind in this criteria. For instance, the reason behind poor state of participatory development in Indonesia is the history of autocratic system that discouraged freedom of social disclosure for attainment of national goal. Even in the democratic society the results are not satisfactory and the government body do not focus on the moral and the ethical forces of human development (Silvia & Choudhry, 2006).

### **Sustainable Development (SD) in Islam**

In Islam, development is a cohesive and inseparable component of the moral and socio-economic development of human society (Jan, 2013). According to Jan (2013), the basic purpose of development in Islamic economic system is the welfare of human beings and the development should be in line with Shariah, which focuses on the welfare of human beings and their relief from hardship. The purpose of development process in Islam relies on humankind as an economic agent and it is the responsibility of humankind that must be aware of concerning the entire development process by integrating social development, economic development and environmental conservation and protection (Chapra, 1993).

From Islamic point of view, the definition of sustainable economic development is not holistic because it only focuses on the material needs. In Islam, economic development should also consider spiritual needs along with material needs. People to spend a balanced life should focus on both needs for the purpose of being successful in this world and the hereafter (Ibrahim et al, 2011). Chapra (1993) argues that for the satisfaction of spiritual need, moral development is required; for the satisfaction of material needs it requires all development and resources (material) in a way that all human beings' needs are fulfilled effectively. In the below verse of Surah Al- Qasas (28, v27), Allah prohibits the action of damaging the earth; *“But seek, with the (wealth) which Allah has bestowed on thee, the Home of the Hereafter, nor forget the portion in this world: but do thou good, as Allah has been good to thee, and seek not (occasions for) mischief in the land: for Allah loves not those who do mischief”* In the above verse Allah motivate us to work hard to make our life beautiful but also directs us not to ruin this world because Allah does not like those who destruct the earth (al-Qurtubi, vol. 16, 319-321). Allah also discourages wastefulness in Surah Al Araf (7:31):

*“O Children of Adam! Wear your beautiful apparel at every time and place of prayer: eat and drink: But waste not by excess, for Allah love not the wasters”*

These verses authenticate for the guidance of the human beings which explains how to save the earth from destruction and how to use the resources of the earth to ensure its protection for the present generation and for the future generation also. These guidelines are known as Maqasid al Shariah. According to Ibn Asyur (2001), Maqasid al Shariah is the purpose and understandings observed by the lawmakers in almost all aspects of lawful rulings. Basically, the main purpose of Shariah is to protect human life and Maslahah (Interest).

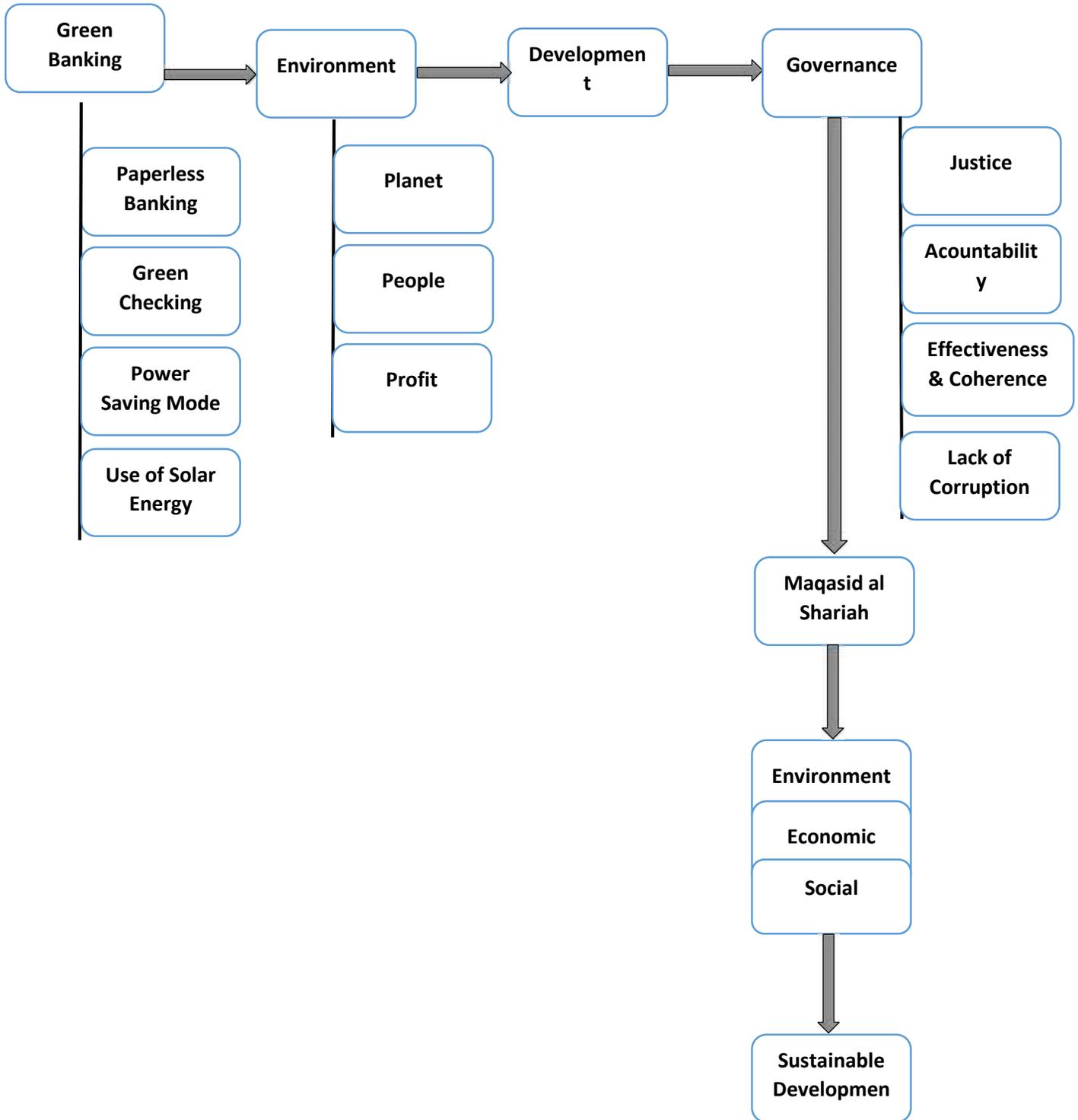
According to Al-Zuhayli (1999), the main objectives of Shariah is to govern the human life and protect their interest or maslahah which are classified into five categories; protection of religion (al-din), protection of property (al-mal), protection of intellect (al‘aql), protection of dignity (al-ird) and protection of life (al-nafs). The Brundtland commission approach is largely in relevance to objectives or Maqasid of Shariah. The main objectives of Islamic law mentioned above are; to protect the wellbeing of all mankind by protecting their faith (din), protection of their human self (nafs), protection of their intellect (aql), protection of their posterity (nasl) and protection of their wealth (maal). Muslims like others should be strong morally and materially to achieve these objectives. To move forward to achieve these objectives fast economic development will be required with the priority for fulfillment of basic needs and prevention of wasteful expenditure (Hasan, 2006).

According to Auda (2008), interestingly, the approach of the Commission is largely in consonance with the Maqasid or objectives of the Shariah. Islam is a universal religion and addresses the entire mankind not the believers alone. It is, therefore, no surprise that men irrespective of faith do often think along Islamic lines. The objectives of the Islamic law entail wisdom, mercy, and justice. Muslims, like others, must be strong both materially, and morally to achieve these objectives. Rapid economic growth with priority for the fulfillment of basic needs and avoidance of wasteful expenditure are imperative to help move in that direction.

### **Theoretical Framework**

Literal analysis discussed different GB practices such as e-banking, green checking accounts, mobile banking, power saving mode and solar power system. These practices if adopted by IB to ensure GB will lead to SD. According to literature the following figure 1 of theoretical framework will explain that how IBscan achieve GB which will lead to SD.

### Theoretical Framework



### 3. Methodology

The purpose of qualitative study is exploratory in nature (Creswell, 2009). Research questions in qualitative research, according to Creswell (2009), mostly focus on how social experiences are created and given a meaning, which further gives stresses on the relationship of the researcher and the phenomenon along with the specific context that shapes the inquiry. The qualitative research inquiry involves different philosophical assumptions; strategy of inquiry, and data collection methods, analysis and interpretation of data (Creswell, 2013). It shapes meaning of the observations and experiences testified in the narratives and discussions (Tashakkori et al, 2010). World view is elementary set of opinions that direct an action (Guba et al, 1981). These views are named as ontology, epistemology or paradigm and they are the actual view of researcher regarding the research nature (Denzin & Lincoln, 2000). According to Kapoulas&Mitic (2012) for researcher the most sensitive step is choosing a suitable paradigm for research according to the research questions and objectives.

In this study social constructivism is used as a research paradigm. The philosophy of Social constructivism is that knowledge is socially constructed and its volatility is dependent on circumstances. In social constructivism worldview, the interpretation of all knowledge and reality is dependent upon the human practices, constructed from human itself and their world interaction, and developed and transmitted within social context (Crotty, 1998). The approach used in the study is inductive as the researcher wants to explore the case under consideration with contribution in theory (Goddard & Melville, 2004). This type of studies involves a pattern that guides observation towards theory development. According to Neuman, (2003), the inductive approach moves towards ideas and generalization of abstract as it started with detail observation of the world. It starts with a phenomena in which researcher develop empirical generalization to find out the basic relationship among various factors. This thesis report has followed case study method which promotes the exploration of a new phenomenon within a situation by using different data sources. This guarantee that the problem is not easy to explore with one lens, but rather a variety of lenses which are used to study multiple facets of the phenomenon to be exposed and understood (Baxter & Jack,, 2008). According to Yin (1989), case study is an empirical inquiry that examines a new day phenomenon within a real life situation when the boundaries are not clearly defined.

The focus of this study is to enquire how Islamic Banks adopt Green banking and how it can achieve sustainable development. In this study single, holistic case study is adopted because it is related to particular case of Islamic Banks of specific area. The sampling technique for this study is purposive sampling in which the researcher interviewed ten respondents from full fledge Islamic banks and its windows. The rationale behind selecting single case study is to give proper attention to the case and substantial input to knowledge and theory building (Yin, 2015). In this study triangulation method is used for data collection which is the multiple or data sources in qualitative research to develop a compressive understanding of phenomenon (Patton, 1999). In

triangulation method interviews, documents, field notes and observations are used for data collection.

#### 4. Data Analysis and Results

The coding process was done for the data which was collected through 10 respondents from Islamic banks (Miles & Huberman, 1994). For the study, purpose data has been collected and organized through interviews transcription, which further extends into codes to create uniformity and meaning. Defining codes is important to avoid complexity and for proper categorization of the data (Dey, 2003). Coding was done manually from the transcription in the table below.

##### Primary Themes

Primary themes identified from transcription of interviews are mentioned below in table 1.

Table 1: Coding

| Construct Description                   | Code    |
|---|---------|
| Islamic Banks & Green Banking           | IBs &GB |
| Green Banking & Sustainable Development | GB&SD   |
| Unavailability of Regulatory Guideline  | URG     |
| Lack of Awareness Regarding GB          | LARGB   |

Primary themes mentioned in the above table shows GB philosophy that contribute in achieving SD and also its adaptation by IB. In the mentioned themes some factors were previously highlighted by the literature while in identification process of themes, two themes were identified i.e unavailability of regulatory guideline and lack of awareness regarding GB. Further, each construct will be discussed onward with respect to past literature.

##### Islamic Banks and Green Banking

###### Conservation of Resources

Resources conservation reduces the carbon level, depletion of biodiversity and maintains the balance of ecology. Islamic Banks can promote conservation of resource among clients through its products and services. IB need to use minimal resources for the purpose to promote environmental friendly banking. Humankind is the custodian of planet and it is the responsibility of every human to protect earth from disaster and pollution by minimal use of resources. IB have to decrease paper use as it leads to cutting of trees, the more bank uses paper the more trees will be cutting. Thus, it is the responsibility of IB to use resources in an efficient way.

###### Carbon Emission Control

The worldwide incidents due to climate related disasters have increased since 1970. It is attributed to the environment degradation and it is considered as the most critical situation the world ever faced. It is due to the greenhouse gasses emission in the atmosphere which is increasing day by day due to unplanned development. To overcome the carbon emission, Islamic banking industry have to play an important role through investing and financing. IB requires to finance those industries which are environment friendly and do not harm environment directly or indirectly by their hazardous industrial practices. IBs need to support those business which follow their CSR activities by promoting green environment and green economy. IB can adopt the following strategies to make this planet a better place;

- The IB ethical and environmental guidelines must include that it will not finance any business which are involved in global climate change, through the production of fossil fuels such as oil, coal and gas.
- IB will not provide any financing or investment to mining projects of mountaintop removal which can cause to shallow down sea environment.
- IB require to adopt such policies which incorporate environmental issues in its strategic planning for the safety of environment and also for making its brand image.
- IB will not finance or invest in projects which are directly involved in carbon emission such as coal plants.

### **Green ATM Card**

To ensure environment friendly banking system, IB can implement Green ATM practices which would minimize the use of resources and contribute some amount of money on every transaction made through ATM. These ATMs will be based on e-receipt and client will only receive an e-statement of the transaction.

### **Green Marketing**

Banking industry uses extensive marketing strategies to promote their product and services to attract clients. IB also spends huge amount of capital on marketing. To promote their product and services, IB can adopt the strategy of Green Marketing. Green Marketing is marketing of product and services which are environmentally safe as it includes different activities such as; change in the production process, product modification, changes in packaging and advertisement strategy. It is the process of selling product and services with environmental benefits. IB gets benefit from Green marketing by using environmental causes for the promotion of its products. Green marketing also bring awareness among the masses regarding the importance of market preservation.

### **Green Investment**

Green investment is a broad term related to investments which are socially responsible, sustainable and long term. This is investment with attention to climate change, green

environment issues and resources conservation. In Green investment, investor uses different methods to benefit the environment with their investments. IB can also use the Green investment strategies by allocating some portion of specific asset profit to the environment.

### **Branchless Banking**

This is a new phenomenon which is based on banking without branch. IB can use this type of banking to ensure environment friendly banking and also for resources conservation purpose. By adopting this practice, IB can fulfill its environment protection responsibility as it will increase resource conservation and decrease carbon emission.

### **Green Transport**

IB needs to follow Green transportation strategy for their employees which have minimal effect on the environment. Green transportation can be use by both employees at individual level and also at mass level for public transport. IB can promote Green transportation policy for the management of business travel for its employees for the purpose to improve its environmental performance and resource conservation. This can be achieved by providing mass transport service to its employees to avoid personal use of cars. IB can also provide hybrid vehicles to employees which can reduce 600 to 700 tons of carbon dioxide emission annually.

### **E-Communication (EC)**

Banking sector use a lot of resources for communication across country branches and also within branches. These communication tools include circulars, notices, reports, and agendas etc. which are merely inefficient and manual practice of communication. IB can adopt e-communication system which will be used for communication across all branches and within the branches in form of e-mail communication. For this purpose IB can use e-notices, e-reports, e-circulars and e-agendas, which will be shared via bluetooth or internet to the employees and clients. It will not only save trees but also helps in making processes efficient.

### **Incorporation of Environmental Risk in CRM (IERC)**

IB should adopt Environmental Risk Management (ERM) policy as part of green Banking. It needs to include environmental risk and climate change risk factor in credit risk methodology used for client assessment. This will include environmental risk assessment in auditing guidelines, checklists, and reporting formats. This addition will help to mainstream environmental risk factor covering the risk of land use, cyclone, drought, and animal disease etc.

### **Creation of Climate Risk Fund**

IB can create climate risk fund which is the assessment of risk of environment and then provide finances accordingly. This fund will be used in emergency for financing of economic

activities of the affected areas. The bank would ensure the regular contribution in the fund that will flow regular support to vulnerable areas. Islamic finance philosophy is the welfare of humankind and to achieve this motive every financial institution should contribute in such types of funds for the benefit of society. IB should work for planet, people and profit.

## **Green Banking and Sustainable Development**

### **Green Financing:**

#### **Green Ijarah**

Car Ijarah is IB product which is interest free and based on Islamic financing mode of Ijarah. This is used for the purpose to get interest free finances for getting a car. It operate under a rental agreement in which Islamic banks purchase the car for customer and rent it out to customer for specified period. At the end of the specified period, the car will be sold at a token amount or will be gifted to customer. By adopting Green practices IB will ensure SD as GB system will work for the three pillars of SD such as environmental development, economic development and social development. To promote Green environment and to achieve SD, IB needs to adopt the following practices:

- IB can provide car to their clients which are manufactured by those companies which don't harm environment by their operation and also follow their corporate social responsibilities for the protection of environment from carbon emissions and other issues which are due to their production. IB can select manufacturing companies sensitive to environmental protection and conservation of environment. In car Ijarah, IB should deal only those companies cars which meet the criteria for safe environment.
- As the car Ijarah of IB is a profitable and increasing product of bank so IB can put some portion of Ijarah profit for environment because due to these cars the carbon emission will be increase to uncontrollable level which can harm environment in future.
- IB can sponsored Green train and Green busses for general transport to minimize the effect of carbon emissions.

#### **Green Mudarabah**

In mudarabah, rabul mal provides money to mudarib for investment purpose to earn profit. The rabul mal will be the owner of the business while mudarib will provide his services. Mudarib invest the capital in profitable businesses for the purpose to earn profit. IBs can also initiate such projects by getting funds from clients for investments. IBs can invest the rabul mal capital which is capital of the business in such businesses activities which do not harm environment from their internal and external operations. To achieve SD, IBs need to be socially responsible, environment friendly and make ethical investments which will benefit economy, society and environment. IB should adopt policies which encourage investment in such

businesses which promote energy efficiency, beneficial for the climate and do not cause environmental degradation.

### **Green Murabaha**

Murabaha is a sale transaction in which the transaction takes place on the basis of cost plus profit. In Murabaha the bank purchases commodities for a client and then transfer the ownership to the client by charging cost plus profit. IB use murabaha for environment preservation by purchasing products from those companies which do not harm environment from their activities. Green murabaha can only be possible when IBs provides business to those companies which work for the purpose of Green economy. This practice of GB will ensure SD as Green murabaha benefit all the aspects of development e.g. to ensure economic development Green Murabaha will raise the GDP of the country, benefiting the environment by contributing to environment and also fulfilling the need of the society by promoting halal businesses.

### **Green Sukuk**

IB can use sukuk for environment preservation by issuing Green sukuks. It will help the environment by contributing specific percentage of these sukuk to environment. IB can use Green sukuk for such projects which are beneficial for environment, society and economy.

### **Sponsoring Plantation**

By fulfilling corporate social responsibility and environmental friendly banking responsibility, IB needs to sponsor plantation campaigns to ensure GB which will achieve SD. IB profit ratio is increasing day by day along with its market share, they need to give back some benefit to society and environment as its ethical responsibility. IB can minimize the effect of carbon emissions through green plantation and establishing carbon sinks and also attract market by ensuring socially responsible investment.

### **Green Building**

When a building generates less waste, use solar energy, conserves natural resources and provides healthier spaces for inhabitants, promoting environmental protection is called Green building. IB can also follow the green building strategy for the purpose to promote green environment. IB should be more environment friendly as compared to conventional banks, as it is based on ethical and moral grounds. It should avoid use of wooden material to save trees and also use water and energy efficient products which minimize the use of resources. The use of GB practices give competitive edge to IB which boosts the brand and sales of IB. It will also minimize the reputation risk of the IB. IB should share their Green philosophy with their clients by using TV spots and digital communication to attract the market.

### **Unavailability of Regulatory Guideline**

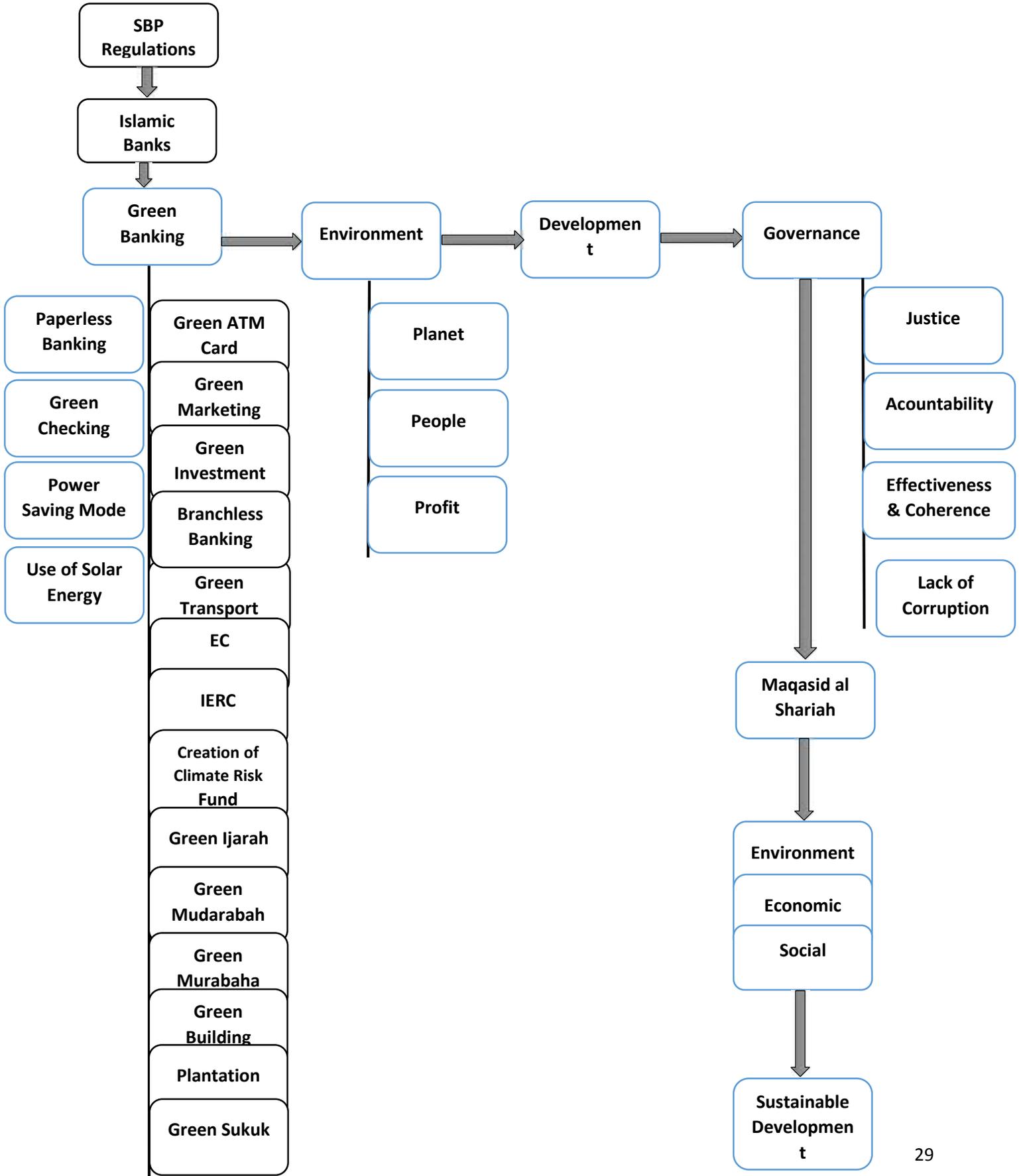
In Pakistan, there is no regulatory guidelines for Green banking from State Bank of Pakistan. The regulatory body need to prepare explicit guidelines for GB practices through calling different working papers from Islamic finance scholars and ensure the papers explicit guidelines for Green banking. These guideline should be made compulsory for all Islamic banks across the Islamic banks. In collaboration with all relevant body of knowledge and institutions the aim of achieving GB is possible.

### **Lack of Awareness Regarding GB**

The concept of GB is new to Pakistan and majority of the working force of Islamic banking is unaware of environmental friendly banking which can save the resources for upcoming generation. Keeping in view the importance of GB as discussed in literature chapter earlier, the regulatory intervention is necessary to familiarize GB practices in the market. There is dire need of regular awareness seminars and conferences on the role of GB in sustainable development of Islamic banking sector.

### **Revised Theoretical Framework**

Revised framework suggests new practices of GB for IB to achieve SG. This framework focus on regulatory bodies which need to provide a policy for GB which will be followed by all Islamic financial institutions. The previous literature highlighted mobile banking, e-banking, online checking of accounts, use of solar system, power saving and paperless banking as GB practices. The new practices shows that by following the new mentioned practices IBs can easily adopt GB which will lead to SD. By transforming to GB, IB will promote environment friendly banking and it will also increase its market share by proving socially responsible and ethical practices. This study identified new practices of GB and also provide a revised framework that indicates how IB can adopt GB to achieve SG.



## 5. Conclusion

Islam is a universal religion, which promotes welfare of humankind. It demands that every Muslim should live peacefully fulfilling his needs through proper consumption of resources and but not damage the ecology. Every humankind should take care of the earth and its resources as his ethical and social duty. To achieve SD, market should be allowed to work within an appropriate framework with economic instruments and cost effective regulations. Financial institutions such as banking sectors are the main economic agents inducing economic growth and industrial activities. In globalized economy, business sector operations are the reason for environment degradation and banking industry is considered as one of the stake holder of this sector. Business or and banking industry are involved in such activities which directly affect environment through its operations. To protect environment from climate change and other catastrophes, regulatory bodies of banking industry need to bring policies for adopting GB. These policies and guidelines provides a roadmap for all IBs to ensure the environmental friendly banking. Regulatory bodies should need to advise all IBs to follow the environment friendly banking policies for the purpose of making planet earth a better place. To promote environmental preservation and sustainable development IBs need to adopt the new GB practices such as conservation of resources, carbon emission control, Green ATM, Green marketing, Green investment, Branchless banking, Green transport, e-communication, incorporation of environmental risk in CRM, initiation of Climate Risk Fund, Green ijarah, Green Mudarabah Green Murabaha, sponsoring plantation and carbon sinks, Green sukuk and Green building. By adopting GB practices and strategies IB can guarantee environment preservation that will lead to SD. These practices and strategies can be followed by IB's to play a positive role in environment conservation. IBs by changing its products and services to Green products and services can achieve SD and also environmental growth which is beneficial for the humankind. It's the responsibility of IB's to promote environment as Islam guided man towards the welfare of humankind and environment preservation is important for all humankind as it will make this planet a better and peaceful place to live.

### Future Recommendations

- Policy Formulation by State Bank of Pakistan for Islamic Banks
- Introducing Green Banking
- Launching Green Practices & Strategies
- Green Strategic Planning for IBs
- Green Branches Installation
- Incorporation of Environmental Risk in Credit Risk Management
- Employee Training
- Clients Awareness

- Green Banking Activities Reporting and Disclosure
- Environmental Preservation Policies
- Formulation of IBs Environment Risk Plan and Guidelines
- Designing Green Products and Services by IBs

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