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# Green Finance: The Future of Sustainable Banking in India

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## Abstract:

India is now in a situation where it has to accept the challenges from the international forum to improve its green infrastructure and attain its sustainable developments goals and climatic challenges like global warming, its huge population and huge green depletion. If the country has to survive, it has to adopt Green finance. Green finance or climate finance is a component where it has to change its focus and behaviour from traditional form of financing to more environments friendly financing. India has to have a green finance strategy to achieve its ambitious sustainable development goals. Indian along with international financial agencies and corporates need to be encouraged to refocus on the aspect of green finance. There has been lot of promises and challenges in this front. This study is an effort to understand the situation where India stands and the go ahead as far as green finance and to manage its sustainable development goals. This study is based on secondary data referred from government, national, international agencies and is of descriptive in nature.

**Keywords:** Sustainable Economic Development, Green Finance, Green Investment, Green Initiatives.

## 1. INTRODUCTION

India is a hugely populous country. The population density has reached 382 per square kilometre. 17.5% of world population lives in India which account for only 2.4% of world surface area. (Times, n.d.) Traditionally Indians have been hugely dependant on its natural resources and forest. The growth of population, industry, business and economy as a whole has seriously impacted on the green or the

environment. India is currently ranked as the 5th most vulnerable nation to the impact of climate change, with a risk to its GDP annually for 2.5% to 4.5 % (Labanya Prakash Jena, 2020). A study conducted by Stanford University has estimated that global warming has caused Indian economy 31% smaller than otherwise it would have been (Times, n.d.). Therefore, climate change is no longer something which we can ignore. It has in fact become the most formidable challenge for GDP growth across the world and to accelerate the implementation of India's commitment to Paris agreement and to achieve sustainable development goal finance will play a huge role. Various estimates suggest that India will be requiring about two and a half trillion dollars to meet its climate action changes from 2015 to 2030 under the Paris agreement. The contribution only from government or the public sectors will not be enough. Private participation or the private-public collaboration has become important to achieve sustainable growth. Green finance has certainly become the medium for adopting sustainability.

## 2. REVIEW OF LITERATURE

India started its initiative on green finance in early 2007. Since then the Reserve Bank of India has also been taking some encouraging policy decisions to support its green finance initiatives. Small renewable energy sector has been included under its Priority Sector Lending (PSL) scheme since 2015. As at end-march 2020, The aggregate outstanding bank credit as on 31<sup>st</sup> March 2020 was around ₹36,543 crore to the non-conventional energy sector, which is around 7.9 per cent of the total

bank credit provided to the power generation sector.(RBI, 2021)

To enable the public sector banks to adopt best sustainable practices, adequate code of conduct at the global level need to be drawn into the Indian banking industry.(Kumar & Prakash, 2020)

In the list of most vulnerable nations to the effect of climate change, India as country is ranked fifth. This impact of climate change can affect 2.5- 4.5% of its GDP every year. So is the reason, India is committed to reduce the carbon intensity 33-35% by 2030 from the level of 2005 levels. But to reach this target, India needs a huge task of mobilizing \$2.5 trillion over 2016-30 (MoEF, 2015)

Investments from public and private sectors towards Climate have been very limited. Asper study by CPI, there is huge shortage of fund required to meet its target as India is being able to mobilize below than 25% of investment required amount of investment.(Sinha et al., 2020)

Even if India has taken several policy measures to tackle the climate issue, serious effort is required towards green sector from the side of Indian financial sector, as more fund is required.(Kumar & Prakash, 2020)

Handling the environmental concern and strengthening environmental issues can improve if Green banking initiatives can be handled more efficiently. It is possible through proper resource planning of green initiatives and banks can take a key role in creating favourable opportunities so that a better and conducive environment can be created for the present and potential customers.(Sharma & Choubey, 2021)

The major hindrance in green finance is its high cost of capital, hence a new process of blended finance need to be developed to reduce the cost of capital of private investors. It is very important for the government of India to develop a clear green investment strategy keeping an eye on long term and broader economic aspect in view. (Jha & Bakhshi, 2019)

Although there have been advances in public awareness and financial options in India, the reduction of unequal awareness of better information management systems and growing communication between stakeholders could lead the way for long-term and sustainable economic growth.(RBI, 2021)

### **3. OBJECTIVES OF THE STUDY**

- I. To analyse various challenges for green financing in India.
- II. To analyse the impact of green finance on sustainable banking in India
- III. To understand the initiatives taken by different agencies in India towards green finance.

## **4. SUSTAINABLE BANKING IN INDIA**

### **4.1 Green Finance**

Green finance as a term first came into picture along with green economy in connection with poverty eradication and sustainable development at United Nations Conference on Sustainable Development Rio de Janeiro, Brazil, 2012(United Nations, 2012).

Green finance is always connected with sustainable finance. United Nations environment programme defines Green financing is to enhance the level of

financial flows from public to private and not-for-profit sectors to environmentally friendly development priorities(UNEP, n.d.). The objective of green finance is to understand and manage environmental risks, thereby identifying opportunities which generate environmental or green benefits with fair rate of financial benefits. Green finance consists of climate finance along with other goals associated to environment those are important to assist sustainability and mainly factors consisting of biodiversity and useful resource conservation (Sinha et al., 2020). Green financing includes instruments like Green bonds, green insurance, green banks, carbon financing, community based green funds.

Green Banks has come out as big supportive factor for growth of clean energy financing throughout the world. This specialized financial institution has certainly helped to inject much needed capital into this sector. First such financial institution Renewable Energy Development Agency (IREDA) was started in May 2016 as the beginning of green banking in India.

## 4.2 SUSTAINABLE FINANCE

Sustainable finance is all about taking investment decisions in finance sector aiming at higher investment in sustainable economic activities whilst taking environmental, social and governance (ESG) issues under consideration (European Commission, n.d.). Sustainable financing is all about investing money into projects that are sustainable. Sustainable financing is traditional profit driven financing in one hand and environmental, social and risk management in the other hand. Financial institutions are screening

out investments that could potentially bring negative outcomes.

Equity and debt are the two major components in sustainable finance. Green Bond aims to finance green projects. In the year 2007 the first green bond was launched and the result is quite impressive. Since then the market has experienced 50 per cent compound annual growth to reach at \$16.3 billion market in 2020, with an attractive base for institutional investors. (Verma, n.d.)

India stands second to China in the emerging green market as of 2021. Despite showing lot of promise since 2015, the Indian green bond market is yet to grow or diversify itself much in terms of assets, while focusing on renewable energy projects. Since 2018, Green bonds share among all the bonds issued in India is only 0.7 percent. As of March 2020, Bank loan assistance to the non-conventional energy contributes to only around 7.9 percent of bank finance to the entire power sector.

## 4.3 PRESENT SCENARIO OF GREEN FINANCE IN INDIA

As per submission of NDC of India submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in the year 2015, minimum of \$2.5 trillion might be required to reach its 2030 target(PTI, n.d.). Which means that each year India will require a minimum of 170 billion dollars to finance its activities to manage climate change but currently the combined annual green investment has only been about 19 billion dollars on an average? For instance, a report by climate policy initiative said the green finance flows in India have total about ₹1.11 lakh crore in 2017 and \$1.37 lakh in 2018. So there is a large gap there. Yes, domestic private investors have been contributing, being the largest contributor

in both of these years. But report also noted the initiatives taken by the Indian government which includes the expenditure incurred by the dedicated PSUs on climate related activities have more than twice in these years.

A study conducted by Stanford University has estimated that global warming has caused Indian economy 31% smaller than otherwise it would have been. Therefore, climate change is no longer something which we can ignore. India is ranked as the 5th most vulnerable a nation to the impact of climate change at 2.5 to 4.5 % of its Gross Domestic Product per year. However, climate related investment both from private and public sources remain limited. Upcoming Study from CPI finds India includes less than 25% of the

investment needed to achieve its target. To put into prospective, India roughly needs 3 times the total investment made in infrastructure sector in the last decade to fight climate change this decade. Crisis often parents to rebuild the better world. India needs more investments. Developing countries are estimated at between \$2.5 to \$3 trillion which means that every year India needs minimum of \$170 billion to finance its climate change measures, but India's annual green investment on an average is about \$19 billion.

Green funds invested between FY 2017 and FY 2018 total ₹248 thousand crores (\$38 billion). The annual follow-up investment has increased from ₹111 crores to ₹137 000 crores over two years.

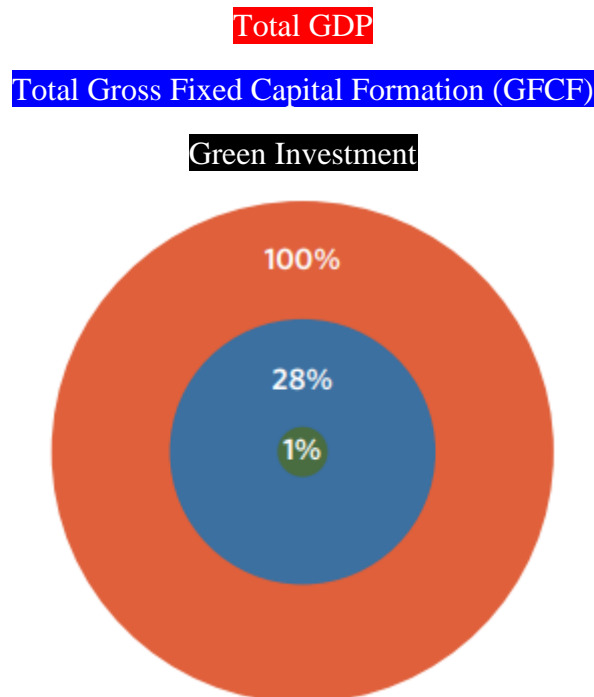


Fig. 1: Green investments as percentage of GDP (Source: Report of Climate Policy Initiative (Sinha et al., 2020))

According to World Energy Report 2019, the average growth rate of India's GDP has

been 7.2% between 2016-17 and 2017-18 and according to the World Bank the total

Gross Fixed Capital Formation (GFCF) to Gross Domestic Product average for the same 2 years has been 28%. From the

national GDP, the green investment has been averaged at 1%.

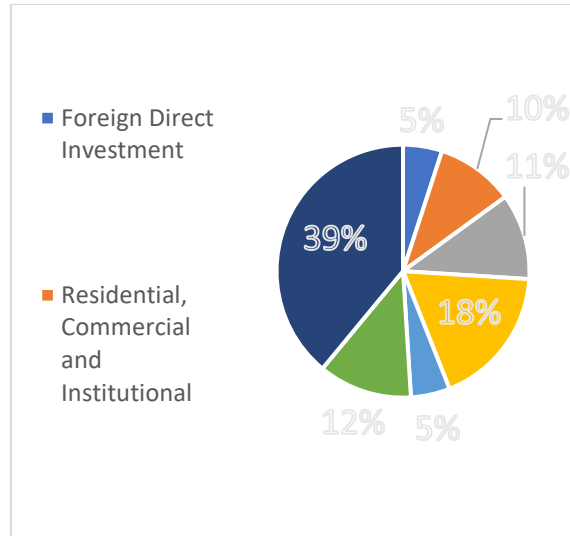


Fig. 2: Breakdown of source of financing to investment (Source: Report of Climate Policy Initiative(Sinha et al., 2020))

In the years 2017 & 2018, (in Fig.2) 85% of finance amounting to approximately ₹100 thousand crores have been raised domestically. This reflects the strong domestic preference of Indian investors. The domestic private finance has been the major source of contribution of ₹139 thousand crores from debt and equity. Domestic private finance sources include project developers, commercial financial institutions, commercial and institutional establishment's corporates and households and Commercial financial institutions have contributed 39% of these funds. Almost all of this finance has been invested on renewable energy development in India, divided between solar energy(64%) and wind energy(36%) projects (Sinha et al., 2020). Renewable energy constitutes almost 80% of India's clean energy expansion, whereas the remaining investment goes into other energy generation activities.

Covid-19 has brought into sharp focus the urgent need to make economy more resilient. in the case of India which was already reeling under economic slowdown. The pandemic has further exaggerated the structural fault lines of a growth pathway.

## 5. PROGRESS & CHALLENGES IN GREEN FINANCING IN INDIA

### 5.1 Progresses in Green Finance in India

The future of green banking and sustainable business investment has started looking encouraging. After so many years post covid-19, some big investors are arranging trillions of dollars for green finance. This is a welcome drift from fossil fuel. Rightfully so the financial risk created with impact on climate and sustainability in India has emerged as the 2nd largest emerging market for green finance investments worth \$10.3 billion. Experts believe that the country requires over 170 billion dollars to fulfil the sustainability goals of the Paris agreement. In its current state the green banking sector

faces various risks and limitations. Transition risk of Bank and its support to shift from traditional financing to financing green projects, this is because financing brown assets generate profits to them and will be difficult to stop. Beyond this, there are challenges relating to financing green bonds and building attraction to foreign investors. However, institutions like the HSBC and other are changing this trend by year marking dedicated funds for financing sustainable ventures. The ability of the sector to expand and continue to attract capital will depend on numerous factors:

- How International Financial institutions will cooperate in the development of a better supportive

funding ecosystem for creating sustainable business system in India,

- How Indian banks will ensure steady flow of capital in the long run towards sustainable projects
- How policy planners and regulators manage to support the banks in extending credit to sustainable ventures.

In Figure 3, Commercial banks take top 5 positions in financing to renewable energy in 2018. The list includes commercial banks, multinational financial institutions, government financial institutions and others.

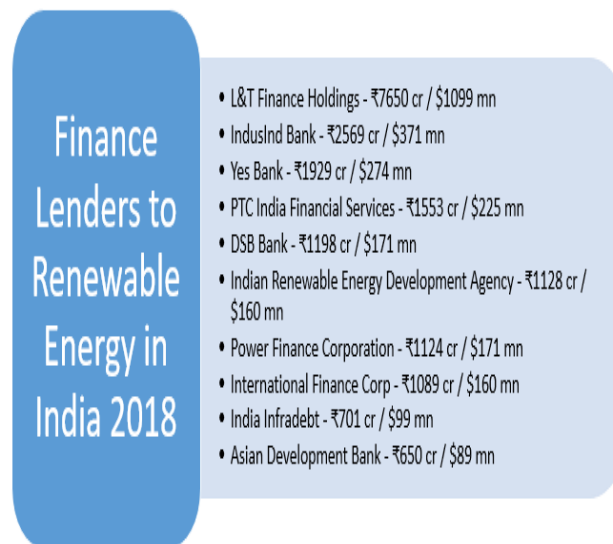


Fig. 3: Finance lenders to Renewable Energy in India (Source: Coal vs renewables Financial Analysis India 2018 (CFA, 2019))

## 5.2 Challenges in Green Financing in India

Creating a platform and development of green financing, financing environment-friendly sustainable developments cannot without challenges, which may include

- “Green washing” or False compliance claims, misuse of Green Loans and most importantly maturity mismatches between long-

term green investments and short-term interests or benefits of investors need to be taken care of. (RBI, 2018).

- There is no clear cut definition regarding green finance. Green Investment terminology needs a clear agreed definition from all government agencies

- There are several Technology risks associated with green Finance Projects for example; solar panels have uncertainties regarding the energy storage and weather dependency. Therefore, this makes it difficult for financial institutions to evaluate the financial risk for these types of green projects coupled with this is the issue of insufficient information.
- As many government agencies and corporates are not ready to share their environmental performance and progress, this limited information on the success or failures of green projects becomes extremely difficult for Financial institutions to create a finance structure and identify price and manage their environmental and financial risk.
- There is an issue of maturity mismatch in many green infrastructure projects those which pay off in the long-term. However, the financial system is dominated by short to medium term investments resulting in a maturity mismatch. This is much more evident in banks because much of bank's resources come from deposits. And deposits are usually used for short to medium term investments because most people who deposit money in banks want their money back within 1 to 5 years.
- There are no reliable green financial policy frameworks at present many policy frameworks do not provide any incentive for Financial institutions to invest in green projects all this is made more difficult with many policy Framework still providing fossil fuel subsidies.
- Borrowing Cost: Compared to the cost involved in issuing other bonds, green bond is higher in India. High borrowing cost has certainly become the most important challenge.
- Market infrastructure development: Till now green instrument has got much smaller penetration considering the huge size of domestic market, which needs to be trapped.
- Other public policies: There are several corporates who has shown their keenness towards expanding 'green buildings' those are more environment friendly. Government of India should try to encourage this organisation. Collaboration can also be possible to have a common approach

## 6. CONCLUSION

The world is still fighting COVID-19 and it has seriously impacted economic growth. India needs to come out of the situation very fast with immediate policy changes to recover its economy and move to fulfil its promise at Paris convention.

Technology risk and credit risk need to be handled carefully. Funding is required for Research, development of new green technology. Energy sector has already turned out to be one of the fastest growing sectors in the world, which is attracting huge amount of investment with lot of potential. Central bank and governments need to work together to develop reliable green financial policy frameworks that is more environmentally sustainable in the



long run. RBI has the regulatory oversight over money as well as the credit and the financial system. This should help them easily understand the risk associated with different green investment models and project. Green finance is without a doubt a critical mean that will facilitate the shift closer to sustainable economic growth and the destiny of sustainable banking in India.

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