

# Green Financing- A Study of Importance, Challenges and Opportunities in India

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## Abstract

Green financing has the following benefits for SD in India: it can boost renewable energy; it can support sustainable business practices; it can unlock private finance; it can create new employment; it can help to address climate change; and it can spawn innovative funding instruments. But there are certain issues that have to be addressed in order to achieve the optimum results of green finance in the Indian context. Some of these factors included ignorance by investors and financial institutions, limited access to finance, issues to do with regulation, absence of credit ratings on green bonds, high costs of transactions, and shortage of technology. In order to solve these issues as well as foster green finance development in India, major reforms by the government and financial institutions are needed. Some of these ways include: enhancing investors and other financial institutions' awareness of green financing; offering guidelines and frameworks for green financing; creating public-private partnerships; and enhancing research on new opportunities for green financing in various sectors and different parts of India. In conclusion, it appears that India has a promising future in green finance because the country remains focused on practicing sustainable development and combating climate change.

**Keyword:** Green Financing, Sustainable Development, Climate Change, Renewable Energy, Private Finance, Public-Private Partnerships.

## 1. INTRODUCTION

Green funding is yet another concept that has only gained momentum in India in the last couple of years because of the country's increasing focus on sustainable development and climate change. Green finance, therefore, can be defined as the act of sourcing funds with the goal of funding projects that are considered to have a positive environmental impact. Such projects may include those in industrial relations, power generation from natural sources, energy conservation, better waste disposal, or any other socially useful project that can benefit the environment. The power sector has been one of the leading green funding strategies in India, and the government has made many efforts to encourage it. Regarding climate change challenges relative to the sustainable development agenda It initiated the policies to follow with the National Action Plan on Climate Change (NAPCC) in 2008. Therefore, the NAPCC has outlined eight national missions that are geared towards managing climate change and different segments, including solar energy, energy efficiency, and farming. The NAPCC has launched many crucial schemes, out of which the establishment of the Green Climate Fund (GCF) was launched in 2010. The GCF is a multilateral fund that sources and provides finance for initiatives whose goal is to reduce their relative emissions of every GH gas and promote development in LDCs. India has also figured as one of the significant beneficiaries of GCF financing, and multiple projects were authorised for financing in the recent past. Besides the government measures, there are the actors, such as some of the financial institutions in India, who also contribute to availing of green financing.

Some of them are the financing of renewable energy generation, energy-conserving buildings, and any other activity that fosters a clean environment. First, let's consider an example of the State Bank of India (SBI), which is one of the largest Indian banks and heavily indebted—it has developed a green bond project that would help fund the renewable power utilities. Recent efforts to encourage ventures into green activities include setups such as the Reserve Bank of India, which is a central institution supervising banking as well as other financial institutions within India. It has since, in the year 2015, put out a circular that requires banks to finance 40 percent of their balance sheet to these sectors, which include agriculture and renewable energy. It was done in order to unlock durable development while at the same time putting measures in place to control carbon emissions. However, there are a few critical barriers that remain problematic for green funding in India today. Some of these challenges include the following: Firstly, the concept of green financing solutions is not known to the investors and the financial institutions. The problem appears to be both in the fact that many investors are apparently not informed about opportunities to benefit from financing such projects and in the fact that financial organisations may be either unaware of or do not possess the tools to assess such projects. The last is the absence of specific guidelines on green finance regulation in India and the number of measures developed by the ministries and departments of the country. While there are certain circulars and memoranda to guide banks and financial institutions's green finance business, there is presently no law in India that governs green operations. This may open a new set of questions and doubts as to which institution should respond to investment opportunities in green activities and preserve the environment.

### **1.1 Problem Statement**

The problem statement of green finance in India is that despite there being several opportunities to call for sustainable development through green financing, there are several challenges that have to be met for green finance to realise its full potential. Some of these challenges are: investors and banking financial institutions, limited availability of green funding for projects, regulatory issues related to there being no specific provision of green financing in India, higher cost associated with evaluation and over alarming cost of monitoring of environmental projects, and restricted access to technology that is necessary in the execution of renewable energy or waste management projects. Connecting these issues, there is a need to strive for the systematic cooperation of government ministries, banks,

and other stakeholders who would facilitate the sustainable growth of green finance in India.

## **2. Literature Review**

Green funding has gained quite a bit of attention in India in the past couple of years, especially because of what has been considered to be sustainable development and coping with climate change. With that in mind, the number of studies that have been conducted to evaluate the potential of green finance in India and the evaluation of threats and opportunities of sectoral development has reached several. For instance, Singh et al. (2019) discussed the effect of green bonds on financing renewable power initiatives in India. It was observed that green bonds may hold potential for the financing of renewable energy initiatives, although the study revealed that there were constraints, including low relevant investor knowledge and the absence of green bond credit rating. Chakraborty et al. (2018), in another study, tried to evaluate the feasibility of green banking in an Indian context. The study found that green banking may play a role in supporting sustainable development because it puts pressure on banks to take green and sustainable actions and activities. But there are some major barriers that have been met in practicing green banking, and they are customer awareness and the scarce availability of green financial products. In his research about the role of the partnerships between the two sectors, both the public and the private sector, on developing renewable energy in India, Bhatia et al. (2017). The PPPs were identified as a way that could help boost private sector investment in renewable energy; however, they have been found to come with other challenges, such as ambiguity in the legislation and issues concerning regulation.

Moreover, Kumar et al. (2016) undertook a comparative study to examine the impact of carbon financing in the advancement of renewable energy in India. Therefore, the study established that carbon financing could be a source of funding to the renewable energy projects, and in the process, may assist in decreasing greenhouse emission. However, the high costs of carbon credits and unfavorable investment funds are the challenges that hinder carbon financing. The paper by Singh et al. (2020) discussed the situation with green finance in India and identified a number of promising directions for further development of this market, such as increasing investors' awareness of the measures linked with green finance, the formation of the legal framework of green financing, and the establishment of PPPs in the sphere of green finance. The paper also emphasized perspective, stating the need for more empirical research to understand

the prospects of green finance in different sectors and regions of India. In general, these studies show that there is significantly much that green finance can do to support sustainable development in India, despite the fact that there are also several challenges that are present. Some of them are inadequate awareness among the investors and the financial institutions, limited access to credit ratings as well as financing, and policy issues. These gaps could only be addressed if all the stakeholders, especially the government and the financial institutions, provided support to make green finance more available in India.

### 2.1 *Objectives of the Study*

1. To read about green finance in the context of India
2. Realising the scope of applying the 'Challenges and Opportunities of Green Finance' theme to the case of India is possible by a number of measures.

#### 1. **Research Methodology**

The present study receives an extensive and varied number of secondary information sources. As a result, using the Internet in conjunction with books, journals, and magazines presents the material in a different way, giving the researcher a multiple-angle view of the research subject. Interdisciplinary strategy also improves the scope of the study as the information is collected from different sources who have an impartial view of the material under research.

#### 2. **The Role of Green Financing for India**

Green funding is one of the most crucial factors needed in India due to the fact that India is already gearing up for a green economy and fighting against climate change. Here are some reasons why green funding is crucial in India: Below are some of the arguments showing why green funding is important for India:

**1. Promoting renewable energy:** The notion of green finance can thus assist in promoting solar, wind, and hydroelectric plants to be established in India under the various power plants category. They may also assist in its mission to decrease use of fossil fuels and support the country's pledge of adding 175 GW of renewable energy by 2022.

**2. Reducing greenhouse gas emissions:** Green funding can go a long way in financing projects that cut, manage, and minimise the flow of greenhouse gases, such as energy management, waste management, and so on. This may help

India meet its targets contained in the Paris Agreement on reducing the carbon intensity by 33–35 percent by 2030.

**3. Encouraging sustainable behaviours:** Green funding may hold some meanings for affecting individual firms and people with some sort of green consciousness of decreasing their effects on the environment and enhancing usage of resources. It can play a crucial role in building a better economy and a society in India as well.

**4. Mobilising private sector investment:** It is a type of funding and helps in directing capital for reconciliation towards Environment Green-related projects that cannot be funded from other sources of financing. This may help to fill the gap in green process financing and hence lead to an increase of the same in India.

**5. Creating new job opportunities:** While green funding may create new employment in areas like renewable resources, waste and energy management, sustainable agriculture, etc. This may also help promote fair development, and complement India's goal of generating 100 million new jobs by 2022. In general, green funding is important in India as it can support the country's initiatives towards sustainable development while addressing climate change issues. The financial support towards the green projects might reduce greenhouse gas emissions, improve resource utilisation, and provide a clean and healthy atmosphere for every inhabitant of India.

#### **Challenges of Green Financing in India**

In India, green financing has remained a challenge in the following ways: On one side, green finance has vast probabilities for promoting sustainable development in India; however, there are multiple difficulties that should be addressed: Here are some of the significant problems confronting green funding in India: Here are some of the significant problems confronting green funding in India:

**1. Lack of knowledge:** Among the various issues that affect green finance in India, lack of awareness of the market by investors and other financial institutions would also attribute to inadequate information about the green financing available in the market. Certain investors have not been told what they can gain from environmentally sustainable investments, while on their part, some financial institutions may lack knowledge or capacity to carry out the necessary analysis of such activities.

**2. Limited financial accessibility:** The last emerging difficulty of green financing in India is the low capacity to provide such financially sustainable and environmentally efficient schemes. Although many governments and commercial organizations provide green financing, the amount of cash available for such projects is small at present. **3. Regulatory issues:** In India, there is no single law or any associated regulating body governing the operation of green finance. This may lead to confusion and scepticism of the real intention of green activities, thus putting off investors and financial institutions from venturing.

**4. Lack of credit ratings:** At the moment, credit rating for green bonds and other green financial instruments is limited in the country of India. This may go a long way in making it hard for investors to understand the risks in such products, which in turn makes them hesitate to invest.

**5. High transaction costs:** Green financial transactions may involve high transaction costs due to the need for the experts and the screening. This may assist a small-streamed scheme to look in and get shots of Green Finance.

**6. Technology availability is limited:** The majority of environmentally friendly plans call for modern technology, which is hard to come by or else is very expensive in India. Such a situation, along with other factors, may curtail the expansion of such initiatives, rendering them unprofitable for investors. In conclusion, the problems discussed above must be solved by the Indian Government and with the help of all other players in the financial sector of India to promote green finance in India and keep environmental sustainability at the forefront of the country's development processes. Indications on green financing in India

Green funding provides so many opportunities for promoting sustainable development in India. Here are some of India's significant green finance potentials: Here are some of India's significant green finance potentials:

**1. Promoting renewable energy:** Green finance can help catalyse the development of renewable energy projects in India, including solar, wind, and hydropower. The renewable energy projects may help decrease the reliance on fossil fuel energy mix, coupled with their reaction towards their 2022 renewable capacity objectives of 175 GW.

**2. Encouraging sustainable behaviours:** Green funding helps the firms and people to implement the change in the practices that are close to or beneficial for environmental protection, including the reduction in carbon

footprint and increasing resource efficiency. It may take time to fork out something better for developing a sustainably economically sound economy and society in India.

**3. Mobilising private sector investment:** Green finance makes it simple for the private sector to invest in activities that have positive impacts on the environment and wouldn't be possible through normal financial models. It may help to close the gap for financing green activities and thereby support the growth of such projects in India.

**4. Creating new work possibilities:** 'Green' funding could possibly generate new employment in areas like new and efficient energy, efficient disposal and treatment of waste, and efficient farming. This may assist in bringing fair growth and assist in achieving India's vision of generating 100 million fresh jobs by 2022.

**5. Addressing climate change issues:** Green funding may help the projects that reduce greenhouse gas emissions for initiatives like energy conservation programs and waste management. It may assist India in achieving its commitments under the Paris Accord on extending carbon intensity decreases by a minimum of 33% to 35% by the year 2030.

**6. Developing novel financial products:** Green finance offers the opportunity to create new innovative financial products that would be tailored to meet the specific requirements of the sustainable projects. For instance, green bonds are relatively new financial instruments that have received a lot of attention over the recent past due to their ability to produce cash for environmentally suitable activities. In general, green funding offers a number of possibilities for promoting sustainable development in India to combat climate change. Through its financing of environmentally sustainable activities, it may possibly assist in reducing the levels of greenhouse gases in the atmosphere, efficiency in resource utilisation, and global environmental health for all of India's inhabitants.

### 3. Discussion

Green financing has the following prospects for the development of India as a sustainable country: the development of renewable energy, the encouragement of sustainable activities, the attraction of private investments, the generation of employment, consideration of climate change processes, the emergence of new financial products, etc. But there also are some issues pertaining to green finance that still require addressing so that the idea could be



implemented in India on a larger scale. Specifically, the problem of its availability, which seems to be just as significant, is that investors and financial institutions know little about the green financing opportunities. Some investors are still unwilling for the advantages of investing in green business, or they do not possess the information. Similarly, there is insufficient reason to believe that most of the financial institutions have sufficient skills or resources to properly assess green programs. The ruthlessness that characterises such funding for green activities is another challenge. Hence, green is a mandatory principle, and it goes further to imply that businesses should incorporate green activities within their processes. But the demand for green finance has raised more concern, whereby a large funding gap between demand and supply has been noted in the country. It can also be difficult for firms and organisations to obtain the required funding that can be necessary in the setting up of green measures. Thus, regulatory constraint is another sociopolitical factor that opposes green finance in India.

At present, there is no specific legal framework in India to deal with green finance, which may create some legal and statutory risks for the investor and challenge the legal structure for new financing products. Furthermore, the ratings are not limited to green bonds or other so-called environmentally friendly credits. Other challenges that may affect green finance in India could also include high transaction costs. The costs associated with analyzing and monitoring the environmental effort may be high, making it a problem for small businesses or groups with limited financial capital. In addition, technology scarcity might also be a challenge toward the implementation of environmentally beneficial projects. The establishment of many technologies that are essential for renewable energy or waste management initiatives is not easily available or cheap in India. However, all these problems and, in order to promote green finance investment in India, the government departments, financial institutions, and other certainty require more cooperation. Some of the ways through which this goal can be realised are as follows: raising awareness of investors and financial institutions about green financing; developing an appropriate regulatory framework for green financing; fostering private-public coalitions; and utilising research and technologies in finding out new potential areas or sectors and regions of India to take up green financing. Overall, green finance has a bright future in India because the country still focuses on sustainable development and combating climate change.

## Conclusion

Therefore, it can be said that green finance is feasible to boost sustainable development in India in accordance with funding environmentally friendly projects and managing the climate change obstacles. However, there are several challenges that must be gotten over, including poor awareness by investors and financial institutions, limited access to funds and standards, legal requirements, lack of social credit ratings for green bonds, high costs of transactions, and scarcity of technology. However, there are several opportunities that are exercised in green finance in India, as follows: support of renewable energy sources, sustainable practices, encouragement of private capital investment, the creation of new employment opportunities, the addressing of climate change issues, and the development of new financial instruments. In order to unlock the potential of green finance in India, it is now imperative for all the stakeholders—government bodies, financial organisations, and others—to work towards addressing the issues that plague green financing and, at the same time, to continue the process of fostering the growth of green finance. To achieve these objectives, they proposed the following: carry out an awareness campaign by targeting investors and financial institutions on green financing; come up with policies and laws relating to green financing; encourage the public-private partnership; and undertake research in order to discover other areas of financing for green activities in the different sectors and regions of India. In all, it can be concluded that there is a positive outlook for growth of green finance in India as the country remains focused on sustainable growth and reduction of its carbon footprint. If the right policies and approaches are implemented in green finance, they can bring about radical changes in the format green habits of every citizen of India as well as bring in sustainable development for the community.

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