



Internship Report

On

Development of Green Finance in Bangladesh

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Letter of Transmittal

April 28, 2024

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Subject: For the acceptance of the Report

Respected Sir,

With great pleasure, I am submitting my internship report on the topic, “Development of Green Finance in Bangladesh.” While preparing this report, I have followed your instructions and guidelines with attention and diligence. This report has been completed primarily with the help and information from my internship experience at IDLC Finance PLC, articles, research papers, Bangladesh Bank’s data, and also through online research.

I express our special gratitude to you for dedicating your valuable time, expert guidance, and support. I have tried my best to complete the report appropriately as much as possible. I will be pleased to answer any sort of query you may have regarding this report. I hope with great anticipation that you will like and accept my report.

Sincerely Yours,



Delara Akter Meghla

ID: 111 201 171

Acknowledgment

In performing the report, I had to take the help and guidelines of our respected faculty, who deserves my greatest gratitude and veneration. Without his support, we could not have completed this report. The completion of this paper gives me pleasure. So, I would like to thank my faculty, Muhammad Enamul Haque- Assistant Professor of SoBE, for giving me the required guidelines and instructions throughout the period of preparing this report. Moreover, I would also like to thank him for taking some time off from his busy schedule to consult with me.

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Executive Summary

The internship report describes the green finance scenario of Bangladesh and its impact on the Economy. In my report, the main focus is how Bangladesh is performing in the green finance sector and the contribution of banks and financial institutions to this matter. The reports will discuss the green financing sectors and the importance of financing those sectors in terms of achieving the SDG targets set by the Government of Bangladesh has set. I have also disclosed the data from 2018 to 2022 from the Bangladesh Bank website about financing green projects. From the data and graphs, it becomes easier for the reader to know if Bangladesh is moving ahead in terms of green growth or if it is lagging. Besides, the macroeconomic challenges have changed the people's banking mindset in which banks and financial institutions have faced many barriers over the years. For instance, the deposit amount has been decreasing over the years at the same time NPL management has become one of the key priorities of banks and financial institutions. This is also noteworthy that, if banks and financial institutions focus more on sustainable projects and start contributing more to green finance then the NPL can be managed. Thus, it will contribute to the GDP of the nation and the economic well-being of the nation as a whole.

Chapter 1: Background

1.1 Introduction :

Green Finance means financing environment-friendly projects. As green finance focuses on projects that are not harmful to the environment, it includes renewable energy, waste management, energy efficiency, sustainable agriculture, etc. By financing such projects, green finance impacts the reduction of pollution. At the same time, green finance focused on contributing to the preservation of natural resources.

Green finance is one the largest contributors to reducing CO2 emissions. Green finance provides funds for renewable energy which means generating electricity through wind, solar, and hydroelectric. These technologies don't emit CO2 while generating electricity. Implementing energy-saving technologies is one of the major sectors where green finance invests and thus it is impacting the target of Net Zero carbon Emission by 2050. (Star Business Report, 2023)

Bangladesh requires funds to fulfill the SDGs. Besides, the country has a lot of SDG-related opportunities. For example, we are yet to achieve the sustainable electricity generation target. Here. Banks and financial institutions play a crucial role by financing green projects and making it possible for the country to cover up the shortage of funds.

Besides, it is noteworthy that Bangladesh has come a long way in green financing. All the banks and financial institutions are focusing on green financing right now. The financing and the disbursement amount are also increasing day by day.

Green finance enlarges market opportunities as it stimulates the development of green technologies, green products, and services. Thus, sustainable and responsible investments create new market opportunities at the same time these drive innovation which ultimately brings economic growth and fosters entrepreneurship.

1.2 Origin of the Report :

My internship report on the topic of- The Stratification of Green Finance and its Impact on Economic Development has been prepared to fulfill the partial requirements of my Internship in the BBA Program of UIU Business & Economics School, supervised by Muhammad Enamul Haque, Assistant Professor of United International University, School of Business & Economics. I did my internship in the Finance Department of IDLC Finance PLC from January 10, 2024, to April 10, 2024. I have prepared this report with the knowledge of the assigned tasks and with the assistance of reports prepared by Bangladesh Bank.

1.3 Purpose Statement :

“To Analyze the Green Finance Scenario of Bangladesh and Its Impact on the Green Growth of the Economy and the Economic Development”.

This report identifies the disbursement amounts in different green projects by the banks and financial institutions and finds out if the country is moving ahead to achieve the targets which are set by the Government of Bangladesh (GoB).

1.4 Objective of the Study:

To analyze the stratification of the Green Finance in Bangladesh and its impact on the Green Economy of the country.

Specific Objectives :

- ⌘ To learn about the road map of green finance in Bangladesh.
- ⌘ To learn about the different incentives for taking green initiatives.
- ⌘ To learn about the macroeconomic barriers of Bangladesh.
- ⌘ To learn about NPL management.
- ⌘ To learn how green finance can impact deposits and NPLs.

1.5 Methodology :

The methodology includes primary and secondary data collection. For collecting the numeric data, secondary data is used whereas for learning about the topic and the impact of it, primary data is used.

Primary Data:

- ⌘ Interview of one of the employees of IDLC Finance PLC in the sustainable finance department.
- ⌘ Exposure to the green desks of IDLC Finance PLC.

Secondary Data

- ⌘ Websites.
- ⌘ Articles & Journals
- ⌘ File Study.
- ⌘ Research papers.

1.5 Limitation of the Study:

- ⌘ The numeric data is taken from Bangladesh Bank's website for which the missing information couldn't be managed by taking an interview at a scheduled NBFIs.
- ⌘ All the information regarding green finance of an individual company was not revealed because of safety reasons.
- ⌘ Some of the information is based on the research paper conducted in China, which might not be relevant to Bangladesh.

Chapter 2: Overview of Green Finance

2.1 Overall Scenario of Green Financing Impact on Green Economy:

The term green finance has received precipitous attention in current literature. For establishing an innovative and sustainable platform, green finance plays a significant role as it focuses on promoting biodiversity and reducing emissions. According to the G20 Green Finance Study Group (2016) G20 Green Finance Synthesis Report, green finance is defined as investments in projects that provide environmental benefits to impact environmentally sustainable development. An increasing level of CO₂ is one of the main reasons for climate change. Excessive usage of power in production, building, and transportation has impacted on the climate change. (Salas, 2024)

The Annual carbon dioxide (CO₂) emissions worldwide have abruptly increased from 1980 to 2023 reaching its peak at 37.55 billion metric tons in 2023. The data from the World Health Organization (WHO) illustrates that an estimated 4.2 to 7 million people die from air pollution worldwide every year and nine out of ten people's breathing contains pollutants. To reduce pressures on the environment, and achieve the climate and environmental objectives of the nation, and support economic growth, sustainable finance plays a fundamental role. The power generation sector makes up an overwhelming majority of CO₂ emissions in the world. This has changed the perspective of business people and financial institutions in the world to invest in renewable energy as well as consider all the other green financing approaches. The world needs massive investment in electric vehicles as well as in water and substantial projects.. (Sachs, 2019)

Among the 7 continents of the world, Asia Pacific has been a predominant emitter of CO₂ throughout the years. However, the impact of climate change has been estimated to affect the economies and it is also estimated that Southeast East Asia will be affected hardly. The maximum projected loss suffered by the ASEAN in the event of a 3.2°C temperature rise is 37.4 percent which is more than double the estimated loss of the Advanced Asia economies.

In these circumstances, green finance will truly pave the way for a sustainable future by providing necessary financial support to environmentally sustainable projects. Again, it not only provides environmental advantage but also delivers economic advantage.

The global green finance leader is Standard Chartered Bank because of its robust framework, assessing approach, mitigating and managing environmental risk, and its commitment to supporting energy transition. On the other hand, the net zero approach of 2050 and the intent to provide \$300 billion in sustainable finance by 2030 has put the bank one step closer to being the leader of sustainable finance.

When we speak about green finance, we are more likely to talk about financial wellness. In the cases of banks and financial institutions, risk management can be ensured by taking environmental consideration.

In the last three centuries, immoderate natural resource depletion, ecological disruption, and the impending threat of climate change have been the results of human attempts aimed at mass production and economic growth, along with population growth and urbanization. According to the NOAA's 2023 report, 2022 was one of the warmest years ever recorded, having a 1.06 °C rise in temperature. Limited access to capital to support green projects is one of the most significant challenges for countries that are endeavoring for sustainable growth for which sustainable economic development is hindered. The market accessibility and transparency for eco-friendly initiatives could be improved by green finance structures. They can also use these specialized instruments to encourage capital accumulation from private sector investments at the same time. (Han, 2024)

Chapter 3: The Road Map of Green Finance in Bangladesh

3.1: Green Finance-Related Developments in Bangladesh: Green finance is included in the term sustainable finance and thus we are familiar with the term green banking. In the year 2009, Bangladesh launched green banking. After two years of launching green banking, Bangladesh Bank framed green banking guidelines in 2011 and subsequently, the bank opened its Sustainable Finance department in 2015. Today, all banks and FIs have sustainable finance help desks in their branches. The evolution of the Green Finance framework in the country is positive. The Sustainable Finance Department of Bangladesh Bank which was established in 2015, has stated that all the scheduled banks and NBFIs are required to maintain a minimum of 5% of their financing in green finance. Furthermore, the Climate Change Trust Act of Bangladesh was in act in 2010 having the aim of taking initiatives in mitigating the problems that arise from climate change and working on climate-tolerant technological innovation. (Hossain, 2018).

In 2016, Bangladesh Bank introduced the Green Transformation Fund (GTF) to move towards green financing such as providing financing for environment-friendly infrastructure in industries focused on exports. The machinery that is imported for export-oriented industries under this fund needs to go through eligible certified energy and resource efficiency audits which provide favorable rates of interest and encourage borrowers to import machinery under this fund. (HOSSAIN, 2021)

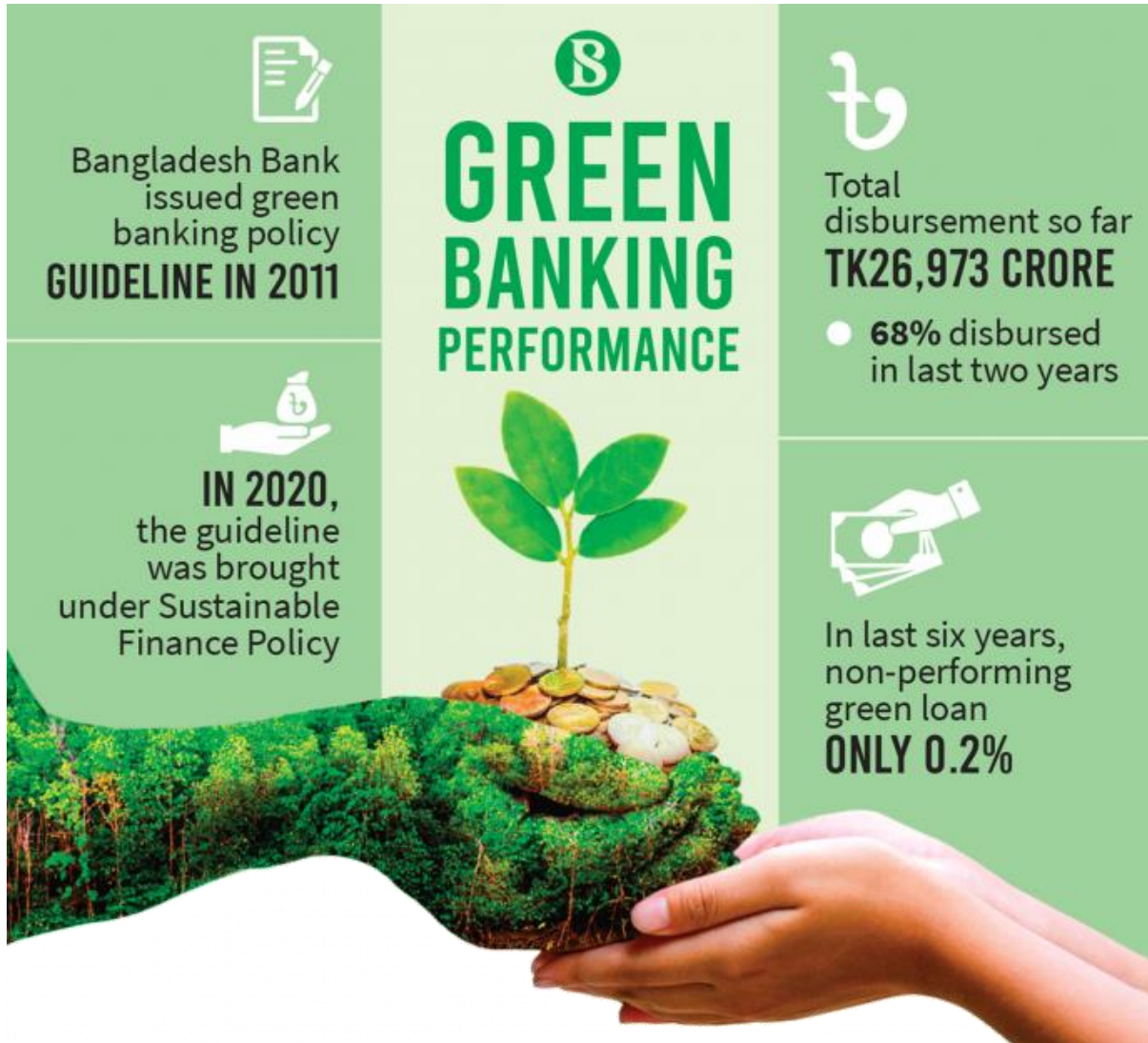
The Bangladesh Climate Change Strategy and Action Plan (BCCSAP) introduced 44 programs to demand proactive action from the Government of Bangladesh so that it can better prepare to deal with the climate change challenges. The areas where the demand comes include food security, social protection and health; comprehensive disaster management; infrastructure; mitigation and low carbon development; research and knowledge management; capacity building, and institutional strengthening. (A. Das, 2017) Next, if we talk about the climate investment fund, about \$8.5 billion CIF was set by the World Bank in 2008 which is accumulated from 14 different developed nations to provide funding to 72 developing and middle-income countries that need finance to cope with climate change. This fund will also focus on reducing greenhouse gas emissions. (The World Bank, 2019).

Bangladesh has set 40 national priority targets to achieve sustainable development goals and one of the critical priorities includes promoting green growth to ensure inclusive development which is one of the Multi-annual Indicative Program (MIP) priorities of the European Union for Bangladesh. The recent energy crisis can be solved through transitioning from fossil fuel-based electricity generation into renewable source-based generation which is one of the SDG priority targets. Bangladesh will be graduated as the least developed country in 2026 which will call for more efficient management to maintain global competitiveness. The targets from the Government of Bangladesh (GoB) of 5 percent and 10 percent electricity from renewable energy in 2015 & 2020 were not achieved. Although electricity generation from renewable resources is a priority, progress is very slow in attaining the targets. A rough estimate of USD 19.2 to USD 37.2 billion investment will be required for the green energy(develop the required installed

capacity from renewable energy sources) transition in Bangladesh by 2040. (Engr. S.M. Shakil Hasan, 2020)

3.2: Green Banking Performance :

Green banking is taking ground in Bangladesh's banking sectors. One of the reasons behind this is the entrepreneurs of the country are moving towards the banking model crafted for eco-friendly financing which will foster the growth of green initiatives and contribute to the green economy and ultimately contribute to the economy of Bangladesh.



Source: tbsnews.net

Chapter 4 : Analysis & Findings

4.1 Disbursements to Green Finances by Banks and FIs:

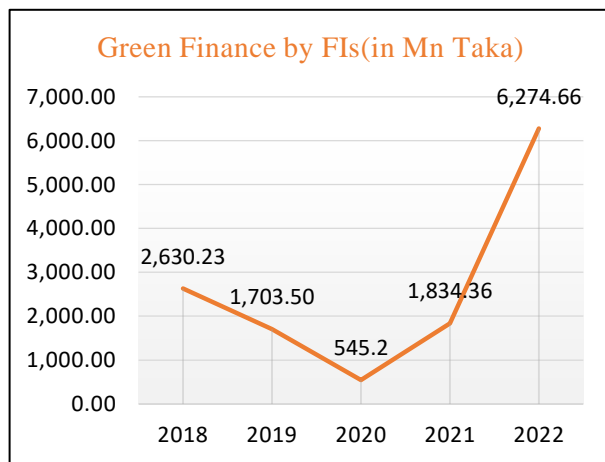
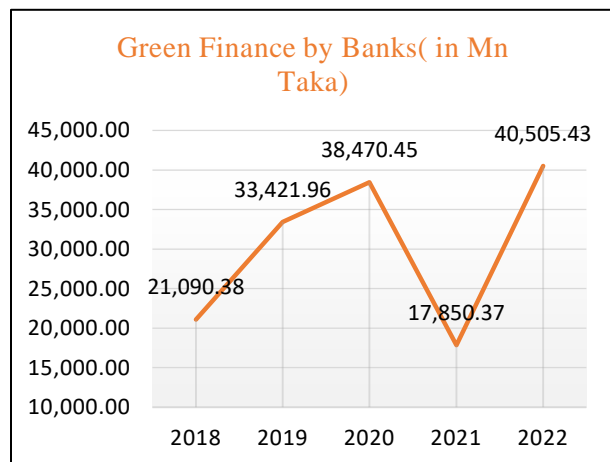
To disclose the green journey of Bangladesh more clearly, we have collected the green financing data of all the banks and FIs for the five years from 2018 to 2022. To see the evolution of the green financing journey of Bangladesh this data will be helpful. The Bangladesh bank has showcased the disbursement amounts of banks and FIs in green finances which is as follows :

Disbursements by Banks and FIs(in millions)					
Years	2018	2019	2020	2021	2022
Green Finance by Bank	21,090.38	33,421.96	38,470.45	17,850.37	40,505.43
Green Finance by FIs	2,630.23	1,703.50	545.2	1,834.36	6,274.66

Source: Bangladesh Bank

The data discloses that banks are far ahead of FIs while making disbursements for green growth. The units are given in millions of taka. The FIs are yet to be involved highly in green financing and impact on the green growth of the country. In 2018, banks disbursed almost 22 million takas in green financing whereas the amount was only 2630.23 million for financial institutions.

If we see clearly, it is evident that the amounts of disbursements by both banks and FIs are increasing. Although there was a downward trend in FY 2020 for FIs and FY 2021 for banks, the amount reached its highest point in the year 2022. Because of the coronavirus the loan ratio decreased and banks have seen a decreasing amount of green financing in year 2021. On the other hand, FIs have seen a decreasing amount of disbursement in FY 2020. If we see the graph, we can get the idea in more detail about the financing trend of banks and FIs to contribute to a greener economy.



Source: Bangladesh Bank

The graphs clearly explain that banks and FIs are focusing more on green financing as the world is moving toward the future. In FY 2022, banks have disbursed a total amount of almost 41 million taka in green finance whereas FIs have disbursed a total amount of 6274.66 million taka. This upward trend can express Bangladesh's commitment to a greener economy.

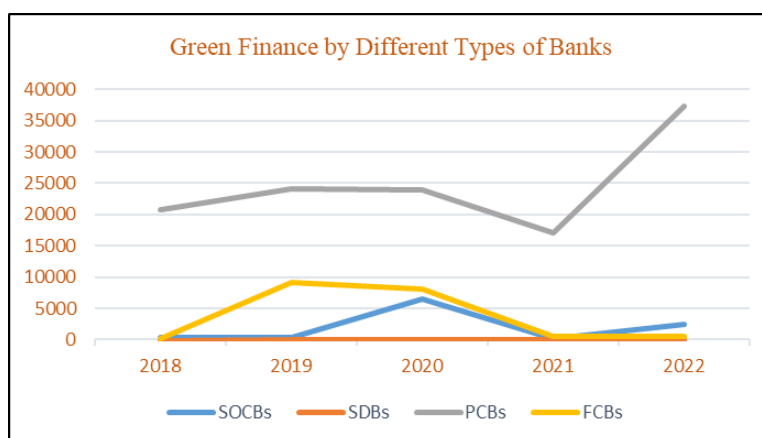
4.2 Green Finance by Different Types of Banks :

Now, as we have seen the disbursement of banks in green finances, it is time to classify different types of banks including private commercial banks, state-owned commercial banks, social development banks, and foreign commercial banks. As we couldn't get the data of individual FIs, it became impossible to disclose it but the target achievements of different FIs will be disclosed later if required as this will provide information about the situation of financial institutions in Bangladesh. Disbursements by different types of banks are provided as follows :

Green Finance by Different Types of Banks					
Years	2018	2019	2020	2021	2022
SOCBs	291.8	265.78	6,442.19	179.6	2,545.66
SDBs	1.33	6.81	3.1	4.6	6.68
PCBs	20,705.11	24,036.36	23,861.83	17,128.20	37,410.09
FCBs	92.14	9,113.01	8,163.34	537.97	543.01

Source: Bangladesh Bank

From the table, it is obvious that the private commercial banks are the top contributor in the disbursement amount whereas the social development banks are the least contributor. The state-owned commercial banks secured the second position and then the foreign commercial banks came. We can also see an upward trend of disbursements as we move forward and a downward trend in 2021 due to the coronavirus. Among all different types of banks, social development banks impact only a little in green financing. The causes of this can be shown as a lack of knowledge about sustainability or the lack of knowledge about the positive consequences of focusing on green investments. It can be said that around 80% of green financing is done by private commercial banks. They are channeling more funds to greener projects.



Source: Bangladesh Bank

The graph can make it more visible to get an idea of different types of banks' contribution to the greener economy. While SDBs had a stable line, hovering at around 6 million through the years, the PCBs have skyrocketed in 2022 reaching considerably higher than 35000 million taka.

4.3 Category of Green Finance by Banks :

Green finance can be defined as environment-oriented financial products which include financing in renewable energy, energy efficiency, waste management, recycling products, green brick manufacturing, green establishments, green agriculture, green SME, etc. Green financing promotes sustainable practices. On the other hand, green investments differ from other investments because their profitability depends on assistance from the government and green investments occur in an environment of rapid technological progress. A massive initiative of Bangladesh includes greening its energy, transportation, manufacturing, and agriculture systems. It is predicted by Standard Chartered that Bangladesh will be the 23rd-largest economy by the year 2030. One of the factors for this growth can be the electricity access rate which increased to 100 percent in 2022. The power generation should have been done from renewable energy sources but it is a matter of thinking that, 55 percent of the power generation was from gas whereas only 0.4 percent was from renewable and sustainable energy. We are mostly dependent on fossil fuels which is an environmental risk for the country. At the same time, the country faces the price volatile risk. This should be a motivation for the country's people that under the Paris Agreement, Bangladesh has committed to reduce carbon emissions by 22 percent. This agreement exposes the investment needed in renewable energy and the country's banks and FIs are working to achieve the target with the support of the government and the rules & regulations of the Government of Bangladesh (GoB). The categories of Green Finance in Bangladesh include Renewable Energy, Energy Efficiency, Waste Management, Recycling & Recyclable Products, Green Brick Manufacturing, Green Establishments, and Miscellaneous(CMSME, SRF, Agriculture). (Sufi, 2022)

Category of Green Finance by Banks (in Million Taka)					
Years	2018	2019	2020	2021	2022
Renewable Energy	504.72	644.31	1,238.34	1,575.59	2,397.07
Energy Efficiency	653.56	1,469.56	3,782.32	3,687.16	6,673.04
Waste Management	6,943.32	3,731.39	1,977.64	820.45	13,128.93
Recycling & Recyclable Product	3,668.78	3,003.67	5,711.78	1,312.89	2,363.90
Green Brick Manufacturing	5,100.11	2,376.74	2,843.11	1,134.02	1,650.88
Green Establishment	2,309.25	19,921.30	22,041.59	8,421.86	11,676.15
Miscellaneous	1,906.84	2,266.33	839.46	898.39	2575.47

The green financing trend of Bangladesh from 2018 to 2022 is as follows:

Source: Bangladesh Finance

From the chart, we can see that banks are moving towards green financing and the disbursements amount was more than tripled in 2022.

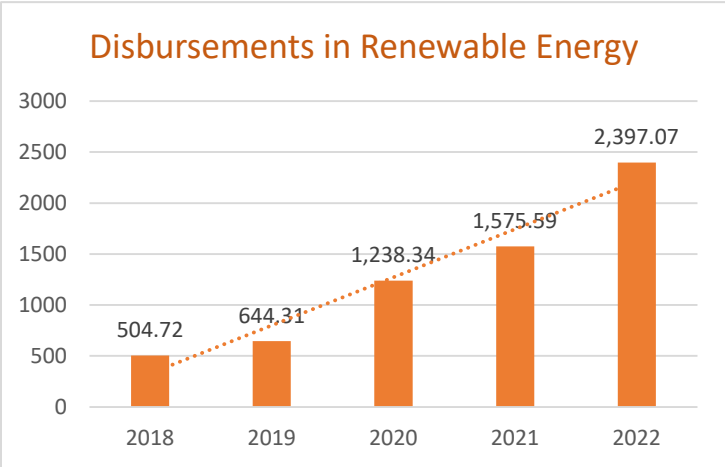
The chart can tell us that the disbursements had a precipitous fall in 2020-2021 which led the banks to finance less in green products and the next year in 2022, we can see a slight increase in the amount after the COVID impact. Although the amount was not huge in 2018 the amount increased as time passed.

For example, the amount reached its peak at 2397.07 million in 2022 for renewable energy, energy efficiency, waste management, green establishments, and miscellaneous. On the other hand, for recycling the peak point was in the year 2020 and for the green brick manufacturing, it was the year 2018.

4.3.1 Renewable Energy :

To drive renewable energy initiatives, green financing plays a significant role. To ensure sustainable growth and clean energy, Bangladesh has already observed the importance of green financing in renewable energy as it will reduce the reliance on fossil fuels, and increase the investments in renewable energy. Developments of new renewable energy infrastructure such as solar or wind farms will be possible through green financing in renewable energy. A rough estimate of USD 19.2 to USD 37.2 billion investment will be required for the green energy(develop the required installed capacity from renewable energy sources) transition in Bangladesh by 2040 which will be easier for the country through making investments in renewable energy. (Fahmida Khatun, 2022)

The renewable energy transition of Bangladesh can be seen in the following chart and graph:



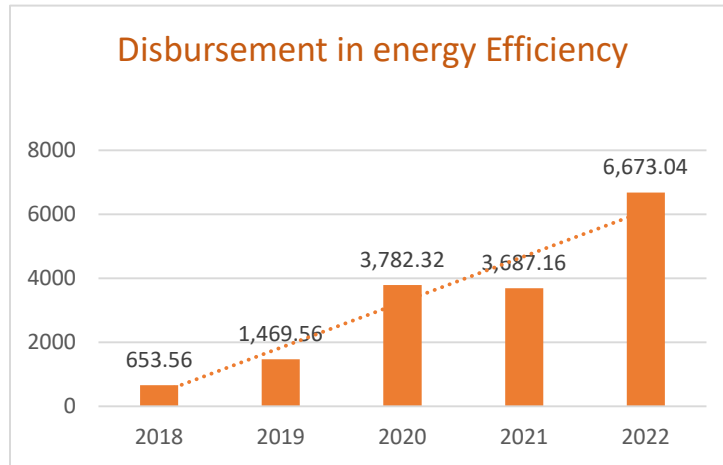
Source: Bangladesh Bank

From the chart, it is clear that the amount of the disbursement has increased over the period which is a positive sign for the country in terms of economic development. The amount was only around 500 million takas in 2018 which has become almost 2400 million in 2022 and the increase is clear within our eyes. As banks are moving towards financing renewables, it is more likely that the target of generating 5 percent and 10 percent electricity from renewable energy will be achieved in no time soon.

4.3.2 Energy Efficiency :

To reduce greenhouse gas emissions and promote sustainable economic development, investments in energy efficiency are crucial. Investments in energy efficiency mean improving the energy efficiency in residential and commercial buildings. Through investing in energy-efficient appliances, building insulation, efficient lighting systems, and smart technologies, energy demand and electricity bills will be reduced.

Disbursements in Energy Efficiency by banks :



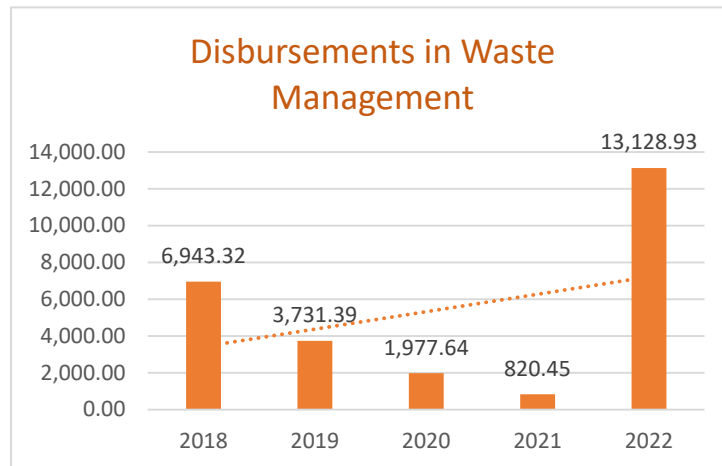
Source: Bangladesh Bank

We can see that financing for energy efficiency has also seen an increase during the period (2018-2022). The disbursement amount has increased sharply from 653.56 million in 2018 to almost 6700 million in 2022 which is the peak point. Although, in 2021, the disbursement amount witnessed a decrease, it again started to increase in FY 2022. The financing will help reduce the energy demands of the country which will be easier to achieve the target of generating gas from renewable sources and finally, this will lower the electricity bills.

4.3.3 Waste Management :

The development of waste-to-energy projects in Bangladesh can be supported by green finance. Waste-to-energy projects mean converting organic waste into renewable energy. Through the process of incineration, the organic wastes are turned into biogas. Besides, green finance can invest in waste collection systems, transfer stations, and landfill facilities. On the other hand, investing in circular economy initiatives that promote reuse, recycling, and recovery of materials can create more resource-efficient waste management in Bangladesh. We can say that investment in waste management ultimately affects the development of renewable energy in Bangladesh.

Disbursements in Waste Management by banks :



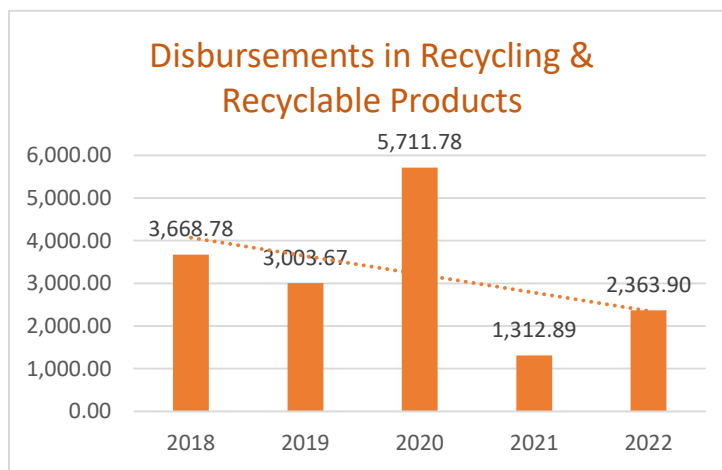
Source: Bangladesh Bank

In FY 2021, waste management saw the lowest disbursement throughout the entire period and the reason was COVID-19. Because of the emergent situations, banks were not ready to adapt to the situations and thus there was a downward trend in the disbursement amount. Later on, banks recovered from the COVID situation and the disbursement amount in waste management peaked at 13,128 million in FY 2022.

4.3.4 Recycling & Recyclable Products :

To make the collection of recyclable materials and sorting more cost-efficient, investments in recycling products play a crucial role. That’s how green finance drives resource recovery and product quality. Again, the circular economy initiatives come into the context as reuse, recycling, and recovery of materials will ensure the efficient use of resources. Through investments in recycling materials, green finance encourages the production of recyclable products.

Disbursements in
Recyclable
:



Recycling &
Products by banks

Source: Bangladesh Bank

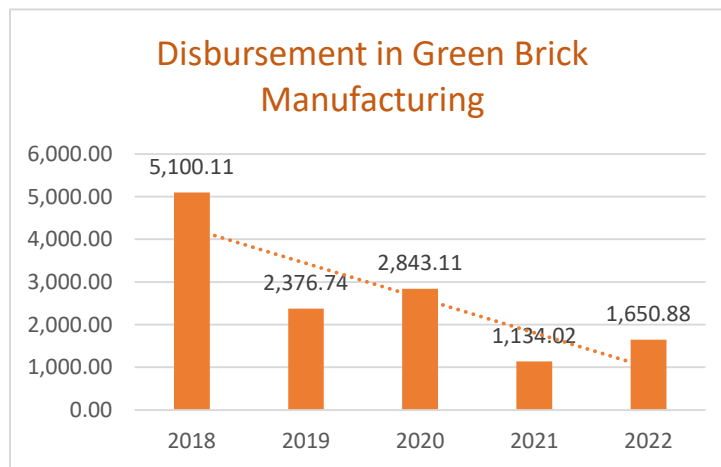
Although all the categories have seen an upward trend in the disbursement amount, it should be noted that disbursements in recycling and recyclable products have faced a downward trend. Throughout the period, the disbursement amount fluctuated and finally reached 2363.90 million takas in FY 2022 before peaking at 5711.78 million takas in FY 2020. It should be said that banks are yet to be recovered from the COVID impacts but the disbursement amount in 2022 is almost 1000 million higher than FY 2018. This can also be seen as a positive growth and the impact on economic development can be noticed.

4.3.5 Green Brick Manufacturing :

Energy efficient buildings reduce the energy demands and electricity bills and here comes the green brick manufacturing technologies. Green brick manufacturing technologies are more energy efficient and these technologies reduce greenhouse gas as well as energy consumption which will impact the investments needed for renewable energy in Bangladesh. Besides, green brick manufacturing will help companies increase productivity and this will in turn reduce the production cost. Traditional bricks use coal, wood, or biomass fuels whereas green brick manufacturing utilizes natural gas or better insulation. Thus, green brick manufacturing helps producers save money as they can get rid of using fossil fuels and bear the cost of fossil fuels which ultimately will improve the profitability of the producers driving the economic development of the country.

Disbursements in
Manufacturing by

Green Brick
banks :



Source: Bangladesh Bank

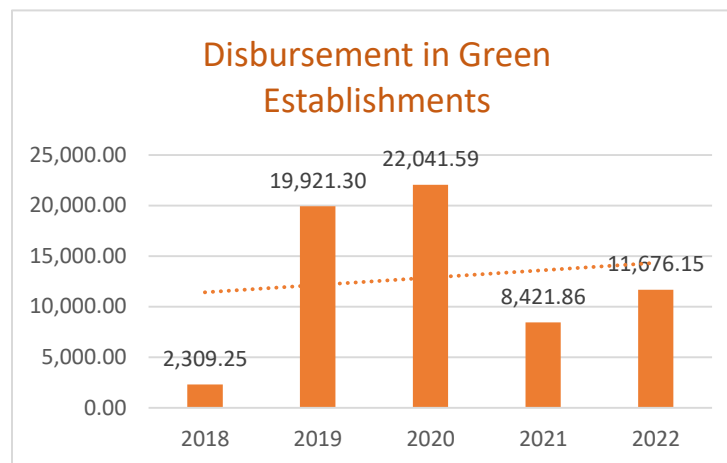
This is a matter of concern that, the disbursement amount in green brick manufacturing during the period has seen a downward trend, and the amount reached to lowest point in FY 2021 at 1134.02 million. In 2018, the disbursement amount was almost 5100 million which decreased by 5 times reaching nearly 1600 million in the final year (2022). Green brick manufacturing plays a vital role in reducing GHG emissions. So, the trend should be seen as a negative sign. As the bar

chart has slightly increased in FY 2022, it can also be said that the banks are slowly recovering from the disruption.

4.3.6 Green Establishments :

Green Buildings in Bangladesh will include investments in renewable energy, green agriculture, energy efficiency, green brick manufacturing, waste management, sustainable agriculture, etc. Green buildings in Bangladesh reduce energy consumption, lower water usage, improve air quality, and reduce carbon emission.

Disbursements in Green Establishments by banks :



Source: Bangladesh Bank

Financing in green establishments is similar to financing in green brick manufacturing because in FY 2021 and FY 2022, the banks are recovering from the COVID impacts and gradually the disbursement amount is increasing. But this should be noted that disbursement in 2018 was lowest in terms of green establishments which is not true for green brick manufacturing. The increasing trend from the year 2021 can bring hope for the country to move towards economic growth.

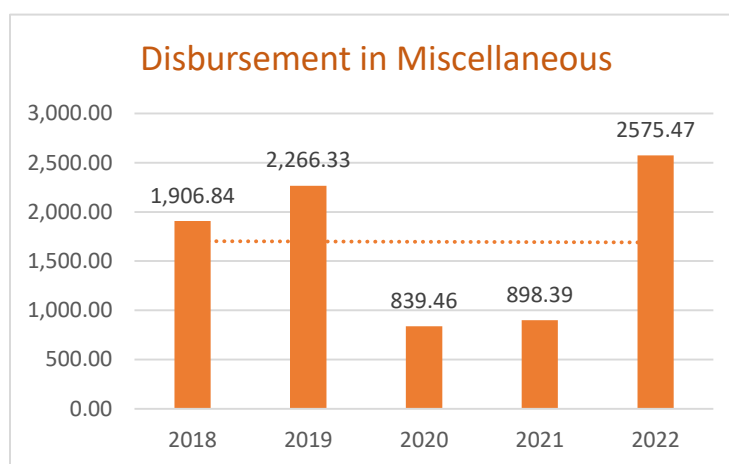
4.3.7 Miscellaneous :

Miscellaneous in green finance includes investments in sustainable agriculture, CMSME, and socially responsible finance. Sustainable agriculture leads to increased agricultural productivity and revenue. Higher revenue, on the other hand, contributes to food security and reduces the need for food imports which will increase the competitiveness of the agriculture sector of Bangladesh in local and international markets. Disbursements in CMSME will not only generate employment but also will generate income and contribute to poverty alleviation and inclusive growth. CMSME will contribute to the gross domestic product of Bangladesh. Furthermore, social equity and economic development are possible through socially responsible financing

which also empowers financial inclusion so that the unbanked population can build assets and invest in income-generating activities.

Disbursements in banks :

Miscellaneous by



Source: Bangladesh Bank

As miscellaneous means sustainable agriculture, CMSME, and socially responsible financing, the disbursement amount must show an increasing curve. Although the amount was lower during COVID times, the disbursement amount reached its highest point at 2575.47 million in FY 2022 which is a positive sign for the country and its economic growth. The more financing in these sectors, the more employment generation there will be, and the more the people of the lower-income countries will earn.

4.4 Category of Green Finance by Financial Institutions :

Now, we will discuss the FIs and see if a similar pattern is followed by the financial institutions or not.

Category of Green Finance by FIs (in Million Taka)					
Years	2018	2019	2020	2021	2022
Renewable Energy	111.51	215.2	101.14	107.72	716.29
Energy Efficiency	53.87	513.36	238.04	132.23	3,301.88
Waste Management	1,172.90	230	39.69	285	435
Recycling & Recyclable Product	80	242.69	0.35	121.17	17.39
Green Brick Manufacturing	837.95	221.26	5.98	0	0
Green Establishment	354	125	100	651.49	931.63
Miscellaneous	20	150	60	536.75	870.97

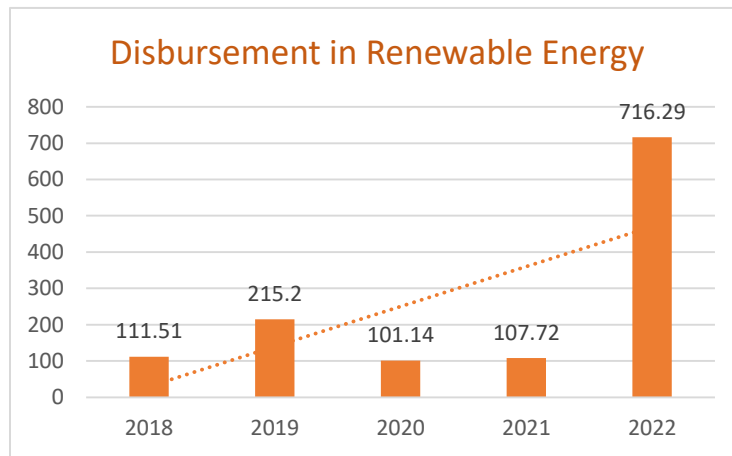
Source: Bangladesh Finance

So, other than waste management and recycling categories, the pattern was the same as the Banks because renewable energy, energy efficiency, green establishments, and miscellaneous

have seen a peak point in 2022. On the other hand, waste management financing reached its peak point in the year 2018 (1172.90Mn) which was in the year 2022 for banks(13128.93Mn). Green brick manufacturing was high in the year 2018 both for banks and FIs.

4.4.1 Renewable Energy :

The investment amount that is needed in terms of generating energy through renewables, financial institutions can support and play a significant role in terms of fulfilling the needed investment. Let us see the financing trend of financial institutions in renewable energy and their contribution towards economic development:

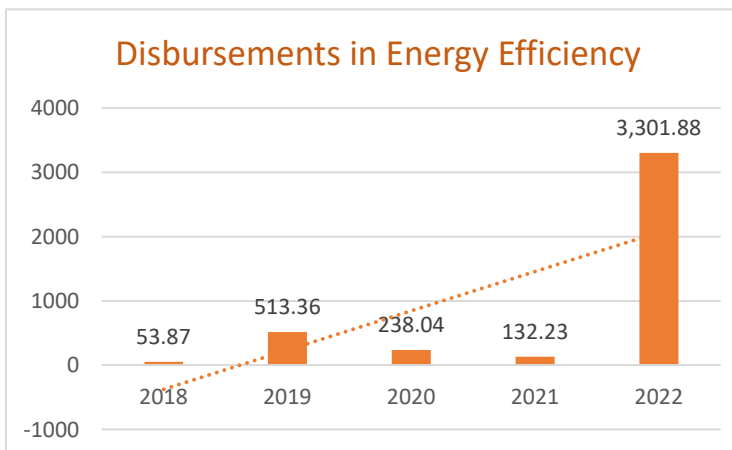


Source: Bangladesh Bank

The chart shows positive growth in the disbursement amount in renewable energy. Although, during COVID times, the financing was slowed down, it again started to increase in FY 2022 and reached its highest point at 716.29 million takas from only 111.51 million in 2018. Thus, financial institutions are playing a crucial role in terms of achieving the target of the Government of Bangladesh of generating 5% or 10% electricity from renewables.

4.4.2 Energy Efficiency :

Not only banks but also financial institutions are playing a vital role in reducing greenhouse gas emissions to achieve the goal of Net Zero Carbon emissions by 2050. How much contribution is coming from financial institutions in energy efficiency?

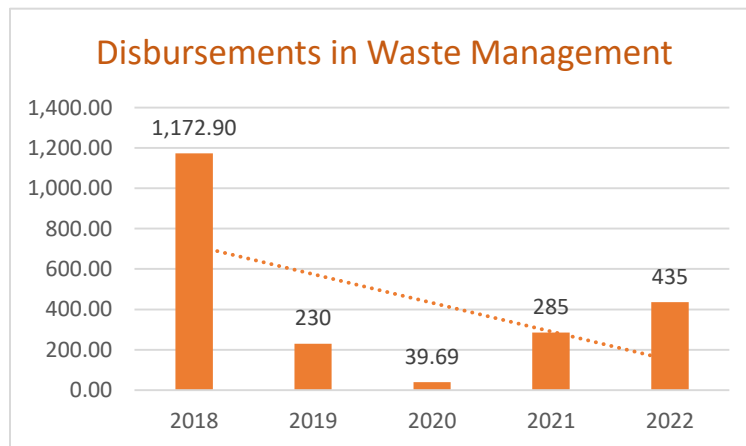


Source: Bangladesh Bank

We can observe that the disbursement amount by financial institutions is very low compared to the banks but it should also be noticed that financial institutions are doing far better than banks as they are improving more. The financing in energy efficiency increased from only 53.87 million takas to 3301.88 million takas in FY 2022 which is almost 3000 times higher than it was in five years earlier. So, we can say that financial institutions are moving forward in contributing towards the economic development of Bangladesh.

4.4.3 Waste Management :

We know that waste management indirectly affects investments in renewable energy. We need to analyze the financing amounts by financial institutions in waste management.

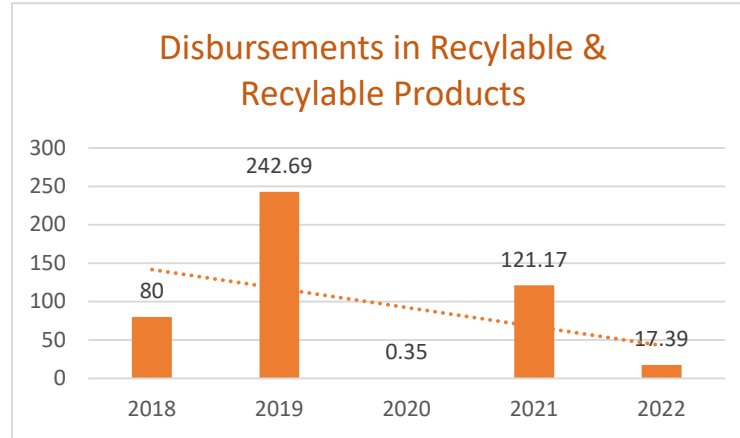


Source: Bangladesh Bank

It is a matter of concern that the disbursement amount by financial institutions in Waste Management has shown a downward trend which is not a positive sign. From the peak amount of 1172.90 million, the disbursement amount reached its lowest amount at only 39.69 million in 2020 during COVID-19 times. Later it is recovering from the COVID impacts and the disbursement amount is gradually increasing.

4.4.4 Recycling & Recyclable Products :

Investment in recycling encourages recyclable products. The more investments in recycling, the more the economy will be developed because resources can be optimized. Disbursements in recycling & recyclable products by financial institutions are given below :

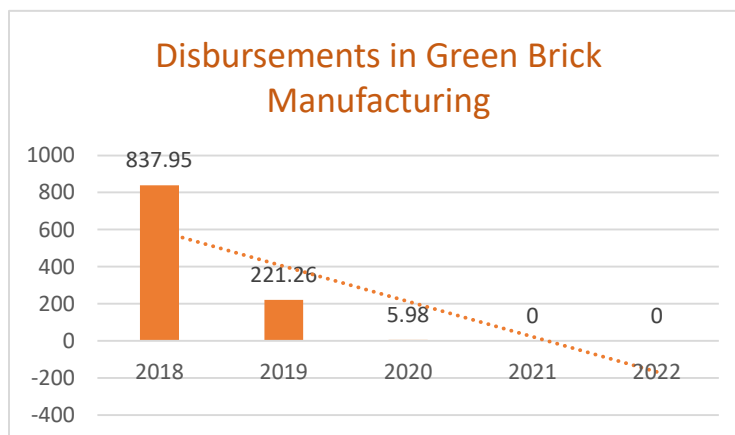


Source: Bangladesh Bank

There is a negative trend in the disbursement amount in recycling & recyclable products by the financial institutions. There was an abrupt decrease in the amount during COVID-19 times. Although it started to increase in FY 2021, it started to fall again in 2022 reaching 17.39 million. This is also noticeable that the amount reached its highest point in FY 2019 at 242.69 million takas. Recyclable products can optimize resources so financial institutions should disburse more in recycling & recyclable products.

4.4.5 Green Brick Manufacturing

A concerning scenario has been seen in the disbursement amount of green brick manufacturing by financial institutions. If we see the chart, we can see the abrupt change in the disbursement amount.



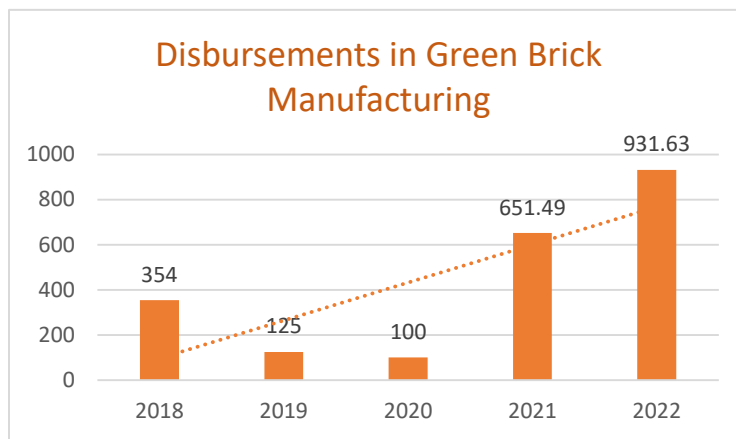
Source: Bangladesh Bank

We can observe that the financing has decreased from 837.95 million takas in 2018 to 0 million takas in 2022. Financial institutions don't finance green brick manufacturing in FY 2022.

This means that financial institutions are reliant on coal, wood, or biomass fuels just like the traditional bricks. This will enhance greenhouse gas emissions as well as impact negatively the climate.

4.4.6 Green Establishment :

Green establishments focus on green buildings and if we look around us, we can observe that companies are moving towards green buildings. This means that clients are more interested in green environments so it has become mandatory for banks as well as financial institutions to focus on investing in green establishments.



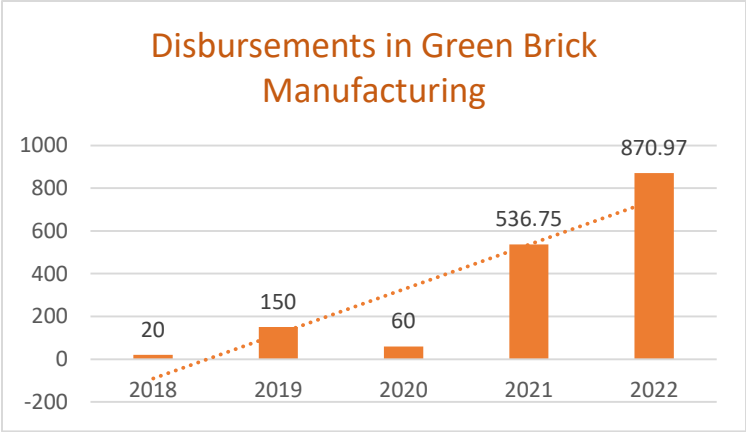
Source: Bangladesh Bank

We can see a positive sign in the disbursement amounts of green establishments by the financial institutions. The amount has increased from 100 million takas in 2020 to the highest amount of 931.63 million takas in 2022. This means that financial institutions have recovered from the COVID era and are disbursing or financing more in green establishments.

4.4.7 Miscellaneous :

We can see that Bangladesh is moving ahead in terms of sustainable agriculture, CMSME, and socially responsible financing. Customers are more interested in SRF for which banks and

financial institutions are also moving to financing in these areas. In the following, we will analyze the chart of the disbursement amount by the financial institutions in miscellaneous.

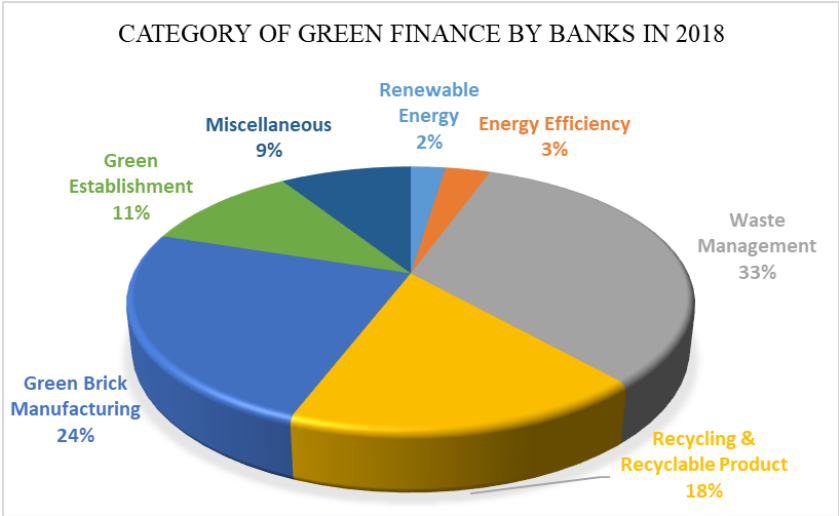


Source: Bangladesh Bank

The chart shows us that financial institutions are improving in terms of financing in green agriculture, CMSME, and SRF. This will lead to more employment as entrepreneurs will be increased. Also, this will lead to more revenues for farmers or people who do agro-business. This will in turn impact the economy of Bangladesh through increasing the GDP.

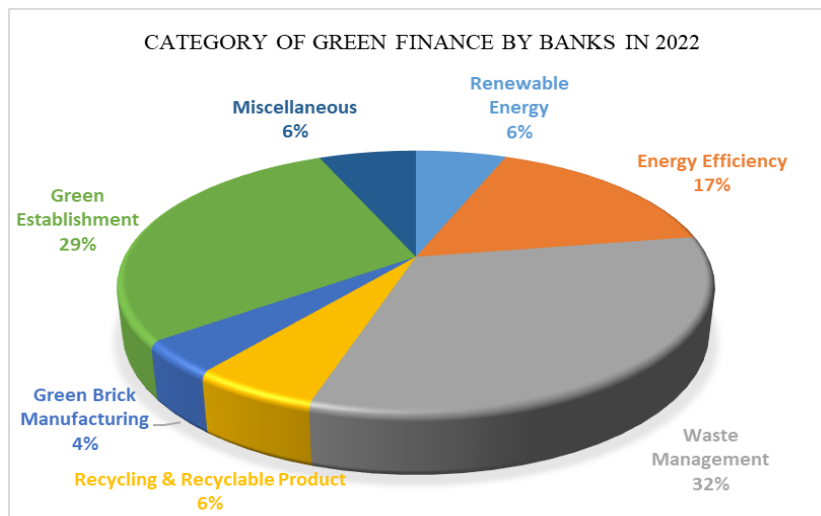
4.5 Comparison of Disbursements in Different Categories in FY 2018 & FY 2022 :

we need to compare the categories and find out which category, the banks and FIs focusing on while doing green financing and find out if it is on the right track or not. We have made a pie chart for different categories and have shown the percentage of financing in each category during 2018 and 2022.



Source: Bangladesh Bank

From the pie chart, it is visible that, the banks disbursed most of their green financing amounts to Waste Management in 2018. After that, the second green finance category is green Brick Manufacturing. Following this, the next category is Recycling & Recyclable Products. Subsequently, Green Establishments, Miscellaneous, Energy Efficiency, and Renewable Energy made it on the list. Although the country needs almost USD 19.2 to USD 37.2 billion in investment in renewable energy, the banks were not disbursing most of the money in renewable energy in 2018. Is there any change in the green financing in the year 2022? Well, we can find it out in the following pie chart:

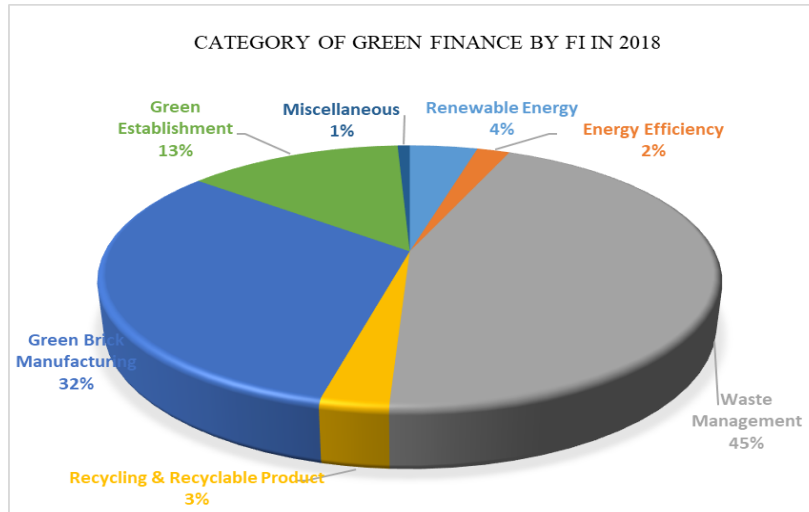


Source: Bangladesh Bank

We can see a slight change in the year 2022 as most of the disbursement made was in Waste Management as same as in the year 2018 but the least was made in green brick manufacturing whereas the least was Renewable Energy in 2018.

So, we can get a common view that banks are moving towards renewable energy financing to fulfill the needs of investments in renewable energy and reach the set target. We believe that the target will be achieved by 2030 if the banks keep working in favor of it and continue to contribute to a greener economy.

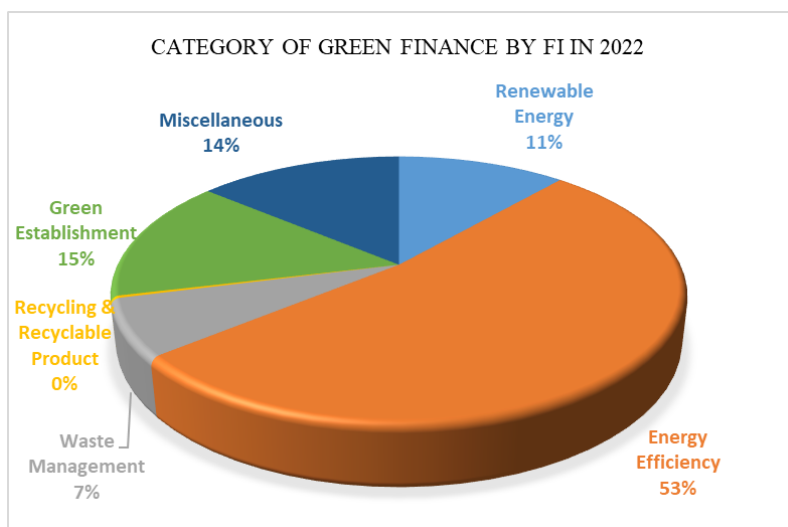
After discussing the disbursements by banks, we need to find out the scenario of financial institutions. It needs to be disclosed that, financial institutions lag when it comes to disbursements as their amount is very lower in terms of banks. First, we will analyze the disbursements for the year 2018 and then for the year 2022.



Source : Bangladesh Bank

From the chart, it can be explained that the financial institutions have made most of their financing in Waste Management in 2018 which is similar to the banks. The next green finance category was green Brick Manufacturing, then Green Establishment, Renewable Energy, Recycling & Recyclable Products, and finally in Miscellaneous.

Although banks focused on recycling more in 2018, FIs focused more on Green Establishment. After Waste Management and Green Brick Manufacturing, FIs disburse more money in Green Establishments but banks did focus on Recycling & Recyclable Products. For the FIs, the Miscellaneous accounted for the lowest proportion among all the other categories in 2018 whereas it was Renewable Energy for the banks. To analyze the improvements of FIs, we must observe the data of 2022. To achieve the targets of climate change in Bangladesh, how effective were the FI's 2022 green investments and finances? The pie chart for the year 2022 is given below :



Source : Bangladesh Bank

In 2022, the financial institutions of the country moved to the financing to Energy Efficiency as it comprised 53% of the disbursements. They are more focused on Green Establishments, Miscellaneous (Green Agriculture, Green CMSME, and Green SRF), and Renewable Energy whereas Waste Management accounted for only 7%. Furthermore, disbursements in Recycling & Recyclable Products were only 17.39 million. Green Brick Manufacturing had no disbursements in 2022. It can be said that the FIs are not as contributing to the green growth as such as the banks. So, Banks are ahead of financial institutions in terms of contributing to a greener economy and contributing to a sustainable future. This should be noted that, for electricity generation from renewable sources, financial institutions are playing a major role in 2022 than banks. Although banks disbursed more money it was less if we take into account all the other categories.

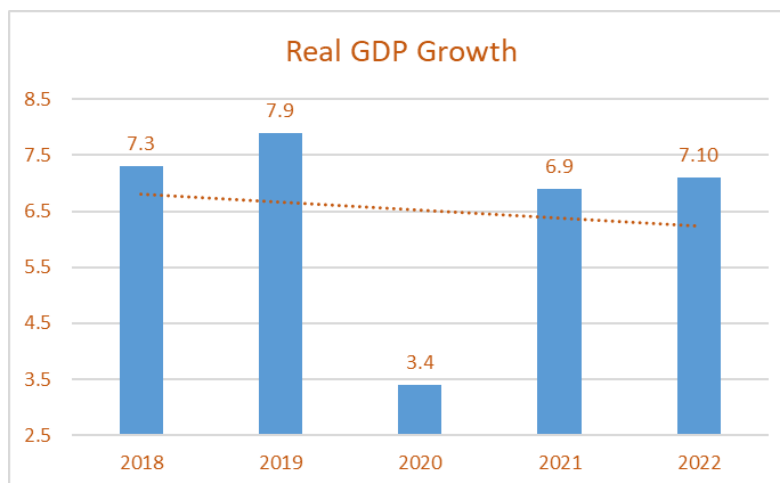
Key Points to be Noted:

- 1) It can be said that banks were not that much interested in financing renewables in 2018 which is not true in the case of financial institutions. For financial institutions, it is the Recyclable Products and Miscellaneous where they should have been interested back then along with other categories.
- 2) For the year 2022, banks were more focused on financing waste management and disbursed only a small amount of money to renewable energy in terms of all the other disbursements. Financial institutions are moving towards financing in Energy Efficiency and Green Miscellaneous (Green Agriculture, Green CMSME & Green SRF).

Chapter 5: Contribution of Green Finance on Macroeconomic Factors

5.1 Real GDP Growth :

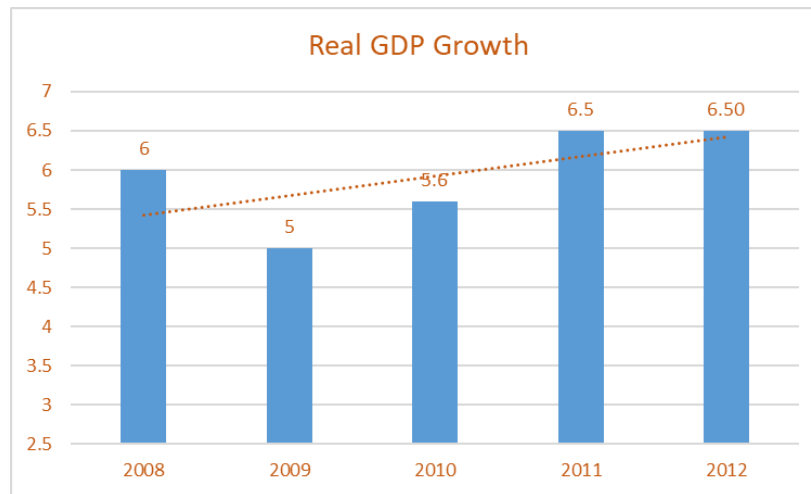
There is an increase in the country's GDP from 2018-2019. In 2020, Bangladesh faced a downward trend in the growth which again started to increase in the following years and reached its highest point at 7.10 in 2022. It should be highlighted that the government's 28 stimulus packages totaling BDT 2 trillion—roughly 5.68 percent of FY 2021's current GDP—to lessen the negative effects of the COVID-19 pandemic on Bangladesh's economy have sped up the country's economic recovery. By providing working capital loans and extending various refinance facilities for agribusiness, CMSME, big enterprises, and export-oriented industries, Bangladesh Bank has played a crucial role in the implementation of various stimulus packages through a range of complementary and supportive policy measures. Bangladesh Bank has taken on the task of carrying out the government's ten main stimulus plans, which total approximately 1.7 trillion, to offset the disruptions caused by COVID-19.



Source: World Bank

Due to Covid impacts, Bangladesh has faced the lowest GDP since 2018 in the year 2020. We all know that Bangladesh has yet to graduate from the least developed countries. In this perspective, the country has been doing better in recent times. Recovering from covid impact has been one of the biggest challenges for Bangladesh. But this should be a proud matter that the country is doing better after the year 2020 as GDP has reached 6.9 in 2021 and 7.10 in 2022.

Now, we must see the GDP rate of Bangladesh before it starts to take into account the green finance concept in its activities. Suppose, we will analyze the GDP of Bangladesh from 2008 to 2012 when green finance was not so popular in Bangladesh. We can then analyze if the country was doing better before doing any green financing or if it is doing better now when it is moving towards the green financing era.



Source: World Bank

From the charts, we can observe that Bangladesh’s GDP reached a peak at 7.9 in the year 2019 just before dropping to 3.4 in the following year during the COVID-19 times. Besides, the GDP was higher in the late years when the country started financing green projects. The GDP was lower in the years before 2012 because Bangladesh Bank had no guidelines regarding green financing and the term was not so popular at that time.

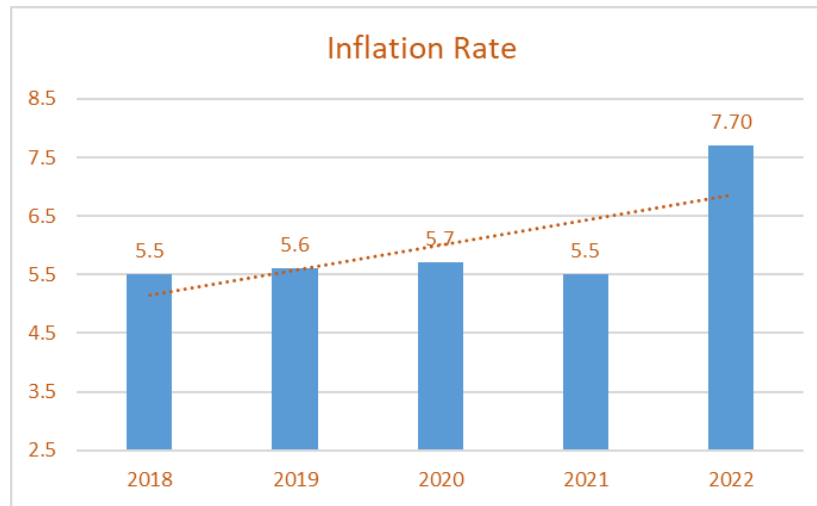
Green finance can improve the economy by impacting the GDP of the country. The green finance or green bond market will impact the development of the economy by moving towards consuming clean energy. On the other hand, green financing will help the economy move towards renewables, focus on waste management, recyclable products, green establishments, and green brick manufacturing. The movement towards sustainability can cause the economy to stand during bad times such as the Covid-19 era. To adapt to any challenging situation, an economy should move to handling sustainable projects. At the same time, employment will increase as banks and financial institutions will provide favorable interest to the entrepreneurs or the corporates handling green projects such as green CMSME, green agriculture, and green SRF. Investments will increase due to the financing of green projects and it will impact the GDP as the four factors of GDP include, consumption, investment, government spending, and export.

5.2 Inflation & NPL :

On the other hand, inflation will impact negatively the GDP and the economic growth of the country. Focusing on the green economy can make the country go up and even if there is inflation, the country will not face any disruptive situation. Greater global energy and commodity prices, coupled with lingering supply disruptions, have caused greater inflation in Bangladesh. Throughout FY 2022, the CPI-based average inflation rate increased and reached 5.99 percent in May of that same year. The cause of the inflation was a large rise in the price of both food and non-food items, primarily due to the pass-through of higher global commodity

prices in the face of supply disruptions, increased shipping costs, and the domino effect of rising domestic fuel prices, such as those of kerosene and diesel.

The inflation will reach higher in the next years because of the Russia-Ukraine war, the Israel-Palestine war, and elevated global commodity prices. On the other hand, a sharp increase in the inflation rate of India will cause an upward risk to the inflation outlook of Bangladesh as India is one of the largest trading partners of Bangladesh. At the same time, energy prices have created pressure on the price of non-food commodities because of the increased cost of production and transportation.



Source: World Bank

The present global commodity price hikes because of the geopolitical conflicts will create inflationary pressure in the domestic economy as well as in the world economy. The inflation pressure is one of the causes of the increasing NPL ratio. Countries like Bangladesh are still developing and not ready to adapt to any situation in a proper manner which people in the country will face difficulties while returning the loan money to the banks and financial institutions.

NPL Ratio of Banks					
Years	2018	2019	2020	2021	2022
	10.3	9.3	8.1	7.9	8.16

Source : DOS, BB; compilation: FSD, BB.

Although the NPL was higher in 2018 and decreasing till 2021, it started to showcase an upward trend in 2022 which can bring disruptions for the banks. Most of the NPL is Bad & Loss which is even worse. The situation is even worse in the case of financial institutions. If we look at the chart below. We can observe the scenario of financial institutions in terms of non-performing loans.

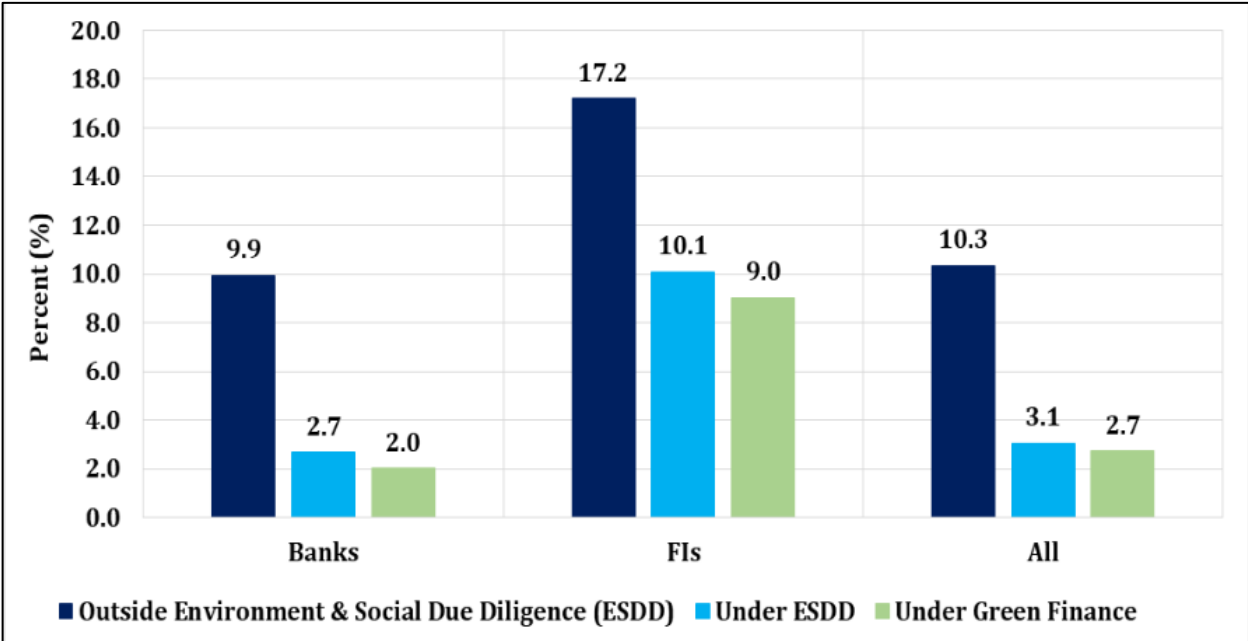
NPL Ratio of FIs					
Years	2018	2019	2020	2021	2022
	7.9	9.5	15	19	23.8

Source : DOS, BB; compilation: FSD, BB.

NPL ratio has increased straight from around 7.9 to almost 23.8 in 2023 which tripled throughout the years.

What green financing will do in terms of the lower deposit scenario and the higher NPL scenario? It has been noticed that the NPL ratio for the loans provided to the green projects is lower in terms of other loans. This means the green projects are better off repaying their loans.

This is noticeable that the NPL rate for sustainable green projects remains under 1% throughout the entire period. From a recent survey made in the year 2022 for the period of July-September, 2020, it has been noticed that the NPL rate on regular loans was 10.3 % whereas the NPL rate was 2.7 for green finance projects. It should also be mentioned that the NPL rate for loans disbursed to the projects that went through environment and social due diligence (ESDD) was 3.1. Since then, the rate has decreased and the news has been collected from the Sustainable Finance Department (SFD) of Bangladesh Bank.



NPL Rates for the year 2020 till September

Source: QRRSF, July–September 2020.

From the chart, it can be said that all the banks and FIs should be encouraged to finance more green projects so that they can handle their unstoppable NPL rate and the rate becomes stable.

When banks and financial institutions will be able to maintain the NPL rate, the situation of banks and FIs will get better which will impact on the economy of the country.

5.3 Green Investment Related Opportunities

The green growth document prepared by the World Bank has declared that Bangladesh requires \$200 billion in climate action financing in the next two decades which means climate-related investments need to be increased. To sustain Bangladesh's economic growth, the country is moving towards greening its energy, manufacturing, waste management, transportation, and agriculture systems. A 2018 World Bank estimate, identified that Bangladesh faces an economic loss of almost 6.5 billion per year due to environmental degradation, and the amount is almost 3.4 % of the country's GDP. Every \$1 million investment in green energy results in greater employment generation whereas fossil fuel generates fewer employment opportunities.

If we look at the European Union, we can see that a \$1 investment in green projects means the GDP will be boosted by up to \$1.50 across the region. That's why China, the US, and Germany became the leaders of these stimulus programs. We can expect similar consequences in Bangladesh. Thus, the more investments are in green projects, the more the GDP will increase, and the more the economy will be developed. (TITU DATTA GUPTA, 2024)

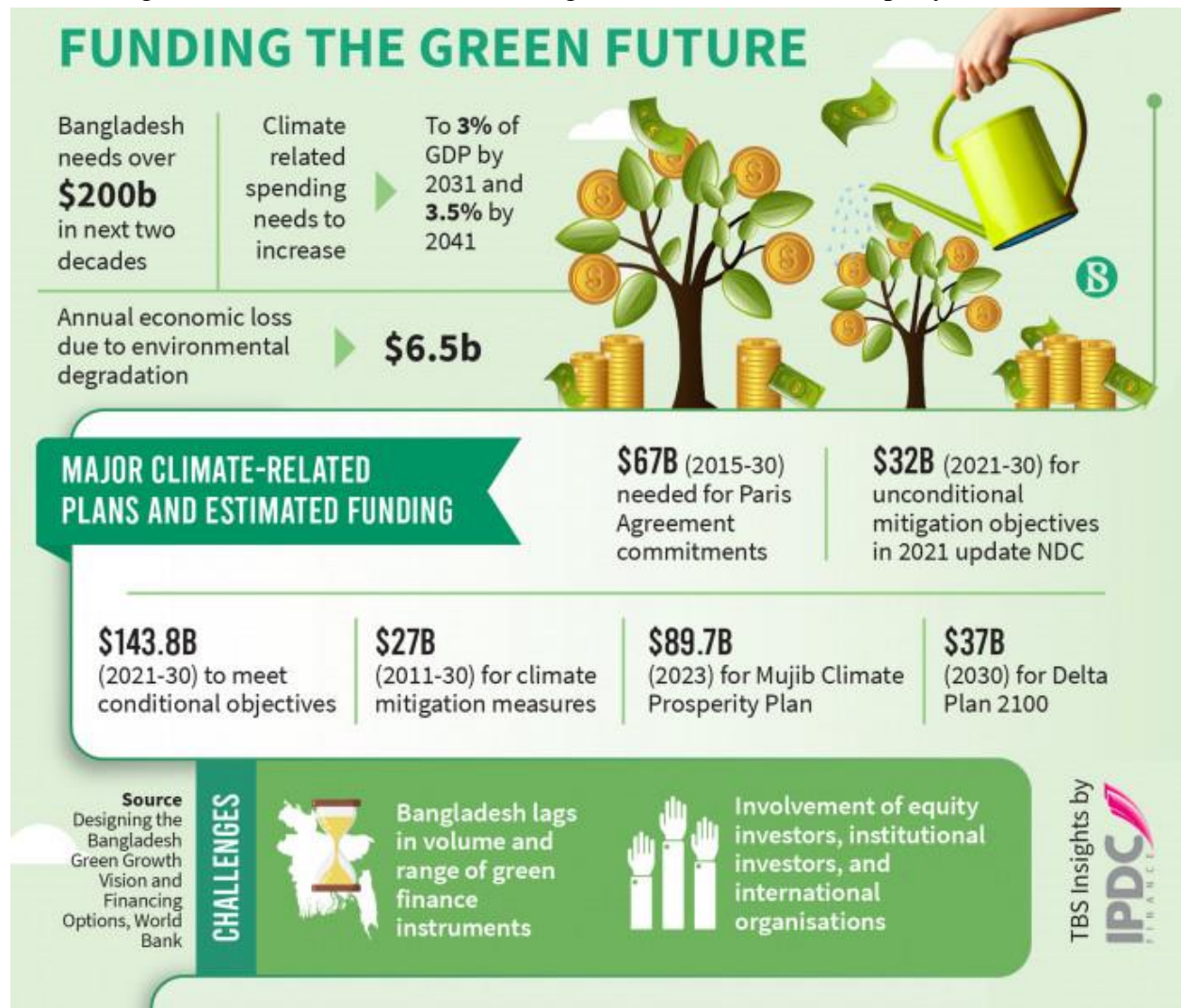
From the World Bank's 2020 report, it has been identified that Bangladesh needs at least \$27 billion for 2011-2030 for climate mitigation measures. On the other hand, \$67 billion is needed to meet the Paris Agreement Commitment.

It objects that billions of dollars will also need to be invested in additional plans and initiatives. Bangladesh has a "myriad of plans and initiatives" that will require significant economic resources, like the Mujib Climate Prosperity Plan requiring \$89.7 billion by 2030, the Bangladesh Country Investment Plan for Environment, Forestry and Climate Change \$11.7 billion, and the Delta Plan 2100 costing around \$37 billion in its first phase until 2030, the report adds.

Furthermore, with the support of development partners, the central bank has set up different green funds at low-interest rates and supported a series of green refinancing schemes. The \$200 million Green Transformation Fund for Export-oriented Industries and the \$50 million Asian Development Bank Brick Kiln project are also part of this.

Because of the structural weaknesses in its banking system, Bangladesh is lagging behind other emerging markets and developing economies when it comes to the volume and range of green finance instruments. Green finance accounted for 4.41% of total disbursements of term loans, an average of 7% in emerging markets, for the year 21. Even if banks were to meet the green

finance target, this would amount to financing of around \$600 million per year, a small dent in



the financing gap, according to the World.

Bangladesh needs to encourage international finance into green industries and products through regulations. Bangladesh needs to encourage international finance into green industries and products through regulatory changes. Apart from indirect funding, Bangladesh should review its tax system in terms of promoting clean energy and green industries to move towards a sustainable nation and promote a green economy.

Source: tbsnews.net (TITU DATTA GUPTA, 2024)

Chapter 6: Recommendation & Conclusion

6.1 Recommendation

The precondition for investment in different sectors such as transport is stable power generation, Infrastructure, agriculture, water, and waste management is stable power generation. The recent energy crisis has aggravated the situation. Countries to develop their responses and reach a certain degree of independence in the production of electricity. Furthermore, the crisis of energy may lead to macroeconomic instability since energy is a key element in production and economic growth. Growth, however, is not sustainable if it does not improve welfare and inclusiveness. Investment in renewable energy is beneficial not only for human health but also for the natural environment. That's why investment in renewable energy as well as other green projects should be increased by the government. The Government of Bangladesh has set some targets regarding green projects such as at least 5% financing in green projects, generating 10% electricity from renewable sources, reducing CO₂, and moving forward to Net Zero Carbon emissions by 2050.

The report puts forward the following recommendations based on the targets set by the government and investments needed by Bangladesh:

- 1) **Mobilizing Funds:** The GOB should declare renewable energy sources projects under SREDA as fast-track projects and mobilize financial and technological assistance which can contribute to increasing the share of renewable energy in the energy mix. As a matter of fact, in this context to improve the situation of Bangladesh, as part of the Millennium Implementation program priorities, the EU may help in mobilizing funds so that the institutional capacity of the SEDRA can be improved.
- 2) **Setting up refinancing facilities for green growth:** The size of Bangladesh Bank's refinancing scheme should be enhanced and the development partners can cooperate on the mobilization of additional funding for green financing. Bangladesh The establishment of environmentally friendly buildings and homes is an essential part of the Bank's refinancing system. In Bangladesh, renewable energy plants. In addition, against the financing of green investment projects, the rate of NPLs is very low in comparison with regular loans. Therefore, there is a need to improve the Bangladesh Bank's refinancing scheme. It is, however, necessary to recognize that the implementation agency is Bangladesh Bank in respect of this refinancing agreement. The Bank of Bangladesh does

not initially mobilize the Fund. Rather General Economics Division (GED) Bangladesh deploys these relatively low-cost funds within the Ministry of Planning. By talking to the development partners.

Besides, there should be a synergy between the development and climate projects because the global resources are moving towards the climate-smart funds. This will help to negotiate better with the partner organizations.

- 3) **Policy Improvements:** The Government of Bangladesh needs to address some of the key policy issues to promote green financing and sustainable development (Hossain m. , 2018) such as :

- ⌘ The Capacity Building of Banks & Financial Institutions.
- ⌘ The development of bond and equity markets.
- ⌘ A well-coordinated policy oversight body.
- ⌘ Mainstreaming Green Finance.

- 4) **Develop Bond Market:** The government of Bangladesh (Gob) should prioritize a strong bond market so that financing green projects becomes easier. At present, the bond market size of Bangladesh is around \$17.5 billion. These bonds are mostly government debt securities and capital bonds which are issued by banks and financial institutions. Usually, the bond market supports the long-term public sector projects in the countries that are developing. But the scenario is different in Bangladesh. Bangladesh's bond market is facing lacking capacity to deal with long-term projects including green projects. In Bangladesh, green establishment financing is dependent on term loans from banks and financial institutions or Bangladesh Bank's refinance scheme. Although the government has introduced green bonds in the country, banks and financial institutions are not finding any interest in these green bonds. Bangladesh Bank should give proper guidelines on green bonds so that it can attract investors as well as potential beneficiaries.

- 5) **Encourage International Finance:** The Government of Bangladesh needs to encourage international finance to the green projects of the country and green products to promote a green economy. The government can do this by changing the regulations.

6.2 Conclusions :

Bangladesh is expected to graduate from the United Nation's Least Developed Countries (LDC) list in 2026. The poverty rate reached 5.00 percent in the year 2022 which was 11.8 percent in 2010 and the human development outcomes improved.

Compared to the average yearly growth rate of 6.6 percent during the ten years before the COVID-19 pandemic, real GDP growth is predicted to remain somewhat muted in FY24, at 5.6 percent. Growth in private consumption is anticipated to be hampered by persistent inflation, and investor mood is anticipated to be deflated by energy and imported input shortages, rising interest rates, and financial sector vulnerabilities. Over the longer term, growth is anticipated to rise steadily as changes are made to the financial sector, and monetary, and exchange rate policies.

Bangladesh needs to boost human capital and develop a skilled labor force, build efficient infrastructure, create jobs through a competitive business environment, and create an environment that attracts private investment if it hopes to reach its goal of becoming an upper middle-income nation by 2031.

Bangladesh needs to focus most on green financing to fulfill the demands of the people and achieve the target set by the government. To fulfill the goal of generating 10% electricity from renewable sources, green financing will play a vital role. On the other hand, to establish green buildings and fulfill the Paris Agreement Commitment, the importance of green financing cannot be described. Besides, Bangladesh's GDP has been disrupted due to some macroeconomic challenges. It should be mentioned that, if the country takes a step towards sustainable development, then it would be easier for the nation to sustain itself for a long period and the abrupt COVID situation will not hamper the country and its GDP.

We have seen that banks and financial institutions are focusing on investing in green projects. But there are categories where they have lowered their investments whereas there are some categories such as renewables where they have increased their investments. In 2018, banks were financing green brick manufacturing whereas in 2022 they shifted to waste management. For financial institutions, it was waste management in 2018 that was their top financing category and in 2022 it became energy efficiency and renewable energy.

On the other hand, the NPL rate of loans has always been higher but through our research and observation, we can say that the NPL rate is lower for green projects. So, if the country focuses

more on green projects, then banks and financial institutions will face lower NPL and this will enhance the situation of the banks and FIs which will ultimately impact the country's economy. At the same time, financing green projects will encourage sustainable agriculture and CMSME. Thus, the projects will generate employment opportunities as well as more yields for the farmers. As a result, the per capita income will grow and the economy will be developed.

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