

---

# “Green Finance towards Achieving SDG14 - An Overview of the Challenges & Opportunities in the Context of Bangladesh”

Shakina Sultana Pomi<sup>1</sup>, Mohammed Abul Hasnath Somaul Haque<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Business Administration, Southern University Bangladesh, Chattagram, Bangladesh

<sup>2</sup>Research Fellow (PhD), Institute of Marine Sciences, University of Chittagong, Chattagram, Bangladesh

DOI : <https://dx.doi.org/10.47772/IJRISS.2024.804291>

Received: 23 March 2024; Accepted: 03 April 2024; Published: 25 May 2024

## ABSTRACT

Green Finance, alternatively Sustainable Finance, is one of the fastest growing economic sectors in the world now a day. This paper provides an outline of green financing status of Bangladesh, endows with a portrayal on the different sources of green finance available in Bangladesh, provides an insight into the green finance landscape in the country in general and represents the challenges and prospective for greening growth of Bangladesh towards achieving SDG14. Greening the economy involves improving environmental quality and combating climate change which poses political, economic and financial challenges. Major challenges are about financing climate protection and climate change adaptation and how we can fill the funding gap. The goal of SDG 14 is to prevent and reduce ocean pollution, promote sustainable management and protection of marine and coastal ecosystems. Green finance faces many challenges as such in achieving SDGs created a huge financial gap in Bangladesh. This requires the mobilization and use of a variety of financial sources, including domestic revenue, development assistance, private sector investment, and public-private partnerships. The global economic downturn, violent conflict in some countries, biodiversity loss, water, dry land, forest degradation, and climate change pose challenges to peace and prosperity. Due to lack of capacities of banks and financial institutions, the lack of a proper understanding of the risks and returns of green projects, and the underdeveloped equity and bond markets decelerating the expected growth of green projects in Bangladesh. Lack of coordination among the respective agencies, poor financial governance, and the absence of a national policy oversight body and mainstreaming green finance toward SDG14 are some of the key policy issues that Bangladesh needs to address and to promote green financing to achieve sustainable development goals (i.e. SDG14) for reinstallation of coastal and marine ecosystem.

**Keywords:** Green Finance, Sustainable Development, Ecosystem, SDG14

## INTRODUCTION

Green finance (or Sustainable Finance) is a developing concept and a new paradigm of finance in the context of sustainable development in Bangladesh. Being one of the innovative and fastest growing economic sectors in the world, green finance intensively sustainable finance has been continually expanding and diversifying over the past decades, to foster economic growth, to conserve and sustainably use the oceans, seas, and marine resources, and environment at all levels for the attainment of all the 17 goals of the SDGs. Green finance keenly Climate finance aims at reducing emissions, and enhancing sinks of greenhouse gases and aims at

---

reducing the vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts (United Nations Framework Convention on Climate Change [UNFCCC], 1992).

The biodiversity of the Asia-Pacific region is the most important for providing food, water, energy, and health security, as well as cultural and spiritual fulfillment to its 4.5 billion inhabitants (Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services [IPBES], 2018). The average annual growth rate in world production of aquatic animals was 5.8 percent in the period 2001–2010 and 4.5 percent in the period 2011–2018. Despite the slow growth at the world level, a high growth rate in the period 2009–2018 was still observed in a number of countries, including major producers such as Indonesia (12.4 percent), Bangladesh (9.1 percent), Egypt (8.4 percent) and Ecuador (12 percent) (Food and Agriculture Organization of the United Nations [FAO], 2020).

But, in recent decades, the ecosystem is reported to face a number of challenges derived from both natural and anthropogenic sources that put pressures on the sustainability of the social and ecological system, which would likely be a potential threat to the coastal & marine ecosystem. The polluting industries discharge their liquid effluents and solids wastes into the adjacent canals, rivers, estuary, and finally into the Bay of Bengal (Kaly, 2004). Industrial untreated wastes deteriorate the water quality as a result of which pH, DO, BOD, Cu, Zn, Pb, Turbidity, EC, TSS, TDS, etc. are crossing the permissible limit which is detrimental to the aquatic animals and unplanned expansion of industrialization have a lethal effect on the fish and fishing community (Bhuyan et al., 2016 & Bhuyan et al., 2017). A wide range of marine organisms ingested plastic granules, which ultimately finds their way into the human body through the food chain (Bhuyan et al., 2019). Plastic materials accounts for 85 percent of marine litter and warns that by 2040 volumes of plastic pollution flowing into marine areas will nearly triple (United Nations Environment Programme [UNEP], 2022). Unless action is taken, it is estimated that there will be more plastic than fish in our oceans by 2050 (World Business Council for Sustainable Development [WBCSD], 2021). Given that ship breaking activity started, quantity, variety and size of the fish have decreased, taste has changed, while a number of species have disappeared compared to their earlier times, fish catches has decreased up to 50% (Demaria, 2009). Impacts of changing climate may be detrimental to the wide range of coastal and marine habitats that may limit their services to human wellbeing and overall growth and development such as reducing the potential fish production, use of fossil fuels causing environmental degradation (Fernandes et al., 2016). Another additional global problem is Ocean acidification that can affect the coastal and marine living resources of Bangladesh (Hossain et al., 2015).

The 2030 Agenda for Sustainable Development (Agenda 2030) contains 17 Sustainable Development Goals (SDGs) that are integrated and linked together (United Nations Environment Programme [UNEP], 2015). There are numerous benefits esteemed from Green Finance-related activities on the apprehended host destinations. Particularly, green finance, green investment, and green bonds can directly support SDGs 6, 7, 9, 11, 13 14 & 15 (Asian Development Bank [ADB], 2020). The other SDGs having targets with direct and indirect implications to the Goal SDG14 are Goals SDGs 1, 2, 6, 7, 8, 9,10, 11, 12, 13, and 15.

Hence, it is inevitable to embark upon an urgent need for green finance in transformation in coastal and marine governance that will focus on restoring ecological diversity as well as fostering a blue economy in the Bay of Bengal in achieving and accelerating the Sustainable Development Goals (SDGs) specially SGD-14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

### **Objectives of the Study:**

It is increasingly recognized the role of green finance as a vital contributor in achieving sustainable

development goals (SDGs). Transformation in coastal and marine governance is vital as well as fostering the blue economy in the Bay of Bengal in achieving and accelerating the Sustainable Development Goal SDG14. Major objectives of this research were as followings:

- i. To evaluate the nature & extent of Green Finance initiatives of banks in Bangladesh.
- ii. To outline the challenges & potentials of Green Finance in achieving SDG14 in the context of Bangladesh.

## LITERATURE REVIEW

Sustainable economic growth, sustainable banking, green banking, and green finance are becoming increasingly popular among academics, researchers, and practitioners. The financial sector is regarded as an essential component of the economy, serving as a potential link between long-term economic growth and environmental conservation. Life below water, global climate change, and conservation of biodiversity are now the world's most recent issues. This section reviews some of the important literature relevant to the present study.

Kreft et al. (2016) reported that the carbon intensity of economic output has declined substantially in most developing Asian economies over the last decades. Bhuyan et al. (2016) carried out a study to determine the effects of industrialization on fish and fishing community and found significant positive correlation and moderate positive correlation between the metals (Zn, Al, Cd, Pb, Cu, Ni, Fe, Mn, Cr and Co) in fishes, water and sediment. Bhuyan et al. (2017) conducted another research on the impacts of Industrial untreated wastes on the water quality that exhibits beyond permissive level of pH, DO, BOD, Cu, Zn, Pb, Turbidity, EC, TSS, TDS, etc. which is harmful to aquatic animals. Bhuyan et al. (2019) in another study outlined that micro-plastic pollution of the oceanic environment is a growing global problem that has a great impact on the marine organisms as well as on human health as circulated to the human body via the food chain.

Islam et al. (2021) conducted field research to investigate the effects of salt marsh restoration and some eco-engineering activities on the climate change impact mitigation and community adaptation in the coastal environment of Sonadia Island, Cox's Bazar, Bangladesh. It is evident from the study that the salt marsh restoration site (SMRS), which was controlled and managed with some artificial inputs showed elevated levels of plant height, biomass, shoot density, sedimentation, and carbon assimilation and the findings could be helpful for the protection of the coastal environment as well as mitigation of climate change impact that will ultimately save the local community from natural calamities in the long run. Gerster (2011) addressed the environmental, social and governance (ESG) impacts of financial services.

Nikolakis et al. (2012) recognized that the interdependencies between finance and sustainable development are most commonly analyzed in the context of ESG risk and integrating non-financial factors into business practices. Jeucken (2004) affirmed that financial institutions are often significant actor toward sustainable development. Chien et al. (2021) acknowledged that the green economy is one of the most effective strategies for resolving destruction of the environment and climate change issues and promoting recycling of economic capital, economic development and environmental protection. Bhuyan et al. (2018) & Failler et al. (2021) also studied on the significant role of ocean to foster the Blue Economy in Bangladesh. Bir et al. (2020) revealed that one of the important components of the blue economy for Bangladesh is the marine fishery as the Bay of Bengal is considered as a potential ground for the natural growth of various fishes.

Shao et al. (2020) established the relationship between green finance, carbon intensity and non-fossil energy

consumption in China based on a Vector-Error Correction Model (VECM). Berensmann & Lindenberg (2016) accomplished that green finance incorporates a sustainable eco-friendly financing procedure to keep the environment in balance. Zhang et al. (2022) showed that CO<sub>2</sub> emissions in the environment are reduced by green finance, renewable energy investment, and technological innovation. Höhne et al. (2012) disclosed that Green finance refers to the financial investments flowing into sustainable development projects and initiatives, environmental products, and policies that encourage the development of a more sustainable economy.

## **RESEARCH METHODOLOGY**

To examine the problems and potentials of Green or Sustainable Finance and its impact on Coastal and Marine Environment to achieve SDG14 in the context of Coastal Bangladesh, the study use secondary data fetched from UN Data, UN e-Government Knowledge Database, UN Global SDG Indicators Database, UN SDG Data Hub, UN System SDG Implementation Database & Voluntary National Reviews Database, UN-DESA, FAO of the United Nations, Bangladesh Bank and different green projects/industrial unit of Bangladesh. The study involved identifying risks and challenges, as well as opportunities for green finance. The methodology used in the article is based on descriptive and comparative analysis, interpretation of realities, and identification of the trends in the field.

## **DISCUSSION ON THE PRESENT STATUS, CHALLENGES & OPPORTUNITIES OF GREEN FINANCE FOR ACHIEVING SDG14 IN THE CONTEXT OF BANGLADESH**

Most of the industrialization & urbanization attempts in Bangladesh have been taken along the bank of the rivers and estuaries and through the coastal belt of the Bay of Bengal. Due to a lack of sustainable inventiveness, adequate regulatory measures, and institutional setup towards proper monitoring and control of pollutants, municipal, industrial, and agricultural waste enter into the inland & estuarine water system and finally into the Bay of Bengal and poses a threat to the coastal and marine biodiversity.

Being one of the major sources of financing for industrial projects such as steel, paper, cement, chemicals, fertilizers, power, textiles, etc., which cause maximum carbon emission, the banking sector thus can play an intermediary role between economic & social development and environmental protection, for promoting environmentally sustainable and socially responsible investment (Azad & Islam, 2022). Although the idea of green finance is still under development in Bangladesh, it has drawn great attention in the modern financial sector, as indicated by the issuance of instruments, such as green bonds, green equity, and green debenture (Keefe, 2011)

Bangladesh has adopted numerous policies i.e. National Sustainable Development Strategy 2021-41, Perspective Plans 2021-41, 8th Five Year Plan, and Delta Plan 2100, Mujib Climate Prosperity Plan 2022-2041 and National Adaptation Plan (2023-2050) that promote conservation and sustainable use of biodiversity and ecosystems. Besides, the Bangladesh Bank, the apex body of the financial system, has undertaken a Green Banking initiative which encourages banks to finance green activities/projects such as renewable energy, green buildings, green products and materials, solid waste management, water management, and clean transportation (General Economics Division [GED], 2021).

Bangladesh Bank (BB) has also launched a comprehensive green banking initiative in 2011, and issued Guidelines on Environmental Risk Management (ERM) in 2011, on Green Transformation Fund (GTF) in 2020, ESRM (Environmental & Social Risk Management) guidelines in 2017 & 2022, on refinance scheme for 55 green products/projects/initiatives in 2020 and on Sustainable Finance Policy for Banks and Financial

---

Institutions in 2020 & 2022. But, it is a matter of disappointment that the Sustainable Finance Policy for Banks and Financial Institutions (2020) & Sustainable Finance Policy for Banks and Financial Institutions (2022) have disregarded the SDG-14 in the alignment of sustainable finance with SDGs and INDCs (Intended Nationally Determined Contributions).

From January-June of FY21, the total amount of disbursement as sustainable finance was BDT 348.14 billion by banks and BDT 6.05 billion by NBFIs (Non-Bank Financial Institution). On the other hand, the total amount of disbursement as green finance during FY21 was BDT 97.64 billion by banks and BDT 3.16 billion by NBFIs while the share of green finance against the total term loan disbursement was 4.41 percent. A total amount of BDT 1.86 billion was utilized from Climate Risk Fund (as a grant) by banks and NBFIs in FY21. The number of projects rated by the Environmental and Social Due Diligence (ESDD) checklist during FY21 was 93,466. Under the refinance scheme, cumulative amount of refinancing up to June 2021 stood at BDT 5,681.89 million. The latest step of BB in fostering sustainable finance is to create Green Transformation Fund (GTF). In April 2020, Euro 200.0 million along with the existing USD 200.00 million was added to the GTF. The disbursement from GTF up to FY21 was USD 118.59 million in 23 projects and Euro 8.41 million in 6 projects (Bangladesh Bank [BB], 2021).

As in many other countries, green bonds have the potential to provide significant financing for sustainable development in Bangladesh. Green bonds are popular around the world as a means of financing climate- and environmentally-friendly sustainable development projects. Created by the European Investment Bank in 2007 and adopted by the World Bank in 2008, green bonds now enjoy a respectable market size. It is similar to a regular fixed rate bond, but with one important difference. To finance projects that have a positive impact on the environment, funds must be raised through the issuance of green bonds. The Sustainable Development Goals (SDGs) were adopted by the United Nations General Assembly in September 2015. 193 countries have committed to 17 SDGs, aiming to tackle the world's biggest challenges by 2030, including climate change, hunger and health, poverty and inequality, industry and infrastructure. As the SDGs include hundreds of indicators, green finance aims to achieve multiple SDGs by aligning financial systems and incentives to achieve a measurable and clear set of indicators. The climate bond initiative is seen as a quick way to perceive green finance as a bridge to achieving his SDG goals.

Green and sustainable finance is essential to channel investments into green projects and to incorporate ESG factors into investment decisions. Green finance and sustainable finance help reduce greenhouse gas emissions, mitigate the negative effects of climate change, and provide long-term benefits by promoting investment in renewable energy, energy efficiency, and other sustainable initiatives and contribute to a sustainable and resilient global economy that promotes sustainable economic development.

The central bank of Bangladesh characterized sustainable finance as any form of financial service that amalgamates environmental, investment, insurance, banking, accounting, trading, economic, financial advice, social, and governance criteria into business or investment decisions for the lasting benefits of both clients and society. Sustainable finance includes green finance, sustainable agriculture, sustainable cottage, micro, small, and medium enterprises, socially responsible financing, working capital and demand loan of green products, projects and initiatives, and priority green or eco-friendly products in the trading sector. In a developing economic country entrepreneurs of green projects expect low-cost funds or soft loans from the funding agencies. The banking industry of Bangladesh uses low-cost refinance opportunities from Bangladesh Bank for financing green projects, which needs to be improved considering the demand in the market. Besides refinance facilities, the banking industry uses depositors' money for funding green projects, which comes with a higher interest rate at the borrower's end due to the high cost of funds. It is a challenge for the banking sector when financing green projects is the maturity mismatch due to the long-term nature of green projects. Green

---

bonds are therefore designed to support specific climate or environmental projects and may come with tax incentives to attract investors.

Apart from the notable policies of Bangladesh Bank, green finance in our country is still in its infancy. The central bank has identified eight sectors where banks and non-banking financial institutions (NBFIs) can provide funding through financing and issuance of green bonds. Sectors include low-carbon power generation and transportation, heating and cooling, green operations, and energy and resource efficiency in industry. The central bank also identified 88 types of activities across eight sectors. Banks and NBFIs can use funds from bonds to implement different types of green infrastructure projects, such as roads and dams.

Bangladesh is facing energy challenges and green bonds can be used to finance renewable energy projects such as solar and wind power. These projects will reduce the country's dependence on fossil fuels and contribute to a cleaner and more sustainable energy mix. Access to clean water and sanitation is a key issue in Bangladesh. Green bonds can finance projects that improve water quality, wastewater treatment, and sanitation and contribute to public health and environmental sustainability. Green bonds can support sustainable agricultural practices such as organic farming, forestry, and the development of climate-resilient crop varieties. Green bonds can finance projects related to sustainable transport, such as the construction of public transport systems, cycle paths, and pedestrian-friendly infrastructure. These will help reduce traffic congestion and air pollution in big cities like Dhaka.

Bangladesh can attract international investors interested in green projects, by issuing green bonds. Bangladesh is vulnerable to climate change and fears natural disasters such as cyclones and floods. Green bonds can be used to finance climate protection and adaptation projects, such as building resilient infrastructure, flood protection systems, and reforestation efforts. Bangladesh exemplifies global best practices in disaster risk management and is an authoritative voice for countries vulnerable to climate change. In addition, government agencies can also lease such projects by providing the necessary financing to the bond issuer's lender. Green bonds can be purchased by individuals, corporations, government agencies, banks, and NBFIs. Green bonds have a maximum term of 15 years. Banks with non-performing loans exceeding 10% cannot issue green bonds. This regulation does not apply to state-owned banks. Lenders must maintain capital according to Basel III guidelines to be eligible to issue corporate bonds. If a lender is found to have faced a reserve shortfall in the past two years, it will not be eligible to issue the bond. Sustainable loans provided by banks increased by 40% FY in Q1 2023 as financial institutions continued to increase loan disbursements to green companies and industries. It increased by nearly 30% to Tk 35,387 million. . The amount was Tk 25,290 billion in the same January-March quarter of 2022, according to Bangladesh Bank's Quarterly Review Report on Sustainable Finance of Banks and Financial Institutions. From January to March 2022, 19 banks and eight NBFIs exceeded the green lending target set at 5% of their total term loan disbursements. Additionally, 15 banks and 10 of his NBFIs were able to achieve sustainable funding targets relative to their total loan disbursements (Bangladesh Bank [BB], 2023).

Opportunities for green finance Financing the transition to a climate-neutral economy involves attracting a considerable amount of funds, far more than those offered by public institutions, which requires the participation of private investors for whom new opportunities are opening up. Moreover, the demand for green financial products is expected to increase. The transition to a low-carbon economy is a promising long-term business opportunity, with financial institutions able to sustain green finance. Therefore, exploring opportunities and new taxonomies and standards is becoming a central concern. To conclude, green bonds have the potential to play a pivotal role in financing sustainable development in Bangladesh by channeling capital into projects that address pressing environmental and social challenges while offering both domestic and international investors innovative investment opportunities. These bonds can help the country achieve its

---

sustainable development goals while mitigating the adverse effects of climate change and promoting a more sustainable and prosperous future.

Institutions that include green funding in their strategy can enjoy multiple benefits. Firstly, in the face of increasing pressures in recent years to focus activities on environmental protection and climate change reduction, they can have a better image that contributes to improving reputation and credibility and improving the relationship with government or regulatory institutions, partners, customers, and investors. This improvement is due to the understanding and proper management of environmental risks. It can facilitate access to new markets, provide a competitive advantage or improve resilience to changes in the market due to feeling the effects of climate change. Adapting to new customer preferences opens up new opportunities, laying the groundwork for suitable medium- and long-term collaboration.

Another opportunity is to diversify portfolio risks by reducing the share of assets associated with environmental risks. Such a weighting may prepare companies and institutions for the new regulations (capital requirements based on "green" and "brown" assets held, special reporting requirements, stress testing). Last but not least, green funding is an opportunity for new research and analysis. The transition to a low-carbon economy is very capital-intensive, requiring the support of private entities, thus generating opportunities for financial services firms. Opportunities are created for portfolio investment, the application of Fin-Tech services for green financial products and services, and artificial intelligence for data analysis and interpretation.

Government of Bangladesh have announced various action plans namely Perspective Plan of Bangladesh 2021-2041, Eighth Five Year Plan, Intended Nationally Determined Contributions (INDCs), Bangladesh Delta Plan 2100, Mujib Climate Prosperity Plan 2022-2041 and National Adaptation Plan (2023-2050), etc to evaluate the impact of environment friendly banking, green finance, climate finance, carbon finance, green bond and sustainable finance to achieve the global targets set through the Paris Agreement and Sustainable Development Goals (SDGs) as a result of the activities of international standard setting bodies in the financial sector. It is a hope that considering the need for implementation of the aforementioned action plans and strategies Government of Bangladesh made a commitment to reduce GHG emissions by 6.73% within 2030.

Green finance faces many challenges; include lack of regulatory compliance, transition risks, and reluctance to pursue green financing routes due to financial concerns. Financial companies is seeking to offer more green finance in emerging markets face a number of challenges, including regulatory gaps and a lack of incentives for local companies to pursue more ambitious climate change targets. Achieving SDG 14 will be challenged not only by the unequal sharing of conservation costs but also due to lack of available finance. A study by Johansen and Vestavia (2020) calculated that there is a financial gap of USD 174.52 billion per year to achieve SDG 14 for the health of our oceans. The global economic downturn, violent conflict in some countries, biodiversity loss and water degradation, dry-lands, forests, and climate change threaten to erase past gains and wipe out future gains. A recent Global Risk Report states that climate change poses a pivotal risk to business, finance, and society (World Economic Forum, 2021). Institutional investors, hedging instruments, and financial instruments (such as green stock indices, and green bonds) can help rebalance and redistribute climate risks, allocate investment to green sectors and maintain financial stability.

According to the Synthesis of Voluntary National Reviews (VNRs) 2017, all reporting countries of 43 VNRs, including Bangladesh addressed SGD14 along with other SGDs. All the VNRs Countries are found to be reported on SDG14 and emphasized the importance of the oceans for sustainable development and human well-being. They also listed major threats affecting the oceans, including marine pollution such as in the form of plastics, as well as overfishing and illegal, unreported, and unregulated fishing. Several countries made

---

voluntary commitments, including in the areas of marine pollution (Bangladesh and Cyprus), marine protected areas (Bangladesh, and Belize), sustainable fisheries (Bangladesh and Belize), integrated coastal zone management (Belize), and marine research (the Netherlands) (United Nations: Department of Economic and Social Affairs [UN DESA], 2018).

It is becoming increasingly apparent that the financial sector is playing an essential role in the fight against climate change. The demand for green financial products is expected to increase. The transition to a low-carbon economy is a promising long-term business opportunity, with financial institutions able to sustain green finance. Therefore, exploring opportunities and new taxonomies and standards is becoming a central concern. The role can play in combating the effects of environmental change gives the importance of green financing without adding significant additional risks and benefits for the economy and society. Given the possible effects of climate change and environmental challenges, the economic system is constrained to consider these issues. Financial institutions are thus driven to identify, manage and report the risks to which they are exposed, increasing the institution's resilience and the financial system as a whole.

## CONCLUSIVE REMARK

Nowadays, the increasing proportion of people in “coastal-urban” areas is undoubtedly an eminent challenge not just in specific countries but to the world at large (Le et al., 2013). Continuing plastic pollution, ocean acidification and rising ocean temperatures are threatening marine species and negatively affecting marine ecosystem services. Combating the decline in ocean health requires intensified protection efforts and the adoption of solutions for a sustainable blue economy. This includes a “source-to-sea” approach that directly addresses the links between land, water, delta, estuary, coast, near shore and ocean ecosystems in support of holistic natural resources management and economic development (United Nations [UN], 2022). The coastal and marine ecosystems have been playing a dynamic and paramount role in the livelihoods of millions of people living in the coastal zone of Bangladesh and beyond and provide critical ecosystem services to millions of people living in densely populated Bangladesh. Globally, fish provided more than 3.3 billion people with 20 percent of their average per capita intake of animal proteins, reaching 50 percent or more in countries such as Bangladesh, Cambodia, the Gambia, Ghana, Indonesia, Sierra Leone, Sri Lanka (Food and Agriculture Organization of the United Nations [FAO], 2020).

Closing the annual gap of funding for achieving the SDGs is a top priority, particularly for climate change and the other environmental pillars. Green funding, in principle, lies between the other two terms (sustainable financing and financing of environmental objectives). Green finance faces many risks and challenges due to issues related to environmental elements and features specific to the financial system. Sufficient activities that adversely affect the environment are still being funded, including burning fossil fuels. Moreover, financial markets face the green washing process, namely attempts to make false or unproven claims about the positive impact on the environment. Outcome of the green funding projects/product and its impact in combating the marine pollution and interdependencies between finance and SDG14 should be assessed and monitored extensively. Research and training on different contemporary issues and ideas related to the growth and development of sustainable finance sector, knowledge imparts, traits of diversified product portfolio, impact assessment, regional and international co-operation, integration of policy, regulation & implementation of those are extensively needed to achieve SDG14 in Bangladesh by strengthening regulation and supervision, minimizing pollution, environmental threats, resilience to climate change with respect to climate change mitigation and climate change adaptation.

In the field of Sustainable Economic Development, the words ‘Green Finance’ or ‘Sustainable Finance’ and ‘SDGs’ got immense popularity as research topics in the context of Bangladesh also. This study will serve as



a guiding tool for the government, and non-government players in the sustainable finance sector in their quest to achieve universal access to environmentally sustainable and socially responsible financing for all, and provide valuable insight on different ongoing programs & initiatives that are focusing on/ addressing on Conserve and sustainably use the oceans, seas and marine resources for sustainable development, will draw some insight on the best way to tackle this ever-challenging issues in the coastal areas of Bangladesh. This study may be helpful to overcome the drawbacks of the development process, achieve sustainable development goals in a sophisticated manner, and set up an active policy appropriate to the national circumstances that render better organization of Coastal and Marine environment towards the attainment of the SDG14 in the context of Bangladesh.

## REFERENCES

1. Asian Development Bank (ADB) 2020, Proposed Loan and Technical Assistance Grant Indonesia: Sustainable Development Goals Indonesia One – Green Finance Facility Phase 1, Project Concept Paper, Project Number: 54152-001, July 2020.
2. Azad, M. A. K. & Islam, M. (2022). Promoting Green Finance for Sustainable Development in Bangladesh, International Academician Studies Congress 2022 Change & Adaptation, Holistence Publications
3. Bangladesh Bank (2020), Guideline on Sustainable Finance Policy for Banks and Financial Institutions, 2020, Bangladesh Bank (BB).
4. Bangladesh Bank (2021), Annual Report-2021, Bangladesh Bank (BB).
5. Bangladesh Bank (2022), Quarterly Review Report on Sustainable Finance of Banks & Finance Companies, Sustainable Finance Department, Bangladesh Bank (BB).
6. Bangladesh Bank (2020), Guideline on Sustainable Finance Policy for Banks and Financial Institutions, 2022, Bangladesh Bank (BB).
7. Bangladesh Bank (2023), Quarterly Review Report on Sustainable Finance of Banks & Finance Companies, Sustainable Finance Department, Bangladesh Bank (BB).
8. Berensmann, K., &Lindenberg, N. 2016. Green Finance: Actors, Challenges and Policy Recommendations. German Development Institute, Briefing paper; 23/2016.
9. Bhuyan, Md & Bakar, Muhammad &Hoque, Md & Sharif, Abu & Islam, Md. (2017). Industrial pollution and its effects on fish in Bangladesh: A review. Indian Journal of Science. 24(90). 46-57.
10. Bhuyan, Md & Islam, Md & Akhtar, Aysha. (2016). Effects of Industrialization on Fish and Fishing Community. Scholar's Press, Editor: Marco Braga, ISBN: 978-3-659-84546-8, Project: River water quality.
11. Bhuyan, Md & Senapathi, Venkatramanan & .S, Selvam & Szabo, Sylvia & Hossain, Md. M. & Rashed-Un-Nabi, Md & C R, Paramasivam & Jonathan, M P & Islam, Md. (2020). Plastics in marine ecosystem: A review of their sources and pollution conduits. Regional Studies in Marine Science.
12. Bhuyan, Md & Sharif, Abu & Islam, Md. (2018). Blue Economy in Bangladesh: Next Resources Exist.. Modern Approaches in Oceanography and Petrochemical Sciences. 2. 1-4, 10.32474/MAOPS.2018.02.000126.
13. Bhuyan, Md & Szabo, Sylvia & Hossain, Md. M. &Nabi, Md. Rashed-Un &Senapathi, Venkatramanan& Islam, Md. (2019). Global microplastic pollution, its impacts and mitigation pathways: A critical review. 10.13140/RG.2.2.21672.21762.
14. Bir, Joyanta & Zaman, Shanchita & Golder, Md. (2020). A review on blue economy in Bangladesh: prospects and challenges. 21-29. DOI:10.5281/zenodo.4270719.
15. Chien F, Chau KY, Ady SU, Zhang YQ, Tran QH, Aldeehani TM (2021) Does the combining effects of energy and consideration of financial development lead to environmental burden: social perspective of energy finance? Environ Sci Pollut Res. <https://doi.org/10.1007/s11356-021-13423-6>

16. Demaria, F. (2009). Ship breaking at Alang-Sosiya (India): Ecological distribution conflicts. M S Thesis, Autonomous University of Barcelona, Spain, 2nd September 2008.
17. Failler, P., Hussain, M. G., Al Karim, A., Alam, M. K., Sarker, S., Rouf, M., Sharifuzzaman, S., Hossain, M., Nobi, M. N., Das, J., & Uddin, S. A., Shemon, W. S. & Hassan, D., (2021). The future of the blue economy in Bangladesh. 15-28. BMJ Special Issue ISSN 2519-5972
18. Food and Agriculture Organization of the United Nations (2020). The State of World Fisheries and Aquaculture 2020. Sustainability in action. Rome. <https://doi.org/10.4060/ca9229en>. FAO of the United Nations
19. Fernandes, J. A.; Susan Kay, Mostafa A. R. Hossain, Munir Ahmed, William W. L. Cheung, Attila N. Lazar, Manuel Barange, (2016), Projecting marine fish production and catch potential in Bangladesh in the 21st century under long-term environmental change and management scenarios, ICES Journal of Marine Science, Volume 73, Issue 5, May/June 2016, Pages 1357–1369, <https://doi.org/10.1093/icesjms/fsv217>
20. General Economics Division (2021). Bangladesh Delta Plan 2100: Bangladesh in the 21st Century (Abridged Version). General Economics Division (GED), Bangladesh Planning Commission. Dhaka: Government of the People’s Republic of Bangladesh. Retrieved July 11, 2019, from Implementation of the Sustainable Development Goals (SDGs) in Bangladesh April 2021.
21. Gerster, R. (2011). Sustainable finance: Achievements, Challenges, Outlook. Gerster Consulting, Richters will.
22. Höhne, Khosla, Fekete, Gilbert., (2012): Mapping of Green Finance Delivered by IDFC, Members in 2011, Ecofys.
23. Hossain, M.S., Chowdhury, S.R., Sharifuzzaman, S.M. and Sarker, S. (2015). Vulnerability of the Bay of Bengal to Ocean Acidification. IUCN, International Union for Conservation of Nature, Bangladesh Country Office, Dhaka, Bangladesh, Pp. vi+55, [www.iucn.org/bangladesh](http://www.iucn.org/bangladesh)
24. Hossain, M.S., Chowdhury, S.R., Sharifuzzaman, S.M. and Sarker, S. (2015). Vulnerability of the Bay of Bengal to Ocean Acidification. IUCN, International Union for Conservation of Nature, Bangladesh Country Office, Dhaka, Bangladesh, <https://www.oecd.org/development/global-outlook-on-financing-for-sustainable-development-2019-9789264307995-en.htm>
25. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) (2018): The IPBES regional assessment report on biodiversity and ecosystem services for Asia and the Pacific. Karki, M., SenaratnaSellamuttu, S., Okayasu, S., and Suzuki, W. (eds). Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn, Germany. 612 pages.
26. Islam, Md & Pervez, Alam& Rahman, Md &Molla, Mohammad Habibur Rahman. (2021). Eco-engineering of coastal environment through saltmarsh restoration towards climate change impact mitigation and community adaptation in Bangladesh. Regional Studies in Marine Science. 46. 101880. [10.1016/j.rsma.2021.101880](https://doi.org/10.1016/j.rsma.2021.101880).
27. Jeucken, M. H. A. (2004). Sustainability in finance – A retroductive exploration [PhD thesis. Erasmus University Rotterdam]. Eburon, Delft.
28. Johansen, Despina & Vestvik, Rolf. (2020). The cost of saving our ocean - estimating the funding gap of sustainable development goal 14. Marine Policy 112, Doi: 103783. [10.1016/j.marpol.2019.103783](https://doi.org/10.1016/j.marpol.2019.103783).
29. Kaly, U.L. (2004), Review of Land-based sources of pollution to the coastal and marine environments in the BOBLME Region, Bay of Bengal Large Marine Ecosystem (BOBLME) Theme report GCP/RAS/179/WBG.10 FAO-BOBLME Programme.
30. Keefe, J. From Socially Responsible Investing to Sustainable Investing. Green Money J. (2011). Available online: <http://www.greenmoneyjournal.com/article.mpl?newsletterid%441&articleid%4544> (accessed on 3 June 2019).

31. Kreft, S., D. Eckstein, L. Dorsch and L. Fischer (2016): “Global Climate Risk Index 2016. Who Suffers Most From Extreme Weather Events? Weather-related Loss Events in 2014 and 1995 to 2014”, Briefing Paper, Bonn: Germanwatch.
32. Le, X. Q., De Munter, K., Khan, A. Z., & Corjin, E. (2013). Coastal Urban Environment: a Synoptic View of Resources and Users Across Cases. SECOA FP7 Research Project, 3(1), 35-60.
33. Nikolakis, W., Cohen, D., & Nelson, H. (2012). What matters for socially responsible investment (SRI) in the natural resources sectors? SRI mutual funds and forestry in North America. *Journal of Sustainable Finance and Investment*, 2(2), 136–151.
34. Shao, Qinglong & Zhong, Ruoyu & Ren, Xuedi. (2020). Nexus between green finance, non-fossil energy use, and carbon intensity: Empirical evidence from China based on a vector error correction model. *Journal of Cleaner Production*. 277. 10.1016/j.jclepro.2020.122844.
35. United Nations (2021), Inter-agency Task Force on Financing for Development, Financing for Sustainable Development Report 2021. (New York: United Nations, 2021), available from: <https://development.un.org/fsdr2021>.
36. United Nations (2022), The Sustainable Development Goals Report 2022, United Nations Publications, 300 East 42nd Street, New York, NY, 10017, United States of America. United Nations (UN)
37. United Nations Environment Programme (2015). Designing a Sustainable Financial System in Bangladesh; United Nations Environment Programme: Nairobi, Kenya, 2015.
38. United Nations Environment Programme (2022), Annual Report UNEP in 2021, United Nations Environment Programme (UNEP), UN Environment Programme, United Nations Avenue, Gigiri, PO Box 30552-00100, Nairobi, Kenya.
39. United Nations Framework Convention on Climate Change (1992). United Nations Framework Convention on Climate Change, FCCC/INFORMAL/84, GE.05-62220 (E) 200705, 25 pages, 1992, United Nations Framework Convention on Climate Change [UNFCCC]
40. United Nations: Department of Economic and Social Affairs (2018), Synthesis of Voluntary National Reviews 2017, Division for Sustainable Development (DSD), Department of Economic and Social Affairs (DESA), United Nations. 60p, <https://sustainabledevelopment.un.org/>
41. World Business Council for Sustainable Development (2021) Roadmap for reducing Ocean Waste, World Business Council for Sustainable Development [WBCSD], Avenue du Bouchet 2bis, 1209, Geneva, Switzerland, <https://www.wbcsd.org/Archive/Factor-10/Roadmap-for-reducing-Ocean-Waste>.
42. World Economic Forum (2021), The Global Risks Report 2021, 16th Edition, World Economic Forum, doi: <http://wef.ch/risks2021>
43. Zhang, D.; Mohsin, M. & Taghizadeh-Hesary, F. (2022), Does green finance counteract the climate change mitigation: Asymmetric effect of renewable energy investment and R&D, *Energy Economics*, Volume 113, 2022, <https://doi.org/10.1016/j.eneco.2022.106183>.
44. Zhang, D., Zhang, Z., Managi, S., 2019. A bibliometric analysis on green finance: Current status, development, and future directions. *Finance Research Letters*, 29, pp. 425–430.