

Research

Bangladesh's Journey Towards Climate Resilience: A Focus on Sustainable Development Goal 13

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Abstract: Climate change is one of the most severe challenges in the 21st century. Bangladesh is one of the countries most adversely impacted by climate change. Every sector of its society is directly or indirectly influenced, including agriculture, public health, education, and the economy. It has brought serious consequences for its people due to the hostile impacts of climate change, such as the excessive rise of temperature, prolonged floods and cyclones, which extremely hinder the country's development process. Thus, climate change has become an essential issue in Bangladesh, and it plays a significant role in determining its politics, security, and foreign relations. In international forums, the government of Bangladesh always raises its voice on climate change issues because it seeks common platforms and agreements to combat the most formidable challenge in human history. Therefore, the Sustainable Development Goal (SDG) 13, dedicated to climate action for combating global impacts of climate change, can be an excellent pathway for Bangladesh in gaining resilience towards climate change impacts. This article mainly analyzes the progress and challenges that the Bangladesh government has faced during the half-time frame of the implementation of SDG 13 in Bangladesh.

Keywords: Climate change, Bangladesh, Sustainable Development Goal 13, strategic location, food security.

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Introduction

Climate change and its adverse environmental impacts have arguably become the most serious global challenge in human history. Almost every country in this world is already severely affected by the harsh impacts of climate change. However, some countries are affected more than others due to their unique geographic position and the lack of infrastructural development. Bangladesh is one of the most affected countries by its dire effects. The unique geographical location of Bangladesh, along with special socio-economic conditions, has made this situation particularly complex. In 2021, German Watch, a Berlin-based non-profit environmental think tank, ranked Bangladesh seventh among the most impacted countries by extreme weather events during the last 20 years.¹ Bangladesh is situated on the shore of the Bay of Bengal, an important geo-strategic location in South Asia. It is home to several

¹ David Eckstein, Vera Künzel, and Laura Schäfer, *Global Climate Risk Index 2021* (Bonn: Germanwatch, 2021), 13.

large rivers that reach the sea with the world's largest delta. Its unique geographical and landscape features have left this country extremely vulnerable to conditions brought about by climate change.¹ At the same time, its important geo-strategic location has offered an immense potential to develop trade and communication among different countries of the world. From ancient times, the Bengal area, which forms modern Bangladesh, has been considered a land bridge between South Asian and Southeast Asian countries with rich opportunities for economic prosperity and trade. Therefore, climate change is considered one of the critical challenges that is seriously hindering this country's development progress.

Bangladesh's government has taken several policies and strategies to tackle climate change impacts, but their implementation is a herculean task, which is all but impossible if the government has to rely on its own limited funds. In addition to being practically and financially unfeasible, having climate adaptation to national funds is also unfair. Climate change is a global problem, so global unity of action is needed to overcome its complex challenges. Therefore, countries like Bangladesh need global support, including technical, financial, and advanced knowledge, to prevent, mitigate, and adapt to climate change and its consequences. The seventeen Sustainable Development Goals (SDGs) offer such an essential global agenda where every nation of this world has found common ground in joint efforts to attain peace and prosperity while ensuring a better environment for generations. SDG 13 is about climate action. It provides a structured framework and promises financial support to climatically vulnerable and developing countries such as Bangladesh in mitigating and gaining resilience to climate change impacts. Therefore, analyzing the effectiveness of a global agenda like SDG 13 in one of the most climatically vulnerable countries like Bangladesh is important.

SDG 13 is divided into two main parts, whereas half of its success depends on the active role of the Bangladesh government with its national plans, policy integration with SDG 13, and their proper implementation. The other half of the successful implementation of SDG 13 depends on the international community's continual efforts and the proper distribution of the promised financial support under this goal. The government of Bangladesh can influence little to the international community to implement that other half part of the plan, but it can make sure to cooperate with those international programs. So, this paper analyzes the initiatives of the Bangladesh government with its plans and policies along with the role of other supporting partners like Non-Governmental Organizations (NGOs) and private companies in the implementation process of SDG 13 in Bangladesh. Given the importance of the financial and technical support of the international community, this paper also discusses the initiatives of the international community that have been granted so far for implementing SDG 13 in Bangladesh.

The objective of this study is to understand the progress and challenges of SDG 13 in Bangladesh, considering the role of its government and other supporting partners along with the support from the international community. Such an analysis is considered timely in view of it being half-time in the SDG program.

SDG 13 in the context of climate change in Bangladesh

Bangladesh has been chosen for its unique geographical, social, and developmental position. The deltaic land features have made this country particularly vulnerable to climate change, especially regarding the already existing and future effects resulting from the rise of sea level, which is the direct result of climate change. It is predicted that seventeen percent of the land area of Bangladesh will lie underwater by 2050 if the current rate (3 mm per year) of sea level rise continues.² People who live in the coastal areas of Bangladesh are the direct victims of climate change. Specifically, children and women are the most vulnerable group. The severe consequences of climate change

¹ Saleemul Huq and Jessica Ayers, *Climate Change Impacts and Responses in Bangladesh* (Strasbourg: European Parliament's temporary committee on climate change, 2008), 2.

²"Bangladesh," Sea level rise, Climate Change Knowledge Portal, accessed June 10, 2022, <https://climateknowledgeportal.worldbank.org/country/bangladesh/impacts-sea-level-rise>

are extremely affecting people's lives both directly and indirectly in Bangladesh. Direct impacts are heat waves, cyclones, and prolonged floods, while indirect impacts include droughts and long-term salinity intrusion in ground water. Almost every year, the people of Bangladesh suffer and lose property and wealth because of these climatic disasters, which have tremendously intensified during the last several years. In particular, heat waves, along with the rise in temperature, have become a serious issue in recent years in Bangladesh. These adverse climatic disasters have intensive and prolonged effects on the lives of Bangladeshi people, which are responsible for decreasing people's productivity and are sure to deteriorate further.

The repercussions are environmental, economic, and social. Bangladesh is a densely populated country with a population of around 160 million, which makes it the seventh most populous country in the world.¹ The geo-strategic location and young labor force of this country provide it with immense potential to prosper economically among other South Asian countries. However, the effects of climate change have become an acute problem which impedes its development process. Every sector in Bangladesh, including political, social, economic, and health, is badly impacted and influenced by its adverse impacts. A case in point is agriculture. Agriculture is a crucial sector in Bangladesh that ensures food security for a large population and provides employment to a large part of that population. Reduced agricultural output will increase food insecurity and reduce many people's incomes. According to the estimates by the Intergovernmental Panel on Climate Change (IPCC), reduced productivity may increase poverty by around 15 percent in Bangladesh by 2030.² Moreover, the Bangladesh Center for Advanced Studies has found that food production will be severely impacted in the future if the temperature increases by 4°C in the country.³ In fact, it has already been impacted in some areas by the changes in temperature and rainfall patterns. Therefore, it can be assumed that food security for Bangladeshi people will be hampered in the future due to climate change.

As a member state of the United Nations, the government of Bangladesh has ratified SDG 13 since its evolution. SDG 13 has set five targets to be implemented by 2030. Moreover, it has formulated eight indicators to assess the progress of those targets. The government of Bangladesh has integrated the subsequent policies and strategies of SDG 13 into its national climate change policies and measures with the aim of doubling the country's food productivity while ensuring the sustainability of the environment. The government has taken a 'Whole Society Approach' for the proper implementation of SDG 13, as well as other goals of the SDG list.⁴ All play a role in the way in which the government has thematically and operationally incorporated the national development plan with SDGs. Thus, the government has offered the participation of other stakeholders, such as NGOs and public-private investment, together with the initiatives of the governmental institutions in order to the successful implementation of SDG 13 in Bangladesh. The government emphasizes adopting and applying coping mechanism techniques along with advanced technologies in agriculture, disaster management, and other climatically vulnerable sectors to overcome the adverse impacts of climate change. Therefore, the government wants to take advantage of the global agenda of SDG 13, which has promised to address those required aspects for ensuring a better and safer livelihood for Bangladeshi people.

The progress of SDG 13 implementation in Bangladesh

The Bangladesh government has progressed in achieving some of the targets of SDG 13 since its evolution. Specifically, the government has partially progressed in the first indicator of SDG 13, which emphasizes reducing the number of people affected by climatic disasters. For instance, the number of directly affected people was 12,881 in

¹"Population trends," UNFPA Bangladesh, accessed December 30, 2023, <https://bangladesh.unfpa.org/en/node/24314>

² Fahmida Khatun, and Syed Yusuf Saadat, *Climate Change in Bangladesh Exploring the Past and Potential Future Impacts* (Dhaka: Center for Policy Dialogue-CPD, 2022), 1.

³ Huq and Ayers, *Climate Change Impacts*, 5.

⁴ Bangladesh Planning Commission, *Bangladesh's Voluntary National Reviews (VNR) 2020* (Dhaka: General Economics Division 2020), 4. https://hlpf.un.org/sites/default/files/vnrs/2021/26303VNR_2020_Bangladesh_Report.pdf

2016, which has reduced by 4,318 people in the year 2019.¹ Though this percentage has further increased since 2020 when the people of Bangladesh faced several devastating cyclones, those named 'Amphan' and 'Yaas' being the most catastrophic among others.² Moreover, the people of Bangladesh have faced one of the worst floods in its history when 7.2 million people from northwestern part of Bangladesh affected seriously by flooding in 2022.³ Apart from this exception, the government is quite successful in reducing the number of directly affected people over several years.

In addition, the government has taken multiple national key initiatives, plans and policies to combat and adapt to the adverse effects of climate change, which are aligned with the implementation of SDG 13. A measure that stands out is the 'Bangladesh Delta Plan 2100' (BDP), devised in 2018 in order to make a proper plan for water resources in the country.⁴ The government wants to ensure sustainable development in the deltaic region with a particular focus to the most climatically vulnerable population those who are living in the coastal areas and river basins. Thus, the long-term delta plan of the Bangladesh government is crucial for mitigating and being resilient in the face of climate change impacts. Moreover, this long-term delta plan can play an important role in reducing deaths and missing people from hydrometeorological natural disasters, which is one of the requirements for implementing SDG 13.

The Bangladesh government has declared several important plans and policies to save lives, protect investments and ensure effective recovery during the emergency of climatic disasters. The government has incorporated the guidelines of the Sendai Framework for Disaster Risk Reduction (SFDRR) in formulating its national disaster risk reduction plans, such as 'Disaster Risk Reduction Strategies (2016-2020)' and 'National Plan for Disaster Management (2016-2020)'. The government has progressed in attaining the targets of SDG 13 in terms of plans and policy formation, which are based on the instruction of SFDRR.

SDG 13 emphasizes the inclusion of local government entities in disaster risk reduction management. Thus, the government has offered scopes to CSOs and other local government entities to actively participate in the events of climatic disasters. Ministry of Disaster Risk Management reported that at present, 0.99 percent of district-level entities and 8.33 percent of city corporations are practicing locally developed strategies for reducing the impacts of climatic disasters. However, this percentage shows that the participation of local government entities is still dismal, which needs to ensure more participation to achieve SDG 13.

The Bangladesh government has introduced the 'Climate Fiscal Framework (CFF)' with the aim of ensuring allotments for projects and initiatives to mitigate climate change impacts. The government wants to finance sustainable and climate-resilient technologies in agriculture, which will reduce greenhouse gas emissions without hampering food production. In addition, the government has initiated a Forestry Master Plan 2017-36, with the objective of increasing forest land within the country, which is an essential initiative for reducing carbon from the atmosphere.⁵ The Bangladesh government is determined to reduce the amount of GHG emissions nationally from different sectors like power, industry and transport as below 5 percent from present business-as-usual level within the year of 2030 by developing and installing low carbon emitting advanced technologies.⁶ Stabilization the amount of GHG emissions in the atmosphere is one of the requirements for achieving SDG 13. However, the government has not yet attained this target.

¹Bangladesh Planning Commission, *Sustainable Development Goals Bangladesh Progress Report 2022* (Dhaka: General Economics Division, 2022), 166.

² "SDGs," Climate-Action, Our World in Data, accessed December 28, 2023, <https://ourworldindata.org/sdgs/climate-action>

³ "Bangladesh: Floods- Final Report (MDRBD028)," International Federation of Red Cross and Red Crescent Societies, accessed February 22, 2024, <https://reliefweb.int/report/bangladesh/bangladesh-floods-final-report-mdrbd028>

⁴ Bangladesh Planning Commission, *Bangladesh Delta Plan 2100 Bangladesh in the 21st Century* (Dhaka: General Economics Division, 2018), 1-37.

⁵ Bangladesh Planning Commission, *Sustainable Development Goals Bangladesh Progress Report 2022*, 168.

⁶ Ibid.

The government has instructed relevant ministries to incorporate climate change mitigation knowledge into different levels of the national educational curriculum in Bangladesh. At present, the literacy rate in Bangladesh is around 74.66 percent, according to the nationwide population and housing survey of 2022.¹ The impacts of climate change and recurrent disasters have severe impacts on the quality of education in Bangladesh because educational institutions face frequent shutdown during climatic disasters like floods, cyclones and even with acute heatwave. Particularly, children are used to passing through massive turmoil situations, including sexual and physical violence during climatic disasters. They have to bear long-term mental severe trauma in the aftermath of those disasters. Therefore, the Ministry of Education in Bangladesh has taken multiple initiatives to prepare students with climate change mitigation knowledge and practical skills to become resilient to climate change impacts and ensure safety during climatic disasters. One of the significant initiatives of the government is the 'Education Sectoral Plan' for the budget year 2020/21-2024/25, where it has prioritized the inclusion of concepts like climate change and sustainable development in its national educational curriculum and co-curricular activities.² The Ministry of Education has already included several chapters related to the concept of climate change and disaster management in the nationally approved textbooks from primary level to higher secondary level of education.³

Bangladesh is a developing country, and it has insufficient means to finance the climate mitigation process with its own limited resources, considering the complexity and vastness of the challenges posed by climate change. Therefore, its government needs financial and technical support from the global community to overcome this problem. Global agenda SDG 13 has offered some of these opportunities for Bangladesh and other countries that are extremely vulnerable to climate change impacts. Leaders of developed countries have agreed and promised to support climatically vulnerable developing countries with financial aid of \$100 billion along with technical assistance. In this context, the Bangladesh government has received financial support of \$94.7 million from the global community under SDG 13 for implementing four projects that are related to enhancing capacities to overcome climate change effects and gain resilience.⁴

In addition, the Economic Relations Division of the Bangladesh government has adopted several projects of \$4 billion by receiving financial support from the Green Climate Fund (GCF).⁵ This fund acts as the financial system developed by the United Nations Framework Convention on Climate Change (UNFCCC) to transact financial assistance from developed countries to developing countries which are struggling with extreme climate change effects. This program aims to support developing countries in mitigating the disastrous impacts of climate change through prevention and adaptation as far as possible. This program is designed to ensure funding for projects like installing low-carbon emitting technologies in agriculture and other production sectors and, generally, assisting countries in finding a sustainable and climate-resilient development pathway. The Bangladesh government received financial support through the Green Climate Fund in 2018 for implementing three projects: a program on clean cooking, measures to increase the abilities of coastal communities to adapt to climate change impacts, and the promotion of building infrastructure that is resilient to climate change.⁶

Private companies and NGOs play a significant role in implementing SDG 13 in Bangladesh, along with the government's direct initiatives and plans. Public and private partnership investment in implementing projects related to climate action has made remarkable progress in Bangladesh. The Infrastructure Development Company Limited

¹ Star Digital Report, "Bangladesh's literacy rate now," *The Daily Star*, July 27, 2022,

<https://www.thedailystar.net/youth/education/news/bangladeshs-literacy-rate-now-7466-3080701>

² Fumiyo Kagawa, *The Heat is On! Towards a Climate Resilient Education System in Bangladesh* (Kathmandu: Unicef Regional Office for South Asia, 2022), 23. <https://www.unicef.org/rosa/media/17566/file/The%20Heat%20is%20On%20-%20Bangladesh.pdf>

³ Ibid.

⁴ Bangladesh Planning Commission, *Sustainable Development Goals Bangladesh Progress Report 2022*, 169.

⁵ Ibid.

⁶ Bangladesh Planning Commission, *Bangladesh's Voluntary National Reviews (VNR) 2020*, 126.

(IDCOL), jointly financed by the public and private sectors, is implementing environmentally friendly projects and is considered to be progress towards achieving SDG 13. This company is a leading public and private partnership initiative for financing renewable energy sources in Bangladesh. IDCOL has been implementing the 'Global Clean Cooking Program' in Bangladesh. This initiative promotes using cooking stoves, which are energy efficient by using less fuel. This initiative also encourages the use of biogas, a renewable energy source produced mainly by agricultural waste. This initiative has used an estimated total investment of US\$ 82.2 million.¹ The Green Climate Fund has provided US\$20 million as a grant to this initiative.² This program is considered a significant initiative for reducing GHG emissions from domestic cooking in Bangladesh.

Moreover, the Bangladesh Rural Advancement Committee (BRAC) plays a significant role as a leading NGO in Bangladesh in achieving the first three targets of SDG 13. Mainly, it contributes through project implementation related to climate change mitigation, adaptation, spreading climate change mitigation knowledge, and collecting data to assess the progress of SDG 13 implementation as a supportive partner of the Bangladesh government. The BRAC has also integrated its development initiative in line with SDG 13. BRAC has built 35 climate-resilient houses under its climate change programme from 2019 to 2022, which are used as mini shelters during natural disasters.³ The main purpose of this initiative is to reduce the number of human casualties during natural disasters, which is also aligned with the objective of SDG 13. Moreover, it has offered climate-adaptive agricultural services to its participants. Around 142,064 households have benefitted from this programme by gaining knowledge about climate-resilient agricultural systems between 2016 to 2022.⁴

The Bangladesh government and other supporting partners, such as NGOs and private companies, work in several sectors to mitigate and gain resilience against climate change impacts. These nationally formulated plans and activities of the Bangladesh government, along with support from the global community, are considered important steps towards gaining resilience against climate change impacts and achieving the targets of SDG 13 in Bangladesh.

The challenges of SDG 13 implementation in Bangladesh

The Bangladesh government is facing several critical challenges in implementing SDG 13 in Bangladesh. SDG 13 has already crossed half of its time frame, but its implementation is insufficient to reach that goal by 2030. The government has adopted several national policies and plans aligned with the global agenda of SDG 13. However, several of them have remained only on paper, or the implementation process is very slow. Some plans and projects seem fruitful, but the government lacks the climate-related data necessary for a proper understanding of the progress and to evaluate the effectiveness of different targets and indicators of SDG 13.

In addition, it is necessary to apply a combined approach to three essential aspects: climate action, disaster management, and sustainable development. These three need equal and joint cooperation to implement SDG 13 successfully. However, different ministries in Bangladesh that are related to those sectors are performing their duties separately. Though its government has formed a special committee that has offered some opportunities for those ministries and other supporting partners to work jointly, there is a lack of coordination, which hinders the progress of SDG 13 implementation in Bangladesh.

Another important aspect obstructing the implementation process of SDG 13 is the special socio-structural context of Bangladesh. There is a lack of transparency in implementing projects related to climate action at the route levels. Particularly, the local political units with weak political structures do not have much accountability towards

¹ Bangladesh Planning Commission, *Bangladesh's Voluntary National Reviews (VNR) 2020*, 126.

² Ibid.

³ Bangladesh Rural Advancement Committee, *BRAC SDG Contribution Voluntary Review 2023* (Dhaka: Brac Centre, 2023), 194.

⁴ Ibid.

the upper body for ensuring proper implementation of those projects. So, the government needs to increase monitoring to ensure transparency in the project implementation process.

Another challenge is the economic structure of the country. A large portion of people in Bangladesh depend on the agricultural sector, which is the main income source for them. As explained, farmers are severely affected by climate change and have few, if any, possibilities to avoid its repercussions. They also have no possibility to relocate their farms to other areas, once they become unusable due to rising sea waters, salination and repeated disaster destruction. At the same time, these disruptions also have dire effects on food productivity. As long as the Bangladeshi economy is not more diversified, it will be difficult for large parts of the population to avoid the worst effects of climate change.¹ Even in the proposed strategies of SDG 13 pay relatively little attention to the agricultural sector which is problematic in a country like Bangladesh whose major employment and food security predominantly depend on agriculture while, farmers are considered the most vulnerable and impacted group. A successful implementation of any climate action in Bangladesh needs to pay special attention to agriculture and also its farmers.

Another challenge regarding SDG 13 implementation is the lack of funding. Bangladesh is a lower middle-income country, and its government faces a financial resource crisis when implementing projects related to climate change. Moreover, the government has to spend immense resources on the rehabilitation process after different kinds of natural disasters, including floods and cyclones. Almost every year, the people of Bangladesh suffer from diverse climatic disasters, and its government needs to spend a large portion of its budget on repair. So, it is extra pressure for its government to ensure financial assistance from its limited resources to implement climate mitigation-related projects on which the successful implementation of SDG 13 largely depends. Getting funding from the Green Climate Fund has proved a lengthy process.² Therefore, the country needs urgent and sufficient disbursement from the GCF to implement the required projects for achieving SDG 13 within the time frame.

Conclusion

Climate change, along with its adverse impacts, is a serious issue for a country like Bangladesh, whose economy and existence depend on and are profoundly impacted by climate change.³ The paperwork of the Bangladesh government related to climate change mitigation is quite impressive including several plans and policies of climate action along with the integration of SDG 13. However, there is a gap between policy formation and the implementation of SDG 13 in Bangladesh. Though the government has integrated policies of SDG 13 into its national policy framing, those plans and policies have little reflection in implementation to certain specific areas. Overall, the Bangladesh government needs to enhance coordination and investment among different stakeholders like NGOs and private sectors while ensuring transparency at the local level for implementing climate action projects. In addition, the international community needs to ensure a regular and sufficient allotment for Bangladesh to help its government succeed in implementing SDG 13 to ensure its people's safe and improved livelihood.

The findings of this study are crucial for understanding the effectiveness of a global initiative, SDG 13, in Bangladesh. This is particularly important for Bangladesh since it is one of the world's worst climatically impacted and vulnerable countries. However, Bangladesh can serve as a model, and the knowledge gained here is considered important for other developing and climatically vulnerable countries in the world. The specific situation outlined above places Bangladesh at the forefront of actions addressing climate change adjustment and mitigation. Thus, its challenges may be more advanced but not principally different from those of other countries, and

¹ Bangladesh Planning Commission, *Sustainable Development Goals Bangladesh Progress Report 2022*, 174.

² *Ibid.*, 173.

³ Ministry of Environment, Forest and Climate Change, Bangladesh, *First Biennial Update Report of Bangladesh to the UNFCCC* (Dhaka: Department of Environment, 2023), 8.

lessons learned in Bangladesh may be helpful to other places in the world, where impacts of a degree already experienced in Bangladesh still lie in the future.

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