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Md. Nazrul Islam *Editors*


# Climate Change in Bangladesh

A Cross-Disciplinary Framework

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Editors

# Climate Change in Bangladesh

A Cross-Disciplinary Framework

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# Preface

Climate change and its variability pose serious challenges in today's global context. Meeting the needs of the most vulnerable through adequate resources is a huge concern nowadays. However, climate finance debate being present in the center stage of global negotiations for decades only deepens its importance as a global issue. Along with the inherent difficulty to address it because of a lack of a proper definition, climate finance debate has taken its turns through various challenging discourses. In terms of institutional framework, together with the Global Environment Facility (GEF), the newly established Green Climate Fund (GCF) will serve as the financial mechanism of the Convention. Also, some other funds established under the decisions of COP7 in 2001 and operationalized few years later will continue serving the climate regime. Many adaptation projects have the typical characteristics of development projects, which makes it difficult to convince the donors in approving such projects. However, it is important to understand that in certain countries, vulnerability of a society is dependent on the structural development, and hence, it is not always logical to distinguish adaptation and development. This is because in these situations, development deficits put the vulnerable communities to further risks. The international treaty obligation for the developed countries to support the developing and vulnerable countries is not only about legal binding but also a matter of upholding human rights. For this, democratization of climate finance governance is imperative with core principles to be ensured through the system.

Subsequently, the main environmental threat from biodegradable waste is the production of methane. Biodegradable waste, when collected and processed in an industrial digester, can produce natural gas, used for homes, as well as a growing number of truck and bus fleets in developed nations. Compare this with natural gas, which contains 80 to 90% methane. The energy content of the gas depends mainly on its methane content. High methane content is therefore desirable. A certain carbon dioxide and water vapor content is unavoidable, but sulfur content must be minimized particularly for use in engines. Climate change coupled with anthropogenic disturbances poses a great threat to the existence of this mangrove. Many regions of the world are affected by climate change, but Sundarbans is one of the

highest affected regions due to high level of salinity, sedimentation, and land erosion. The salinity is increasing day by day due to frequent cyclones, sedimentation, and brackish tiger prawn cultivation. The increased salinity is jeopardizing the ecosystems of Sundarbans and poses more risk than any other stressors. The study aims to assess the impact of salinity on the pioneer and indicator plant species in terms of species distribution and the coping capacity with the increased salinity. Primary data was collected from 30 sample plots which were fresh swamp and fresh-brackish swamp in the past. Secondary historical data was collected from the Forest Department to understand the natural dynamics.

In Bangladesh, food security has been one of the major national priorities for last few decades but the target has always been interrupted by the climate change and for resource constraints. Present section of this chapter will highlight the major effects of climate change in the food production and the national resources constraints to address the food security. However, major constraints in terms of food security in Bangladesh attributed to cultivable land scarcity, irrigation water scarcity in summer, lack of technological knowledge, lack of climate adaptive crop variety, lack of institutions, and professionals as well as social and cultural constraints. Richer farmers can afford modern machineries, genetically modified crop seeds and chemical fertilizers. This results in efficient farming, higher yield from a unit plot of land, or better utilization of larger farmlands. Climate changes are expecting to contribute to some air quality problems. Respiratory diseases may be exacerbated by warming-induced increased frequency of events and allergen in air. It has been said that ground-level ozone can damage lung tissue, and it is harmful for those who have asthma and other chronic lung diseases. The preparation of Bangladesh to face the challenge of global warming is not enough and cannot be overlooked. In order to tackle the health and socio-economic effects, relevant stakeholders including policy makers, program designers, program implementers, civil servants, and civil society members need to have better understanding about both climate change and its possible impacts. Due to favorable climatic condition, tea industry of Bangladesh is one of the most important sources of income. Sylhet, the northeastern divisional city of Bangladesh, is the major tea-producing region of the country. For this reason, the study area was selected in Sylhet region to find out the causes of fluctuation of recent tea production in the study area.

The analysis depicted that the households not having the access to marketing information were 0.214 times significantly less like to be food secure as compared to the households having the same access to the information related to market price of input, output, and materials needed for shrimp culture. Provision of training, in this study, was significantly associated with the food security status. Expansion of metropolitan area poses a greater risk toward the environment which needs immediate attention to the problem of solid waste disposal, air pollution control, and deterioration of the urban environment. The average highest generation rate was found to be 0.368 kg/capita/day at residential areas in Dhaka, whereas the lowest was 0.259 kg/capita/day in Barisal has been discussed in this book. Climate change is predicted to impact on fisheries and dependent communities. This study assesses the vulnerability and adaptation to the impacts of climate variability and

change, in three small-scale coastal fishing communities in Bangladesh with a view to suggest policy and scaling-up the findings. Overall, using a mixed method approach, this study contributes empirical evidence to current debates in the literature on climate change by enhancing an understanding of the characteristics and determinants of livelihood vulnerability, migration as an adaptation strategy, and limits and barriers to the adaptation of fishing communities to climate variability and change.

Due to climatic Change in the recent years, the existing national database of Bangladesh lacks information on lightning casualties. Hence, a five years of database on lightning related deaths and injuries from 2011–2016 were constructed through an innovative data mining process. An average of 913 casualties was identified, with an average of 182 people being affected by lightning occurrences each year in Bangladesh. The largest death toll was found among the male population (74%) compared to the females (26%), as males are more involved with labor-intensive agricultural practices in a developing country like Bangladesh. In Bangladesh, fisheries contribute about nearly 3% to GDP and more than 8% to the export earnings of the country (Bangladesh Population and Housing Census 2011, 2015). Marine fish contributes about 20% of total fish production in Bangladesh. (Islam et al. 2001). Marine fisheries constitute of industrial fishery by large trawlers and artisanal fisheries by mechanized and non-mechanized boats.

Dhaka, Bangladesh

Professor Dr. Md. Jakariya  
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# Contents

<b>1</b>	<b>Climate Finance in the UNFCCC Negotiations: Bridging Gaps with Lessons Learnt</b> .....	<b>1</b>
	Sirazoom Munira, Raisa Bashar, Tahmid Huq Easher, and Mizan R. Khan	
<b>2</b>	<b>Climate Change and State of Renewable Energy in Bangladesh: An Environmental Analysis</b> .....	<b>25</b>
	Kamrun Nahar and Sanwar A. Sunny	
<b>3</b>	<b>Climate Change Impact on Sundarbans: Challenges for Mitigation Strategies</b> .....	<b>47</b>
	Md. Mizanur Rahman, Md. Rakib Hossain, and Md. Nazrul Islam	
<b>4</b>	<b>Climate Change and Sustainability of Agriculture in Bangladesh</b> .....	<b>65</b>
	Nazmul Ahsan Khan	
<b>5</b>	<b>Climate Change and Its Impact on Health in Bangladesh</b> .....	<b>85</b>
	Mohammad Delwer Hossain Hawlader	
<b>6</b>	<b>Climatic and Environmental Challenges of Tea Cultivation at Sylhet Area in Bangladesh</b> .....	<b>93</b>
	Md. Nazrul Islam, Sahanaj Tamanna, Md. Mizanur Rahman, Mohammad Ahmmed Ali, and Imran Mia	
<b>7</b>	<b>Determinants of Food Security in the Environmentally Stressed Areas in Bangladesh</b> .....	<b>119</b>
	Mohammad Amirul Islam, Avik Chowdhury, Md. Anisuzzaman, Md. Shohanur Rahaman Shetu, Khandaker Md. Mostafizur Rahman, and Moupia Rahman	
<b>8</b>	<b>Climate Change and Municipal Solid Waste Management in Dhaka Megacity in Bangladesh.</b> .....	<b>135</b>
	Hassan Mahmud	

<b>9</b>	<b>Impacts and Responses of Bangladesh Coastal Fishing Communities to Climate Change: Implications for Policy and Scaling-up</b> .....	<b>157</b>
	Md. Monirul Islam	
<b>10</b>	<b>Climate Change and Lightning Risk in Bangladesh</b> .....	<b>183</b>
	Fahmida Kabir and Md. Jakariya	
<b>11</b>	<b>Climate Change Impact and the Conservation of Marine Turtles: A Case Study from Teknaf, Bangladesh</b> .....	<b>205</b>
	Methila Sarker, Alifa Bintha Haque, Md. Nazrul Islam, and Md. Jakariya	

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Prof. Nazrul has made more than 40 scholarly presentations in more than 20 countries around the world, authored more than 120 peer-reviewed articles and authors of 10 books and research volumes. Currently Prof. Nazrul has published an excellent textbook entitled *Environmental Management of Marine Ecosystems* jointly with Prof. Sven Erik Jorgensen by the CRC press (Taylor & Francis). He has also currently published an excellent book entitled: *Bangladesh I: Climate Change Impacts, Mitigation and Adaptation in Developing Countries*, Springer

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# Chapter 1

## Climate Finance in the UNFCCC Negotiations: Bridging Gaps with Lessons Learnt



Sirazoom Munira, Raisa Bashar, Tahmid Huq Easher,  
and Mizan R. Khan

**Abstract** Climate finance debate being present in the centre stage of global negotiations for decades only deepens its importance as a global issue. Along with the inherent difficulty to address it because of a lack of a proper definition, climate finance debate has taken its turns through various challenging discourses. Regardless of these, there have been several incidents of consensus, not only in thinking but in collective action—as demonstrated by many developed and developing country Parties to address challenges but also taking actions. These actions have helped to not only bridge gaps at the global negotiation tables, but to work on the past mistakes and make way for a more transparent and reliable climate finance forum. In addition, debate over adaptation finance and development finance is currently another big issue. This stems from the fact that many adaptation projects have the typical characteristics of development projects, which makes it difficult to convince the donors in approving such projects. However, it is important to understand that in certain countries, vulnerability of a society is dependent on the structural development, and hence, it is not always logical to distinguish adaptation and development. This is because in these situations, development deficits put the vulnerable communities to further risks. The international treaty obligation for the developed countries to support the developing and vulnerable countries is not only about legal binding, but also a matter of upholding human rights. For this, democratization of climate finance governance is imperative with core principles to be ensured through the system. These principles include accountability, transparency along with public and gender-equitable participation in the decision making process. Furthermore, to reach a consensus, an understanding of where the gaps are occurring in opinions between the donors and the recipients is also key to address and then effectively bridge the gaps.

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## Introduction

Climate change and its variability pose serious challenges in today's global context. Meeting the needs of the most vulnerable through adequate resources is a huge concern for Parties who make important decisions at the Conference of Parties (COP) under the United Nations Framework Convention on Climate Change (UNFCCC) negotiation process. So far, the Paris Agreement has been one of the major achievements in the climate discourse, whereby UNFCCC achieved a great diplomatic success in bringing all Parties to a common platform and agreeing on major building blocks, which included mitigation, adaptation, loss and damage, finance, technology development and transfer, capacity building among others. The UNFCCC acknowledges the climate change-induced risks and vulnerabilities and calls for special efforts to reduce the impacts. The Articles 3.1, 4.3, 4.4, 4.5 and 4.9 (from the consolidated version of the convention text including amendments to Annex I and Annex II) of the convention mentioned the responsibilities of the developed country Parties towards the developing countries that are particularly vulnerable to the adverse effect of climate change (UNFCCC 1992).

In retrospect, providing finance to the countries which are vulnerable to impacts of climate change was a fundamental part of the UN Rio Treaty under the UNFCCC in 1992. Since then, there has been a number of general agreements which press on the urgent need for funds to be dedicated to climate change activities, which is echoed in the Bali Action Plan (BAP). There has also been focus on the scale of funding, but with little discussion about the sourcing of the additional resource that is required. However, transparency, modality and accounting of these financial resource flow have been an issue of several security in the past.

Against this backdrop, this chapter attempts to summarize the legal and institutional framework on which climate finance (CF) is based under the UNFCCC. It outlines the inherent difficulty caused due to the absence of a universally accepted definition of climate finance and the key debates around the issue and also demonstrates the current state of climate finance in Bangladesh, as well as at a global level. It contains a gist of the strategic actions of Bangladesh outlining its take on climate change as a vulnerable country with very little financial and technical resources to combat its impacts. The section outlining key debates in climate finance summarizes the challenges surrounding this issue down in the grassroots straight up to the Convention. However, climate finance debate being present in the centre stage of global negotiations for decades only deepens its importance as a global issue. Along with the inherent difficulty to address it because of the lack of a proper definition, climate finance debate has taken its turns through various challenging discourses. Regardless of these, there have been several incidents of consensus, not only in thinking but in collective action—as demonstrated

by many developed and developing country Parties to address challenges, but also taking actions. These actions have helped to not only bridge gaps at the global negotiation tables, but to work on the past mistakes and make way for a more transparent and reliable climate finance forum.

Additionally, the different definitions of CF proposed by organizations is highlighted in this chapter, along with an analysis of the Subsidiary Body for Scientific and Technological Advice (SBSTA) submissions by the donor, recipient and observer Parties to evaluate the differences and similarities among their views. The authors believe that the differences in views involving capacity building, fund weighing mechanisms, reporting formats and diversification of projects portray the long road ahead of the negotiations. However, the unsaid consensus/common grounds on private and public intervention, roles of MDBs, improvement of reporting formats and monitoring mechanisms demonstrate that there may be a way out of the “blame game.” This, in turn, will help identify the starting points to solve the problems of the missing universal climate finance definition and framework, as well as pave the way towards mitigating the transparency and accountability issues.

## **Current Status of CF: The World Arena**

The UNFCCC provided a legal framework and guiding principles that define the climate finance governance in the world. When the UNFCCC was adopted, Parties unanimously realized that climate change calls for the “widest possible cooperation between the countries and their participation in an effective and appropriate international response, in accordance with their common, but differentiated responsibilities and respective capabilities and their social economic conditions” (UNFCCC 1992). The Convention provided legal framework to support the implementation of mitigation and adaptation programmes and projects (Ludemann and Ruppel 2013). This emphasized on the cooperation and contribution of countries involved to assess their specific responsibilities and respective capacities. It said that these state actors ought to consider financial implications for their financial responsibilities. The Paris Agreement also reaffirmed the need for financial assistance and cooperation from the developed countries to address climate change (UNFCCC 2015).

### ***Legal and Institutional Framework of Climate Finance***

The Convention lays down the basic principles of economics and financing for addressing climate change in Article 3 which include equity and common, but differentiated responsibility based on respective capabilities (CBDR-RC), consideration of specific needs and special circumstances, especially of those that are particularly vulnerable to climate impacts, ensuring cost-effectiveness and global benefits from adopted measures and recognition of the right to promote



development. The commitments under the climate regime obligate developed countries to provide financial support (Article 4.3) for adaptation and mitigation projects in developing countries (Articles 4.1, 4.3, 4.4, 4.7, 12.1). As mentioned previously, Articles 4.3 and 4.4 can be taken as prominent reflections of the CBDR principle. Furthermore, adaptation has been recognized as a global responsibility under the PA, setting a global goal and linking it to the level of mitigation. This is a step forward in elevating the importance and urgency of adaptation in the developing countries, but in terms of finance, not much progress is there yet.

In terms of institutional framework, together with the Global Environment Facility (GEF), the newly established Green Climate Fund (GCF) will serve as the financial mechanism of the Convention. Also, some other funds established under the decisions of COP7 in 2001 and operationalized few years later will continue serving the climate regime. These funds are the LDC Fund, the Special Climate Change Fund and the Adaptation Fund. The GCF has been capitalized with a fund of USD 10.3 billion. However, so far only about 5.6% of total CF has been delivered through these somewhat democratically administered funds. Besides these funds, quite a number of bilateral and multilateral agencies also deliver CF (Oxfam 2012).

The Paris Agreement, which brought Parties to agree to combat climate change and accelerate actions towards a sustainable future, is a landmark agreement bringing all nations to a common cause and realizing these framework(s). According to Articles 9, 19 and 11, it reaffirms the obligations of the developed countries to support the developing country Parties to build a climate-resilient future. Also, calling for voluntary contributions by other Parties, the agreement calls for provision of resources that ought to keep a balance between adaptation and mitigation activities. The Paris Agreement provides that the Financial Mechanism of the Convention, which includes the GCF shall serve the Agreement (What is the Paris Agreement? n.d.). The Paris Agreement also emphasizes on transparency (Article 13) and implementation and compliance (Article 15)—it relied on a robust transparency and accounting system in order to provide clarity on climate actions. With that a “global stocktake” to take place in 2023 and every five years after that the collective progress should be assessed towards achieving the purpose of the Agreement.

Issues related to climate finance have been a subject of debate at global platforms. The debate surrounds ideas regarding how climate finance is sourced and mobilized through a number of financial instruments and channels. It includes the kind of support and the extent to which it can be assumed as “new and additional” in order to support the countries that are really in need. A key area of debate also surrounds the idea of “fair share” of climate finance and how to assess whether this amount of funding is the fair amount (Bird 2014). On the other hand, there has been a lot of attention on mitigation finance in the past, which calls for a balanced support for both adaptation and mitigation activities. Parties to UNFCCC, despite of agreeing to this balanced approach, still have a lack of understanding on how this is to be interpreted in practice (Nakhooda 2013; Nakhooda and Norman 2013). Recent climate negotiations have been focused on strengthening focus on adaptation and increasing financial capacities to address it (Ludemann and Ruppel 2013).

However, unlike mitigation, which can be tracked through the greenhouse gas emission reduction, there has not yet been a metric system to track progress of adaptation. In addition, debate over adaptation finance and development finance is currently another big issue. This stems from the fact that many adaptation projects have the typical characteristics of development projects, which makes it difficult to convince the donors in approving such projects. However, it is important to understand that in certain countries, vulnerability of a society is dependent on the structural development, and hence, it is not always logical to distinguish adaptation and development. This is because in these situations, development deficits put the vulnerable communities to further risks. So, any development project that aims to mitigate structural problems also have a large contribution to increasing the society's adaptation capacity (Weischer and Wetzel 2017).

Also, major climate policy agreements made so far, including that of the Kyoto Protocol and the Cancun Agreement, have mentioned that funds that address climate change for the developing countries must be new and additional. Although these two terms are indicative of being over and above development aid, they have never been defined properly (Stadelmann et al. 2011). It is also important to ensure that achieving major reduction in greenhouse gas emission and building capacity of the vulnerable communities to combat climate change is being done at a very fast rate; however, this must not take place by sacrificing the needed development.

The PVCs having nano-contributions to causing the climate change problem are being hit first and hardest as innocent victims, with extremely weak adaptive capacity on their own (Khan 2013). The developed countries must account for the greenhouse gas emissions which lead to major implications, especially in countries that are geographically vulnerable to extreme events. Hence, the transfer of these resources cannot only be a legally binding regime but also an issue of human rights (Schalatek 2012). Also, a variety of new arrangements must be facilitated to generate public and private climate finance, and a "single uniform design is neither feasible nor desirable". These designs should support and "not retard" the future adoption by many developing nations of emission caps (Stewart et al. 2009).

Parties and experts who aim to mobilize climate finance at scale proposed to have alternate sources of climate finance which includes trading schemes, carbon taxes, etc. However, the United States (US) pulling out of the Paris Agreement made this scenario quite complicated. The US, as one of the world's largest financial superpower, has a strong ability to raise financial and technological resources. Its contribution is key to mobilizing funds and is unmatched, especially to make the latest technology available to the rest of the world, and hence, its withdrawal from the Paris Agreement will have serious implications in the climate finance arena. The Parties to the Paris Agreement, with their commitments to meet resilience targets and also cut down greenhouse gas emissions, have also set some financial targets. Although developing nations made their commitments conditional to receiving global support through international climate funds, there is still not enough attention to assessing the legal frameworks of the developing countries. It is important for the developing countries to identify the legal barriers and

opportunities to optimize options for climate finance to fund the Nationally Determined Contributions (NDCs) of these countries (Morita and Pak 2018).

## **Current Status of CF: Bangladesh**

There are many different elements to climate finance. These include the type of finance provided (e.g. development aid, equity, low cost loans, etc.), the sources of this finance (is it public or private?) and where the finance flows from (developed countries to developing countries, within developed nations or from other sources). Financing can be provided through a number of channels including bilateral, regional or other multilateral channels along with envisaged financial mechanism. This has been clarified in paragraph 5 of Article 11 of UNFCCC and paragraph 3 of Article 11 of Kyoto Protocol. Ludemann and Ruppel (2013) echo that this opens many opportunities for state actors and relevant stakeholders to play important roles in financing activities dedicated to climate change.

Climate finance flows went up to USD 437 billion in 2015 until falling 12% in 2016 to USD 383 billion. The surge was due to private renewable investments, in China and in the US. However, the fall in climate finance flow in 2016 was because of lower capacity additions in a number of countries along with falling technology costs (Buchner et al. 2017).

According to the Intergovernmental Panel on Climate Change (IPCC), Bangladesh is one of the most vulnerable countries to climate change. However, the country has taken large strides to combat climate change through long-term strategic approach. Bangladesh has prepared the Climate Fiscal Framework (CFF) by the partnership of the Finance Division of Bangladesh and Poverty Environment and Climate Mainstreaming (PECM) project of the General Economic Division; it has been developed in line with the Bangladesh Strategy and Action Plan (BCCSAP) 2009, the Sixth Five-Year Plan and other important initiatives of the Bangladesh government. The CFF provides such tools by identifying the supply and demand sides of the climate fiscal funds. However, the framework could be reviewed to ensure that transparency, accountability and sustainability aspects in climate finance are existent in the long run. Bangladesh has been setting examples in terms of governance of climate funds too. The government not only implemented the BCCSAP 2009 by the establishment of the Bangladesh Climate Change Trust Fund, but also enacted the Climate Change Trust Act in 2010. Large funds were allocated to BCCTF, supporting a number of projects undertaken and implemented by various ministries, departments, NGOs and others. Strategic Program for Climate Resilience (SPCR) is another financing facility to address climate threats in Bangladesh (Climate Fiscal Framework 2014). A comprehensive climate finance framework is key to achieving climate finance readiness in a nation. For such framework, the inclusion of some key factors is critical. According to a UNDP's discussion paper, Development in a Changing Climate: A framework for Climate Finance in 2010, financial planning refers to one of its key components which does

not only assess the needs and priorities of climate-related activities, but also identifies policy mix and source of financing. It also presents the importance of assessing finance through blends and combinations to formulate projects, programmes and sector-wide approaches to access finance.

On the other side, there should be proper channels for delivery of the funds and to coordinate implementation and execution of projects, programmes, sector-wide approaches among others. Lastly, the components should be measureable, reportable and verifiable (MRV), and if performance-based payments are to be used, MRV is key. On that note, it is essential for Bangladesh to be made ready to use the national and international climate finance in the most effective way and this raises the need of a holistic framework. A comprehensive climate finance framework should provide guidelines to track climate-related expenditures and estimate the potential costs that may be required to address future climate change challenges. To formulate climate change policies, a climate finance framework aids to provide essential tools, guidelines and principles to achieve the goals of a climate fiscal policy without intruding into public finances. Integration of a climate finance framework with the governance structure of Bangladesh is important. It should help provide performance management indications at the ministry levels to reinforce accountability. This is also one of the key recommendations of the Climate Public Expenditure and Institutional Review (CPEIR), which states that the budget formulation and its execution must address climate change. Also, the framework should have adequate scope for auditing to be conducted on climate activities and also have close engagement and combined ownership of both the public and the private sectors. Bangladesh, as an LDC, should raise its voice to have climate funds as grants, especially for adaptation, as promised at Copenhagen in 2009 by the developed countries.

It is very important for countries like Bangladesh to be well-equipped to meet the standards set by the Green Climate Fund (GCF) and other adaptation fund windows as there is a race in accessing funds. Enhanced access capacity and effective utilization of the funds are a must, along with strategically using political leverage for raising funds. However, it is imperative for Bangladesh to have improved governance mechanism to have better access to global climate funds. This will be possible through multi-stakeholder engagement and maintenance of transparency and accountability through the whole governance process. For this, Bangladesh has to identify key challenges that exist in their climate finance discourse. The recipient countries also need to strengthen their institutional capacity through improved public–private partnership to have an enabled environment for financing climate change. In Bangladesh, there should be an enabling environment to finance private sector in addressing climate change. Private sector’s engagement is insufficient in decision-making or policy implementation, especially in countries like Bangladesh. Their inclination is to engage this sector through public–private partnership through financial incentives. However, it is very important for the vulnerable countries to identify their vulnerable sectors for just climate finance allocation.

## Attempts at Defining Climate Finance

Comparative analysis of the various definitions of climate finance which has been proposed by various organizations show a large amount of similarity. Although there are a number of views of what type of funding makes up “climate finance”, there is no standard definition of the term (Venugopal and Patel 2013). Referring broadly to financial resources that are dedicated to cover the costs of transitioning to a low-carbon global economy and to address activities to build resilience against the current and future threats of climate change (CPI 2014), climate finance is yet to receive a universally accepted definition. But broadly, at international negotiations in global climate politics regime, the term is used to describe financial flows from the developed to the developing nations to address mitigation and/or adaptation activities (Venugopal and Patel 2013).

Climate finance was first attempted to be defined by the Rio 1992 UNFCCC report (UNFCCC 1992) as the following: developed countries shall provide “new and additional financial resources” to developing countries to support meeting the full and incremental costs of climate change. Hence, there is a strong legal binding for the developed countries to support the developing countries in combating climate change impacts to become more resilient and also less carbon-intensive. The concept of “incrementality” or “additionality” plays an important role in understanding the sum of climate funds, which must be “new and additional” (Brown et al. 2010; Stadelmann et al. 2011). Climate funds should therefore be funds that are mobilized from new sources, such as levy or emissions trading; it should be delivered through new channels which includes climate finance windows like the GCF, and it should be in excess of current climate finance (Brown et al. 2010; Stadelmann et al. 2011).

Although UNFCCC does not have a definition of climate finance, in its report on Standing Committee on Finance on the 2014 Biennial Assessment and Overview of Climate Finance Flows, it has tried to point to a convergence of (operational) definitions that is as follows: *Climate finance aims at reducing emissions, and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts* (UNFCCC 2014). UNFCCC’s report on Standing Committee on Finance on the 2014 Biennial Assessment and Overview of Climate Finance Flows also mentions, “...the report encountered challenges in collecting, aggregating and analysing information from diverse sources. For example, each of these sources uses its own definition of climate finance and its own systems and methodologies for reporting. The wide range of delivery channels and instruments used for climate finance also poses a challenge in quantifying and assessing finance”.

ADB’s Sustainable Development Working Paper Series No. 34 (Chandrasekhar 2014) almost rightly points where the problem is being created as a consensus is yet to be reached on defining “climate finance”. The paper refers: “*There is no agreed definition of climate finance. Consequently, accurate data on international climate*

*finance are not available. Data on bilateral and multilateral flows are available, but they involve some double counting. In some cases the data reflect the total financial commitment to a project that has adaptation or mitigation benefits rather than the share of the project cost attributable to the climate objective.* ADB has simply put the definition of climate finance in one of its 2014 report as the *financial support by industrialized countries for adaptation and mitigation actions in developing countries*". On the other hand, the Organization for Economic Co-operation and Development's Development Assistance Committee (OECD-DAC) has no definition on climate finance as well; instead, the OECD-DAC defines and reports on climate-related Official Development Assistance (ODA) and have five (5) statistical markers for monitoring external development markers for environmental purposes (UNFCCC 2014).

The Particularly Vulnerable Countries (PVCs) have negligible contributions to greenhouse gas emissions across the globe. However, they are hit first and hardest, with very weak adaptive capacity to tackle the impacts (Khan 2013). This is where the rationale or legal basis emerges for industrial countries to support the PVCs in addressing these impacts. Since climate finance comes from the notion of responsibility-capability-based mechanism (Article 3.1), it is therefore very different from the voluntary-based development aid. Climate funds are identified as "new and additional" and hence are in excess of the 0.7% of Gross National Income (GNI) contribution that is addressed to ODA. Thus, climate finance ought to be (a) in excess of current ODA, (b) in excess of ODA levels from a specified baseline year and (c) in excess of projected ODA calculated using a specified formula (Brown et al. 2010).

On the contrary, from the Biennial Assessment and Overview of Climate Finance Flows (2014), it is clear that the Multilateral Development Banks (MDBs) understand that climate finance is equal to the sum of mitigation, adaptation and dual benefit finance from the MDB own resources as well as external resources. The Biennial Assessment and Overview of Climate Finance Flows (2014) states that the International Development Finance Club mentioned about "Green finance" which comprises "climate finance" and finance for "other environmental objectives", with "climate finance" being composed of "green energy and mitigation of greenhouse gases" and "adaptation to climate change.

Furthermore, according to the World Resources Institute (WRI), climate finance—or international climate finance—is used to describe financial flows from developed to developing countries for climate change mitigation/adaptation activities. In contrast, Climate Policy Initiative (CPI) puts climate finance in a different angle. They put the idea of climate finance as the financial resources paid to cover the costs of transitioning to a low-carbon global economy and to adapt to, or build resilience against, current and future climate change impacts. On the other hand, the Overseas Development Institute (ODI), which has done a number of works on climate finance instruments and the architecture, refers to climate finance as the financial resources mobilized to help developing countries mitigate and adapt to the impacts of climate change, including public climate finance commitments by developed countries under the UNFCCC. Furthermore, the primary national policy

documents by the Government of Bangladesh (GoB) which analysed the concept of climate finance very critically, including the Climate Fiscal Framework (CFF), the Climate Public Expenditures and Institutional Review (CPEIR) and Climate Protection and the Development (CPD) Budget Report 2017–18, could not pinpoint the definition of climate finance as has been mentioned in the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), the Seventh Five-Year Plan (7FYP) and the CPEIR. However, according to Climate Fiscal Framework (CFF) of Bangladesh: the expressions “climate finance”, “climate expenditures” and “climate-related expenditures” are used interchangeably in the CFF, which includes both adaptation- and mitigation-related finances and expenditures. This study therefore presses to propose a comprehensive definition of climate finance, which is imperative in understanding what is inclusive and/or is exclusive when climate finance is acknowledged.

Hence, the central idea remains that climate finance aims at reducing emissions, and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts. This has been the overall understanding obtained from United Nations Framework Convention on Climate Change (UNFCCC).

## **Issues of Climate Finance**

### ***Accountability and Transparency in the Climate Finance Arena***

Several meetings on aid effectiveness have taken place from 2005 onwards on the principles of mutual accountability, transparency and shared responsibility, ownership and partnership for CF from the industrial nations to the developing, most vulnerable nations. It was assumed that if the transparency was ensured then accountability would result accordingly and ownership of aided projects/programmes will also come about via a partnership approach (Khan 2017). Unfortunately, ODA was not taken into account while these agreements were taking place and hence, the result now is that even though CF agreements were formulated with good intentions and agreed that it would be above and additional to the ODA being provided, only about half of that additional fund has been contributed by some industrialized countries, while most are even further behind. ODA is somewhat being repackaged as CF (Oxfam 2012; Nakhoda 2013).

## ***Attempts to Strengthen Transparency and Accountability***

From COP 13 (2007) onwards, the measurability, reporting and verification of finances flowing into LDCs from Highly Developed Countries (HDCs) have been strengthened and CF's reporting guidelines were also made powerful in COPs 17 and COPs 18, under which the old industrial countries assumed obligation to report on climate finance in details both in their National Communications (NatComms) and Biennial Reports (BRs). The Common Tabular Format (CTF) for submission of CF project-related information was agreed upon as well. Later, to further strengthen and effectively create modalities and framework of transparency and accountability for mobilization of public funds, in COP 21, the SBSTA, the technical arm of the Convention, was formed. Furthermore, under the Paris Agreement (PA) of 2015, along with the establishment of Articles to enhance capacity building and create transparency framework, the need for developing nations to report their financing needs and climate funds received were also stated.

## ***Failures in the Creation of Transparency and Accountability Modalities***

Unfortunately, the status of transparency and accountability is unsatisfactory in both developed (donors) and developing (recipients) nations. Firstly, the definition creation and the resultant methodology establishment of CF is continually being hindered by the developed nations, which means there is negligible uniformity in CF accountability across countries. This, in turn, has many-a-times resulted in double/triple/quadruple counting of the funds in the books.

Hence, unsurprisingly, there is a Himalayan difference between the CF disbursed by the donors and CF received by the recipients. To elaborate, "...at COP21 in Paris, when the donors declared that they provided USD 62 bn as CF in 2014 to the developing nations, India instantly produced their research on CF showing that only USD 2.6 bn has been actually received by the DCs". Also, several NGOs, like Oxfam America have shown about 80% of CF so far delivered are ODA renamed and repackaged (Oxfam 2012; Nakhooda 2013); even worse, almost 33% of this money has been allocated to adaptation and only about 20% of it went to the most vulnerable countries, which numbers at about 100 UNFCCC Parties. Furthermore, there is a lack of granularity in project data as most countries submit compiled information, without giving project-level disaggregate data and/or explaining the financial tools used. Also, there have been reports that several of the bilateral, multilateral and international NGOs currently provide CF have creamed off a significant portion. Additionally, the accessibility of funds is also very complex, even with the establishment of a 20-member Standing Committee on Finance (SCF), which lacks in exercising its full potential towards enhancing transparency in project details and mobilization. Moreover, the projects taking place seem to be



more short-term; rather than “...warranting more use of local resources and long-term investment in developing human resources and professional expertise”, they are “workshop-driven”.

## **Solving the Accountability and Transparency Issues: SBSTA Submissions**

Both LDCs and HDCs have, over the years, put forth several propositions, to lower the transparency and accountability issues existent in the Climate Finance literature. To have them at one place, at its forty-fourth session, the SBSTA invited the opinions and ideas of Parties and observer organizations to be submitted to the UNFCCC Secretariat. These submissions, analysed together, will help to identify the similarities among the Parties, and those points could be a starting point for developing the modalities for better transparency and accountability for the mobilization of CF funds, instead of concentrating on unique ideas proposed by only a few nations (SBSTA 2016). Also, the similarities, if discussed, before the disparities and agreed upon to be ratified, will set a precedence for higher levels of trust among the Parties and organizational representative attending Conference of Parties—COP(s); till now, COP negotiations were hindered by donor Parties trying to prove they provided as much as their ledger said, while the recipient Parties were busy discrediting these claims, often putting the real issues—those of common methodology creation—in hindsight (Schellnhuber et al. 2010). It is to be understood that as soon the issues of accountability, transparency and lack of common methodology are solved, the Himalayan difference between CF received and CF provided will automatically become small (and may later vanish altogether) as well. The establishment of a CF definition, coupled with the recent attempts of OECD to redefine ODA (Hynes and Scott 2013) in today’s context, will also be better addressed, then.

### ***Building Bridges to Turn Differences into Strengths for Modality Creation***

To better understand why a universal CF framework has still not been introduced, the differences in opinions amongst the Parties need to be analysed. Only by sorting out the differences, especially in three categories—recipient parties, donor parties and observers—can bridges be built to reach compromises and consequently better results at negotiations that benefit both the developed and the developing nations. After all, the question is of the greater good of saving the Earth’s most vulnerable regions from the effects of climate change and mitigating the reasons which cause this phenomenon in the first place, not individual gains.