



Implementation of Bangladesh Climate Change Strategy and Action Plan 2009: Sketching the Influential Factors

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Public Policy & Governance Program
North South University



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**Public Policy & Governance Program
North South University**

Dedicated to

My Mother, Still on whom I fully depend

DECLARATION

I declare that the dissertation entitled “ Implementation Process of Bangladesh Climate Change Strategy and Action Plan 2009: Gloomy in the Glow” submitted to the PPG Program of North South University, Bangladesh for the Degree of Master in Public Policy and Governance (MPPG) is an original work of mine. No part of it, in any form, has been copied from other sources without acknowledgement or submitted to any other university or institute for any degree or diploma. Views and expressions of the thesis bear the responsibility of mine with the exclusion of PPG for any errors and omissions to it.

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Abstract

What are the major factors that can effectively influence implementation of Bangladesh Climate Change Strategy and Action Plan? This study has conducted to search the answer of this question. At present climate change is considered as a burning issue for the contemporary world. The issue is also related to the development. Therefore developing countries are likely to be more effected by the adverse impact of climate change because of less capacity. As a developing country Bangladesh is often cited as one of the most climate vulnerable countries due to its geophysical location. In this context, the country has formulated climate change policy named as Bangladesh Climate Change Strategy and Action Plan, 2009 (BCCSAP) to address the problem. The policy is well drafted and recognized by the United Nations.

Formulation a policy is not all about the story. Policy implementation is considered more challenging than formulation of a policy. In implementation stage, policy is usually influenced by several factors to fulfill each of their personal interest. In this context, this study is going to identify factors that can influence the implementation of BCCSAP. The Study also aims to look into how the factors are associating in the implementation process of BCCSAP.

In this context variable like disposition of implementers, resources allocation, function of bureaucratic and political condition of organization describe in the “The Policy Implementation Process-A Conceptual Framework”, by Donald S. Van Meter and Carl E. Van Horn used in this research. Qualitative research method was applied to this research. Primary data was collected both from policy implementing organization (Bangladesh Climate Change Trust) and main stakeholders of this policy that are officers of concern ministries and Project Directors who are directly or indirectly related to the implementation of the policy. Both primary and secondary data collected to find out the factors that can influence the policy implementation. Semi-structured questionnaire used to collect data from employee of the office and project directors of the projects who are basically responsible for implementation of BCCSAP.

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Abbreviations

ADP	Annual Development Programme
BCCRF	Bangladesh Climate Change Resilience Fund
BCCSAP	Bangladesh Climate Change Strategy and Action Plan
BCCT	Bangladesh Climate Change Trust
BCCTF	Bangladesh Climate Change Trust Fund
BWDB	Bangladesh Water Development Board
CAG	Comptroller and Auditor General
CoP	Conference of the Parties.
EIA	Environmental Impact Assessment
GCF	Green Climate Fund
GoB	Government of Bangladesh
IMED	Implementation, Monitoring and Evaluation Division
KII	Key Informant Interview
LGD	Local Government Division
MoEF	Ministry of Environment and Forests
MoLGRDC	Ministry of Local Government, Rural Development and Cooperatives
NIE	National Implementing Entity
LGED	Local Government Engineering Department
LGI	Local Government Institution
MP	Member of Parliament
NAPA	National Adaptation Programme of Action
PIC	Project Implementation Committee
DPP	Developmental Project Proposal
PPCCTF	Project Proposal for Climate Change Trust Fund
PSC	Project Steering Committee
TIB	Transparency International Bangladesh
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

Chapter 1

Introductory Discussion

1.1 Introduction

This study is about searching the factors that can effectively influence the implementation process of Bangladesh climate change strategy and action plan 2009 (BCCSAP 2009)¹. Government of a country formulates and implements a particular policy to address a specific problem. At present climate change is considered one of the core developmental challenges for Bangladesh. The country is often cited as one of the most vulnerable country experiencing adverse consequences of climate change (Hoque, 2015; Harmeling, 2014; UNDP, 2007; Huq and Ayers, 2007). The unique geographical location, high population density, low level of awareness, infrastructure and higher reliance on climate-sensitive natural resource makes the country less resilient to climate change (Rahman, 2014). Intergovernmental Panel on Climate Change (IPCC) has already noted that Bangladesh will be among the worst victims due to climate change. In addition to that increased frequency and intensity of climate induced natural disasters account for losses worth 1.5% of country's GDP (MOF 2013). Furthermore, it is estimated that it could cost US\$ 2671 million by 2050 to protect major towns of Bangladesh from climate-induced monsoon flooding (Dasgupta et al. 2011). Another research reveals that on an average 57% of annual development investment is now at risk of being adversely affected by climate change and an additional 10-30% of funding is required to ensure the current level of benefits from development projects (Haque 2009).

¹ BCCSAP formulated in 2008 and revised it 2009 to address the climate vulnerability in Bangladesh.

The Government of Bangladesh (GoB) realizes the scenario and develops long term climate change strategy, BCCSAP to address the problem. Bangladesh is one of the early initiators among the least developed country in the field of formulating climate change policy. The policy initiatives to address the adverse impact of climate change are acknowledged by the United Nations. The Prime Minister of Bangladesh has been announced as one of the winners of the United Nations' highest environmental accolade, in recognition of Bangladesh's far-reaching initiatives to address climate change (UN Environment Bangkok/ Dhaka 14 September, 2015).

After formulation of BCCSAP, two funds were created named as Bangladesh Climate Change Trust Fund (BCCTF)² in 2009 uses the government revenue fund, and Bangladesh Climate Change Resilient Fund (BCCRF) in 2008 uses the donor fund. The management system of these two funds is different from each other. Government established Bangladesh Climate Change Trust (BCCT) in 2010 to manage and run the projects of using the fund BCCTF. On the other hand BCCRF is managed by Ministry of Environment and Forest (MoEF)³ within a project. Every year government is allocating its revenue budget to the BCCTF and 66% of the total allocation is used to implement projects and 34% of the allocation is used as permanent fund for the BCCT. The interest of that fund is also used to implement projects. The government agency and NGO can initiate projects by using the fund BCCTF.

The study focused on the activities of BCCT to analyze the implementation process and find out the influential factors in the implementation process of BCCSAP. The factors are going to be traced out by analyzing the projects of government agencies especially the Bangladesh Water Development Board (BWDB)⁴ and Local Government Engineering

² According to the provision of Climate Change Trust Act, Bangladesh Climate Change Trust was established to with the aim to enhance the capacity of the people of climate vulnerable area

³ Ministry of Environment and Forest is the controlling ministry of BCCT.

⁴ Bangladesh Water Development Board (BWDB) is the department of Ministry of Water Resources. BWDB is the one of the major entity to implement BCCTF project

department (LGED)⁵. These two government agencies have been selected because they are implementing maximum projects of climate change. As of February 2017 out of 409 projects 136 projects have undertaken by BWDB and 173 projects have undertaken by LGED. Both primary and secondary data is collected to examine the implementation process and find out the influential factors.

1.2 Background of the Problem

Climate change is considered one of the developmental issues for the Bangladesh. The issue is well addressed by the Government in every developmental agenda that the country aimed to achieve to celebrate its 50th anniversary in 2021. One of the developmental agenda of the Government is to transform the country from a low income economy to the first stages of a middle income economy. Planning Commission (2012) has stated that “along with higher per capita income, Vision 2021 lays down a development scenario where citizens will have a higher standard of living, will be better educated, will face better social justice, will have a more equitable socio-economic environment, and the sustainability of development will be ensured through better protection from climate change and natural disasters.” The climate change is considered as an important factor in the way to achieve the Vision. In addition to that the Vision 2021 is associated with Perspective Plan 2010-2021. “The Perspective Plan provides the road map for accelerated growth and lays down broad approaches for eradication of poverty, inequality, and human deprivation. Specific strategies and the task of implementation will be articulated through the two five-year plans: Sixth Five Year Plan (2011-2015) and the Seventh Five Year Plan (2016-2020). Both the plan has addressed the climate change issue to eradicate poverty, ensure the social and economic well being for the people and maintain the GDP growth rate to transform the country to the development. The vision is well reflected in the BCCSAP also.

13th Conference of the Parties (COP 13) also launched an action plan in 2007 popularly known as Bali Action Plan which identified a set of action is essential to achieve a secure

⁵ Local Government Engineering Department (LGED) is the department of Local Government Division. Along with BWDB, LGED is the most important organization to implement climate change project.

climate future. The national and global commitment of the government provided initial boost on the importance of climate change issue. By the same time, people especially coastal area of Bangladesh has experienced two devastating cyclones namely sidr in November, 2007 and aila in May, 2009 provide a necessary background for the adoption of some drastic action plan to address this issue (BCCSAP 2009). In this context Bangladesh Climate Change Strategy & Action Plan is formulated as a unique tool to address the climatic issues (BCCT, 2016). The GoB from its own revenue budget has created the fund without waiting for the global commitment or Green Climate Fund that as an innocent victim of climate change lawfully Bangladesh deserves (BCCT, 2016).

After creating the fund, Bangladesh Climate Change Act, 2010 was enacted to create an organization to oversee the overall management of the fund. Thus, BCCT came into force in 2013 with effect from 2010. This organization is basically responsible for the overall management of the fund. Government of Bangladesh enacted rules named “Guidelines for Project Formulation, Processing, Approval, Revision, Implementation, Release and Use of Fund of the Projects of the Government, Semi-government and Autonomous Organizations under Climate Change Trust Fund” in 2012 as a guideline to manage the fund. After creating the CCTF, till the fiscal year 2016-2017 Government has allocated total tk 3200 crore to address the adverse impact of climate change.

Government of Bangladesh is allocating its revenue budget every year to make Bangladesh resilient to climate change. As a developing country government has shown its sincere effort towards the issue. Along with the budget allocation GoB has taken all legal initiatives to institutionalize climate change initiatives, as government has considered it as developmental challenge for the country. The problem is that budget allocation capacity of the GoB is very limited as the country has other priorities. Therefore budget allocation has decreased over the year. At the beginning of BCCTF fund Government allocation was tk 700 crore. At present the allocation is only tk 100 crore. With the limited budget allocation how could government able to address the

climate change issue. The climate change issue is important for the government as it has close linked with maintaining the development.

The BCCSAP 2009 has linked the climate change issue with the national developmental strategy and well stated that the country is striving to accelerate economic growth and substantially eradicate poverty by 2021 but avoiding the harsh environmental price many countries have paid in the pursuit of growth (BCCSAP 2009). In this context climate change issue is integral part of the development. Therefore, without addressing the climate change government may not able to achieve the targets of Vision 2021. Government assumed that addressing the climate change is important to eradicate poverty, increase employment opportunities, ensure food security, provide access to energy and power, and achieve economic and social well being of all the citizen of the country (BCCSAP 2009). The context shows the importance of proper implementation of BCCSAP.

The proper implementation of BCCSAP is closely associated with Activities of BCCT. If the BCCT is able to implement the policy according to the provision of law, rules and circulars, government could able to address the climate change issue. In addition to that government could able to achieve objectives and targets specified in policy document. In the other words if the function of BCCT is influenced by the several factors then the climatic event can hinders the government's initiatives to make the country resilient to climate change. Eight years have passed after the creation of CCTF and BCCT. Whether BCCT can use or manage the fund as per the provision mentioned in the BCCSAP, or fail to implement the policy it is needed to examine.

1.3 Statement of the Problem

A general assumption is often made by scholars that once a policy has been made the policy will be implemented (Smith 1973). Sound laws are a key foundation of democratic governance and economic development in every country. Yet, formulating such laws is

only half of the puzzle. The other, more challenging half is ensuring that the legal framework is properly implemented (Nadgrodkiewicz et al, 2012). In this regard policy implementation is more important than policy formulation. In case of developing countries, public policy can be formulated without any consultation. Though in Bangladesh, this situation has changed over the year. Engagement of civil society is increasing day by day. In maximum cases, people have less interest in policy formulation process. The real role of interest groups including political parties comes when the policies are implemented by the government (Smith 1973). So, a good policy is not enough for achieve the desire objectives of the policy. The pace at which this can be realized is hinged essentially on the ability of the government to formulate appropriate policies and, very importantly, on the capability of the public bureaucracy to effectively implement the formulated policies (Ikechukwu U.B. and Chukwuemeka E.E.O: 2013)

A well drafted policy might influence by several factors during implementation and might fail to achieve its desire objectives. As the same way implementation of BCCSAP is influenced by several factors and resists the policy to achieve its desire targets. Several literatures on BCCSAP implementation also manifested this fact in context of Bangladesh. Asia Foundation (2014) identifies that a lack of information and understanding of the BCCSAP among key actors at various levels, particularly local government officials as well as local civil society organizations hinders the proper implementation of BCCSAP. In addition to that TIB (2016) conducted a research on climate change project implementation by the local government institutions. In that research they found various types of governance challenges such as not assessing the adverse impact of climate change before designing the proposals of climate change projects, personal and political connection applied in getting project approval and most of the cases less vulnerable locations got the priority to implement a projects. Further study conducted by the TIB (2017) on project implementation by the Bangladesh Water Development Board (BWDB). In that study TIB found that there is a lack of accountability mechanism of the trustee board for their selection and approval of

climate projects. In addition to that, the project selection and approval for funding often is politically influenced that results selecting projects and allocating fund in less vulnerable areas in terms of climate change. Rai et al. (2014) also found governance challenges in the implementation process of BCCSAP as the Trustee Board is the final authority to approve a project. In addition to that, the BCCTF has no specific project selection and prioritization indicators or criteria. BCCTF aspire to mainstream climate change adaptation activities in the country's national development planning process, the bulk of funding by these funds is going towards a few lead line ministries without wider representation of national interests.

The existing literature has evidence that BCCSAP faces challenges in its implementation level. In contrast GoB has shown its sincere effort to implement BCCSAP as climate change is core developmental challenge for Bangladesh. All development plans of national and international bodies are addressing this issue as a developmental agenda. After the MDGs, the UN announces the targets of SDGs. Now these targets are ahead of country. Goal 13 of SDGs is about to "Take urgent action to combat climate change and its impacts". Government of Bangladesh has formulated 7th five years plan is in line with SDGs. Chapter 8 of 7th five years plan is about Sustainable Development: Environment and Climate Change. To achieve the development target of Bangladesh proper implementation of BCCSAP is inevitable.

In addition to that, Implementation of BCCSAP is important because the government of Bangladesh's has vision is to eradicate poverty and achieve economic and social well being for all the people. This will be achieved through pro- poor climate management strategy (BCCSAP 2009). It also shows the necessity of proper implementation of BCCSAP. Furthermore, the sixth annual Climate Change Vulnerability Index exposed that Bangladesh would feel the economic impacts of climate change most intensely and that capital Dhaka would be one of the five most climate vulnerable cities in the world. The report published by ADB (2014) claims that Climate change is a pressing development

concern for Bangladesh. The impacts of climate change will force millions of people to migrate, squeeze settlements and resource-use patterns, and have serious implications for the physical and natural environment. Given a business-as-usual scenario, climate change will threaten the significant gains made in poverty reduction (BCCSAP 2009).

Therefore it can be assumed that impact of climate change will hinder the economic growth. In addition, government will fail to achieve its desire sustainable development goals. Government will fail to lead the nation towards the category of middle income country. Climate change policy is a new arena of public policy for the country. The policy document is stated that climate change policy implementation can enhance the country's adaptive capacity and lead the country towards the sustainable development. Failure in implementation of policy can increase the poverty rate; destroy the development initiative taken by the government. The facts and figure is presented above shows that the policy is not implementing smoothly. Several factors may influence the implementation process and policy may hinder for that reason.

1.4 Objectives of the Study

Overall discussion in the previous sections and problem statement of the study set the objectives of the study. The study aimed to assess the implementation process of BCCSAP. In addition to that, the factors that influence the implementation process also analyzed in this study. In this light, the research has set the following objectives:

- To assess the implementation process of BCCSAP
- To access the influence of factors in the implementation process of BCCSAP

1.5 Research Questions

The background and research problem stated in the previous section has set the objectives of the study. The research questions for the study have placed to attain the objectives specified in the previous section. In addition to that, research question has

set in a way that manifested the assumption of the study. In this context, the research questions are fixed to identify the major factors that influence the implementation process of BCCSAP as well as to know the answer of the questions how resource constraint, political culture and administrative culture can influence implementation of the BCCSAP. There might be some other factors also that might able to influence the implementation. Thus, taking this context into account, the following research question can be posed for discussion:

Broad Research Question

- What are the major factors that can effectively influence the implementation process of BCCSAP?

Specific Research Questions

- How does the function of bureaucrats influence the implementation process of BCCSAP?
- Does the institutional arrangement such as resource allocation, policy communication, and characteristics of implementing agency can influence the implementation process of BCCSAP?
- How the political condition can influence the implementation process of BCCSAP?

1.6 Significance of the Study

Literature showed that climate change policy implementation countenance several challenges over the country in different ways. Okolo et al (2015) identified that structural issues such as lack of technical expertise, equal funding and coordinated planning, little communication between district- and local communities all impede efficient climate policy implementation in Uganda. Ampaire et al (2014) explores that limited institutional capacity and knowledge gaps on climate change are considered important bottlenecks. Effective implementation of climate change policies will demand

identification of specific capacity needs and implementation of capacity building activities for different actor groups. TIB (2016, 2017) identified that climate change projects implemented by Local Government Institutions (LGI) and BWDB faced several governance challenges in the implementation level. Literature revealed that climate change policy was not able to get desired impact because of the influence of the factors.

In addition to that, the BCSAP is one of the policy priorities for the government. Government is implementing the policy with an ambition that it will address the climate related developmental obstacles and can minimize the damage that might be caused by the climate change. Assumption for the effective implementation of BCCSAP would lead the country towards sustainable development. In addition to that, government could be able to achieve its developmental goals mentioned in SDGs, 7th five years plan, Vision 2021. To attain these developmental targets, proper implementation of BCCSAP has no alternatives. Several researches on policy implementation are carried out by different scholars but climate change policy gets less concern by the scholars. So it is an important area to conduct a research.

Furthermore, BCCSAP is considered as a unique tool to address the climate change causality. But policy might be influenced by several factors as mentioned earlier. In this situation, BCCSAP might fail to achieve its desired objectives. Finding factors is important for proper implementation of the policy. In this perspective, the research will generate knowledge about the influential factors.

1.8 Scope of the Study

As a developing country, proper implementation of policy is important to achieve its developmental vision, mission and goal. Proper implementation of BCCSAP can enhance the capacity of the country to address the vulnerabilities of climate change. This study has scope to identify challenges that can influence the implementation of BCCSAP. The policy is implemented through two funds: BCCTF and BCCRF. The study is concentrating on BCCTF and to manage the fund GoB created BCCT. Therefore, activities of BCCT are

going to analyze to identify the influential factors. The scope of the study is confined with the implementation of BCCSAP by BCCT.

1.9 Chapter Outline

The thesis is divided into six chapters. The introductory chapter is associated with background and statement of the problem, significance and rational of the study, research question and research objectives. This chapter is followed by a detailed description of theoretical and analytical framework on the basis of choosing the appropriate theory and review of literature. Methodological discussion is in third chapter. This chapter is about technique of collecting and analyzing data for the purpose of the research. The fourth chapter is about development of climate change policy especially policy context of BCCSAP 2009 in Bangladesh as well as institutional arrangement to implement the BCCSAP 2009. The fifth chapter presents and analyzes the data and draws inferences. Finally, the sixth or the last chapter draws conclusions of the entire research.

1.10 Conclusion

This chapter is an over view of the research problem and tells about the objectives of the research, what is researcher going to do. In addition, it tries to provide the inquiries incurred in the researcher to identify. Finally, it tries to present the replica of the research methods used in the study and whole thesis organization. Next chapter will discuss on the related literature of the research topic and on the theory chosen by the researcher to analyze the research problem further.

Chapter 2

Literature Review, Theoretical and Analytical Framework

2.1 Introduction

The chapter is about literature review, theoretical and analytical framework. Relevant concept is also defined in this chapter. Literature review gives an idea about the current trend of climate change policy implementation in global, regional and local context. It reveals the implementation process of climate change policy and factors that affect the implementation process. In addition to that by reviewing the literature missing gap can be identified to frame the present study. On the other hand, theoretical and analytical framework provides an overview of theoretical aspect of the issue. It leads towards the practice ground of the study. It also focuses on the specific focus of the study. According to the theory what the study is going to be analyzed. Definition of relevant concept also provides an idea about the research topic.

2.2 Defining the relevant Concept

The research two concepts are important to provide a clear idea about the research topics. These are policy implementation and climate change. In social science there is no single definition of any concept. So, it is important to provide a clear idea how these two concepts are going to use in this study. By defining the concept ambiguity can be avoided.

2.2.1 Policy Implementation

2.2.1 Policy Implementation

The study of policy implementation began in 1970s. Pressman and Wildavsky (1973) brought the issue of policy implementation to the forefront. This point is particularly important in an era in which processes of 'government' have been seen as transformed into those of 'governance' (Hill and Hupe, 2002, p1). So the study of policy implementation is comparatively new phenomena in social science. Like other concept in social science, there is no universal definition for policy implementation. Policy implementation is defined by the different scholars in different ways.

According to Pressman and Wildavsky (1973) policy implementation may be viewed as a process of interaction between the setting of goals and actions geared to achieve them (Pressman and Wildavsky, 1984: xxi-xxiii). This includes both one-time efforts to transform decisions into operational terms and continuing efforts to achieve the large and small changes mandated by policy decisions (Van Meter and Van Horn, 1975, p447).

According to Mazmanian and Sabatier (1983, p20-21), policy implementation is the carrying out of a basic policy decision, usually incorporated in a statute, but which can also take the form of important executive orders or court decisions. The starting point is the authoritative decision. It implies centrally located actors, such as politicians, top-level bureaucrats and others, who are seen as most relevant to producing the desired effects.

O'Toole (2003, p266) defines policy implementation as what develops between the establishment of an apparent intention on the part of government to do something or stop doing something and the ultimate impact of world of actions.

Thus implementation of policy means carrying out, accomplishing, fulfilling, producing or completing a given task. In general it refers practical manifestation of written document. Policy is nothing but a written document to address a specific or several

problems. Usually Government formulates policy to fulfill its desire goals. By implementing policy government can achieve its aims and objectives.

2.2.2 Climate Change

Climate change is the variation in global or regional climates over time. It reflects changes in the variability or average state of the atmosphere over time scales ranging from decades to millions of years. These changes can be caused by processes internal to the Earth, external forces (e.g. variations in sunlight intensity) or, more recently, human activities (Arctic Climatology and Meteorology).

In recent usage, especially in the context of environmental policy, the term "climate change" often refers only to changes in modern climate, including the rise in average surface temperature known as global warming. In some cases, the term is also used with a presumption of human causation, as in the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC uses "climate variability" for non-human caused variations. (IPCC, 2001)

The Intergovernmental Panel on Climate Change (IPCC 2007:943) defines climate change as 'a change in the state of the climate that can be identified (for example, by using statistical tests) by changes in the mean and/or variability of its properties, and that persists for an extended period, typically decades or longer'.

Climate has changed over the year and will change further. Governments all over the world especially government of third world countries are now being concerned to tackle this problem. Third world countries are considered as innocent victim of climate change. They are less responsible but more vulnerable regarding climate induces challenges. In this context climate change is important because it is one of the central issues of development.

2.3 Literatures Review

Literature review provides a clear indication about the ideas of scholars or ideas of previous work on same issue. It helps to figure out how the problem is manifested in the real world. It directs the researcher to conduct the research. For convenience of discussion the literatures under review are divided into three groups. At first, literatures in global context are being reviewed. Global context are divided into two parts developing countries and developed countries. Then the literatures in regional context and at last literature on Bangladesh context are being reviewed. By conducting the literature review in this manner, helps to provide a clear and overall idea implementation challenges of climate change policy over the world. The whole reviewed literature is also for tracing out the factors that may influence the implementation process of climate change policy.

2.3.1 Global Context

Hickey & Weis (2012) in their article “The challenge of climate change adaptation in Guyana” have mentioned that climate change has enormous impact on low lying region in the world. As a low lying developing country in South America Guyana, is highly vulnerable to sea-level rise and flooding. Most of its population lives at or below sea level and depends upon old and decaying coastal infrastructure. So the policy of this country has focused on increase the adaptive capacity of the country to tackle the adverse impact of climate change. They mentioned that budget allocation to the adaptation is not adequate. Some other factors like limited technical skills, low public awareness and the longer time-scale of threats relative to other national priorities are remain as problem. In fine this literature highlights some of the formidable challenges which poor countries face in prioritizing investments in adaptation.

Juhola et al, (2012) in their article “Regional Challenges of Climate Change Adaptation in Finland: Examining the Ability to Adapt in the Absence of National Level Steering” has described that Climate Change adaptation presents a challenge for all levels of governance. As impacts of climate change are most acutely felt at the regional and local level, so it is important to identify regional level barriers to regional implementation of climate change adaptation in Finland.

Okolo et al. (2014) have prepared info note on Barriers to successful climate change policy implementation in Uganda. Their finding derived from a qualitative policy study in Nwoya and Rakai districts, in Uganda. Their findings indicate that structural barriers like insufficient funding, low staffing levels and lack of coordinated planning across ministries hinder implementation of climate change adaptation policies in Uganda. They have mentioned that for better implementation of climate change policy national-level climate change policies have to be linked with local-level climate action plans. In addition to that national-level commitment to climate change adaptation should be demonstrated through equitable funding allocation across district- and sub-county levels.

Ampaire et al. (2015) have prepared an info note on Barriers to Successful Climate Change Policy Implementation in Tanzania. Their findings derive from a desk review and exploratory studies in Lushoto, Kilolo and Bagamoyo Districts. They have identified that lack of an effective national finance mechanism slows down to direct climate funds. It leads slows down in implementation of climate change policies. Moreover poor coordination of climate change actions from the national level to the local level remains a challenge. It creates gap between national and local governments and hinder implementation of climate change actions. In addition to that Limited institutional capacity and knowledge gaps on climate change are considered important bottlenecks.

Table 1: Summary of Reviewed Literature in Global Context

Name of Author	Major Findings
Hickey & Weis (2012)	Inadequate budget allocation and prioritizing investment in adaptation is major challenges for Guyana.
Juhola et al, (2012)	To identify regional level barriers is important to regional implementation of climate change adaptation in Finland.
Okolo et al. (2014)	Structural barriers like insufficient funding, low staffing levels and lack of coordinated planning across ministries hinder implementation of climate change adaptation policies in Uganda.
Ampaire et al. (2015)	Lack of effective national finance mechanism slows down the implementation of climate change policies in Tanzania.

Source: Depict by Author

The literatures in global context suggested that budget allocation and mechanism for the budget allocation is one of the major challenges for the Government developing countries of South America, and East Africa. In addition to that, prioritizing the investment in adaptation along with some structural deficiency like coordinated planning across the ministries; low staffing level is also challenge for the Government. For the European country to identify regional barriers is challenge for implementation of climate change policy.

2.3.2 Regional Context

Singapore

Hamilton-Hart (2006) in her article "Singapore's Climate Change Policy: The Limits of Learning" has mentioned that Singapore's climate change policy underwent an apparently significant shift in 2006 after acceded with Kyoto Protocol of the UN Framework Convention on Climate Change. As Singapore contributes only a small amount to global greenhouse gas emissions, the consequences of its accession are not great in global terms. In this context, formulating and implementing of climate change policy is considered challenge for Singapore. Economics-first mindset raises the bar for environmental risks to meet the problem definitions held by policymakers. This situation makes it harder to achieve the required big policy changes.

Nepal

Lamsal et al. (2014) in their article “Climate Change Policy in Nepal: Challenges, Opportunities and Imperative” have identified several challenges regarding climate change policy implementation in Nepal. At first they identified challenge regarding ‘Institutional Arrangement’. According to their analysis LAPA describes the goals and objectives in detail, but fails to provide clear identification of the main agents for implementation. The absence of decentralized executing units at the district and village levels has shown that implementation of the policy on the ground is extremely difficult. Another challenge is that ‘Financial resources and utilization’. They have mentioned that there is no clear provision regarding the allocation of fund and mechanism of fund flow from central to local level. Lack of mainstreaming climate change adaptation in development planning, and lack of legal basis are some other problem.

Pakistan

Ali & Erenstein (2017) on their research paper “Assessing farmer use of climate change adaptation practices and impacts on food security and poverty in Pakistan,” want to investigate the factors influencing the use of climate-change adaptation practices among farmers. This methodology used was quantitative with different models. The findings revealed that the number of adaptation practices used was found to be positively associated with education, male household heads, land size, household size, extension services, access to credit and wealth. Farmers adopting more adaptation practices had higher food security levels (8–13%) than those who did not, and experienced lower levels of poverty (3–6%).

India

Saxena, N. C., 2009 in his article “Climate Change and Food Security in India” has disclosed the fact that India is the home of 360 million under nourished and 300 million poor people despite of its fast economic growth and piling food stocks in the government’s stocks. Climate change make the situation worse as most vulnerable to climate change

are the poor in India and their assets and livelihoods are tied to climate-sensitive factors of production. In this context he stated that greater political and bureaucratic attention is needed to diversify their livelihoods and reduce their vulnerability. Investments should be increased in nutrition programs, clinics, disease control, irrigation, rural electrification, rural roads and other basic investments, especially in central and eastern India. Lastly, we need to build administrative capacities for designing climate proof investments. Greater and imaginative governmental intervention would also need an efficient and professional administration that is tuned to the emerging but uncertain crises caused by global warming and climate change.

Table 2: Summary of literature review in Regional Context

Name of Author	Major Findings
Hamilton-Hart (2006)	Economic development first mind-set is challenge to implement climate change policy in Singapore as the country has less contribution in global emission.
Lamsal et al. (2014)	Challenge to identify main agent to implement climate change policy is major challenge for implement LAPA in Nepal.
Ali, A. & Erenstein, O., (2017)	Adaptation measures enhance the agricultural production but all are not equally.
Saxena, N. C., (2009)	Greater political and bureaucratic attention is needed to address the climate change issue to ensure the food security to the people.

Source: Depicted by Author

The overall summary suggested that in regional level, challenges are manifested in different ways in country perspective. Policy response to climate change is varied from developing to developed country. Less emitter country want to continue its development first mind set. On the other hand adaptation is priority for the less developed country. Climate change issue is addressed by the country in a trial and error basis.

2.3.3 Bangladesh Context

N. Rai et al. (2014) mentioned that Bangladesh is one of the first least developed countries to develop a long-term climate change strategy and created two funds after developing the BCCSAP, one using government resources (BCCTF) and the other using donor resources (BCCRF). This paper uses the three “building blocks” to analyze the implementation process of BCCSAP. They argued that without completing a building block, it is not possible to move into another building block. They also mentioned that as countries move from planning to practice, these early experiences reveal that planning and implementation decisions are much more than just linear, simple outcomes. Implementation decisions are complex and implementation is influenced by the several factors. Besides policy and institutional drivers; actor behaviors, underlying incentives, interests, and partisan politics influence actions and decision-making to implement the policy.

Parvin, A. and Johnson, C. (2014) mentioned that their attempt was to have an in-depth understanding of the climate change policy context of Bangladesh with regard to the notion of disaster vulnerability as a policy concern from social vulnerability perspective. By considering socioeconomic and environmental context of Bangladesh, they developed an analytical framework to examine the climate change policy. The political economy of climate change initiatives in Bangladesh leaves little scope to address vulnerability of grassroots communities. The authors argued that in a country like Bangladesh where lack-of development-led problems are persistent, there is an urgent need to develop context-responsive policies and action plans that should address the causes and dynamic processes of disaster vulnerability and lack-of-development issues in an integrated manner. Existing climate change policies do not address the structural dynamics of disaster vulnerability adequately. At the end, they suggested policy-relevant insights towards the formulation of people-centered policies and strategies for Bangladesh.

Rahman & Giessen (2016) has mentioned that climate change policy depends on the ability of national-level public bureaucracies to formulate and implement effective measures. But ability depends on resources, political responsibility and power. In the process of allocating specific climate-related policy tasks and resources, changes in the distribution of power among these competing agencies can occur. This process results in the overall architecture of power distribution among climate-related bureaucracies. This study analyses the power added to climate-relevant bureaucracies as a result of policy tasks being allocated to them through myriad international and domestic climate policies and initiatives. Data on national and international forest-related climate change policies in Bangladesh (1992–2014) are used to qualitatively analyze policy tasks assigned to bureaucracies and the power dynamics that arise as a result.

TIB (2016) has conducted a research on “Climate Finance and Local Government Institutions: Governance in Project Implementation”. The study highlights some positive aspects of the selected projects, which include a few innovations to reduce climate vulnerabilities, monitoring visits by the BCCTF and Local Government Division (LGD) officials at the initial and post implementation stages, which can be viewed as good practice for quality assurance. The study also reveals that there have been various governance challenges such as political influence and conflict of interest in project approval, resulting in some cases in inconsistencies of allocation of funds with climate change related vulnerabilities. There have been instances of deficit of transparency and community participation and hence lower than desired level of accountability and equitable distribution of project benefits.

TIB (2017) has conducted another research titled as “Climate Finance and Governance in Project Implementation: The Case of Bangladesh Water Development Board” with a major aim to explore governance challenges in climate project implementation and the reasons behind identified challenges. Theory of good governance was used and data was collected both from the primary and the secondary sources. The research work

progress on by selecting six CCTF funded projects. The data is analyzed by using four indicators: Transparency, Accountability, Integrity, and participation. By using the indicators the study has found several governance challenges. First of all regarding transparency the study has found that BWDB has the basic setup and system to disclose their information though the extent of the disclosure is not very clear. Secondly regarding accountability the study found that there is a lack of peoples' participation and lack of monitoring mechanism exist in the implementation process of BWDB projects. Lack of accountability created problem to be integrated in project completion. Therefore poor quality of work and leaving the work incomplete is the scenario of BWDB projects. And finally the study found that people who are directly or indirectly affected by the adverse impact of climate change are not participating in project design and implementation process. The findings of the study showed that the challenges in terms of selected governance indicators are evident. This weakness or challenges has multifaceted and web of possible impacts some of what already may be in effect.

Table 3: Summary of Reviewed Literature in the Bangladesh Context

Author's Name	Major Findings
N. Rai et al. (2014)	Partisan politics influence actions and decision making to implement the climate change policy in Bangladesh.
Parvin, A. and Johnson, C. (2014)	The political economy of climate change initiatives in Bangladesh leaves little scope to address climate vulnerability in grassroots communities.
Rahman & Giessen (2016)	Climate change policy depends on the ability of national-level public bureaucracies to formulate and implement effective measures.
TIB (2016)	Political influence and conflict of interest in project approval creates governance challenges to implement climate change policy
TIB (2017)	Governance challenges hinders the proper implementation of climate change policy

Source: Depicted by Author

The overall summary of the findings exposed that Bangladesh has shifted from planning to execution level regarding climate change policy. Partisan politics, political economy, governance challenges in climate change policy implementation created obstacles for the proper implementation of climate change. People are not getting the outcomes of the climate change policy to enhance the adaptive capacity.

2.4 Salient Features of Overall Reviewed Literature and Research Gap

From the above reviewed literature, it is evident that implementation of climate change policy is recent area of knowledge to discuss among the scholars. The study on this area begins after the ratification of UNFCCC. However reviewed literatures have provided idea that the implementation process of climate change policy faces several challenges. But challenges vary from country to country and from developed countries to developing countries. There is no unified trend of influential factors.

Implementation of climate change policy in developing countries around the world is influenced by several factors. Factors like, resource allocation, finance flow mechanism, poor coordination within the organization and between the ministries, poor coordination between the local and central, low technical capacity are the main factors that can influence the implementation of climate change policy. In addition to that governance challenges are pertinent to the climate change policy. On the other hand developed countries faces challenge regarding development first policy. It resists the developed countries to implement the climate change policy.

Reviewed literature showed that climate change policy is facing challenges in every county in different level. In Bangladesh, the study on climate change policy implementation gets less concentration among the scholars. Therefore few literatures are available in the area of climate change policy implementation. The context showed the relevancy of the study. In addition to literatures, the study is analyzed the theory of policy implementation to developed its analytical framework.

2.5 Theoretical Discussion

The study of policy implementation is comparatively recent phenomena. This discourse became popular among the scholars in 1970s when Pressman and Wildavsky (1973) brought the issue of policy implementation to the forefront (Paudel, 2008). At the beginning, research on policy implementation provides the essential link between political and economic analyses of policy implementation and the organizational/institutional analysis of public administration (Hjern and Hull 1987). The development of research on policy implementation developed basically in three phases: first, second and third generation (Goggin 1990, Howlett and Ramesh 1995, Pal 2006). The first generation of research ranged from the early 1970s to the '80s; the second generation from the 1980s to the 90s; and the third generation research from 1990 and onwards (Matland, 1995).

2.5.1 First Generation Policy Implementation Research

The first generation implementation research was focused on how a single authoritative decision was carried out, either at a single location or at multiple sites (Goggin et al., 1990, p13). Pressman and Wildavsky's work is a prime example of this generation of research (Hill and Hupe, 2002, p66). So Top Down approach was the central theme of that era. The approach was criticized by the scholars and bottom up approach evolved as a response. The debates on the relative merits of top-down and bottom up approaches were grouped under the level of first generation implementation research (Hill and Hupe 2002).

2.5.2 Second Generation Policy Implementation Research

Second generation of research synthesized the insights of the top-down and bottom-up approaches into a conceptual framework that consisted of a set of theories of implementation (O'Toole 1986, Palumbo and Calista 1990, Sabatier 1986). The study of policy implementation of this generation was begun with the work of Donald S. Van Meter and Carl E. Van Horn. For the first time they developed an analytical framework

of implementation process. Second generation scholars also perceive implementation problems as political in nature. Second generation theory is criticized for its synthesis approach. Especially its tendency is to be little more than a combination of variables from the two perspectives, which leaves a long list of variables and complex diagrams of causal chains.

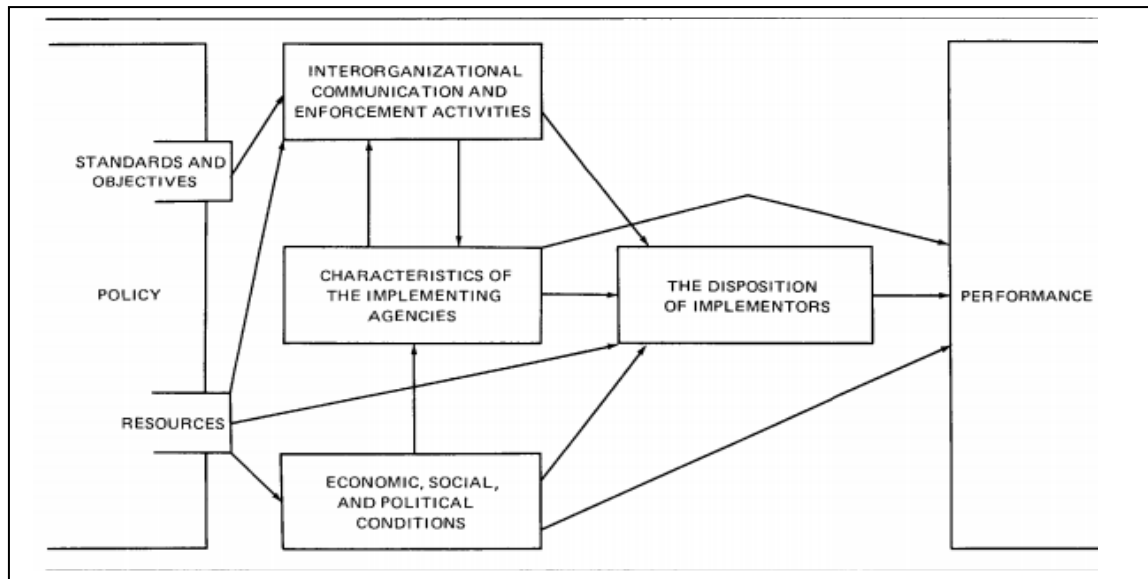
2.5.3 Third Generation Policy Implementation Research

The unique trait of the third generation research is its research design--an explicit theoretical model; operational definitions of concepts; an exhaustive search for reliable indicators of implementation and predictor variables; and the specification of theoretically derived hypotheses, with analysis of data using appropriate qualitative and statistical procedures as well as case studies for testing them (Goggin et al 1990). In the third generation research, the macro world of policymakers with micro world of individual implementers is integrated (McLaughlin, 1987). Some scholars argue that third generation implementation has not been realized in practice.

2.6 Selection of Theory for the Study

The BCCSAP is formulated to address the adverse impact of climate change. The climate change is new arena for the policy maker to formulate and implement climate change policy. Bangladesh has successfully formulated Climate Change Strategy and Action Plan. What is the state of implementation is less known to all because of few researches in this area. The reviewed literature shows that basic factors are influencing the implementation of climate change policy. In this study with few basic factors like variable resource allocation, policy communication, Characteristics of implementing agencies, the role of bureaucrats will be analyzed to search the influence of these factors. In this context "The Policy Implementation Process-A Conceptual Framework", by Donald S. Van Meter and Carl E. Van Horn will be used as theoretical framework of this research.

Figure 1: A Model of Policy implementation Process



Source: Adopted from Meter and Horn 1975

This framework focused on policy implementation process. The framework has six variables. These variables are policy standards and objectives, policy resource, inter-organizational communication and enforcement activities, characteristics of the implementing agencies, economic, social political conditions and a disposition of the implementers. According to the Meter and Horn these variables can influence policy implementation in different ways and different level. These variables can influence the implementation in positive and negative both the ways. This theory will also help to trace the influential factors. They considered disposition of implementers as one of the vital variables because all other variables have to pass through this variables. From this theory the cognizable variables are described in the following sections by considering the view of Meter and Horn.

2.6.1 Policy Resources

According to the Meter and Horn resources are very important to achieve aims and objectives of policy. Available resources usually facilitate the administration of policy

implementation. These resources may include funds or other incentives in the program that might encourage or facilitate effective implementation. It is obvious that funds are usually not adequate for proper implementation of the policy.

2.6.2 Inter-organizational Communication and Enforcement Activities

Meter and Horn stated that effective implementation requires that a program's standards and objectives be understood by those individuals responsible for their achievement. Standards and objectives cannot be carried out unless they are stated with sufficient clarity, so that implementers can know what is expected of them. Communication within and between organizations is a complex and difficult process. In transmitting messages downward in an organization, or from one organization to another, communicators inevitably distort them-both intentionally and unintentionally.

2.6.3 The Characteristics of the Implementing Agencies

Meter and Horn argued that there are numerous factors of administrative agencies that affect their policy performance. Without trying to provide an exhaustive listing of these elements, the authors offer the following suggestions of characteristics that may impinge on an organization's capacity to implement policy:

- A. The competence and size of an agency's staff
- B. The degree of hierarchical control of subunit decisions and processes within the implementing agencies
- C. An agency's political resources
- D. The vitality of an organization
- E. The degree of open communications within an organization;
- F. The agency's formal and informal linkages with the policy making or policy enforcing body

2.6.4 Economic, Social and Political Condition

According to Meter and Horn, the impact of economic, social, and political conditions on public policy has been the focus of much attention during the past decade. But these conditions get little attention, may have huge impact. In this study only political condition are going to analyze. The main focus of this whether partisan politics is supporting or opposing the policy.

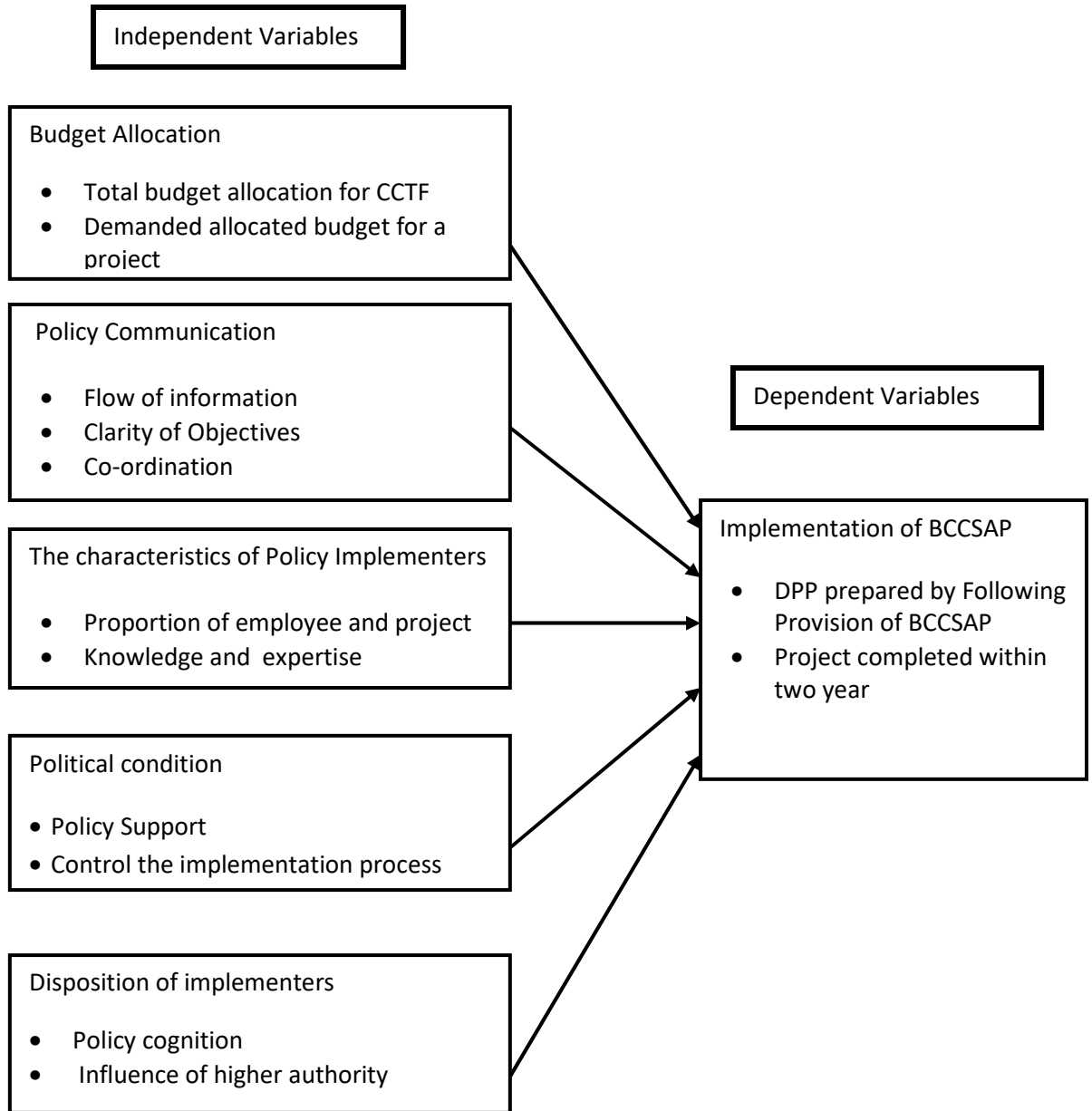
2.6.5 Disposition of Implementers

Meter and Horn stated that each of the components of the model must be filtered through the perceptions of the implementer within the jurisdiction where the policy is delivered (Meter and Horn 1975). They have identified three elements of the implementers' response that may affect their ability and willingness to carry out the policy: their cognition (comprehension, understanding) of the policy, the direction of their response toward it (acceptance, neutrality, rejection), and the intensity of that response. The policy gets its shape by the activities of policy implementers. Therefore understandings of implementers to implement the policy are very important to achieve the desire performance of the policy.

2.7 Analytical Framework

The overall discussion of theory and literature provided the ground to develop an analytical framework for the thesis. An analytical framework of a research provides guideline for the researcher to carry out the research. In addition to that it provides the guideline to choose the methodology for the research to collect data from the field. It also helps the reader by providing a quick understanding of the research problem and relevant influencing issues. The reviewed literatures showed the relevancy of theory for climate change policy implementation. Based on literatures and theory the analytical framework for the study has developed in the following manner.

Figure 2: Analytical Framework



Source: Framed by Author

2.8 Operational Definition of the Variables

The operational definition of the variables is important for the thesis because it provides a clear idea, what the concept is meant in the thesis. Variables are often quite vague and difficult to measure. Systematic study of variables is not possible unless the concepts involved in the variables are operationally defined. In order to study a variable empirically, defining of the variable is necessary (Aminuzzaman, 2011). Therefore, the variables used in this thesis are operationalized in the following sections.

2.8.1 Resource Allocation

Resource allocation is the process of assigning and managing assets in a manner that supports an organization's strategic goals. Resources might be in monetary form or in human capital. As a third world country monetary resource is important for implementing Climate change strategy and action plan. This strategy is concentrated with implementation of project under the specified thematic area. Monetary resource is received by the BCCT through the budgetary allocation of the revenue budget.

2.8.2 Policy Communication

After formulating a policy, important task is to communicate the policy among the stakeholders. The best drafted policies will not work if the messages fail to reach right stakeholder in a proper manner (University of Wollongong, 2015). Thus policy communication refers to disseminate the policy to the stakeholders. Stakeholders are those who will impact by the policy, who will implement and who will use the policy (University of Wollongong, 2015). There are basically three criteria for effective policy communication:

- a) The tone of the message
- b) The channels use to communicate
- c) The timing of messages

It is important how familiar is the Stakeholders to the policy. The policy is communicated in various channels like web, mail, training, staff meeting, coordination meeting PD meeting. Whether user of the policy can get timely instruction or not is important for proper implementation of the policy.

2.8.3 Characteristics of Employee

The characteristics of employee in this study refer to the ratio of project and employee. As a comparatively new organization the employee of BCCT may over loaded by project work. In addition to that climate change is a new area, therefore knowledge and expertise on this area can be considered vital issue for the proper implementation of BCCSAP. The characteristics of employee will be judged by considering project-employee ratio, knowledge and expertise of the employee and project director on this issue.

2.8.4 The Role of Bureaucrat as Policy implementers (Disposition of Implementers)

Bureaucrats play the significant role in policy implementation. They are the main agent to carry out the written document of the policy. The achievement of objective and goals of policy depends more on the functions of bureaucrats. Scholars have in general identified five key parameters of policy and decision-making within the executive (Panandiker, 1973).

- a. First and foremost, is the basic function of anticipating the policy needs
- b. Secondly, the bureaucracy has to develop systematically the various alternatives or choices which are indicated by the value premises and an assessment of what is possible
- c. Thirdly, the bureaucracy is expected to suggest a specific choice of alternatives that would yield the maximum achievement of the objectives.
- d. Lastly, the bureaucracy has to apply the general policy to specific instances, that is to say, decision-making in individual cases

The crucial thing to be evaluated the role of bureaucracy in decision-making regarding these parameters, whether they can take the initiative in policy proposals or merely waits upon the proposal of their political bosses (Jain, 1987). This study will analyze whether bureaucrats can take decisions independently or depend on political authority to implement BCCSAP.

2.8.5 The Influence of authority

Bangladesh Climate Change Trust is a statutory body under the MoEF. As per the provision of The Bangladesh Climate Change Trust Act 2010, TB is the responsible for the overall management of the BCCTF as well as BCCT. On the other hand Secretary is considered principle accounting officer according to the Rule of Business. Therefore, both the Chairman of the TB and Secretary of MoEF is considered as authority for this study.

2.9 Conclusion

This research is about identifying the factors that influence the implementation process of BCCSAP. The reviewed literature shows the present trend and gaps on previous study on climate change policy implementation area that set the logical ground for undertaking the present research. Based on the literature review gaps was identified. To fulfill the gap policy implementation theory “The policy implementation process: A Conceptual Framework” by Van Meter and Van Horn has been selected for the study. By considering the literature and the theory an analytical framework was developed for the further progress of the study. The analytical framework has provided the overall guideline for the thesis. The framework also directs the researcher for the further progress on the thesis to select the appropriate methodology for the data collection to see what is happening in the reality. In fine the analytical framework showed the direction to proceed systematically on the study to find out the influential factors that can influence the implementation process of BCCSAP.

Chapter 3

Research Methodology

3.1 Introduction

The chapter is detailed about methodological discussion. The nature and objectives of the problem of the study is needed to address by using a specific research methodology. The study is aimed to search the factors that affect the implementation process of BCCSAP. This chapter is going to tell the way to address the issue. The chapter briefly discussed the research design, sources and the technique of collecting primary and secondary data that is needed to address the research questions and the two objectives of this study. The technique for analyzing and interpreting primary data gathered from the questionnaire has also been discussed.

3.2 Research Design

The research design precisely means drawing a systematic approach and establishing a plan of action to carry out the research (Aminuzzaman: 2011). In addition to that a research design is 'the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure' (Selltiz 1965). By considering these views the choice of an appropriate research design is essential for a scientific study. It gives a framework of what the researcher is going to do from setting the research question to the operational implications of the data analysis. Although 'individual researchers have a freedom of choice ... to choose the methods, techniques, and procedures of research that best meet their needs and purposes' (Cresswell: 2009). It is noted that 'the selection of research

design is also based on the nature of the research problem or issue being addressed, the researchers' personal experiences, and the audiences for the study' (Creswell: 2009).

3.3 Research Method

Cresswell (2009) mentions three principal approaches for conducting scientific research namely qualitative, quantitative and mixed approach. This research will solely rely on the views of respondents who are directly involve in the implementation process, as well as experts on this very topic under study, and also respondent from the civil society. By considering the views of the respondents, this research is aimed to analyze the implementation process of BCCSAP 2009 and intended to find out the influential factors. In this context qualitative approach suits the best to meet the objective of the study.

The researcher keeps focusing on extracting the participants' actual thoughts about the problem. This method itself is an emergent one i.e. there is no hard and fast rule to stick to the initial planning rather it allows changing of questionnaire, respondents, sample size and even study area as it gradually progress after researcher enters into the field and starts data collection. All these flexibilities were considered helpful for the study. In addition to that qualitative research is a form of interpretive inquiry in which researchers make interpretation of what they see, hear and understand. And last but not the least; qualitative researchers try to develop a complex picture of the problem under issue (Creswell 2009, p.175).

3.4 Research Area

The data mainly was collected from BCCT. As respondents from BCCT was the main source of providing the information. The data also collected from respondent of MoWR, and LGD, Bangladesh Secretariat, Bangladesh Water Development Board, Motijheel, Local Government and Engineering Department, Agargaon. The BWDB and the LGED and their respective ministries were selected as they are implementing the maximum

projects of BCCT. The above mentioned ministries and organizations were considered as research area of the research.

Table4: Location of Study Areas

Name of the Ministry/ Department	Location of the Office
Ministry of Environment and Forest	Bangladesh Secretariat, Dhaka
Ministry of Water Resources	Bangladesh Secretariat, Dhaka
Local Government Division	Bangladesh Secretariat, Dhaka
Local Government and Engineering Department	Agargaon, Shere Bangla Nagar, Dhaka-1207
Bangladesh Water Development Board	WAPDA Bhabon, Motijheel C/A, Dhaka
Bangladesh Climate Change Trust	101 Mohakhali, Dhaka

Source: Official web-site of the Ministries and Departments

3.5 Sources of Data

The research is based on both primary and secondary sources of data. Primary data collected from the study area directly using different data collection techniques. On the other hand, different relevant publications, dissertations, books, journal articles, reports, websites etc. are considered as sources of secondary data. The data collected from secondary sources is very useful in a sense to cross validate primary data and also to analyze the relationship among variables.

Primary data collected from officials of BCCT, BWDB, LGED, MoEF, LGD, MoWR, BCAS, These organizations are directly related to implementation of BCCSAP 2009. Their experience of challenges during discharging duties helped to answer the research questions. In addition to that, opinion of the respondents of these selected ministries and department helped to attain the objectives of the study.

3.6 Data Collection Technique

The qualitative method used in this study. By considering the qualitative method, data collection technique has fixed for the study. In depth interview with unstructured questionnaire considered best fit data collection technique for the study. In addition to

that four case studies have conducted further to validate the information gathered from the respondents. Furthermore, content also analyzed to see the similarity and dissimilarity of the present study.

3.6.1 In-depth Interview

Interview method helps the researcher to collect data by face to face contact from the respondents. Interview is a very systematic method by which a person enters deeply into the life of even a stranger and can bring out needed information and data for research purpose (Aminuzzaman 1991, p.82). In depth interview has conducted to get idea on BCCSAP implementation challenges. From joint secretary to above officers were interviewed by the researcher. Expert journalist and university teachers will be also interviewed. It helped to reveal in-depth causality of the problem.

3.6.2 Case Study

The case study approach is suitable for research that seeks to have an in-depth understanding of processes. It allows for exploratory and explanatory analysis. The nature of the main research questions and the issues it seeks to address call for a case study analysis. As Robert K. Yin (2009, P:2) argues, 'the case is a preferred method when (a) 'how' and 'why' questions are posed, (b) the investigator has little control over the issues, (c) the focus is on a contemporary issue within a real life context.' The method allows investigators to retain the holistic and meaningful characteristics of real-life events –such as individual life cycles, small group behavior, organizational and managerial processes and so on. This research, though, has adopted other qualitative methods, namely: interviewing, content analysis, observation and participatory observation to explore all research questions. In this study, two projects from BWDB and two projects from LGED are selected as case studies. While conducting case study, observation comes to use automatically.

3.6.3 Content Analysis

Content analysis is the critical and objective review of the published or printed facts, figures, opinions, observations and generalizations in the light of its content value (Wilkinson 1952). Such analysis, among others, attempts to describe trends in communication content, trace the development of scholarship and portray attitudes, interests and values of population groups (Aminuzzaman, 2011a: 55). Secondary literature on the policy and implementation of policy, implementation of climate change policy, challenges of implementation of climate change policy incorporate content analysis for this research. Relevant research work, articles, meeting proceedings of Trustee Board and Technical Committee, project document were consulted for conducting the analysis. In fact, content analysis provides a better understanding of the research question and helps development of an analytical framework.

3.7 Sampling Method

The study used purposive sampling method so as to get the best information to achieve the objectives of the study. This method gave flexibility to the researcher to pick up only cases or people who are likely to have the required information and be willing to share it. Moreover, the sampling method helped to ensure representation of different variation of respondents who are working in different position and different level. In other words, heterogeneity in the composition of sample of service seekers and providers (senior-junior officials, officials of different department and different ministry) were attempted to maintain as possible.

3.7.1 Sampling of the Population

Study population has been selected from BCCT, MoEF, BWDB, MoWR, LGED, MoLGEDC. Various levels of officers from these ministries and organization were selected as respondents of this research. Two of the respondents were from the TIB and BCAD. These two organizations are basically working with the issue climate change. Especially TIB has several research papers on climate change issue.

Table5: Respondent's Profile at a Glance

Category	Designation	Ministry/ Organization	Respondent
Key Informant Respondent	Additional Secretary	Ministry of Environment and Forest	01
	Additional Secretary	Ministry of local Government	01
Respondent from Climate Change Cell of Different Ministry	Joint Secretary	Ministry of Water Resource	01
	Deputy Secretary	Ministry of Environment and Forest	02
	Joint Chief	Bangladesh Water Development Board	01
Respondent of BCCT	Deputy Managing Director	Bangladesh Climate Change Trust	01
	Deputy Director	Bangladesh Climate Change Trust	01
	Assistant Director	Bangladesh Climate Change Trust	04
Project Directors of LGED and BWDB	Project Director	Local Government and Engineering Department	03
	Project Director	Bangladesh Water Development Board	03
Civil Society	Representative	Bangladesh Centre for advance Studies	01
	Representative	Transparency international Bangladesh	01

Source: Researcher's data collection from the field.

The officers of BCCT are the main responsible to implement the BCCSAP. Ministry of Environment and Forest is the controlling ministry of BCCT. So officers under the climate change wing are also responsible to implement BCCSAP. So these two sections have been selected to know their thought about the implementation process and challenges they used to face during implementation period. They are being chosen as they are the supply side of implementation of policy. As policy implementers they have faced the challenges most. Their experience is most important for this research. In addition to that, different local level authorities usually implement the projects under thematic area

of BCCSAP. These organizations are considered as project implementing agencies. From that organization one officer is assigned as project director (PD). Activities related to implementation of project is controlled and monitored by climate change wing of controlling ministries. They are the demand side of the policy implementation. Their idea regarding policy implementation is also very important. To know how they experienced challenges during policy implementation. They are the agent to implement the project under BCCSAP within the timeframe specified in the BCCSAP implementation related rules and regulations.

3.7.2 Selection of Four Case Studies

The four projects of BWDB and LGED selected as case for this study. Two projects were from BWDB and two from LGED. Criteria were good performing and not performing well projects. The cases selected for the study according to the opinion of respondents from BCCT. The respondents were asked to select according to the criteria. By taking account of their opinion project were selected. The overview of six projects was presented in the following table.

Table6: Brief of Selected Four Projects for Case Studies

Case Studies of CC projects	Project Location	Types of Work	Budget (in lac BDT)
Case 1: Successful Project of LGD	Charfession Upazila, Bhola	Repair and maintenance of existing rural roads cum embankments.	620.00
Case 2: Problematic Project of LGD	Jhenaidah Sadar Upazila, Jhenaidah	Improve 2.114 km climate proofed road connectivity	111.44
Case 3: Successful Project of BWDB	Mohammadpur Upazila, Magura	Protection of embankment	400.00
Case 4: Problematic Project of BWDB	Bakergong upazila, Barisal	Protection of embankment	1000

Source: Depicted by Author

3.8 Data Processing and Analysis

In qualitative study the researcher has the freedom to marshal gathered data to meet the desired objectives of the study (Creswell 2009). In addition to that data was analyzed to find out the answer of the question. The data were presented and explained carefully to meet the aim of the study and research question and also attempted to establish relation among the variables.

3.9 Conclusion

The overall methodological discussion of this chapter has provided a clear and brief picture on research methodology that is used as guideline for whole research. The research has conducted by using the qualitative methods as the implementation challenges is going to be explored by conducting in-depth interview of the respondents. Data was collected both from primary and secondary sources. Cross section respondents were selected to maintain the validity and reliability of the data. Overall findings of the thesis have drawn by following the guiding principles of the methodological chapter. This chapter also provides the information about the unit of analysis used in the study, limitations the study. Finally a brief discussion on data collection, presentation and its interpretation helped to ensure smooth journey of this study.

Chapter 4

An Overview of BCCSAP and its Implementation Process

4.1 Introduction

This chapter is going to present a clear overview of implementation process of BCCSAP. The aim of the section is to present a clear idea about the BCCSAP and government initiatives to implement BCCSAP. This analysis is going to be added extra value in data analysis and interpretation. From this chapter readers will get a clear idea about BCCSAP and its implementation process. In this direction, first attempt is to brief discussion on formulation of BCCSAP, aims and objectives of formulation of BCCSAP, major provision of BCCSAP at a glance, then establishment of BCCT to implement the BCCSAP is being discussed.

4.2 Background of Formulation of BCCSAP

Bangladesh is one of the largest deltaic countries in the world. Geographical location of the country makes the country vulnerable to different kind of disaster. Further assumption is that in coming day's climatic event like floods, tropical cyclones, storm surges and droughts are likely to become more frequent and severe due to impact of climate change (BCCSAP 2009). In the policy document it is also stated clearly that climate change will threaten the significant achievements Bangladesh has made over the last 20 years in increasing income and reducing poverty, and will make it more difficult to achieve the MDGs (BCCSAP 2009). At present targets of SDGs are ahead of the country. Over the last few decades Bangladesh invests lots in the area of disaster management. In BCCSAP it is mentioned that last 35 years GoB has invested \$ 10 billion to make the country less vulnerable to natural disaster. Due to climate change the

country is now facing the challenge to scale up these investments to create a suitable environment for the economic and social development of the country.

At present climate change is considered beyond being an environmental problem, presents a broad developmental issue. The GoB was well aware about the issue and has taken a number of significant initiatives, to achieve the developmental goal and ensure the well being of the people. The initiatives include formulation of the National Adaptation Programme of Action (NAPA) in 2005 (updated in 2009); formulation of the Bangladesh Climate Change Strategy and Action Plan (BCCSAP) in 2008 (updated in 2009); formation of the Bangladesh Climate Change Trust Fund (BCCTF) in 2009 and the Bangladesh Climate Change Resilience Fund (BCCRF) in 2010; and enactment of the Climate Change Trust Act 2010. These initiatives demonstrate the sincere willingness of GoB to build a safe guard for the people of the country and lead the country towards the sustainable development.

To make country resilient to climate change and enhance the capacity to tackle the adverse impact of climate change government has taken initiative to formulate a pro-poor climate change policy. It was launched at the Bangladesh-UK Climate Change Conference held in London on 10 September, 2008. Most civil society groups opposed the 1st BCCSAP because it was developed by consultants assigned by policymakers. In the following year, the BCCSAP was revised based on the opinions of the civil society

4.3 BCCSAP at a Glance

The policy document is divided into two parts and seven sections. In part one, sections I to V of the document has briefly discussion on context, outline the implications and likely impact of climate change in Bangladesh, provide an overview of different strategies and briefly outline mitigation issues. In part two, sections VI and VII describe a ten year programme to build the capacity and resilience of the country to meet the challenge of climate change over the next 20-25 years (BCCSAP 2009). The plan is built

on six pillars popularly known as six thematic areas. According to the policy documents projects to address the climate change should cover these thematic areas to scale up the present scenario.

The policy is divided into two parts, comprised of six sections and an annex. In five sections part one includes the context, outlines the implications and likely impacts of climate change, and provides an overview of different adaptation strategies and mitigation measures. The thematic areas are 1) Food security, social protection and health, 2) Comprehensive disaster management, 3) Infrastructure, 4) Research and knowledge management, 5) Mitigation and low carbon development, 6) Capacity building and institutional strengthening. These thematic areas are subdivided into 44 programs (Annexure). In that section detail of activities, responsible ministries are identified.

4.4 Vision for Formulating BCCSAP

The vision for formulating BCCSAP is clearly stated in the policy document that Government want to make the country more resilient to climate change and to achieve the developmental goals ahead of the country. To meet this end it is necessary to formulate a pro poor climate change policy. Vision for BCCSAP is to achieve desire economic development and eradicate poverty by 2021 through implementation of BCCSAP. In addition to that, increase employment opportunity, ensures food security, provide access to energy and power, and achieve economic and social well-being of all citizen of the country is also linked with BCCSAP. The policy is considered as a part of the overall development strategy of the country and is being integrated into the overall plans and programs involving all sectors and process for economic and social development.

BCCSAP is considered a unique tool to address climate change issue in Bangladesh. The main objectives of this strategy is to full fill the vision of government to achieve the country's vision to eradicate poverty and achieve economic and social well being through a pro poor and climate resilient strategy. This strategy is depending on four building block of Bali action plan such as adaptation to climate change, mitigation, technology transfer and adequate and timely flow of fund. The main purpose of the BCCSAP is to adapt to climate and safeguard the future well being for her people. Over the last 35 years the government of Bangladesh has invested about \$10 billion to make the country less vulnerable to natural disasters (BCCSAP 2009).

4.5 Creation of CCTF and BCCT to Implement the BCCSAP

After the formulation of BCCSAP, Government of Bangladesh established the two national funds to implement the programs specified in the policy document. One was the Bangladesh Climate Change Trust Fund (BCCTF) and another one was Bangladesh Climate Change Resilient Fund (BCCRF). This study has focus on the implementation process of BCCSAP through BCCT. BCCTF was established in accordance with the Bangladesh Climate Change Trust Act 2010 to implement prioritized projects of the BCCSAP. Government started allocates its own revenue budget to that fund. To manage that fund Government established an organization named as BCCT. This research has main focus on the activities of BCCT to implement the provision of BCCSAP and fulfill the objectives of the organization.

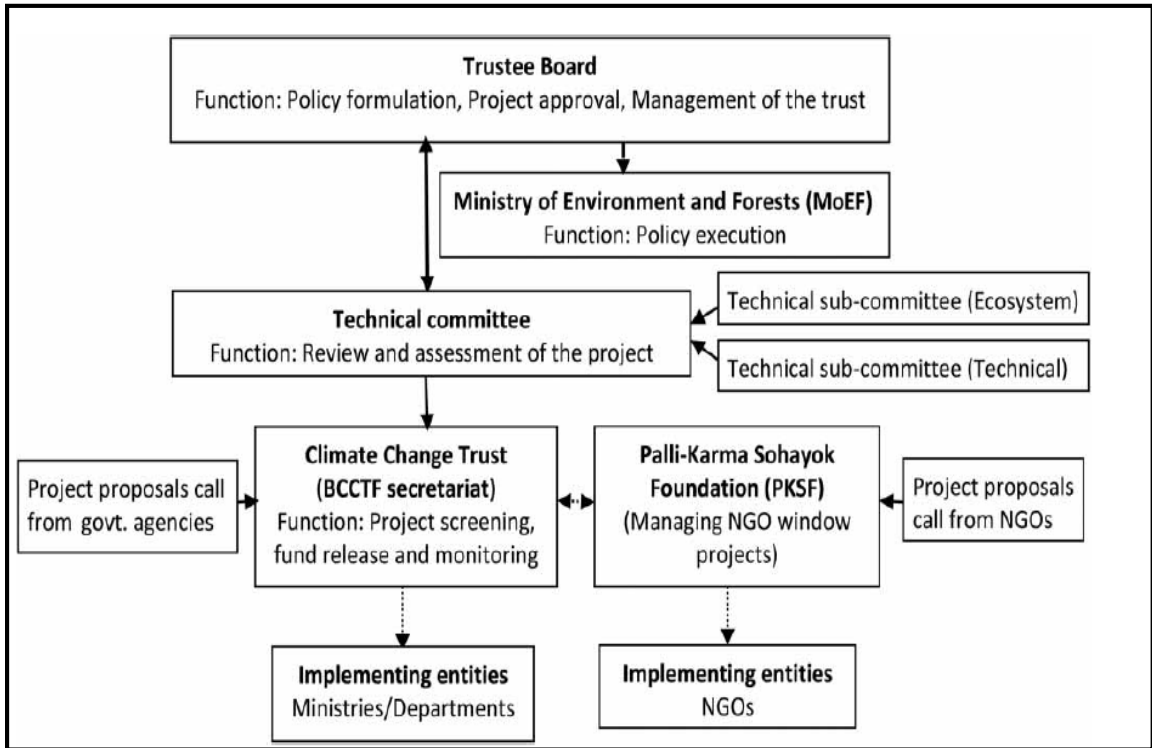
The actions outlined in the BCCSAP were implemented using the Bangladesh Climate Change Trust Fund (BCCTF), which is a governmental fund managed by the Bangladesh Climate Change Trust (BCCT) and the Bangladesh Climate Change Resilient Fund (BCCRF), and is funded by international donors.

The GoB has raised the BCCTF with the help of its own revenue budget, which is managed by the Bangladesh Climate Change Trust (BCCT), a statutory body of the Ministry of Environment and Forests (MoEF) regulated afterwards under the Climate Change Trust Act 2010. The vision of the BCCT is to enhance capability to create climate resilient Bangladesh. The GoB has allocated 3100 crore BDT for the BCCTF during the last seven fiscal years, from FY 2009-10 to FY 2016-17. As of June 2016, 431 projects have been undertaken with the funds from the BCCTF. Of them, 378 projects have gone under the implementation process through government, semi-government and autonomous agencies. A total of 161 projects completed their implementation phases by June 2016 while nine projects have been cancelled on account of misconduct of rules (BCCT, 2016).

4.6 Governance Mechanism of BCCTF funded Projects

BCCT is a statutory body, established by the government to manage the BCCTF Funded projects. The management of BCCT is quite different from the other attached department of MoEF. According to the Bangladesh Climate Change Trust Act 2010 the Board of Trustees is mainly responsible for overall management of BCCTF funded projects. According to the aforesaid law a technical committee has formulated to assist the trustee Board. The formation of technical committee and Trustee Board is discussed in the following section.

Figure3: Governance Mechanism of CCTF Fund



Source: Adopted from Rai, N et al (2014)

4.6.1 Board of Trustees

The overall functions of BCCT are governed by the Board of Trustees of seventeen members. It comprises Honorable Minister, Ministry of Environment and Forests as the Chair and 16 (sixteen) other members including 9 (nine) ministers/state ministers, Cabinet Secretary, Governor of Bangladesh Bank, Finance Secretary, Member of Planning Commission and two experts appointed by the Government. The Secretary, Ministry of Environment and Forests, is the Member-Secretary of Trustee Board.

Table 7: Board of Trustee of CCTF

SL No	Trustees	Designation
1	Minister/ State Minister, Ministry of Environment and Forest	The Chair
2	Minister/ State Minister, Ministry of Finance	Member
3	Minister/ State Minister, Ministry of Agriculture	Member
4	Minister/ State Minister, Ministry of Food and Disaster Management	Member
5	Minister/ State Minister, Ministry of Foreign Affairs	Member
6	Minister/ State Minister, Ministry of Women and children Affairs	Member
7	Minister/ State Minister, Ministry of Water Resource	Member
8	Minister/ State Minister, Ministry of Shipping	Member
9	Minister/ State Minister, Ministry of Health and Family welfare	Member
10	Minister/ State Minister, Ministry of Local Government, Rural Development and the Co-operatives	Member
11	Cabinet Secretary, Cabinet Division	Member
12	Governor, Bangladesh Bank	Member
13	Secretary, Finance Division, Ministry of Finance	Member
14	Member, Agriculture, Water resources and Rural institution, Planning Commission	Member
15	Expert on Climate Change Selected by Government	Member
16	Expert on Climate Change Selected by Government	Member
17	Secretary, Ministry of Environment and Forests	Member Secretary

Source: Climate Change Trust Act 2010

4.6.2 Technical Committee

To assist the Trustee Board, there is a Technical Committee (Annexure 2) headed by the Secretary, Ministry of Environment and Forests. It comprises thirteen members including experts/representatives from the Planning Commission, Department of Environment, Department of Forest, and Centre for Environmental and Geographic Information Services (CEGIS) and social organizations/NGOs working on climate change.

Table 8: Technical Committee

SL No	Members of Technical Committee	Designation
01	Secretary, Ministry of Environment and Forest	The Convener
02	Joint Secretary (Environment), Ministry of Environment and Forest	Member
03	Joint Secretary (Development), Ministry of Environment and Forest	Member
04	Climate Change Focal Point/ Representative of climate change cell of Concerned Ministry	Member
05	Representative of the Planning Wing of Concerned Ministry	Member
06	Representative of the Concerned Sector of Planning Commission	Member
07	Expert representative from Department of Environment (Director)	Member
08	Expert representative from Department of Environment (Technical)	Member
09	Representatives Selected by the Government from Social Organizations/NGOs/experts on Climate Change	Member
10	Representatives Selected by the Government from Social Organizations/NGOs/experts on Climate Change	Member
11	Representatives from Centre for Environment and Geographic Information Services (CEGIS)	Member
12	Representative from Department of Forests	Member
13	Deputy Secretary (Environment), Ministry of Environment and Forest	Member Secretary

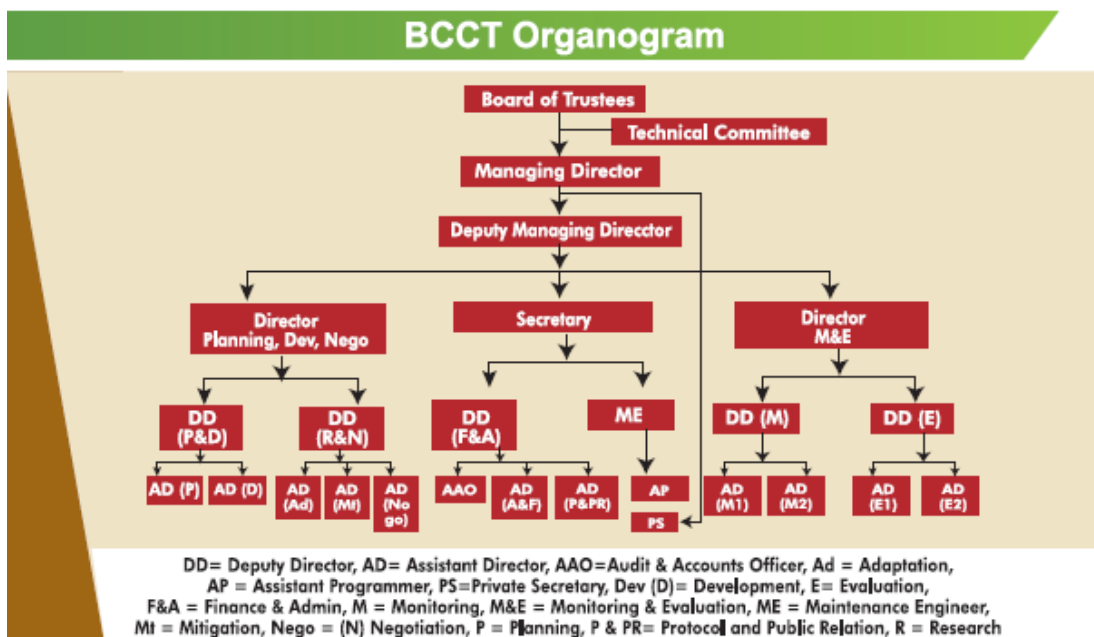
Source: The Climate Change Trust Act 2010

4.7 Organogram of BCCT

The BCCT is a comparative a new office established by the government for the overall management of climate change projects. The TB is responsible for the overall management of the office and BCCTF fund. A technical committee is responsible for providing the support for the TB. The Additional Secretary of the Government designated as Managing Director (MD) the head of the office. He is assist by Deputy Managing Director (DMD). The structure of the office is divided into three unit headed by Deputy Secretary Ranked Officer. The three units are named as Administration, Planning and Monitoring and Evaluation. Deputy Directors are Assistant Directors are the two other posts. From Deputy Director to Managing Director is getting their posting in deputation. All of them belong to BCS (Administration) cider. Section officer of BCCT

are mainly recruited by following the provision of Bangladesh Climate Change Trust Employees Service Rules 2013.

Figure 4: Organogram of BCCT



Source: Booklet, BCCT 2016

4.8 Main Functions of BCCT

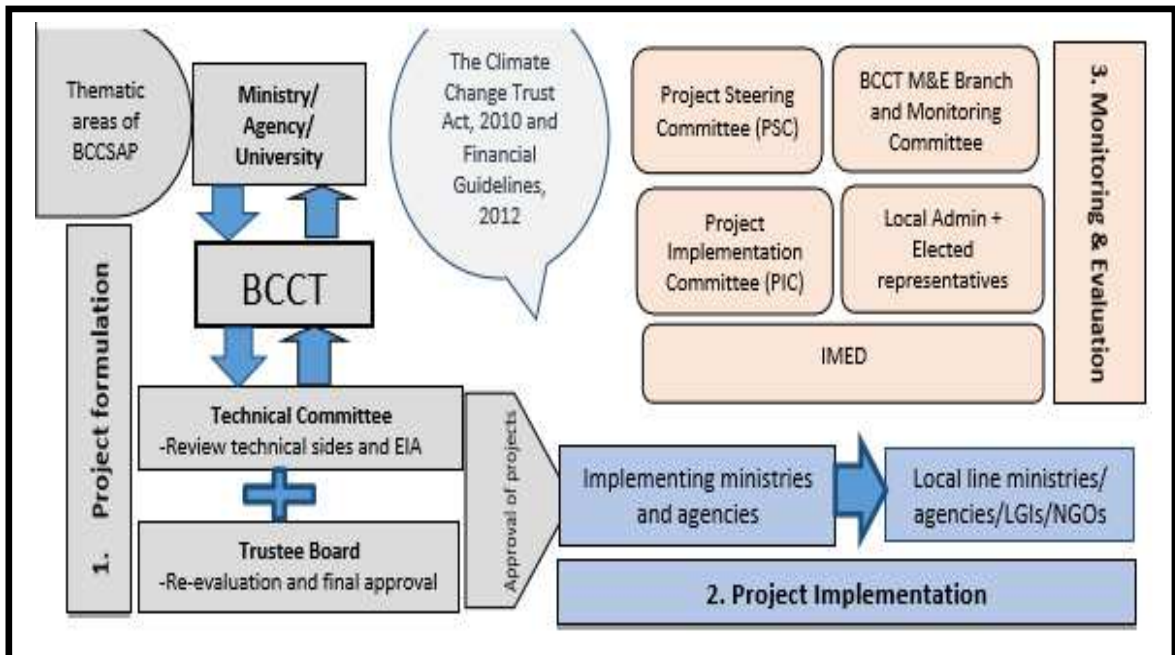
The main function of BCCT is to utilize CCTF as a special sector in addressing climate change vulnerabilities beyond the development and non-development budgets of the Government. In addition to that BCCT is also responsible to prepare and implement special programs and appropriate action plans related to climate change in order to achieve the developmental goal of Government. BCCT also initiate activities and projects for strengthening institutional, social and human resource capacities of vulnerable communities to tackle climate change and to conduct action research disseminate research findings and undertake pilot programs on climate change adaptation, mitigation, technology transfer, finance and investment. The organization is also responsible to prepare, initiate and implement short, medium and long term plans,

programs and projects to adapt to and reduce loss of climate change. To create public awareness on issues related to climate change; and to support post-disaster emergency programs related to climate change.

4.9 Project Planning and Approval Process

One of the major Functions of BCCT is to provide administrative support to the TB to select a project. The project selecting procedure starts with the respective ministries who want to implement project to enhance the sectoral capacity to enhance the adaptive capacity of that sector.

Figure 5: CCTF project selection and implemented procedure



Source: Adopted from TIB (2014)

The respective ministries can send a DPP to the climate change trust all the year round after satisfied with the proposal received from their field office. Bangladesh Climate Change Trust after receiving the DPP make a quick scrutiny whether they could able to fulfill the provision of checklist (Annexure) prepared for the overall management of the CC projects. This provision is newly added for the better management of the project. If fulfill the provision of checklist, the responsible officer make a list of the project with short summary. If failed to fulfill the provision, then DPP send back to the respective ministries for the revision. The DPP list with summary is placed before the TC meeting for further scrutiny. The Technical Committee analyzes each and every project and with the approval of all the member of TC, select project for the approval of TB. The trustee Board is the final authority to select a project that is going to be funded by BCCTF. After the approval of the project BCCT send the copy of GO to the MoEF for issue that against that project. The projects, those failed to get their demanded budget is needed to revise the project according to their budget. Therefore, project again sends to the respective ministries for revision.

4.10 Conclusion

The Government of Bangladesh formulate the BCCSAP to scale up the existing management procedure of disaster to tackle the adverse impact of climate change and maintained the developmental speed of the country. For the last few decades Bangladesh has managed to continue a standard GDP growth rate. Maintain above 6 percent GDP growth rate is miracle for the scholars. The development can be hampered by the impact of climate change. The report of IPCC also acknowledges that Bangladesh is one of the most vulnerable countries to adverse impact of climate change. Impact of climate change can hamper the developmental targets ahead of Bangladesh like achieving the perspective plan popularly known as vision 2021, to eradicate poverty within that time line. In addition to that Bangladesh has aim to show the excellence in achieving targets of SDGs. Government of Bangladesh by realizing this issue formulate Climate Change Strategy and Action Plan to create a guiding principle to tackle the

adverse impact of Climate Change. Government has aim by implementing project following the guideline of BCCSAP, able to create climate resilient country and can able to ensure well being for the people by protecting people as well as country from the adverse impact of climate change. The above section is the brief discussion of BCCSAP and its implementation process to present an overview for the readers to understand the issue clearly. The overview also helps to explain the findings further. The provision of policy and actual scenario can be compared easily. In fine, the reader can have better understanding to grapes the whole idea of research clearly.

Chapter 5

Findings, Analysis and Discussion

5.1 Introduction

The chapter aimed to explore the major challenges that effectively influence the implementation process of BCCSAP by analyzing the field data and case studies. BCCSAP is implemented through climate change projects and programs by following the six thematic areas of BCCSAP. Climate change projects and programs are implemented to enhance the adaptive capacity of the climate vulnerable people and ensure social and economic wellbeing of the people. Two funds were created named BCCTF and BCCRF. This study is mainly concentrated on BCCTF. BCCT is the major responsible authority to implement BCCSAP by following the provision of BCCSAP and implement the project to create piloting idea for all the government organizations by using the fund of BCCTF. In this research assumption is that proper implementation of climate change projects would able to increase the resilient capacity. Proposition is also that several factors can influence the implementation process.

The factors that are influencing the implementation process of BCCSAP are going to be identified in the following section. To that direction, this research is first analyzing the views of respondents regarding implementation process of BCCSAP, then how the factors influence the variables is going to be analyzed. The field data is going to reveal that resource allocation, characteristics of BCCT, role of bureaucrats; authority both administrative and political, communication and coordination can influence the implementation process either in positive or in negative manner. In this context, implementation process is measured by two variables. First, how in project follow the

rules and regulations, then timely completion of projects. Then the factors will analyze to see whether the factors are influencing the implementation process in a positive or negative manner.

The analysis of this study based on both primary and secondary sources. Inferences were drawn by conducting interview of different level officer who are directly involve with BCCSAP implementation process. In addition to that interview also conducted with representative of civil society and climate change expert. Total twenty two interviews have been conducted. Policy implementation challenges have been identified by counting their opinion, views and by analyzing the projects documents, meeting proceedings of trustee board and technical committee. So that oral account could be verified through legal document. It is notable that in this research oral account itself has great importance. Multiple sources of data collection will enhance findings of data.

5.2 Findings Derived from the Data

The government in the first sight has formulated BCCSAP to use the foreign aid that is promised by the developed countries as a compensation of their carbon emission. New window of climate finance has been introduced after the Paris conference that is popularly known as GCF. To get access to the GCF fund, specified rules and regulation is needed to follow that induces constraint for the developing countries like Bangladesh. Meanwhile government of Bangladesh knows that adverse impact will hamper the achievement of developmental goals like vision 2021 to lead the country towards the middle income country. In this context, government created BCCTF to implement the BCCSAP with its own revenue budget. The MoEF and BCCT are directly related to manage the BCCTF and implement the BCCSAP. The main stakeholders of BCCTF are MoWR and MoLGRDC especially the BWDB and LGED are implementing maximum projects using the allocation of BCCTF. Therefore, views of respondents from these government offices are important to know how they face challenges during implementation of BCCSAP. The opinion of government officials are verified through the

response of respondent from the civil society like TIB, BCAS as these two organizations are working on climate change issue from the very beginning. With some exception all the respondents were asked more or less same questions respondents by using several indicators. Their opinions are presented in the following section.

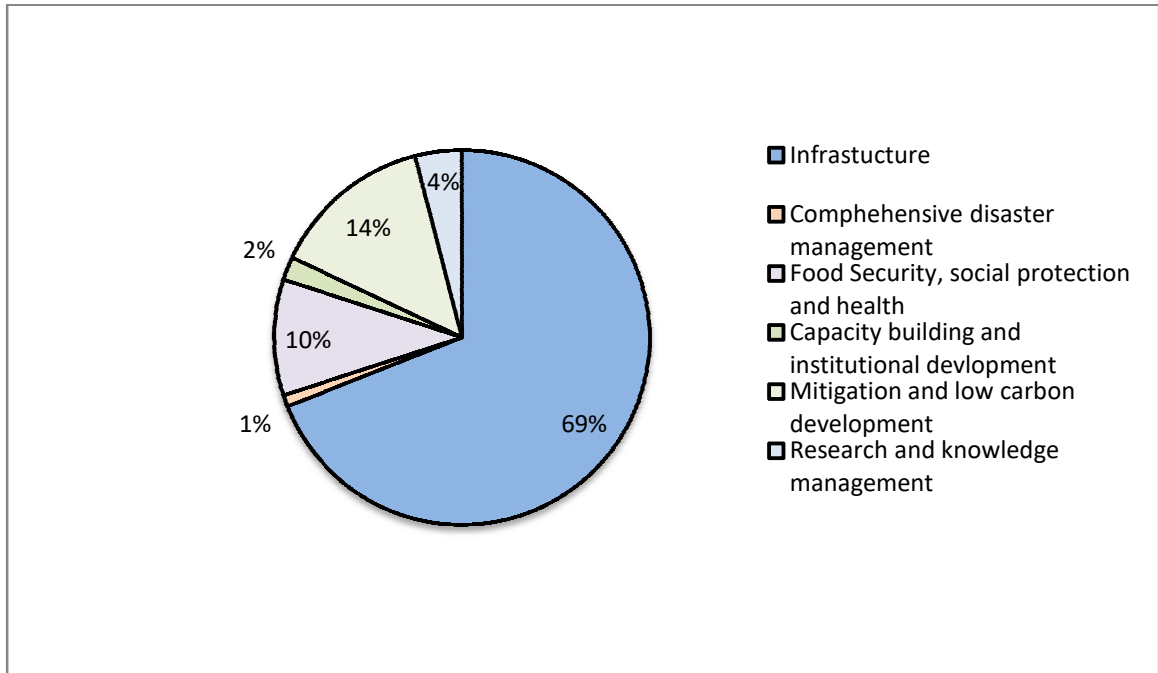
5.2.1 Dependent Variable: The Implementation of BCCSAP

The BCCSAP aims to reduce the climate vulnerabilities and adaptation capacities of people of climate vulnerable areas. In that light climate change projects of BCCT are implementing in vulnerable areas and trying to reduce adverse impact of climate change by addressing the six thematic areas mentioned in BCCSAP. These are food security, social protection and health, comprehensive disaster management, infrastructure, research and knowledge management, mitigation and low carbon development, capacity building and instructional strengthening. A common theme throughout of these entire strategic areas is the focus on the poor and vulnerable in particularly women and children. Before going to identify the influential factors it is important to know the present status of the implementation of BCCSAP, by analyzing the views of the respondent. To identify this, first the respondents were asked question about implementation of BCCSAP. The first specific question on this issue is whether projects under CCTF fund are following the thematic areas and addressing the climate change.

5.2.1.1 BCCTF Projects Highly Concentrated on Thematic Area of Infrastructure

The respondents told that all the climate change projects are addressing the thematic areas of BCCSAP according to the instruction of PPCCTF (Project Proposal of Climate Change Trust Fund). In the section 8 of PPCCTF made the provision compulsory to relate the project with the thematic areas of BCCSAP. By following the instruction all the projects linked with one or more than one thematic areas. The opinion showed the compliance of provision of PPCCTF by addressing the thematic areas of BCCSAP. In addition to that, maximum projects were under thematic area of infrastructure. The following figure shows the thematic area wise projects allocation.

Chart 1: Thematic Area wise CCTF Project



Source: BCCT 2017

The chart shows that infrastructure thematic area is major concern area for CCTF project. Therefore, the problem lies with the giving the importance to the all the thematic areas. The BCCT do not have any specific provision providing the importance of thematic areas. There is no plan or circular or instruction about the budget allocation according to the thematic areas. As BWDB and LGED are the two major implementing agencies therefore, therefore projects are concentrating on infrastructure thematic area. Even other ministries are also implementing projects under the thematic areas of infrastructure. Along with the LGED and BWDB, Ministry of Agriculture (MoA), Ministry of Disaster Management and Relief (MoDMR), Ministry of Defense (MoD) are also implementing projects under the infrastructure thematic area. MoA has project on 'Construction of Rubber Dam'. MoDMR and MoD have Project on Construction of Cyclone Centre. For this reason other thematic areas remained less focused. There are no innovative projects ideas to address the climate vulnerabilities.

The findings showed that the Climate change projects are addressing mainly the thematic area of infrastructure. The key informant told that may be the demand for infrastructure is high. In addition to that, the demand of infrastructure is visible too. People of a particular area have awareness about the infrastructure as it related to their regular livelihood. In addition to that Flash Flood, Flood is very common in rainy season with other disaster in Bangladesh. Roads, embankments, dike are damaged at that time. Therefore, government is under pressure to renovate the infrastructure along with construction of new roads, embankments, and rubber-dam. Improvement of livelihood also creates capacity to fight against adverse impact of climate change. In this case maximum projects are implementing under the infrastructure thematic area.

5.2.1.2 BCCTF Projects are Indirectly Addressing the Climate Vulnerabilities like ADP Projects

Over the years the government has invested to make the country less vulnerable to natural disaster but challenge now Bangladesh faces to scale up these investment to create a suitable environment for the economic and social development of the country (BCCSAP 2009). To fulfill these purposes, the climate change projects are needed to formulate and implement to address the vulnerabilities induced by the climate change. The cross section respondents failed to differentiate the CC projects from the ADP projects. Section 21 of PPCCTF has the provision to mention the adaptation and mitigation activities that the projects are aimed to do to address the root causes and barrier. The project documents showed that section 21 has only the general description about addressing the climate change but how the projects are addressing the climate change it is not analyzed in that document. In maximum cases the name and activities of CCTF and ADP projects of BWDB and LGED are more or less the same in nature. Both kinds of projects are indirectly addressing the impact of climate change.

Box 1: The Same Nature and Activities of CCTF and ADP projects

The ADP project of BWDB is “Protection of Ramgoti and Kamal Nagar upazila and adjacent areas under Lakshipur district from the continuing erosion of Meghna river (Phase 1)” and the BCCTF project of same organization is “Bank protection work for protection of Kashipur and adjacent area from erosion of the right bank of river Modhumoti in upazila Mohammadpur, district Magura to mitigate the effect of climate change”. The nature and activities of work are same in both the cases. Both the projects were aimed to protect the bank of the river. BWDB is implementing same nature of project by using both the ADP and BCCTF. The Only difference is in name of the project. Mitigate the effect of climate change is the addition for CCTF project. The

The key informant told that both the implementing agencies and the MoEF, BCCT are responsible for the existing condition. The Climate Change Trust Act (2010) section 7(b) specified

“The concerned Ministry or Division and the Non-Government Research Institute or Organization having experience in the concerned field shall, in the light of the Bangladesh Climate Change Strategy and Action Plan, 2009, made by the Government, prepare projects or programmes relating thereto and submit them to the Board of Trustees.”

In addition to that section 5 (a) of The Climate Change Trust Act specified about the capacity building of the relevant ministries

“To make necessary action plan for capacity building for adjustment of the people or groups of people of the affected and risky areas resulting from climate change, upgrading their life and livelihood and facing the long term risk, and to take measures for implementation thereof”

Key informant told that as a new area of knowledge, individual and institutional capacity is important to implement the BCCSAP. Both individual and institutions are not capable

enough to implement the BCCSAP. The officials of implementing agencies do not have the capacity to formulate a climate sensitive DPP as the concern ministry is responsible to address the climate change. In addition to that MoEF failed to create sensitivity to the climate change issue among the various ministries and agencies who are implementing projects under BCCTF. Ministry of Environment and Forest also failed to take leading initiatives in climate change issue. They failed to sensitize other ministries regarding climate change issue. The following chart reflected that maximum ministry left behind from the mainstreaming the climate change in their developmental activities.

Table 9: Ministry wise Budget Allocation

Sl No.	Name of the Ministry	Total Number of Projects	Allocated Budget (lac Tk)
1	Ministry of Water Resources	136	1134.19
2	Local Government Division	173	639.02
3	Rural Development and Cooperatives Division	05	48.47
4	Ministry of Environment and Forest	40	324.88
5	Ministry of Agriculture	16	117.78
6	Ministry of Disaster Management and Relief	07	119.97
7	Ministry of Defense	04	35.64
8	Ministry of Shipping	03	50.82
9	Ministry of Hill Tracts	03	20.22
10	Ministry of Women and Children Affairs	02	8.00
11	Power Division	03	56.02
12	Ministry of Education	11	39.99
13	Ministry of Science and Technology	02	19.31
14	Ministry of Health and Family Welfare	02	18.04
15	Ministry of Civil Aviation and Tourism	01	2.00
16	Ministry of Public Administration	01	0.19

Source: BCCT data base 2017

The table represents that out of 45 ministries (Cabinet Division 2017) only 16 ministries are implementing projects under BCCTF. Moreover, BCCTF projects are concentrating within the three ministries. These are MoWR, LGD and MOEF. The respondent of BCCT told that they did not get enough PPCCTF from the other ministries. Therefore, Trustee Board has less scope to approve projects of other ministries. Key informant told that the

MoEF focal ministry to strengthen the capacity of other ministry but MoEF failed in this point. Lack of institutional capacity leads the lack of individual capacity.

5.2.1.3 Climate Change Projects Failed to Create Piloting Idea within Specified Time

Climate change projects of BCCT are special nature in a sense that it aims to reduce emergency climate vulnerabilities. According to uses of Climate Change Trust Fund Regulation 2010 a Project should be completed within two years. So that it could address the immediate climatic event. In this context if projects completed within two years it could able to address the climate change otherwise it will failed to achieve the targets. Under implementation of BCCSAP, second question was regarding project completion within stipulated time.

The respondents of BCCT told that still no cost time extension is the common scenario for the Climate change projects. About 70% of the total projects are needed to be extended. They also added that compare to LGED projects BWDB projects failed to complete within the specified time. According to the opinion of BCCT official at present, in few cases PD can able to complete the projects within specific time. At the end of 2015, BCCT arranged a practical training on rules, regulations related to implementation of projects under BCCSAP for the PDs. So there is better understanding of policy among the PDs. BCCT has continued the training till today. After every Trustee Board meeting BCCT arrange training for the PDs. With this initiative the percentage of completed projects within specified time has increase but not in satisfactory level. Till the date PDs of CC projects are struggling to complete the projects within the specified time.

One of the meeting proceedings of TB in 2017 showed that total numbers of approved projects were 27. On the other hand total numbers of time extended projects were 23. Out of 23 projects BWDB has 13 projects and LGED has three projects.

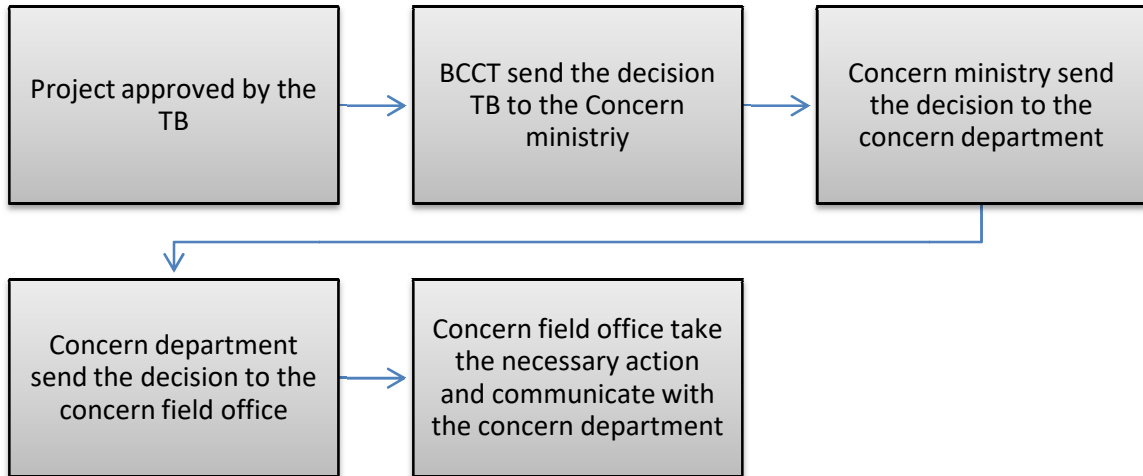
One of the respondents of BCCT told that PDs failed to complete the projects within the specified time as rules and regulation of CC projects are different from the ADP projects. He added that,

“The format of DPP and rules, regulations related to implement projects under the CCTF were new. Even formulation of PPCCTF Projects and budget allocation for those projects are different from the ADP project. Project directors are familiar with rules, regulations of ADP. The ADP projects finalized its project design, budget, and all other activities before the approval of the projects. Several meeting was conducted before finalize a projects. On the other hand, in CC project all the components were finalized before after approval and budget allocation. This is the unique nature of CC project.”

In addition to that, negligence of PDs is another reason for delaying the BCCTF project. According to the respondent of BCCT negligence of PD's is the one of the major reason for not complete the project within specified time. He told that

“Usually PDs of BWDB and LGED are used to implement big projects of their own department. Usually the budget was more than 100 crore of taka. So they have negligence to complete the climate change projects that have only budget of few crore tk. They have put priority to implement their own departmental projects. They considered that their main responsibility to complete their department projects first.”

Another opinion by the BCCT officials and officials of ministry of environment and forest and also PDs are that there is three to four month gap between date of project approval and dates of issuing GO of that project. Usually concern ministries have submitted projects as per their desire. But trustee board approved that project by considering available budget. With rare exception in every case allocated budget is less than their desire. Therefore they revised whole thing according to the allocated budget.

Figure 6: Communication procedure of BCCTF Projects from BCCT to the Ministry

Source: Depicted by the Author

The communication procedure for prepare the revised DPP can be explained as complex process. From central to the periphery it has to cross five stages to get the massage. After getting the budget the concern office have to prepare DPP again. After that local office send the DPP to the concern ministry for the authorization. After that with the signature of secretary of concern ministry, ministry sends the DPP to the ministry of Environment and Forest. After that, DPP send to BCCT to issue a GO. At that time, if some gap were noticed by the BCCT official, they send a letter to the concern ministry by mentioning the gap. At this time same procedure was followed again. Everybody is agreed upon this issue. Projects directors are also agreed on this.

Excessive rules and regulation is the another problem. According to the opinion of PDs at the same time they are implementing ADP's projects, World Bank's projects or other donor agencies projects as well as BCCT's project. They have to straggle a lot to implement CCTF's projects. These projects are overburden with excessive rules and regulations. One of the respondents of LGED told that,

“The allocated budget in climate change project is comparatively low but has to maintain excessive rules and regulations. Therefore he is not willingly taking responsibility to implement the climate change projects. He also added that the project approval and time extension procedure are both need same excessive

procedure. In addition to that any official response takes multi level of procedure. In case of projects of LGED projects any quarry sends from BCCT towards the secretary of MoLG. MoLG sends the letter to LGED and from LGED to the local office of LGED. The reply of that particular quarry also follows all stages but in the opposite direction.”

In addition to that respondent of MoEF told that wrongly selected projects is the another cause of delayed projects. She mentioned that ministry of Tourism is implementing a project. Government order of this project passed on December 2016. But still implementing ministry is struggling to start the projects. The ministry has aim to develop a tourist spot in this project. The major problem for this project is that project site remained under water half of the year.

Box 2: Summary findings on Implementation Process of BCCSAP

The findings of the study showed the gloomy picture of implementation process of BCCSAP. First of all, there is no strict distinction between the CCTF and ADP projects. Both are indirectly address the climate change. Innovative idea to tackle the adverse impact of climate change is absent in BCCTF project. In addition to that, Government does not have fixed criteria to emphasis the thematic areas. Therefore maximum projects are under thematic area of infrastructure. Furthermore, the CCTF project failed to create piloting idea for developmental work to address the climate change within the specified time. Lack of institutional and individual capacity is responsible behind the scenario. MoEF failed to sensitize the ministries to mainstream the climate change in their developmental work.

5.3.2 Independent Variable: Budget Allocation for the BCCTF Project

Meter and Horn (1975) proposes that available resources facilitate the administration to achieve the objectives of a policy. Resources means “funds or other incentives” in the program. All the respondents of this study told that Resource allocation is considered one of the fundamental challenges in the field of climate change project in Bangladesh. The respond from BCCT, civil society and key informant told that in the Paris conference the developed countries have promised that they will provide compensation to the developing countries as they are the innocent victim of climate change. After post Paris consensus GCF was created to provide financial support for the developing countries to facilitate the projects to tackle the adverse impact of climate change (BCCT 2016). The GCF fixed several criteria those are very unusual for the government origination of Bangladesh.

5.3.2.1 Budget is Inadequate for the Proper Implementation of CCTF Projects

In this context Bangladesh is spending its revenue budget according to its ability. But the budget is not adequate to make the country resilient to climate change. The first question is about government allocated budget for climate change project. The respondents told that last couple of years budget is only tk 100 crore, but at the beginning it was tk 700 crore. The less government budget allocation to the climate change project creates obstacles in BCCSAP implementation.

One of the meetings resolution of TB in 2017 showed that total twenty eight projects were approved by the TB. Out of twenty eight projects only six projects got its demanded fund. Rest of the projects got less allocation than their demand. One of the projects in Kulaura Upazila for removing water logging effect had demand for budget of tk 1494.69 lac but the project got only tk 200 lac. This is the common scenario for the maximum projects.

5.3.2.2 Total GoB Budget Allocation Reduced but Number of Projects Increased

The budget allocation for the project seems crucial for the BCCTF project. The allocation of budget reduced but the number of BCCTF project increased over the year. The senior officials of BCCT told that climate sensitization among the ministries increased day by day. Ministries are submitting huge number of projects on the regular basis as they are trying to mainstream the climate change in their regular developmental activities. In this regard the TB is trying to allocate the budget to the maximum number of projects. In this case number of projects has increased over the year but budget allocation was reduced as well.

The meeting resolution of TB showed that in the first three meetings in 2017 total number of projects submitted by the various ministries was one hundred and sixty five and number of approved projects was eighty five. In the same period projects submitted by the LGD was ninety five and approved projects were fifty four and total number of projects submitted by the BWDB was thirty nine and number of approved project was eighteen.

The key informant told that as several ministries submitted huge number of projects, therefore members of TB were in pressure to select a project. In this context the TB tried to approve maximum number of projects to satisfy everyone.

Table 10: Year wise Total Budget Allocation and Total Number of Projects

Fiscal year	Total budget allocation by GOB (crore tk)	Total number of approved projects	Total Cost for approved Project (Crore tk)	Comment
2009-10	700	32	342.53	*The interest of the fixed deposit of BCCT is used to meet up the extra cost of projects.
2010-11	700	23	311.67	
2011-12	700	37	426.50	
2012-13	400	48	441.59*	
2013-14	200	77	399.90*	
2014-15	200	87	370.00*	
2015-16	100	73	253.00*	

Source: BCCT 2017

The table shows that the budget allocation by the government is decreasing day by day; on the other hand number of projects was increasing at the opposite direction. In the consecutive fiscal year 2009-10 total budget was 700 crore tk but total number of project was 32 and 23. It directs towards the fact that climate awareness among the ministries was lower at the beginning but with the progression of time awareness was created as government incorporated the climate change with the 7th five years planning. Ministries were also prioritizing the climate change issue in their developmental projects and programs.

The table and narration of respondents on budget allocation for the projects shows the influence of patronage politics on CC project implementation. The tendency of select the maximum projects are to make everybody happy rather address the climate change in reality.

The patronage nature of Trustee Board to select CCTF projects has negative influence in the BCCSAP implementation process. The CC projects failed to create sustainable impact to address the climate change. As TB is selecting maximum projects and allocating less, selected projects are not also getting adequate fund to implement project as their demand. This is one of the major obstacles for proper implementation of projects. According to the resolution of last trustee board meeting, total demand for the budget was tk 150 crore. But projects get only tk 56 crore to implement their projects. Inadequate budget is the serious problem for projects of water development board, LGED.

5.3.2.2 Due to less Allocation of Budget Sustainability is the challenge for BCCTF Projects

According to the opinion of respondents sustainability of BCCTF projects is in question as the projects get inadequate budget than their demand. In this context addressing the climate change remains far behind to achieve the targets. Excessive demand and

inadequate allocation of budget can be considered one of the major challenges. Furthermore climate change expert told that,

“Inadequate resource allocation is the common problem for developing countries. Bangladesh is not exception in this issue. Moreover government has formulated BCCSAP to use the foreign aid that was promised by the developed countries as a compensation for the developing countries. In the meanwhile GOB started allocating its own revenue fund to address the climate change. Government has no capacity to allocate more funds on implement climate change project. Without the compensation from developing countries, adequate budget allocation is not possible.”

Key informant also focuses in the issue of corruption in the spending on climate change budget. Respondents from TIB and BCAS told as government of third world countries Bangladesh Government is spending quit a good amount of money in climate change project. But question is that whether money is spending in a right manner or not.

5.3.2.3 Governance Challenges for the Fund Allocation of CCTF Projects

The secondary literatures presented the governance challenges to implement the climate change projects. Recently two consecutive research works were conducted by the TIB, one was on local government institution and another was on BWDB. Both the study showed that governance challenges in financial mechanism hindered the proper implementation of climate change project and failed to address the climate induced vulnerabilities. TIB (2016) found that,

“Few members in the Trustee Board and Technical Committee of some relevant ministries are active in the meetings and project approval processes. It was found in the LGIs implemented projects that the BCCT funds had been allocated to the LGIs located in non-climate hotspot areas. It was also found that 11% funds among the total funds allocated to the LGIs had been distributed to less or non-disaster prone areas.”

Further study of TIB (2017) draw inferences that “Influence and lobbying resulting allocating funds in a biased way which does not ensure that the most vulnerable areas and people are getting support from climate fund.” These two studies found that lack of proper monitoring mechanism, peoples’ participation, failed to conduct audit of the project derived the BCCTF project in a critical situation.

The findings of the present study showed that monitoring mechanism is a problem for CCTF projects. The Officials of the BCCT used to visit twice or thrice to see the progress of CCTF projects. Last fiscal year total number of monitoring was 158 (Annul Report, 2017) but BCCT do not have any data regarding the monitoring other local administration, implementing ministries. In addition to that, out of 134 completed projects only 8 projects have been audited by the CAG according to the provision of the Climate change Trust Act 2010. Audit objection was filed up against each of the project. Besides these IMED evaluated only one project. At present BIDS are evaluating 28 projects. Therefore, governance challenges are pertinent to the BCCTF project.

5.3.2.4 Beyond the Governance Challenges in CCTF Projects

The Governance challenges in financing mechanism of BCCTF like transparency and accountability are creating obstacles in the implementation of BCCSAP. The respondents of LGED and BWDB also told that they prepared projects by assessing the local needs. But in maximum cases they failed to get the demanded budget. Therefore, they were in trouble to prepare climate resilient project. In some cases they were not willingly implement the ceiling bound climate change project as they know that was the total wastage of fund.

Box 3: Jolobayur Taka ki Jole Jacche? (Does the Climate Change Fund go into Water?)

One of the respondents of BWDB told that they submitted a project to construct 3 km river bank embankment with budget of tk 300 lac. Trustee board allocated tk 100 lac for 1km river embankment. According to his opinion if they spend tk 1 crore for 1km embankment, that would be the total wastage of money. They might fail to protect the partial work. According to their field assessment for a sustainable project they have to protect the three kilometers of that embankment. If they protect 1 km embankment, it will not be sustain in the long run. So they disagreed to implement the project to avoid the allegation “Jolobayur taka Jole Jacche”

5.3.2.5 Summary Findings on Budget Allocation

Ceiling of the budget allocation for the CCTF project is hindering the implementation process of BCCSAP. The LGED and BWDB prepared the project by assessing the need of the locality. In maximum cases projects do not get the demanded budget. The Trustee Board fixed allocation of budget for the projects. Within that financial frame LGED and BWDB prepared the projects by ignoring the original design. Partial work of LGED and BWDB failed to create any sustainable impact on the project area. Budget allocation for the projects also faced governance challenges. The Trustee Board used to allocate the budget to a project without any framework or mechanism. The decision is totally depend on the Trustee Board.

5.3.3 Independent Variable: Communication between BCCT the Respective Ministries

Meter and Meter (1975) has coined the point that effective implementation requires that a program's standard and objectives be understood by those individuals responsible for their achievement. In this respect, inter-organizational Communication is considered important tool of implementation any policy. In policy implementation process, it is assumed that formulated policy may bring desire result when it communicated with all its stakeholders. Policy communication empowers the stakeholders, so all the parties know their responsibility. As a new area of knowledge, climate change policy should be communicated properly to ensure proper implementation.

5.3.3.1 Proper Dissemination of Policy

The respondents were asked question about communication activities for proper management of climate change projects. Regarding the answer to the question, the officials of BCCT told that at the beginning communication gap was the vital problem. Gradually the condition has improved with the establishment of the organizational setup. At present they have a well established coordination mechanism. They usually communicate with PDs in regular basis over telephone, e-mail, and web-site. In addition to that the respondent of BCCT told that

“In every two to three month the BCCT arranged coordination meeting with the PDs. In that meeting progress of projects is the main issue of discussion. In addition to that challenges, prospect and problem of project are also discussed. New rules, regulations and circulars were also discussed. Therefore, after three to four month PDs and officials of BCCT can exchange their views. In addition to that after the every TB meeting training was conducted to sensitize the concern officer for the proper implementation of the project under BCCSAP.”

On the contrary, the PDs of LGED told that BCCT officials are not always open to provide the necessary explanation of a particular rule, regulation and instruction to implement project clearly. One of the respondents of LGED told that

“As a new dimension of project implementation, the BCCT circulated several rules and regulation on trail basis. All the time they need the explanation to comply with the rules and regulation. In few cases they do not get the proper response from the Officials of BCCT. Lacking of openness among the assistant director of BCCT create problem in the implementation level. In the project execution level needed more open communication for better management of the projects.”

In the response to this allegation the AD of BCCT told that the authority of the office has restricted them from the frequent communication with the PDs. One of the respondents of BCCT told that

“They duly communicate with the PDs and provide them all kinds of information related to the proper implementation of the projects. In few occasions the higher authority got the complaint against the close relationship with the PDs. That might hamper the office secrete. Therefore they are instructed to maintain close relationship with the PDs”

On the contrary the PDs of BWDB told that all the time they got the proper information from the AD of BCCT regarding the implementation of projects. In addition to that they told that they get all the instruction regarding project implementation on time.

Box 4: Summary of Findings on Policy Communication

The overall pictures of influence of communication shows that inter organizational communication are gradually improving day by day through coordination meeting named as PD meeting among the PDs, officers of BWDB and LGED, LGD, MoWR. In addition to that, continuous training conducted by BCCT creates positive impact on Implementation process of BCCSAP. Furthermore, ICT is also playing important role in the implementation process of BCCSAP.

5.3.4 Independent Variable: Characteristics Policy Implementers

Meter and Horn (1975) has viewed this component as consisting of both formal structural features of organization and the informal attributes of their personnel that can influence the implementation process of BCCSAP. In this thesis characteristic of organization is measured by employees and projects proportion and technical knowledge of employee to overall management of climate change project. According to Meter and Horn these two are the formal features of the organization. How these formal features are influencing the implementation process is going to analyze in the following section.

5.3.4.1. Projects and Employees Proportion of BCCT Hindrance the Proper Management of the Project

Bangladesh Climate Change Trust is being in operation since 2010. From that year to till July 2017 total 480 projects has been approved by the trustee board. At present total number of ongoing projects are 317. According to the organogram of the BCCT ten AD supposed to manage these huge number of projects. The situation became the huddle for the Ad of BCCT. One of the respondents from BCCT told that

“The total number of employees in BCCT is 82. All together 20 post are vacant at present. Out of them ten are working as Assistant Directors (ADs) who are directly involve with project management procedure. Out of that ten posts two post are vacant. Total eight AD are managing the huge number of projects. On an average one Ad are in charge of 42 projects. Therefore they are over burden with the work load. Timely response was not always possible for them as they responsibility to do other functions.”

5.3.4.2 Educational Background of Policy implementers Showed Less Exposure to Climate Change

The respondents of BCCT are from different educational backgrounds. Three of them have graduated from different public university with general subjects like economics, chemistry, and political science. One of the respondents is graduated in the civil engineering department from CUET. At present two of the respondents are graduated from the department of disaster management from Dhaka University. One of the respondents is now studying in the department of environmental science in NSU. On the other hand, all of the PDs are graduated from Different Engineering Universities of Bangladesh. Besides these, Deputy Secretaries of MoEF have post graduate degree on environment and climate change from University of Melbourne, Australia. On the contrary respondents climate change cell of LGED, LGD, BWDB, MoEF are graduated in general subject from different university.

The data showed that respondents are implementing BCCSAP but in maximum cases they have less exposure to the academic area of climate change. In the previous section it was found the less individual capacity hindering the implementation of BCCSAP. Education is closely related with personal attributes that can enhance the individual capacity. Individual's capacity is also related with the institutional capacity. Lack of educational exposure on climate change of the policy implementers hinders the proper implementation of BCCSAP.

5.3.4.3 Training for the BCCSAP Implementers on Climate Change and Projects Management

All the respondents have training on climate change on various issues like climate finance, adaptation and so on from inside the country and outside the country. In contrast, respondents have deficits in project management area. Only one respondent has weeklong project management training in NAPD. But rest of officers of BCCT does not have direct training on project management. On the other hand PDs have

orientation on project management but not in climate change. Lack of adequate knowledge is a problem for climate change projects.

Respondent from the MoEF have positive opinion regarding the knowledge on climate change of officials of BCCT. As Moef is the controlling authority, therefore their judgment is important. He told that

“The employees of the BCCT have enough knowledge to manage projects efficiently. They never heard any adverse remark regarding their duties and responsibilities. According to their opinion they are quite happy about how they are discharging their duties.”

On the contrary PDs of LGED and BWDB have quite different opinion from the MoEF. They had emphasis on educational background of BCCT officials. According to their opinion,

“BCCT officer are from different background and have less experienced regarding management of projects. They are needed to increase their capacity regarding management of project. Maximum projects of these organizations are technical, and BCCT. Desk officer of BCCT has lack of knowledge regarding technical issue. Without understanding the technical issue they put adverse comment on a project during their inspection.”

Scenario reflects in different ways in the view of senior officials and CC expert of MoEF, strengthening program is needed to enhance the institutional capacity as well as capacity of the employee of BCCT. According to their opinion

“As the issue climate change is comparatively new for the current world as well as for Bangladesh. So clear understanding of this issue is crucial to enhance the adaptive capacity of the country. In this context strengthening program is important for BCCT official. There is not a single project of CCTF to enhance the capacity of officials of BCCT.”

Respondent from civil society coined his opinion in different ways. According to their opinion

“Institutional strengthening program is needed for both MoEF and BCCT. According to his opinion BCCT and MoEF are not serious about climate change. Officers of climate change cell are busy with foreign tour, not focusing on implementation of the BCCSAP. On the other hand as a new institution officers of BCCT need to develop their capacity regarding implementation of BCCSAP.”

Box 5: Summary Findings on Characteristics of Policy Implementers

The overall findings showed that as a new area, knowledge gap created problem for the BCCSAP implementation. Not having academic background and training on climate change hinders the implementation process. BCCSAP incorporated the issue in thematic area capacity building and institutional development. As a newly established organization, BCCT failed to take any project to enhance the capacity of policy implementers. Both institutional and individual capacity is needed to accelerate the implementation process of BCCT.

5.3.5 Independent Variable: Influence of Authority

Meter and Horn (1975) raised the question about the partisan character of implementing jurisdiction. Their proposition is that partisan character can influence the implementation process. In addition to that this research is going to analyze how the authorities both administrative and political do their activities in a partisan condition. In a hierarchical administrative system authority plays important role. In a political government system hierarchically minister is the administrative head and secretary is the principle accounting authority. Head of any department of ministry has authority to take any decision. In every important issue departmental head have to depend on the decision of ministry. In case of climate change project TC, TB are playing important role. No officer from BCCT is the member of that committee. In this situation decision of minister and secretary plays very important role. Respondents view on this issue are categorized and discussed in the following section.

5.3.5.1 Incomprehensiveness Decisions of Political Authority

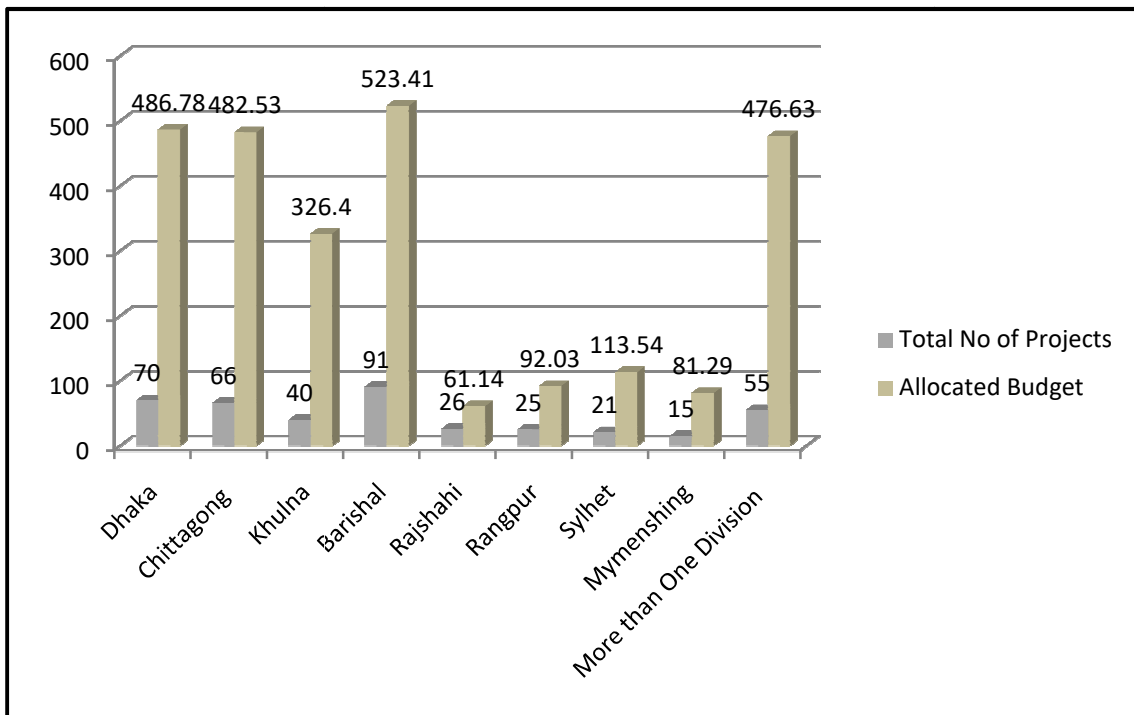
The research findings of TIB (2017a) shows that the approval of the project took place through personal and political connection of the respective Mayors with BCCT, Trustee Board or Technical Committee members especially the most concerned Ministers or Secretaries. The finding shows the partisan characteristics of incomprehensive of trustee board as well as the influence of administrative authority. The responsibility of TB is to select a project to enhance the adaptive capacity of the people as well as vulnerable area of Bangladesh. In that committee official of BCCT who are the main responsible authority to manage the climate change projects, do not have even the membership.

The respondents from TIB told that political and administrative connection is very important for the selection of CC projects. He referred to the findings of TIB (2017a) that,

“In many cases when the Paurashavas felt that they needed budget to further their development activities, which required more than a crore taka, they immediately thought of preparing and submitting proposal for BCCT funds. In many cases the LGD could allocate up to 70 lacs taka from its own budget, which deemed insufficient to carry out bigger development activities of the LGIs. The Paurashavas submitted their PPs for BCCT funds by establishing rationale of their projects and linking with climate change. The BCCT also approved those projects where there was close political connection between the Mayors and the Ministers of most relevant ministries.”

The office document showed that at present maximum projects are implementing in the Barisal division. After that Dhaka and Chittagong division has the second and third highest of budget allocation.

Chart 2: Division wise Project Allocation



Source: BCCT 2017

The chart shows that the Dhaka division got the second highest of Budget. The figure showed the partisan influence on CC projects. Though, Barisal and Chittagong division are the vulnerable as the whole coastal area is vulnerable due to climate change, other climate vulnerable district are remain untouched. This is also true that as a coastal area whole Barisal division is vulnerable due to climate change. But in that region which area is vulnerable to others, MoEF do not have that index.

The key informant told that people of the constituency of a minister have demand for the development of their area as he is in an influential position. To fulfill the popular demand of people they act to develop the area as that area is considered one of the most vulnerable areas due to climate change. To select a project in a specific area has strong logical ground that can justify the activities.

5.3.5.2 Decision by the Secretary

Minister is the supreme authority in the Ministry. Respondents of BCCT told that besides minister secretary can play important role regarding implementation of BCCSAP. To solve financial, and projects related issue file send to the secretary. For example file of fund release for a project send to the secretary for his approval. As a part of BCCSAP implementation, officers of BCCT do not have authority to take decision independently. The respondent of BCCT told that

“Officers of BCCT have directly engaged with project implementation under BCCSAP. They know every pros and cons but cannot take any decision independently. For example every time they have to place the wrongly filled up DPP before the Trustee Board. They wanted to send back those DPP with comments, but they failed to do that. They did not get the approval from Secretary. But recently the secretary told them to do so. Officers of BCCT are now sending back DPP to the concern ministry that do not match with the criteria.”

Box 6: Summary Findings on Influence of Authority

The findings showed that the implementation process of BCCSAP is highly influenced by the decision of both political and administrative authority. The Trustee Board is the supreme authority to selection a project. Decision of budget allocation to a project also depends on the Trustee Board. In addition to that administrative decision also depends on the secretary of the ministry. As an implementing authority BCCT does not have any authority to take independent decision regarding the proper implementation of BCCSAP. It reflected the highly centralized administrative culture of Bangladesh.

5.3.6 Independent Variable: Disposition of Implementer

Meter and Horn (1975) have specified that each of the components of their model must be filtered through the perception of the implementers. The cognition of the policy, the direction of their response and the intensity of that response is very important in proper implementation of a policy. Generally a specific policy is formulated by targeting to deal with a specific problem. Formulated policy is implemented by bureaucrats. Proper implementation of policy more or less depends on bureaucratic role. A well drafted policy might not be always self explanatory. The policy is needed to be explained further, or is needed to be formulated further regulations, or circular. In addition to that bureaucrats should take some strategy or action plan to implement the policy. In this context role of bureaucrats is important to implement BCCSAP. It is important to know, how bureaucrat take decision, how their decision is influenced by the hierarchy system of bureaucracy, how far they could able to take their decision.

5.3.6.1 Role of Policy Implementers Differs as Cognition Differs

The respondents next were asked whether they could able to discharge their duty independently as per provision of the rules and regulation. They can discharge their duty in the same way. As they work in a same organization their cognition of rules and regulations directed in the same way and they discharge duty accordingly. The picture is different in case of policy implementer in BWDB and LGED. The policy is disseminated in the same way but role of policy implementer differs in those organizations. The respondent of BCCT told that project directors of LGED can comply with the rules and regulations better than the projects directors of BWDB. The respondents of BCCT told that they usually felt difficulties to work with project directors of BCCT. The project completion rate is higher in LGED than BWDB. It reveals that policy cognition is important for the proper implementation of BCCSAP.

5.3.6.2 Administrative Hierarchy

Whether they could able to take any decision independently regarding proper management of project, in their answer to this question officials of BCCT gave their opinion in the same way. They told that they could not take independent decision. They have to send file for the approval of secretary and minister for any kind of decision regarding management of project. Rules and regulation directed them to do so. They mentioned that for last couple of year they tried to send back the uncompleted and wrongly completed DPP to the respective ministry. But they failed to do so, as they did not get the direction from the MoEF in this issue. But recently secretary of MoEF gave his consent to this issue. Now they could able to send back the faulty DPP with comment of BCCT officials. This initiative reduced their unnecessary burden of faulty DPP.

Box 7: Summary Findings on Disposition of Implementers

The policy is disseminated in a same way and same manner to the implementing agency. Due to the difference in cognition of the BCCSAP, implementation differs. Therefore, the project directors of LGED can comply with the provision of rules and regulation better than the project directors of BWDB. Inferences can be drawn that disposition of implementers can influence the proper implementation of BCCSAP.

Table 11: Major Findings Derived from Interview

Variables	Major Findings
Implementation of BCCSAP	The implementation of BCCSAP through BCCTF is not exclusively different than the ADP project. Therefore, the BCCTF projects failed to address the climate change directly.
Budget allocation for the BCCTF project	The Trustee Board fixed a ceiling for the project to accumulate more projects. Within that boundary without feasibility study and assessing the need of the locality executing agency implement BCCTF projects. Those projects failed to address the adverse impact of climate change directly. The patronage nature of Trustee Board in budget allocation to the projects induces other factors mentioned in the analytical framework.
Communications of rules and regulations	The BCCT formulate or added or revised the existing rules and regulation for the better implementation of BCCSAP. The BCCT could able to disseminate the newly formulate rules and regulation but lack of proper coordination lead to noncompliance of those policy.
The Characteristics of the Policy implementers	Lack of knowledge regarding BCCTF project implementation among the implementers hinders the proper implementation of BCCSAP. MoEF, the Focal ministry failed to enhance the institutional and individual capacity.
Political Condition	Due to political influence BCCTF projects are implementing in a less vulnerable areas as Dhaka division got the second highest budget allocation from BCCTF
Disposition of Implementer	The policy implementers of BCCT failed to take strategy independently due to the administrative culture. On the other hand the project directors of BWDB failed to comply properly because of failed to understand policy properly.

Source: Depicted by Author

The overall data presentation showed that execution of BCCSAP 2009 has influenced by several factors during its implementation phase. The ceiling of budget allocation is one of the major challenges for making the BCCTF project Climate proof. The decision of budget allocation relies on the Trustee Board. The Trustee Board is on pressure from all over the country as Bangladesh is one of the most climate vulnerable countries to approve project in the vulnerable area. Therefore, BCCSAP is not affectively implemented due to Patronage nature of the Trustee Board.

5.4 Case Study Analysis: Influence of Factors in a Specific Project

The implementation Process of BCCSAP is influenced by several factors. The data shows that resource allocation, employee projects ratio of BCCT, political and administrative authority, lack of proper networking, knowledge gap can adversely influence the implementation process of BCCSAP. These are the overall picture of how the factors are influencing the implementation process. In the following sections the specific case of a project will help further to validate the data. The case study is the manifestation of how the one or more factors are responsible for a project implemented within time or following the rules and regulations. On the other hand how the factors associated with the projects and creates hinders in implementation process of BCCSAP. The four specific projects will show how different factors are associating with the different project differently. The scenario will not be the same in every case. It will also provide the evidence how a single factor like adequate resource allocation minimize the influence of all other factors. On the other hand how resource allocation creates hinders and also helps to create other obstacles like administrative procedure, ignorance of rules and regulations, and other factors. There are also differences regarding executing agencies. LGED is considered more efficient than BWDB. These differences will analyze at the end of the case study analysis.

5.4.1 General Information about the Four Case Studies:

Four case studies from two selected organizations- LGED and BWDB are going to be analyzes in the following section to validate further the findings of the research. At first general information of the four projects is going to be present for the general overview of the project. The overall pictures of the four projects will help to compare the projects, how the factors are influencing a specific project in a different way.

Box 8: Case One: Successful Project of LGED

The project 'Development (Renovation) of Climate Resilient Roads, affected by Climate Change in the Coastal area under Charfession Upazila in Bhola district' is implemented by Local Government Engineering Department (LGED), Ministry of Local Government, Rural Development, and Cooperatives/ Local Government Division. Project was approved on 29th September 2016 by the TB and the project duration was from November 2016 to November 2018. The main component of the project was to develop climate resilient 7.43 km road. The project addresses T3 (Thematic Area 3) infrastructure, P1 (Program 1) repair and maintenance of existing rural roads cum embankments. The project aimed to ensure rural connectivity and safe movement of people during disaster. The estimated cost was 6 crore and 27 lac taka. Trustee board had allocated 6 crore and 20 lac taka. The TB reduced only 7 lac taka for the project by cutting down budget for computer and miscellaneous item. Decision of TB was that GO should be issued by excluding that items. But project was completed within 17th August 2017 only within one year. The official of BCCT has visited the project twice. The report shows that the project was completed according to the DPP.

According to the respondent of BCCT, the project is successful. To him the reason behind this the PD was involved with climate change projects from the beginning. So he is well acquaintance with BCCTF project. In addition to that the project location was in area of influential political leader. For that reason PD was conscious to complete the project. He also added that usually the engineers of LGED are more capable than BWDB. On the other hand, the PD of the project, the location was very close to Upazila head quarter. Materials carried easily to the project area. In addition to that plant method was used in the project. In a plant method it takes only one day for carpeting one km road.

Therefore, adequate budget, project location, available of materials, use of technology, well acquaintance of BCCTF rules and regulation, supportive decision by the Trustee Board made the project successful.

Box 9: Case Two: Problematic Project of LGED

The project 'a) Improvement of Carpeting road from durlovpur Uttarpara jamtola H/O pro Md. Tofazzal Hossain to H/O Amjad Hossain Road at ch 00-450 b) Improvement of carpeting road from Durlovpur Pucca road jam tree to durlovpur road ch. 00-1664m. District Jhenaidah.' was implemented by LGED, LGD. The project duration was July from 2016 to December 2017. The aim of the project was ensure sustainable 2.114 km rural road communication network and improve the livelihood of climate vulnerable people. The project covers thematic area T3 infrastructure and P1 improvement of existing rural road. The estimated cost was tk. 150.44 lac. The TB had allocated tk. 111.44 lac for the same work. GO was issued on 25th of July 2016.

Before realizing the second installment a monitoring team visited the project site. At that time BCCT monitoring team had found some major violation in project implementation phrase. They mentioned that low quality materials were used in that project and 10 meter less work has done. That was violation of DPP. After their report the PD compelled to change the materials and to cover that 10 meter road. The project director failed to comply with the rules and regulation with the climate change project.

The PD told that he got less allocation of Budget than the demand of the project. Therefore, he faced difficulties to complete the same volume of work within the allocated budget. He also added that he was find difficulties with the rules and regulation of the climate change projects as he used to implement the project of ADP. He also told that by the demand of local people and BCCT he compels the contractors to change the road construction materials and complete the road as per the design.

The analysis of the project showed that project got less allocation of budget. Therefore, the implementation faced several challenges. The monitoring team of BCCT find fault with the project. Project failed to address the general provision of DPP at a first glance.

Box 10: Case Three: Successful Project of BWDB

The project “Bank protection work for protection of Kashipur and adjacent area from erosion of the right bank of river Modhumoti in Mohammadpur upazila, Magura district to mitigate the effect of climate change” was implemented by BWDB, MoWR. The project duration was from June 2013 to June 2015. The objectives of the project was to protect adjacent embankment of Madhumoti-Nobogonga project, educational institute, houses, hat bazaar, and 20,000 hector agricultural land. The project addressed the thematic area T1: Food security, Social Protection and Health, P9: livelihood protection of vulnerable socio economic groups’, T3: infrastructure, P5 adaptation against floods. The major activity of the project was to protect 1700.00 river banks by cc block.

The project faced several obstacles during its implementation period. First of all demanded budget for the project was tk 2483.92 lac, but allocated budget was tk 400 lac. The decision was that within the budget project should complete proportionately. The revised project was submitted within tk 400 lac the river bank protection of 305 m. After submitting the revised the BCCT found that the rate of per meter protection work is higher than other same nature project of BCCT. The office send official letter to the executing authority through the line ministry. The executing authority sends the replay in the same direction. Whole process took about 5 (five) month. After long administrative procedure GO has been issued on 15of April 2015, before two month of original project duration. Then the executive authority sent the time extension letter to the BCCT without following the rules of Fund Uses regulation. They send the time extension proposal without conducting the PIC meeting. Then the projects again fell in hole of administrative procedure. When they submitted the revised DPP with the recommendation of PIC, the BCCT found that there was change in design without notifying. The project again fell in administrative trap. The executing authority replied that in working design has changed due to the convenient of the project. Finally, revised GO issued on 8th of January. Now the project has been completed.

The project was considered as successful project by the BCCT. The respondent of BCCT told that due to ignorance of PD regarding rules and regulation, PD failed to complete the project within specified time period. He also mentioned at that time due to some report published on newspaper about the misuse of climate change fund, BCCT administration also very strict. They were very cautious about the every detail of project document. At that time almost all the projects got different valid administrative quarries. In addition to that Officials’ quarries take several stages. For BWDB the stages for quarries are BCCT- Ministry of Water Resources-BWDB-Local Office of BWDB. The replay needs the reverse direction. In every stage it takes minimum one week. At least two months is needed to solve a quarry. The project director also told that he faced difficulties to cope up with the rules and regulations. He told that rules and regulations of climate change project are more acute than ADP project.

The problem of the project started with the allocation of budget. Then administrative procedure, pressure of excessive rules and regulations, compliance with the rules and regulations lead the infrastructure project to complete within the specified time period.

Box 11: Case Four: Problematic Project of BWDB

The project 'Construction of Polder to mitigate the impact of climate change effect in Nalua Union, at Bakergong upazila in Barisal district' is implementing by BWDB, MoWR. The project was approved by the TB on 9th of April 2013, GO was issued 22nd September 2013. In the original DPP, project duration was from March 2013 to June 2014. In addition to that, there was also provision to construct regulator with tk 4 crore. It was under thematic area T1, T2, T3, T5. Main purpose was to increase the sense of protection to address the adverse impact of climate change among the population of that locality. The aim of the project was to protect the locality from flood, and increase road communication, create job opportunity, and reduce poverty, and boost forestation.

Total demand for the project was tk 1998.98 crore for construction of 24 km embankment. The TB allocated tk 1000 crore to construct same length. The official of BCCT visits the project for the first time on 17th October 2014. Their observation was 200 houses left outside the alignment of project. Sub assistant engineer told that their houses were very close to the river. It was not possible to protect those houses by building the embankment. The local people had that demand to include those houses also. Second observation was inferred by the opinion of the people of that locality. People of that locality told that there was no inlet, outlet and sluice gate. Therefore, water logging is a problem for that project area. Drainage was important for the project area. In that inspection report mentioned that total length of the embankment they found was 21.125 km. At that time the team found that in some portion of the embankment was damaged.

In this case, due to budget allocation problem started in the project. In the original design there was a provision of inlet, out let or sluice gate to drain the water from the project area. The Trustee Board approved the project without the provision of drainage system. Therefore, this project failed to address the climate change rather created water logging problem for the project. The respondent of BCCT also told that due to less allocation of budget, project created water logging problem for the project area.

5.4.2 Factors Derived from the Case Studies

The general information of the four projects provides an idea about the influential factors that can effectively influence the implementation process of BCCSAP. The general accounts reveal that budget allocation is common factors for the both successful and problematic project. In every project it is considered as one of the most influential factors for implementation of a project following the guiding principles of BCCSAP. The factor is also influencing other factors to influence the project positively and negatively. In the following section discussion on general observation on factors is going to be analyzing by two distinct sections and lastly a comparative analysis is going to be drawn from the observation.

5.4.2.1 Projects Failed to Follow the Provision of BCCSAP

Project document of all the four projects has mentioned about the thematic area of BCCSAP. The analysis shows that projects of CC are following only the thematic area of BCCSAP as mentioned in the DPP. The components of the projects show that there is no difference between CC projects and ADP projects. Major activities of the projects are same as ADP funded project. Road construction of LGED in case one and case two projects and River bank embankment construction in case three and four projects of BWDB have the same nature as ADP projects. The PDs and respondents from BCCT told that more or less same as ADP projects. The respondent from LGED and BWDB failed to differentiate the climate change projects and ADP projects. They told that any project implemented in coastal area is considered as climate change project. They failed to make the projects climate sensitive projects as per the provision of BCCSAP. The facts of all the four cases show that the CC project only follows the provisions of BCCSAP only mentioning the thematic areas. They have lack of capacity to make CC projects as climate sensitive projects.

5.4.2.2 Projects Completed within Two Year

Out of four selected projects, projects of LGED completed within two years of specified period. But projects of BWDB failed to complete the projects within two years. Both the projects started at 2013. Project director of Case 3 could able to complete the projects with one time extension but another projects need four time extension to complete the projects. Climate change projects are not following the provisions of BCCSAP, they only able to relate the project one of the thematic area of BCCSAP. In addition to that projects of BWDB failed to complete their projects within specified period. The factors behind the scenario are going to be discussed in the following sections.

5.4.2.3 Budget Allocation

Budget allocation seems to be a problem for the climate change projects. Out of four cases budget allocation is adequate for the only case 1 project which was implemented in Char-Fashion upazila. Trustee Board only reduces tk 7 lac from the demanded budget. In addition to that trustee board also made decision in favour of the project not to submit revised project. Without the revised PP, GO to be issued for the allocated Budget. As project got the allocated budget and favorable decision by the TB, PD could able to complete the project without any obstacles. In case 2, budget was allocated less than demand was 150.44 lac but the TB had allocated tk. 111.44 that is tk 39 lac less than the demand. So, revised DPP was needed to submit by the PD. Problem arises with the less budget allocation. On the other hand selected two projects of BWDB did not get demanded budget. Proposed budget for case 3 project was tk 2483.92 lac but allocated budget was tk 4 crore only. Proposed budget for case 4 was tk 15 crore, the TB allocated tk 10 crore for the same work. These two projects extended time twice and fourth times consecutively. In compare with LGED and BWDB projects LGED comparatively more budget allocation than BWDB. In all three cases revised DPP was needed to prepare and respective organization send the DPP in a proper channel. This process takes excessive administrative procedures.

5.4.2.4 Administrative procedure: Pressure of Rules and Regulations

Administrative procedure is another challenge related with budget allocation for the climate change project. Project directors of LGED and BWDB told that they prepared primary DPP by estimating the local need. At the time of Trustee Board meeting, the TB allocated budget less than their demand. In this context they need to prepare the DPP again. They send the DPP through proper channel. The process is time consuming. In case of BWDB the Process of sending DPP is from local office-BWDB-MoWR-MoEF-BCCT. In every stage it takes at least one week. Administrative procedure relates with rules and regulations also. They also told that excessive rules and regulations are also integral part of climate change project that is unlike to ADP projects. If they failed to comply any rules, than quarries send to them through proper channel from BCCT. They have to send reply in the same proper channel. Compliance of rules and regulations is closely related with knowledge and capacity of Project Directors.

5.4.2.5 Capacity of the PD

The respondents from BCCT told that climate change project is new area for the Project Directors. So they fell in difficulties to comply the rules and regulations of climate change projects. They told that in general PDs of LGED are more capable to compliance rules and regulations. In this connection the case 2 projects implemented by the PD of LGED can able to complete the project within the specified period though he have to submitted the revised DPP as budget was cut down by the TB. On the other hand the PDs of BWDB are not capable in general. In case 3 and 4 projects the PD send the time extension proposal without the PIC and PSC meeting. It shows the ignorance about rules and regulations of CC projects by the PDs of case 3 and case 4 projects. It seems that knowledge gap is also affecting the climate change projects.

5.4.2.6 Knowledge Gap

The two case projects of BWDB shows that the PDs of those projects are not well informed about the implementation of climate change projects. The respondent from BCCT told that PDs of BWDB are reluctant to climate change projects. Several times the letter was issued to the PDs of those projects for the complaisance the rules and regulations. They told that case 4 projects changed their design without the prior permission to the TB. That was the violation of provision of climate change trust fund uses rules. The PD of that project told that he was not well informed about that provision. He added that in ADP projects it is not mandatory to take approval before the execution.

5.4.2.7 Different from ADP projects

The PD of failure projects of LGED and PDs of two case projects of BWDB told that they are used to implement the projects of ADP. The rules and regulations are ADP projects are different from CC projects. They added that in case of ADP projects budgets and design was prepared before the approval of the project. But in CC projects the TB allocated a fund for the project that is not as per their demand. After approval of the project they have to prepare DPP according to the decision of the TB. It creates gap between the estimated time and original time given for the projects. The PDs of that failure projects do not have the prior experiences to implement CC projects. On the other hand the PDs of LGED have the experienced to implement the CC projects. They could easily adapt with the rules and regulation of CC projects.

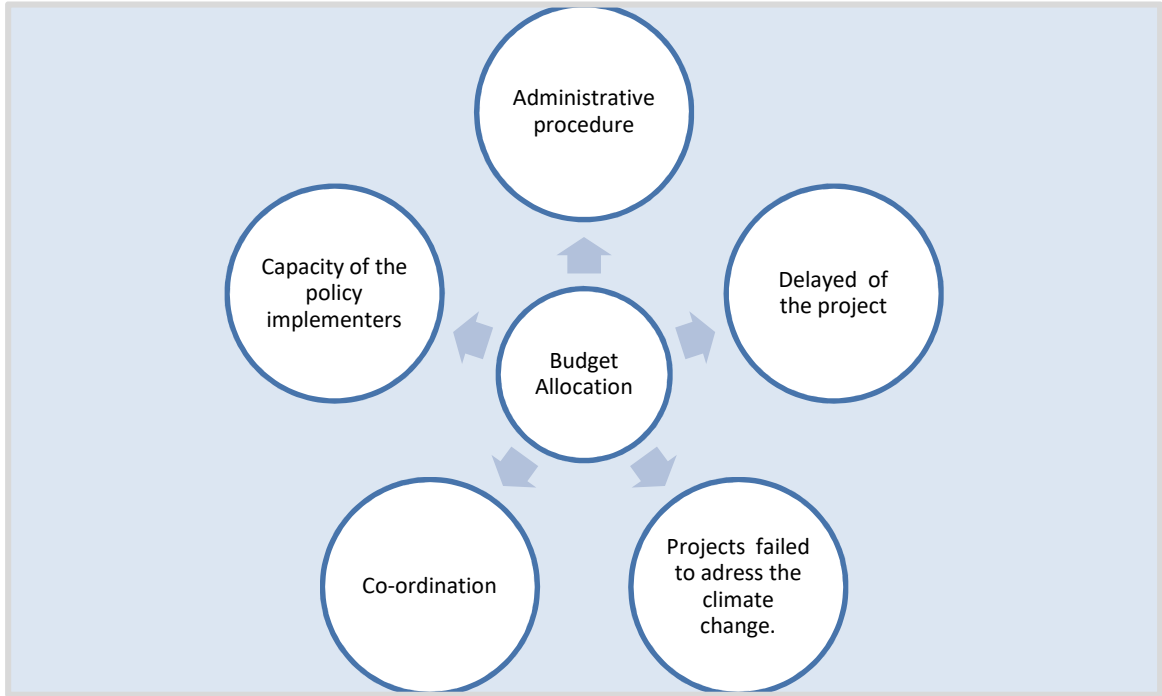
Table 12 Summary of Findings Derived from Case Studies

Project	Major Findings
Case 1: Successful project of LGED	Project got demanded budget and project director could able to complete the project within the specified time period and use of technology.
Case 2: Problematic project of LGED	Project failed to get demanded budget. The contractor use low quality materials and construct by excluding 10 meter road.
Case3: Successful project of BWDB	Project failed to get demanded budget. Less allocation of the budget induced other challenges like excessive pressure of rules and regulation, administrative procedure, problem of communication. In addition to that PD failed to compliance the rules and regulation. With all the challenges PD could able to complete the project successfully. Knowledge gap is also problem for the BCCTF project
Case 4: Problematic project of BWDB	Project failed to get demanded budget. Implementing agency failed to incorporate all the component of the project. Therefore, rather address the climate change the project creates water logging problem for the project.

Source: Depicted by Author

The four case studies show the influence of factors behind implementation of successful or failure project. All the four projects are not equally influenced by the same factors. Different factors are influencing a specific project differently. Interplay of factors makes the project successful or problematic. The summary of the overall cases showed that budget allocation for the projects is playing an important role and crating negative impact of BCCSAP implementation. This vital factor is inducing some other factors to be emerging as influential factors in the implementation process of BCCSAP. The complex relation between the factors and matrix between the dependent and independent variables are going to help to summarize the influential factors that affect the projects to follow the provisions of BCCSAP and complete the projects within specified period.

Figure 6: Influence of budget allocation to the dependent and independent variables



Source: Depicted by the Author

In fine three out of four projects got less allocation than their demand. Budget allocation induces other factors to influence the implementation of BCCSAP. Inadequate budget allocation leads toward the administrative procedure for the CC projects. Administrative procedure with its rules and regulation also identified as influential factors for the climate change projects. The project directors were bound to prepare the RDPP within the allocated budget. In addition to that, they have to follow all the rules and regulations specified for the climate change project. Capacity of PD to implement CC project is another important factors for the proper implementation of CC projects. The PD of CC projects should be capable to compliance all the process of CC projects. To complete a project within a specific time period, compliance of rules and regulation is important. If some provision misses than it took again administrative procedure to complete the projects. Knowledge gap is another factor that can hinders the

implementation process. In the four cases it is clear that knowing the rules and regulations is important for the PD to complete the projects on time.

5.5 Conclusion

This chapter is the overall representation of field data and case studies. Overall implementation process of BCCSAP by BCCT faces several challenges. From the views of respondent and case studies some common variables authority of TC and TB to select a CC project showed influence of authority of TB to implement the BCCSAP. Budget allocation for the projects is also considered influential factor and it depends on decision of TB. In addition to that budget allocation is not adequate for climate change projects to address the vulnerability. Furthermore climate change projects are implementing not by measuring vulnerability of a locality to enhance the adaptive capacity, the CC projects are like usual projects of ADP. In this context it failed to address specifically the climate change issue. As only one project is being evaluated by the IMED so how far climate change project can able to address the climate change issue it is still in question. The case studies show that budget allocation for a project also determined by the TB. Out of four cases one project is completed without any obstacles. That project got demanded budget allocation and favorable decision by the TB. In this context authority of Tb is also playing important role in implementation process of BCCSAP. On the other hand the institutional and individual capacity are creating obstacle in implementation process of BCCSAP. The overall findings showed that several factors influence and creating hindrance in implementation process of BCCSAP.

Chapter 6

Conclusion

6.1 Introduction

The chapter is going to draw the inferences of the whole thesis by focusing on the objectives and research questions. The objectives of the thesis is to assess the implementation process and sketching out the influential factors that have an impact on implementation process of Bangladesh Climate Change Strategy and Action Plan. In addition to that the research question is also going to address in the following sections by analyzing the findings. Furthermore, how the theory is related with the findings is also going to analyze in the light of findings. Lastly, based on the analysis and observations few research issues have been raised for future research.

The study was carried out to analyze the influence of factors in the implementation process of BCCSAP 2009. It also analyzes how the factors are influencing the implementation process; whether the factors are influencing the implementation process in a positive or negative manner. The data obtained from in-depth interviews were cross checked through key informant interviews and analysis the cases to ensure reliability and validity of the study. Besides, secondary resources were reviewed to examine the findings in light of contemporary study of climate change project and policy implementation. Results were presented and analyzed in detail in chapter to show the relationship between dependent and independent variables.

6.2 Major Findings: Factors Influence the Implementation Process of BCCSAP 2009

The findings of the study shows that CC projects are not exclusively addressing the climate change issue and failed to create piloting idea for the other ministry to formulate and implement projects to address the climate change within specified time period. In addition to that, there are no specific circulars or regulations for addressing the thematic areas. Maximum projects are under thematic area of infrastructure.

The findings also indicate that budget allocation is the most influential factors to implement the BCCSAP. The executing ministry has to prepare CCPP within the allocated budget sanction by the Trustee Board. The findings from the case studies showed that the budget allocation can influence the implementation process both positive and negative. If a project gets its demanded budget as per CCPP then there is a possibility to complete the project within the specified time without the intervention of other factors like pressure excessive rules and regulations, lack of proper coordination, and capacity of the PDs. On the other hand, less allocation of budget than the demand as per CCPP starts with some inbuilt challenges like revised the projects according to the budget. In maximum cases projects are not sustainable and failed to address the climate change.

The findings have direct indication that budget allocation is one of the most influential factors for implement the climate change project as well as implementation of BCCSAP 2009. The findings also showed that the decision of budget allocation for the projects is fully depend on the decision of Trustee Board. The final approval of a project and budget allocation for that project is the sole authority of Trustee Board. The findings showed that the budget allocation was reduced from the beginning but the number of projects was increasing day by day. The Trustee Board is taking account of popular demand of people as well as the MP. The budget allocation in this regard related with Patronage Politics and Political Economy that seems to play an important role in this situation not considering the direct influence of climate change.

6.3 Re-examining the Research Questions

The objective of the study as identified in the chapter one was to assess the implementation process of BCCSAP 2009 and to assess the influence of factors in the implementation process. To attain the objectives one broad research question and three supporting questions were being raised in this study: What are the major factors that can influence the implantation process of BCCSAP 2009? How does the role of bureaucrats influence the implementation process? How does the implementation process can influenced by the decision of both political and administrative authority? How the institutional arrangements influence the implementation process?

The study found that various factors can influence the implementation process of BCCSAP in different level and various ways. Factors like budget allocation, policy communications, co-ordination, pressure of rules and regulation, influence of authority, role of bureaucrats, characteristics of implementing agencies - all are influencing the implementation process of BCCSAP in their own ways.

In addition to that among the influential factors in CC projects budget constraint is playing most important role. It itself can influence the policy implementation both in positive and negative way as well as it can able to induce some other factors. The case study of LGED good performing project of the research showed that if a project get its demanded budget, then PD could able to complete the project without the influence of other factors. On the other hand other three case studies showed that if projects get less allocation than their demand than the projects were negatively influenced by the other factors. The decision of budget allocation of the projects depends on the decision by the trustee board.

Moreover, Bureaucrats have less scope to accelerate the implementation process. None of the officers of BCCT are the member of TB and TC. The function of BCCT is influenced by the decision of higher authority both administrative and political. Especially the TB is the sole authority to make project related final decision.

6.4 Theoretical Implications

The findings of the thesis reflect the implication of theory “The Policy Implementation Process: A conceptual Framework by Van Meter and Van Horn.” The findings show that the BCCSAP is influenced by the several factors. The factors like resource allocation, policy communication, and disposition of implementers, hierarchical administrative system, and political economy are influencing the implementation process. The factors are not mutually exclusive rather they are interlinking with each other.

In this research, findings showed that budget allocation plays vital role in BCCSAP implementation process as the policy is implementing through the implementation of CC projects to address the climate vulnerabilities. Moreover, budget allocation keeps force on other factors to influence the implementation process. Factors like communication, co-ordination, pressure of rules and regulations; capacities of the employee arise and negatively influence the implementation process of BCCSAP. The question of institutional capacity also came into the screen because of allocation of budget. The budget allocation and other factors are resembled with the theory of Van Meter and Van Horn.

Budget allocation for a project depends on the decision of TB. In this context whole implementation process is influence by the decision of TB. Therefore authority matters in BCCSAP implementation process in Bangladesh. Till the date every year GoB is allocating revenue budget to the BCCTF. The institutional capacity of BCCT hinders to get access to the GCF. Other priority sectors resist government to allocate adequate budget for CCTF. The budget and the projects are not equally distributed. Project selection and budget allocation of the projects depend on the decision of the TB. It shows the relationship between the projects and the political economy. Administrative culture is also playing vital role in the implementation process. Therefore, in climate change policy implementation studies political economy and cultural factors should be given emphasis in Bangladesh context.

6.5 Policy Implication

The BCCSAP 2009 is considered as a unique tool to address the climate induced vulnerabilities and Government considered climate change issue as one of the core developmental issue for the country. The GoB is allocating fund to the BCCTF every year to enhance the capacity of the country to reduce the vulnerabilities induces by the climate change. As a new area the BCCT is facing challenges in the implementation process of BCCSAP. The study showed that the projects are concentrating mainly in three divisions: Barisal, Chittagong and Dhaka. Though the whole coastal area of Bangladesh is considered climate vulnerable CC Projects in two coastal divisions have some logical ground. The lack of long term planning and adequate research in this field CC projects are implementing in a random Manner.

Last eight years several circulars or initiatives such as check-list for new and revised project proposal, check list for disbursement of first installment of budget for the project, circular for incorporating the concern representative of district administration for PIC and monitoring the project have been taken to improve the implementation process. The findings showed the less influence of these initiatives, rather showed the gloomy picture of implementation process. There is a lack of specific guideline for allocating the budget for the project. Financial mechanism is in questioned by the several research conducted by the private organization as maximum projects are in infrastructure and Dhaka division got the third highest budget allocation from CCTF.

In this context, for the proper implementation of BCCSAP comprehensive and long term specific planning is necessary to emphasis on where and how to allocate budget to tackle the adverse impact of climate change is necessary.

6.6 Implication for Future Research

The Government linked the implementation of BCCSAP with the developmental targets of GOB specifically to achieve the target of SDGs, Seven Five Years Plan and Vision 2021. The findings of the research shows that the implementation process is influenced by the several factors especially budget deficit is one of the major problem for the implementation of climate change projects specifically to address the climate change issue. The projects are indirect impact of climate change but failed to create any specific distinction between climate vulnerability and disaster vulnerability. The institutions do not have the capacity to formulate and implement climate change project within the controlled allocation of budget by the Trustee Board. Still there is no evaluation of CC projects. Therefore, people as well as government do not have idea to impact of the policy on the implementing areas. Financial investment on climate change projects and financial benefits induces from climate change project can be the further research in the climate change area.

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Annex 1: Interview Questionnaire 1 (Questionnaire for the Desk officer of BCCT)

Part A: General Questions about the Respondents

Q1. Gender:
Ministry:

Q2. Name of the Organization/

Q3. Designation:

Q4. Work Experience:

Q5. Academic Subject:

Part B: Specific Questions for the Respondent

Q6. Have you ever been gone through the BCCSAP?

Q7. Do you have any training on project management? Please mentioned specifically.

Q8. Project management is the main function of this office. But total number of pending project is increasing day by day. What is the main reason behind this scenario? Explain briefly.

Q9. You are in charge of implementation of BCCSAP. How independently you can able to take decision regarding follow the instruction of BCCSAP?

Q10. How do you experience the pressure of political authority? Please explain briefly.

Q11. Budget allocation for project has decreased. For the last three years, it is only 100 crore tk. How does it affect the selection and approval procedure of project under the BCCSAP?

Q12. Do you think that budget allocation can influence implementation of provision of BCCSAP?

Q13. As a project implementing authority, how the BCCT communicate the rules and regulation with the ministry and project director?

Q14. Is there any communication gap between BCCT and implementing ministries or project director that affect the in time project completion?

Q15. This government has formulated the BCCSAP. For this reason government is providing full support. With the change in government policy may abandon by the new government. How far you agree with this statement?

Annex 2: Interview Questionnaire 2 (Questionnaire for Director and above of BCCT)

Part A: General Information about the Respondents

Q1. Gender:

Q2. Name of the Organization/ Ministry:

Q3. Designation:

Q4. Work Experience:

Q5. Academic Subject:

Part B: Specific Questions

Q6. Have you ever been gone through the BCCSAP?

Q7. How do you think that importance of knowing the provision of BCCSAP to implement BCCSAP?

Q8. How efficient the employee of the organization to implement BCCSAP?

Q9. Does every employee have training on project management?

Q10. You are in charge of implementation of BCCSAP. How independently you can able to take decision regarding follow the instruction of BCCSAP?

Q11. How do you experience the pressure of political authority? Please explain briefly.

Q12. Budget allocation for project has decreased. For the last three years, it is only 100 crore tk. How does it affect the selection and approval procedure of project under the BCCSAP?

Q13. As a project implementing authority, how the BCCT communicate the rules and regulation with the ministry and project director?

Q14. Is there any communication gap between BCCT and implementing ministries or project director that affect the in time project completion?

Q15. This government has formulated the BCCSAP. For this reason government is providing full support. With the change in government policy may abandon by the new government. How far you agree with this statement?

Annex 3: Interview Questionnaire 3 (For section officer of different ministries of climate change cell)

Part A: General Information about the Respondents

- Q1. Gender: Q2. Name of the Organization/ Ministry:
Q3. Designation: Q4. Work Experience:
Q5. Academic Subject:

Part B: Specific Questions

- Q6. Have you ever been gone through the BCCSAP?
- Q7. How do you think that importance of knowing the provision of BCCSAP to implement BCCSAPP?
- Q8. How efficient the employee of the BCCT to implement BCCSAP?
- Q9. What are the major challenges to implement projects under BCCSAP?
- Q10. How do you select the project?
- Q11. Is there any political pressure to select the project? Please explain briefly.
- Q12. Budget allocation for project has decreased. For the last three years, it is only 100 crore tk. How does it affect the selection of project under the BCCSAP?
- Q13. Are you regularly informed about new circular, or rules and regulations?
- Q14. Is there any communication gap between BCCT and implementing ministries or project director that affect the in time project completion?
- Q15. This government has formulated the BCCSAP. For this reason government is providing full support. With the change in government policy may abandon by the new government. How far you agree with this statement?

Annex 4: Interview Questionnaire 4 (Questionnaire for Project Directors)

Part A: General Information about the Respondents

Q1. Gender:

Q2. Name of the Organization/ Ministry:

Q3. Designation:

Q4. Work Experience:

Q5. Academic Subject:

Part B: Specific questions

Q6. Have you ever been gone through the BCCSAP?

Q7. How do you think that importance of knowing the provision of BCCSAP to implement BCCSAPP?

Q8. How efficient the employee of the BCCT to implement BCCSAP?

Q9. How do you get response from the BCCT for the problem regarding project implementation?

Q10. What are the major challenges to implement projects under BCCSAP?

Q11. How do you select the project?

Q12. Is there any political pressure to select the project? Please explain briefly.

Q13. Budget allocation for project has decreased. For the last three years, it is only 100 crore tk. How does it affect the selection of project under the BCCSAP?

Q14. Are you regularly informed about new circular, or rules and regulations?

Q15. Is there any communication gap between BCCT and implementing ministries or project director that affect the in time project completion?

Q16. This government has formulated the BCCSAP. For this reason government is providing full support. With the change in government policy may abandon by the new government. How far you agree with this statement?

Annex 5: Programme of BCCSAP

Programme – T1P1

Theme	T1. Food Security, Social Protection and Health
Programme	P1. Institutional capacity and research towards climate resilient cultivars and their dissemination
Objective	To build the institutional capacity of research centres and expertise of researchers to develop climate resilient cultivars of food and other crops
Justification	<p>Global warming will alter the ambient conditions under which crops grow. Initially, higher temperatures and increased concentrations of carbon dioxide may increase food grain yields due to increased photosynthesis. However, temperatures are predicted to increase by over 2°C and carbon dioxide concentrations to exceed more than 450 ppm, which will reduce yields of current cultivars of cereals, such as rice and wheat. In addition, increased droughts, floods and saline intrusion, in different parts of the country, will also cause crop losses</p> <p>Research work has started at BIRRI, BARI and other research centres under NARS to develop cultivars adapted to likely future climatic conditions. There is an urgent need to develop the research capacity of these institutes and scientists, and to provide better research facilities</p> <p>The impact of climate change on many other food (e.g., potatoes) and non-food crops (e.g., jute) is largely unknown. Research must be initiated to understand these impacts and find out how to minimise adverse changes</p> <p>It takes 7-8 years to breed new cultivars, certify them and release to the farmers through the extension system. In view of this, indigenous varieties will be screened to identify those that can withstand, at least partially, the adverse impacts of climate change on yields. After participatory field trials, they will be disseminated to farmers</p>
Actions	<ol style="list-style-type: none">A1. Collection and conservation of local improved cultivars, characterization and their documentationA2. Research to develop climate resilient varieties of rice (i.e., heat, drought, salinity and submergence tolerant varieties)A3. Research to develop climate resilient (i.e. heat, drought, salinity and submergence tolerant) cultivars of wheat and other food and non food crops including vegetablesA4. Field trials and disseminations of the climate resilient local improved cultivars and the newly developed varieties, to farmers in partnership with the DAE and NGOsA5. Strengthening the capacity of NARS institutes, research facilities and Scientists and Technicians to undertake the work
Timeline	Medium to Long term
Responsibility	BIRRI, BARI and other NARS organisation

Programme – T2P1

Theme T2. Comprehensive Disaster Management

Programme P1. Improvement of flood forecasting and early warning systems

Objective Improvement of the existing flood forecasting and early warning systems by increasing lead times and strengthening dissemination mechanisms

Justification Bangladesh is highly regarded for its competence in flood forecasting and early warning systems. Currently, the Flood Forecasting and Warning Centre (FFWC) of the Bangladesh Water Development Board (BWDB) issues flood levels forecasts for 24, 48 and 72 hours. These forecasts are released through e-mails as well as placed on a web-site. However, there is scope for improvement

1. **Dissemination.** The current practice of releasing warnings in terms of river stage are not easily understood by local communities, while the absence of digital elevation models (DEM) makes it difficult for flood forecasting modellers to relate river stage to likely flood levels at different locations in the countryside. T3P5, below, would develop a DEM for areas vulnerable to floods. It is important that this is used by flood forecasters, together with information on river stages to improve forecasts for floodplain communities

2. **Lead times.** It would be helpful to communities and the authorities to have longer range forecasts, even though they are not always reliable. FFWC has the capacity to make 10 day forecasts. It should be encouraged to do so and the usefulness of the new forecasts assessed

Actions

- A1. Review of the hydro-meteorological data network and the setting up of telemetric stations
- A2. Improvement in dissemination of warnings by (a) combining river stage and DEM information; and (b) making 10 day forecasts
- A3. Awareness building programmes at community level on warnings produced and released by FFWC

Timeline Immediate and continuing

Responsibility Ministry of Water Resources and its various agencies; civil society organizations active in disaster management and media

Programme – T3P1

Theme	T3. Infrastructure
Programme	P1. Repair and maintenance of existing flood embankments
Objective	Ensure continued flood protection by repairing and rehabilitating existing flood embankments
Justification	<p>Earthen embankments have been constructed by the Bangladesh Water Development Board (BWDB), along most major and medium-sized rivers in the country and also some minor rivers. They are the key structural component of the flood management system in the country</p> <p>The heights of the embankments were designed based on recent major floods and/or statistical analysis of past river stage data. For embankments along major rivers a 50 year return period was used. For protection of Dhaka city, the level of safety was a 100 year flood</p> <p>Many of these embankments are in poor shape due to lack of proper maintenance. In many places the embankments are cut by local people to drain water from the land into the rivers. Although these gaps are filled in again, these points remain vulnerable to breaches. In many places the appurtenant structures, such as sluices and regulators no longer function properly</p> <p>Embankments have provided security from flooding and, as a result, many people have moved into protected floodplain areas. The traditional approach of building homes on raised mounds has more or less been abandoned. Farmers go for high yielding variety of crops because of the security provided by the embankment and associated drainage systems. Given this, it is very important to rehabilitate existing river flood embankments so that they are fully functional and able to provide the level of security for which these were constructed</p>
Actions	<p>A1. Assess the condition of all existing flood embankments and prepare GIS maps</p> <p>A2. Immediate repair and rehabilitation of existing embankments and appurtenant structures taking future forecast flood levels into account</p>
Timeline	Immediate
Responsibility	Ministry of Water Resources and its agencies

Programme – T4P1

Theme	T4. Research, and Knowledge Management
Programme	P1. Establishment of a centre for research, knowledge management and training on climate change
Objective	To increase institutional and human capacity on research and knowledge management related to climate change, and to train sector professionals
Justification	<p>Although Bangladesh has been in the forefront of awareness raising on adaptation and on-the-ground adaptation research, the knowledge and information generated remains scattered. A comprehensive move towards adaptation and mitigation supported by technology transfer and financial flows (as envisaged in the BCCSAP) requires an up-graded system of knowledge creation, dissemination and training</p> <p>Bangladesh has already suggested that an International Adaptation Research and Training programme should be established in the country as an international public facility for all to draw upon. While this may be an ultimate goal, a more urgent need is to set up a centre or network of institutions to be (a) a source of all available national information, reports and knowledge, and (b) a virtual technology bank, including on financial mechanisms related to both adaptation and mitigation. It would also track and provide information on the state of climate change negotiations</p> <p>A dedicated web portal would be established, which would track all national and within country policies, rules and regulations, and news related to climate change debates. The information managed by the Centre will be available to the public. In essence, it would be a one-stop data and information bank on climate change for all related national activities</p> <p>The Centre would also arrange for training programmes on issues related to adaptation and mitigation and would support activities in collaboration with universities, research centres and other agencies</p>
Actions	<ul style="list-style-type: none">A1. Establish a centre and/or network for research on climate change and climate change impacts and their managementA2. Establish a virtual technology bankA3. Develop and maintain a dynamic web portalA4. Develop training programmes for high and mid-level officials of the Government, NGOs and private organisations/associations and provide training in collaboration with research centres and universities
Timeline	Immediate and continuing
Responsibility	Ministry of Environment and Forests, research organisations, universities

Programme – T5P1

Theme T5. Mitigation and Low Carbon Development

Programme P1. Improved energy efficiency in production and consumption of energy

Objective Ensure an energy secure and low-carbon development of the economy

Justification Bangladesh is one of the lowest energy consuming and green house gas (GHG) emitting countries. Our energy consumption is around 90 kgoe (kilogramme of oil equivalent) per capita, the lowest in South Asia except for Nepal. We use 170 Kwh electricity per capita which is equivalent to 38 kgoe. We emit less than one-fifth of 1 percent of the total global emission of carbon dioxide equivalent in the world

However, Bangladesh is also an energy-inefficient country. If we raise the efficiency with which we produce and consume energy, we may be able to increase energy supply while lowering carbon emission. This could allow us to lower carbon emissions without jeopardizing energy security and growth

We should carefully assess how we can become more efficient in producing and consuming energy. This will involve identifying any technical, economic or regulatory/policy constraints to help improve performance and to learn how these constraints can be overcome. Improving our efficiency may require the use of new technologies which could be costly and will thus need additional financial resources

It will be important to take a medium to long-term view in analysing alternative investments since, once investments are made, it would be expensive to change them

Actions

- A1. Study the future energy needs of the country and find out the least cost energy supply path that satisfies future energy demand based on the desired growth path of the economy
- A2. Raise energy efficiency in power production, transmission and distribution through appropriate investments
- A3. Raise energy efficiency in agricultural and industrial processes through appropriate policies and investments
- A4. Raise energy efficiency in domestic and commercial/service sectors through appropriate policies and investments
- A5. Raise energy efficiency in transport sector through appropriate policies and investments

Timeline Medium to long term

Responsibility Ministry of Power, Energy and Mineral Resources, Ministry of Industry, Ministry of Agriculture, Ministry of Communications, Ministry of Finance, Universities and Research Organisations

Programme – T6P1

Theme T6. Capacity Building and Institutional Strengthening

Programme P1. Revision of sectoral policies for climate resilience

Objective To integrate climate change issues into development policy and action

Justification The Government and the people of Bangladesh realise that climate change is going to impact adversely on many sectors and threatens the nation's economic and social achievements. Our food, water, energy and livelihood (including health) security are threatened. An integrated approach is needed to counter this. Climate change management needs to be integrated into the development activities of different sectors. Sectoral policy statements need to be modified to take account of and become consistent with climate change impacts and their management

The National Water Management Plan recognizes the need to make water sector activities resilient to climate change. However, the only sectoral policy that explicitly incorporates climate change considerations is the Coastal Zone Policy of Bangladesh, which was drafted in 2005 when knowledge and understanding about climate change was available

There is also a need for a National Climate Change Policy to guide the integration of climate change issues into development planning and to provide a framework for sectoral policies. All policy formulation should be carried out in a consultative way by involving key officials of concerned ministries/sectors together with professionals, academics, NGOs and civil society leaders, as well as the general public

Actions

- A1. Draft a consultation paper on the National Climate Change policy, the integration of climate change issues into development planning and sectoral policies and how they should be formulated for discussion with key stakeholders
- A2. Incorporate climate change concerns in all sectoral policies and strategies through appropriate revisions in consultation with relevant stakeholders
- A3. Publish the National Climate Change Policy

Timeline Immediate

Responsibility Ministry of Environment and Forests, Cabinet division