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Climate resilient planning in Bangladesh: a review of progress and early experiences of moving from planning to implementation

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Bangladesh is one of the first least developed countries (LDCs) to develop a long-term climate change strategy, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP). Two funds were set up after developing the BCCSAP, one using government resources (BCCTF) and the other using donor resources (BCCRF). This paper uses the "building blocks" framework to analyse changes that occur when progressing from planning to finance and implementation by comparing the BCCRF and BCCTF. This analysis reveals how governance enablers are influenced by political economy dynamics that steer funding decisions and implementation outcomes, and provides lessons for countries pursuing climate resilience.

Le Bangladesh est l'un des premiers pays les moins avancés (PMA) à avoir élaboré une stratégie à long terme en matière de changement climatique – Stratégie et Plan d'action du Bangladesh face au changement climatique (*Bangladesh Climate Change Strategy and Action Plan* – BCCSAP). Deux fonds ont été mis en place après la création de la BCCSAP, un utilisant des ressources gouvernementales (BCCTF) et l'autre utilisant des ressources provenant de bailleurs de fonds (BCCRF). Cet article se sert du cadre « *building blocks* » (éléments constituants) pour analyser les changements qui surviennent lors du passage de la planification au financement, puis à la mise en œuvre, en comparant le BCCRF et le BCCTF. Cette analyse révèle en quoi les facilitateurs de la gouvernance sont influencés par la dynamique de l'économie politique qui oriente les décisions de financement et les résultats de la mise en œuvre, et propose des enseignements à l'intention des pays en quête de résilience au changement climatique.

Bangladesh es uno de los primeros países de menor desarrollo (LDC) que ha diseñado una estrategia de largo plazo para hacer frente al cambio climático: el Plan estratégico y programático ante el cambio climático de Bangladesh (BCCSAP). Tras su elaboración, se crearon dos fondos, uno financiado por el gobierno (BCCTF) y otro apoyado por donantes (BCCRF). A través de la comparación de ambos fondos, el presente artículo utiliza el marco de los "bloques de construcción" para analizar los cambios que tienen lugar cuando se avanza desde la planificación hacia la financiación y desde ahí a la implementación. Dicho análisis revela la forma en que los facilitadores de la gobernanza acusan la influencia de las dinámicas de la economía política, las cuales orientan las decisiones de financiamiento y los resultados obtenidos tras la implementación, brindando, además, aprendizajes útiles a aquellos países en los que existe interés en promover la resiliencia ante el cambio climático.

Keywords: Environment (built and natural) – Climate change; Aid – Development policies; Governance and public policy; South Asia

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Introduction

Bangladesh is often cited as one of the most climate vulnerable countries in the world due to its geophysical location, exposure to extreme conditions caused by climatic stimuli, and high population growth rate (Huq and Ayers 2007; Parry et al. 2007; GoB 2009a, 2009b). Additionally, although the GDP of the country is consistently showing progress, one third of the population lives below the poverty line (MOF 2013). High population density and dependency on agriculture and natural-environment based livelihoods have further increased vulnerabilities over the years due to hazards and uncertain climatic variability. The combinations of these stresses make Bangladesh one of the most affected least developed countries (LDCs) when it comes to climate change-related issues. According to the Ministry of Environment and Forests (MoEF 2012), increased frequency and intensity of climate-induced natural disasters account for losses worth 1.5% of the country's GDP. A study conducted by the Planning Commission of the Government of Bangladesh (GoB) highlights that changes in crop production due to climate change increase the number of poor people and are equal to the rate of total crop damage caused by any major disaster (GoB 2009c). Dasgupta et al. (2011) estimate that it could cost US$2671 million by 2050 to protect the major towns of Bangladesh from climate-induced monsoon flooding (Dasgupta et al. 2011). Further research reveals that on 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).

These inextricable linkages between climate change and development make it critically important to synergise climate and development policy actions to support adaptation. Although self-evident, in reality, mainstreaming climate change adaptation into development activities remains a challenge (Adger et al. 2007). Burton (2004) recognises this as an "*adaptation deficit*", defined as a "*failure to adapt adequately to existing and future climate risks*" thereby causing a discrepancy between existing and optimum levels of adaptation. Climate disjointed decisions made by development practitioners will further increase the deficit (Burton 2004). Bridging the adaptation deficit requires measures to be integrated into coherent development strategies. This in turn requires improved governance and mainstreaming of climate change measures into national development objectives (Davidson et al. 2003). Although still in its early years of institutional restructuring, Bangladesh, amidst a range of constraints, has made remarkable progress in climate resilient development planning over recent years. It is also one of the most proactive countries in global climate negotiations, as well as in addressing its own climate issues. The advanced position of Bangladesh as a global leader in adaptation is in part due to strong political will and an enabling environment, encouraging the mainstreaming of climate risk management at different levels of planning and implementation throughout country governance. Recognising this comparatively advanced position of Bangladesh in addressing its adaptation deficit, practical actions, and responses to climate change therefore provides interesting lessons that can inform decision-making for climate change-related efforts across countries facing similar challenges. This paper applies the International Institute of Environment and Development's (IIED) "building blocks framework for mainstreaming" (Figure 1) to understand the existing support systems for climate resilient development planning in Bangladesh, including the enabling environment, policies, and institutional and financial frameworks.[1] This framework, although an effective tool to characterise a country's status and trends in the evolution of climate mainstreaming efforts, offers limited scope to assess the effectiveness of these building blocks. To understand the strength and outcomes of the building blocks, a deeper political economy analysis is needed to attribute the outcomes, which is not entirely within the scope of this paper. Nonetheless, we highlight initial governance reflections that direct us to further research in this area.

The building blocks framework identifies three building blocks for successful climate change mainstreaming into development planning: (1) an enabling environment; (2) policies and

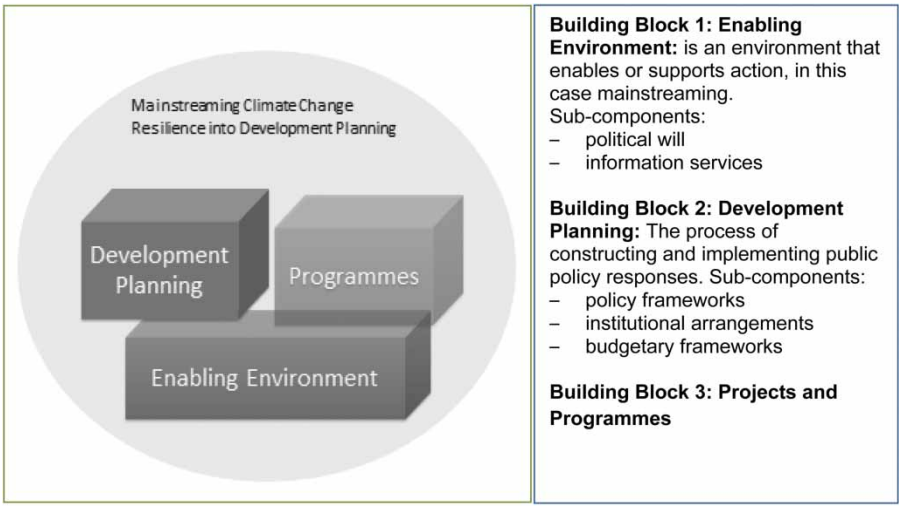

Figure 1. Building blocks for mainstreaming climate resilience into development planning. Source: Pervin et al. 2013.

planning; (3) projects and programmes (as illustrated in Figure 2). By applying this framework to the case of Bangladesh it is possible to identify the combination of blocks that has enabled the government to incorporate adaptation into planning and implementation processes. The paper traces changes in the country's progress from planning to implementation by comparing the embedded cases of two main funding instruments in Bangladesh: the Bangladesh Climate Change Trust Fund (BCCTF) and Bangladesh Climate Change Resilience Fund (BCCRF). Through this analysis it is possible to identify lessons that are relevant to countries working towards developing plans and institutions for climate change, as well as those moving from planning to implementation.

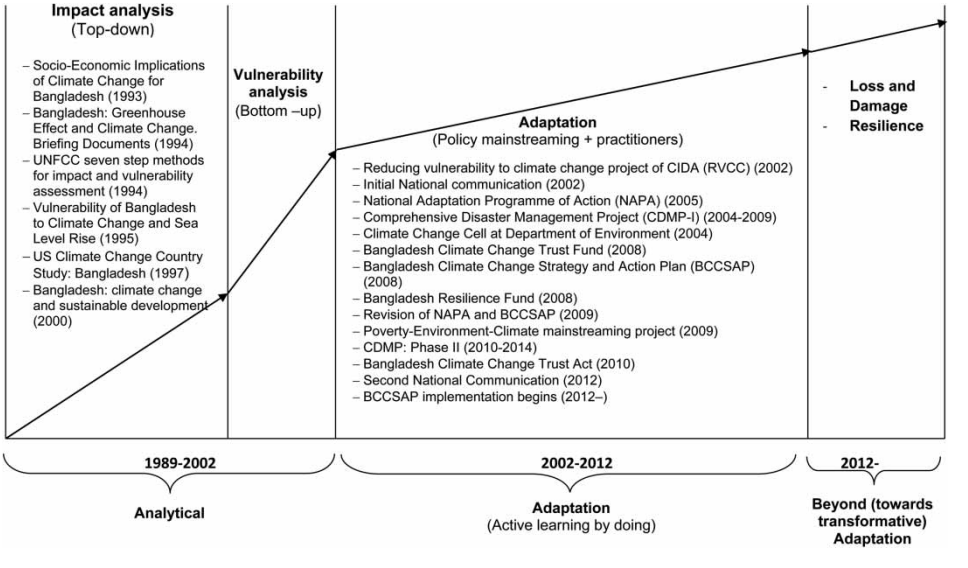

Figure 2. Evolution of climate change adaptation in Bangladesh.

How is Bangladesh planning to address its adaptation deficit? Key building blocks

Proactive climate-resilient planning: policy and institutional architecture

The discourse around climate change implications on development has evolved over the last decade, and is now a critical part of policy agendas and international climate change discourse (Schipper 2006). In 2002, CARE-Bangladesh implemented the country's first adaptation project ("Reducing Vulnerability to Climate Change") using a community-based approach. In 2005, the Government of Bangladesh (GoB) prepared its National Adaptation Programme of Action (NAPA) in line with international policy requirements, identifying 15 urgent and immediate adaptation actions. Later, the Bangladesh Climate Change Strategy and Action Plan (BCCSAP), as an extension of NAPA, was prepared in 2008 following the Bali Action Plan. The BCCSAP is a 10-year plan aiming to facilitate medium and long term adaptation measures, including 120 projects that are captured under six thematic areas, in order to encourage low-carbon and climate resilient development (GoB 2009b). These thematic areas are: (1) Food security, social protection and health; (2) Comprehensive disaster management; (3) Infrastructure development; (4) Research and knowledge management; (5) Mitigation and low carbon development; and (6) Capacity building and institutional development. National planning documents identify the adverse impacts of climate change as one of the crucial and evolving challenges facing Bangladesh and therefore focus on mainstreaming climate change adaptation into sectoral policies, plans, and programmes. Figure 2 represents the key efforts to address the adaptation deficit that underlines a gradual evolution of climate change adaptation in Bangladesh.

As illustrated in Figure 2, the government is steadily increasing its efforts to establish policies, institutions, and plans in order to nurture and enhance the adaptive capacity of the country and increase resilience to climate change risks. An enabling environment; the policy, institutional, and financial arrangements; various projects and programmes for addressing climate risks – all constitute the essential "building blocks" needed for successful mainstreaming of climate change. Bangladesh has nurtured these building blocks over the last few years, emerging as an exemplary arrangement for addressing climate risks.

Building Block A: An enabling environment for mainstreaming includes the political will to make climate policy and the information services that guide it. The *political will* for addressing climate issues is evident in the election manifesto of the ruling party of Bangladesh, the Awami League, with a focus on climate change as an environmental and developmental priority (Pervin 2013). The widespread awareness of climate change amongst voters and civil society in Bangladesh has made it an important political issue for any ruling party. A Cabinet Review Committee has also been set up to review the actions of Bangladesh's main strategy and action plan, led by the prime minister under the Ministry of Planning. The formation of this plan and allocation of the government's own budget towards climate change also reflect the political will within the country. This is in contrast to many developing countries, where development and adaptation planning and finance could be primarily driven by international agendas.

Building Block B: Development planning includes the policy frameworks together with institutional arrangements and finance mechanisms. The policy frameworks, strategies and action plans for Bangladesh clearly reflect the climate resilience[2] objectives of the country. Bangladesh was the first country to develop a National Adaptation Programme of Action in 2005, which identified 15 urgent and immediate adaptation actions. NAPA was updated in 2009, directly translating into Bangladesh's first strategy on climate change, the Bangladesh Climate Strategy and Action Plan (BCSSAP). Climate resilience is also reflected throughout policy *planning cycles*. The Planning Commission in Bangladesh has begun a process to internalise climate change into long and medium term planning processes. Climate change is also reflected in the sixth development plan and the national perspective plan of Bangladesh. These efforts to mainstream climate

change through governance processes indicate that the political rhetoric for climate change is actually being translated into concrete steps towards building adaptive capacity.

Building Block C: Institutional frameworks for climate change are also established within various ministries, departments and agencies. The Ministry of Environment and Forests (MoEF) is the key agency responsible for climate change-related matters. Several other institutions have evolved since the preparation of the BCCSAP, including a Management and Technical Committee for the Bangladesh Climate Change Resilience Fund (BCCRF) and Trust Fund (BCCTF). Climate Change Cells (CCC) and a Climate Change Unit (CCU) have also been established to coordinate ministries, and a Department of Climate Change is also being developed. The CCC's are the longer arms of the Comprehensive Disaster Management Programme (CDMP) housed in the Department of Environment, which provides technical support on climate change-related issues to MoEF. A Climate Change Trust (CCT) was established in the MoEF to coordinate and manage the climate action plan, later assimilating into the BCCTF. Climate change focal points in all ministries are formed to liaise with the MoEF and to support smoother implementation of the climate action plan. Currently these focal points are not very active or functional and major decision-making rests with the MoEF. However, there is a National Environment Committee in the country headed by the prime minister for strategic guidance and oversight, and a National Steering Committee on climate change chaired by the Minister of MoEF to harmonise the progress of all climate related activities in Bangladesh. The establishment of institutions further signifies commitment to developing the longer term capacity of the government to address climate change adaptation and promote resilience.

Building Block D: Finance mechanisms for climate change efforts in Bangladesh were first set up in 2002 with support from the Canadian International Development Agency (CIDA) to implement the "Reducing Vulnerability to Climate Change" (RVCC) project. This was subsequently followed by the creation of a national "Climate Change Trust Fund" (BCCTF) in 2008 to support the implementation of the BCCSAP. Bangladesh has become one of the first LDCs to allocate US$350 million from its non-development budget towards climate risk management (Pervin 2013).

The BCCTF has been operationalised through government approval of a Climate Change Trust Fund Act passed in 2010. The BCCTF receives a block budgetary allocation of US$100 million per year from GoB towards climate change (Figure 3). Apart from the BCCTF,

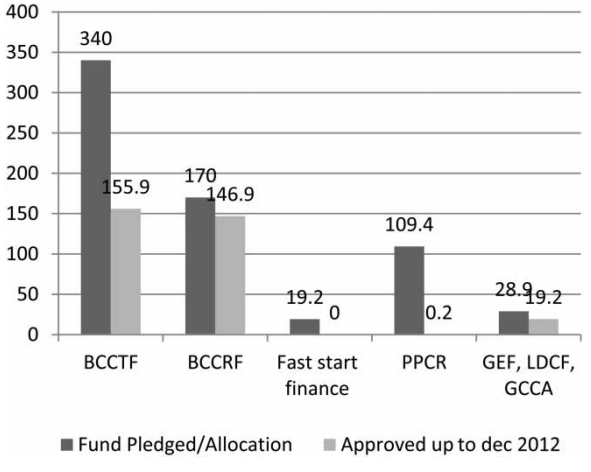

Figure 3. Financing windows for climate change in Bangladesh.

Bangladesh has several other institutional funding mechanisms for climate change adaptation. The Annual Development Programme, which is led by the Planning Commission and Ministry of Finance, allocates up to 4% of GDP to delivering climate response actions (Pervin 2013).

Major bilateral and multilateral development partners also promote climate change as a central development issue (Alam et al. 2011; ICAI 2011; SDC 2010) and have set up a multi-donor fund to implement the BCCSAP and "climate-proof development" in Bangladesh (Ayers 2009, 239). The BCCRF is one such donor-funded arrangement, where the World Bank acts as an interim secretariat, playing a key role in facilitating BCCRF in due diligence of projects, fiduciary management, ensuring transparency and accountability. Additionally, the Pilot Programme for Climate Resilience (PPCR), an adaptation fund under the Climate Investment Fund (CIF) of the World Bank, supports mainstreaming of climate risk and resilience into the country's core development planning and implementation (CIF 2011). Bangladesh also receives support from the Least Developed Country Fund (LDCF) through the Global Environmental Facility (GEF) to implement its NAPA. These multi-lateral funding arrangements are parallel to additional bilateral development assistance.

Bilateral development cooperation has led to the direct implementation of different climate change-related projects in Bangladesh (Hedger 2011).These bilateral initiatives jointly support different types of mainstreaming activities setting the country on its adaptation path. The modalities and mechanisms employed by different funding windows vary. Support for the national budget is seen as one way of promoting more integrated climate resilience, whereas the BCCRF and Climate Investment Funds are observed to be more stand-alone pilot projects intended to meet specific sub-objectives of the BCCSAP (MoP 2012; Pervin 2013). In reality, the former also suffers from its inherent management weaknesses. Nonetheless, these funding innovations place Bangladesh in a strong position to respond to and address climate risks. The large amounts of multilateral and bilateral financial support also provide strong incentives for the government to continue promoting climate change adaptation as a political and developmental imperative.

Moving from planning to practice

Since its formulation in 2009, the objectives of BCCSAP are being supported by various funding windows and initiatives. Government agencies and non-governmental organisations are pursuing a mixture of adaptation projects guided by the BCCSAP. A summary of these adaptation activities and their major funding sources is given in Table 1.

According to the BCCSAP, climate change adaptation is defined as "climate-proofing" development and reducing the impact of climate change on economic growth and poverty reduction. The BCCSAP was prepared by identifying cause and effect relationships (Figure 4), which are based on the impact that past extreme events had on development in Bangladesh, and used to identify climate vulnerable sectors and geographies.

Based on this analysis of vulnerabilities, the BCCSAP proposes a list of generic measures (Table 2) to address the likely impacts of global warming on Bangladesh and help the government secure external support to implement those activities.

Although a range of measures were prioritised, it is important to note that many of the measures represent a relabeling of older concepts of development that are translated into different local contexts and give greater consideration to spatial, temporal, and structural dynamics (e.g., innovative flood management or drought and saline tolerant crop varieties). These measures range from continuation of current best practices to the substantial enhancement of existing technical approaches, such as improved irrigation and up-gradation of flooding and coastal embankments (Alam et al. 2011).

Table 1. Sources of different adaptation funding and their preferred adaptation actions.

	Bangladesh Climate change Trust Fund (BCCTF)	Bangladesh Climate Change Resilience Fund (BCCRF)	Pilot Programme for Climate Resilience (PPCR)	Global Environmental Facility (GEF)
Contributing amount	US$100 million annually	US$188.2 million	US$110 million	US$9.65 million (July 2012-June 2014)
Type of contribution	–	Grant	US$50 million as grant + US$60 million as loan	Grant
Funding source	Annual revenue budget of Bangladesh	Contribution from DFID (UK), SIDA (Sweden), DANIDA (Denmark), USAID (USA), EU, SDC (Switzerland)	Climate investment fund	Least Developed Countries Fund (LDCF)
Implementing organisations	Different ministries and national NGOs through PKSF	Different ministries and PKSF	Different ministries, implementing MDBs	UNDP Bangladesh MoEF and NGOs
Infrastructure (cyclone shelter, flood shelter, embankment, river training and dredging, and road construction.	√	√	√	
Technical assistance		√	√	
Community based adaptation project	√	√ (10% of total fund)		√
Coastal afforestation and reforestation (Coastal green belt)	√	√	√	√
Insurance				√

Sources: MoEF 2010; MoEF 2013b; CIF 2010; GEF 2012.

A closer look at the thematic focus of the BCSSAP as well as the nature and approaches to climate change adaptation helps us to understand how climate resilient planning is translated into actions and practices. Looking at BCCSAP proposed adaptation activities in six thematic areas, one can arrive at two broad classifications: (1) infrastructure based adaptation, and (2) community-based adaptation. *Infrastructure based adaptation* requires state involvement for large investments, whereas *community-based adaptation* evolves from the country's

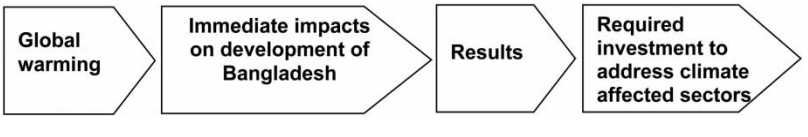

Figure 4. BCCSAP used cause-effects relationship in the context of global warming and development in Bangladesh.

Table 2. Generic measures proposed to increase the adaptive capacity of vulnerable communities.

– Early warning system
– Cyclone shelters and *killas*
– Improved operation and maintenance of (coastal) embankments and polders
– Upgrading of flood protection embankments/drainage systems
– Raising roads and railway tracks
– Flood proofing
– Improved crop and cropping system
– Improved irrigation and water management
– Provision of (potable) drinking water and sanitation
– Possible industrial relocation
– Health education/awareness and immunisation
– Social protection as a crosscutting issue

traditional community-based development approaches. Community-based adaptation is shown in the BCCSAP as a spin-off effect of social protection. These focus areas are further explored under the two funding instruments: BCCRF and BCCTF.

From planning to implementation: the government-funded Bangladesh Climate Change Trust Fund

According to the Climate Change Trust Fund Act 2010 (MoEF 2010), climate change adaptation projects under the BCCTF can only finance public sector and national NGOs through a competitive process, and the duration of the projects vary from one to two years. The Climate Change Trust Fund Act offers three different tiers to operationalise the fund and ensure transparency and accountability in its disbursement system. The Board of Trustees is responsible for the overall governance and management of the trust fund and consists of 17 members, including two from civil society organisations nominated by the GoB. This trustee board is also the apex decision-making body that approves projects for the Trust Fund. It is chaired by the Minister of MoEF. The technical committee, headed by the Secretary of the MoEF, reviews project proposals, develops annual work plans and budgets for the trust, and helps the Board of Trustees develop policy and make funding decisions. This technical committee has 12 members from different ministries and two sub-technical committees (ecosystem and technical) staffed by experts to provide particular technical advice to the technical committee. The Climate Change Trust acts as a secretariat and is held accountable for all proposals, preliminary project proposal screening, fund disbursement, and monitoring and evaluation of the ongoing projects, whereas the MoEF is a coordinating agency for policy execution. As per a new order within the Board of Trustees, the Palli Karma Soyahok Foundation (PKSF), which is the apex body of microcredit organisations in the country, has been given accountability for overseeing the off-budget part of this fund (NGO window), to build capacity and awareness on climate change, and support community level climate change adaptation projects.

The governance mechanism defined in Figure 5 gives a picture of how climate resilience is being mainstreamed into different implementing ministries as well as civil society. As per Climate Change Trust Fund policy 2010 (MoEF 2010), 66% of that total fund will be spent on executing the prioritised actions and programmes of the BCCSAP and the remaining 34% will be put into a fixed deposit in a bank for national emergencies. The interest of that fixed deposit will also be utilised for BCCSAP projects.

As of September 2013, the Government of Bangladesh has selected 139 projects worth US$200 million for implementation by different government departments and NGOs (MoEF

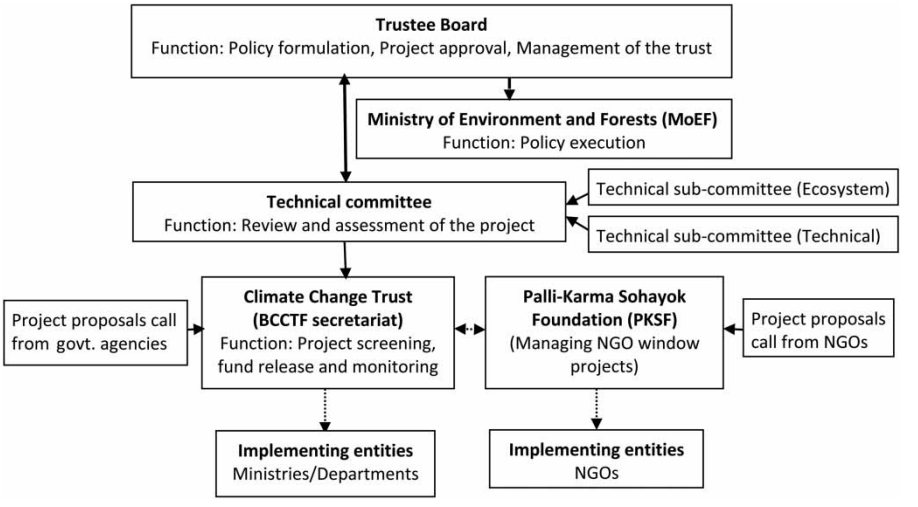

Figure 5. Governance mechanism of Bangladesh Climate Change Trust Fund.

2013a). Although the trust fund is being utilised in sync with the development priorities of the BCCSAP, one can observe a strong preference towards specific themes and practices (Figure 6). For example, two-thirds of the total allocated funding is designated for *water infrastructure* in coastal areas. Water infrastructure is followed in importance by mitigation and low carbon development (20.21%). Food security, social protection, and health, and comprehensive disaster management receive 8.05% and 5.83% respectively. The other two thematic areas, research and knowledge management and capacity building and institutional strengthening, receive 3% of total funding each. Although adaptation continues to remain in the heart of Bangladesh's priorities, actions under BCCSAP's fifth theme, low carbon mitigation, are gaining momentum in the implementation plans of BCCTF (although less so when compared to the BCCRF). Some of these planned mitigation projects comprise of solar electrification, recycling, solar irrigation, and afforestation projects (GoB 2014).

Figure 6. BCCTF allocation under BCCSAP's six thematic areas.

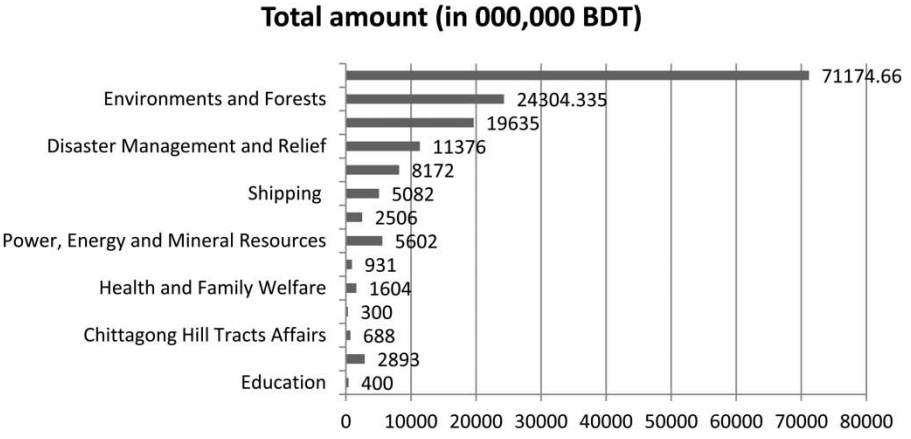

Figure 7. Funding to ministries (in Bangladesh Taka-BDT).

Amongst the adaptation priorities, some of the infrastructure projects which received early approval were in coastal areas. These include construction of cyclone resilient houses, construction of dams, and coastal afforestation projects. Although the first set of projects received quick approvals, some received criticism for neglecting safeguards and compliance to proper planning procedures. For example, one of the cross dam projects approved by the trust fund was criticised for its inadequate social and environmental impact assessments. Lack of coordination between ministerial departments further weakened the case; the project stalled when the Forest Department opposed the proposal of a dam crossing through a reserve forest (TIB 2014). Although a coastal geographical focus and targeting of infrastructure are both political and strategic priority areas and issues in Bangladesh, the unconvincing process of prioritisation and implementation have brought the system under criticism. Some areas of criticism include inadequate openness about the project selection mechanisms (TIB 2013).

Apart from project selection issues, the allocations of the six climate funds have been concentrated within a selective few ministries and departments. Indeed, the Bangladesh Water Development Board (BWDB), the government body under the Ministry of Water Resources that is responsible for constructing water-related infrastructure, receives the highest amount (45%) of funding from the Trust Fund (58 projects) (MoEF 2013a). This diverges from the BCCSAP's vision to bridge the adaptation deficit by integrating climate resilient actions across the activities of line ministries (Figure 7).

Although BCCTF continues to be an example of country leadership in responding to climate change, initial reflections on governance issues explored above point to the risks when moving from planning to implementation. The fund has come under scrutiny for partisan politics and exceptionalist planning (illuminated by Alam et al. 2011) clearly showing that implementation decisions are not necessarily linear processes.

From planning to implementation: the donor-financed Bangladesh climate change resilience fund

The BCCRF uses a similar governance mechanism and the same competitive process for selecting and prioritising adaptation projects as the BCCTF. It also uses the same implementing government institutions and non-state actors, including Bangladeshi NGOs, civil society organisations, community-based organisations, research institutions, and other civil groups. The major

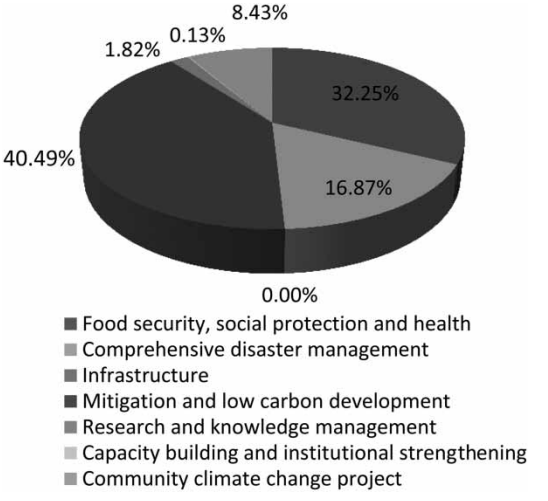

Figure 8. Distribution of BCCRF under thematic areas of BCCSAP.

difference between the BCCTF and BCCRF is the membership of the technical committee, its management by the World Bank, and the presence of international donors on the governing council. Indeed, the World Bank plays a key role in assisting the BCCRF to screen and supervise projects.

Grant criteria for BCCRF funding include the requirements that projects should be between US$15 and US$25 million, be demand driven, and have three-year timelines with a possible one-year extension. Additionally, proposals coming from existing project units are given advanced consideration during selection and prioritisation.

The distribution of BCCRF funding to the thematic areas of the BCCSAP is given in Figure 8. Although adaptation continues to be at the forefront of BCCRF priorities, projects under the mitigation and low carbon development theme of the BCCSAP now constitute almost 40% of the total funding. Indeed, one of the largest projects funded under the BCCRF is a mitigation project funding solar-powered irrigation pumps, costing US$60 million; it will be funded by the BCCRF, the World Bank, and the Infrastructure Development Company Limited (IDCOL). The project aims to decrease Bangladesh's reliance on foreign diesel and improve food security (GoB 2014).

A major part of the adaptation pool is going into three key programmes: (1) *building multi-purpose cyclone shelters in coastal areas*; (2) *agriculture adaptation in climate risk prone areas of Bangladesh – drought, flood, and saline prone areas*; (3) *afforestation and reforestation for climate change risk reduction in hilly and coastal areas.* Additionally, the BCCRF is supporting six studies to inform the design of future adaptation projects in various sectors. The NGO window within the BCCRF receives 10% of this total fund, which is managed and implemented by PKSF. PKSF is managing a community level climate change project following an agreement in August 2013 to fund selected NGOs.

As of September 2013, donor agencies contributed US$188.2 million to the BCCRF and 81% of this was already disbursed to 13 projects, including the NGO window. Apart from this NGO window, six analytical studies are funded under the thematic area of research and knowledge management, and there are an additional five investment projects. Of the five investment projects, three are stand-alone projects and the rest are co-financed with other ongoing World Bank projects. There is also a project funded under the thematic area of capacity building and institutional strengthening that intends to establish the BCCRF secretariat as a key mechanism for attracting

climate finance into Bangladesh. The BCCRF is thus supporting a comprehensive programme of work with a balanced combination of adaptation approaches including infrastructure, research, and knowledge management.

Although it is still too early to measure the development impact of these approaches, public expenditure in disaster management has proven to be effective. Better infrastructure and information systems were both credited with reducing the number of fatalities that would have otherwise been caused by the Sidr cyclone in 2008 (Haque et al. 2012). Building on these past successes, the BCCRF has scaled up construction of multipurpose shelters and better early warning systems. These newly constructed shelters were highly utilised during the Mahsen cyclone in 2013. Cyclone shelters, approach roads, and *killas* (storage shelters) all played a vital role when Mahsen forced more than one million inhabitants in 13 coastal districts to take shelter (MDMR 2013). An enhanced early warning system further enabled inhabitants to respond and seek shelter in a timely manner. Early warning systems are also employing a public-private partnership model that brings together the government and mobile providers to supply early warning information through text messages (ICAI 2011).

Apart from investments in targeted adaptation mechanisms, BCCRF funding towards knowledge management, capacity building, and institutional strengthening is also building management capabilities and stewardship of national entities. This is evident from the fact that disaster risk reduction and climate risk management are being included in the work and plans of eight ministries (ICAI 2011). The role of the World Bank in the fund also brings in technical value, consideration of safeguards, reduced corruption, and compliance to fiduciary standards. However, the management of the BCCRF by external entities is of concern to the government of Bangladesh, who had expected complete fund ownership by the government once their management capacities were built. The BCCRF is challenged by differences between country and development partner priorities, which increasingly raise concerns about country ownership.

The focus on adaptation has been a specific policy agenda for the Bangladeshi government for some time, leading the emerging emphasis on low carbon projects to be contested as an externally driven agenda by campaigning groups in the country (Alam et al. 2011).

Despite this, there is a growing acceptance that mitigation will have a role in Bangladesh's climate change strategy, not least because the Government of Bangladesh feels it is necessary in order to continue to secure foreign aid and is increasingly concerned about energy security. It is worth emphasising that mitigation and adaptation are not necessarily differing policy aims. Numerous afforestation projects funded by the BCCRF and the BCCTF achieve both mitigation and adaptation objectives, by reducing the risk of flooding as well as acting as carbon sink. Although all of the projects have been divided into six thematic areas, success will mean that the benefits of many will be felt well beyond their own, specific thematic area.

Early lessons from planning to implementation: some results and comparison of the BCCTF and BCCRF

The BCCSAP sets out a range of adaptation options and priorities to be implemented. Most programmes and projects are in the early design phase; but they clearly intend to address the development needs of society while building climate resilience. Planned projects include addressing chronic disaster vulnerabilities and food security in order to build the adaptive capacity of climate vulnerable communities. This focus also extends to the infrastructure thematic area, where respective government agencies place emphasis on building shelters, early warning systems, excavating canals, and constructing infrastructure to manage increased flooding due to climate change, as well as protect riverbanks from erosion in order to protect settlements.

Most interventions funded by the BCCTF and BCCRF are in the early stages and it is difficult to know the extent to which investments have resulted in reduced vulnerability, which may take decades to accurately understand. However, past experiences show that scaling up of climate specific interventions (e.g., DRR related infrastructure) *does* reduce the vulnerability of coastal communities to cyclones, albeit indirectly.[3] Both the BCCTF and BCCRF have selected and prioritised climate change responses that have proven to be effective in the past. Investments made in coastal Bangladesh are a good example, as early warning systems, cyclone shelters, and capacity building in disaster management have all proven to significantly reduce disaster-induced death rates and protect human assets. A comparison of cyclones in 1991 and 2007 also reveals how infrastructure development has helped to reduce death rates and vulnerability in the region (Paul 2009). Indeed, investments in infrastructure capacity and better coordination kept the death toll of cyclone Sidr (2007) below 3000 compared to a similar category (IV) cyclone in 1991 which had a death toll of more than 100,000. In Myanmar in 2008, a country which is very similar to Bangladesh in all aspects except disaster preparations, Cyclone Nargis caused 140,000 deaths and affected around 2.4 million people (Lateef 2009). The case of Myanmar shows how poor dissemination of information, inadequate early warning systems, poor government coordination, and inadequate infrastructure can all intensify the impacts of natural disasters (Haque et al. 2012). In comparison to Myanmar, Bangladesh experienced decreased fatality rates (e.g., Sidr in 2007, and Aila in 2009) because of modernised early warning systems, as well as effective use of infrastructure and coordinated government efforts. It is perhaps understandable that scaling up of similar investments was a preferred option by GoB.

Although it is still too early to see the developmental impacts of these adaptation investments, we can say that it has resulted in increased awareness and knowledge amongst different stakeholders engaged in climate risk management. An overview of policies, plans, funding mechanisms, and their institutionalisation within development projects provides some evidence that building blocks for climate risk management are being put in place and stakeholder knowledge is increasing. In order to understand how these building blocks shape funding decisions and continued implementation, it is helpful to compare the two main funding and implementation mechanisms, the BCCTF and BCCRF.

Building Block 1: The enabling environment for implementation under the BCCTF and BCCRF appears to be heavily shaped by the composition of the governance and technical boards. Furthermore, the composition of these boards is shaped by those providing financing, which is evident by the stronger influence of development partners in the BCCRF. The establishment of the BCCTF using national government resources is a noteworthy achievement for Bangladesh and may allow greater ownership in implementing adaptation activities throughout the country. In this manner, although the BCCSAP is being used to inform the funding and implementation decisions of both funds, there are some emerging challenges that need consideration in future planning and implementation (for example, differing transparency and accountability mechanisms).

Building Block 2: Development planning also appears to be heavily shaped by the governance and technical composition of the BCCTF and BCCRF. The BCSSAP has laid out 44 priorities within six themes drawing from the NAPA priorities. However, decision makers within the funds appear to cherry pick specific projects and actions amongst the wide range of priorities for making funding allocations. The BCSSAP is clearly a conceptual strategy, but because there is no strict implementation strategy the plan is reinterpreted depending on the context and fund (Khan, Huq, and Shamsuddoha 2012). The BCCTF has already given birth to controversies about the transparency and accountability of its project selections and funding allocations

(Khan, Huq, and Shamsuddoha 2012). Political bias has significantly influenced project selection and funding decisions (anonymous interview with a MoEF official). In addition, the BCCTF has no specific project selection and prioritisation indicators or criteria. The BCCRF is also considered to diverge from principles of ownership due to its management by an external agency. Its emerging emphasis on low carbon development has also brought it under civil society scrutiny (Alam et al. 2011).

Finally, although both the BCCTF and BCCRF 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 Ministry of Planning has a limited role in the funds' governance mechanisms. The approval process of BCCRF projects is also criticised for bypassing the normal planning process of the country. The Ministry of Planning argues that since these adaptation projects are not prepared following national planning development guidelines, they have no opportunity to be mainstreamed into the national annual development planning of Bangladesh. In response it is argued that the customary development planning procedure of Bangladesh has been avoided due to its lengthy process and to ensure the quick utilisation of the fund.

Building Block 3: The nature of projects and programmes used to implement the BCCSAP are strongly shaped by the enabling environment and development planning that takes place within each fund. The selected projects under both BCCTF and BCCRF depict an uneven distribution of funding in terms of BCCSAP thematic areas. Coastal areas are agreed to be one of the hotspots in terms of climatic vulnerability; it is noticeable that both the funds have concentrated in coastal areas of the country, without addressing the vulnerability issues of other hotspots. This indicates a dilemma in appropriate project selection and prioritisation. Additionally, the overemphasis on infrastructure development makes us question the selection process in relation to targeting the poor – as development outcomes of infrastructure-based risk reduction projects often benefit those at the top of the income ladder while ignoring the rural communities at risk. The disbursement of finance within the NGO window also raises controversy around the selection of NGOs based on the personal affiliations of stakeholders, when political interest has significant influence over project and partner selection. Although the BCCRF benefits from the World Bank's administrative systems for maintaining fiduciary standards, these are also delaying the implementation of projects. The BCCRF is often criticised for its slow bureaucratic process in project selection and fund spending. Most of this fund is tagged as "additional" to other World Bank projects in Bangladesh.

Conclusions

An initial reflection on Bangladesh's experience in planning and implementing climate change responses highlights early lessons learnt that have importance for developing countries seeking to follow a similar development path. Bangladesh's experience of the BCCTF and BCCRF shows how important it is to reflect, nurture, and steer the building blocks needed to complete each stage leading up to implementation. This may mean understanding the political economy of a system in order to steer that system toward a common development path.

Perhaps we can draw some lessons from these initial findings and their implications on mainstreaming and ensuring transparent outcomes. For example, it is worth reiterating that although both funds have set up systematic ways to allocate funding to Bangladesh's priority themes, transparency in decision making has come under scrutiny, particularly in the case of the BCCTF. Selective prioritisation during planning and low levels of coordination between parallel funding mechanisms can run the risk of leaving gaps and increasing the "adaptation deficit". A better understanding of political interests and influence early on can help assess risks in funding

decisions (for example, biases in project selection or neglect of safeguards). This may mean including independent entities for screening and overseeing actions or integrating better safeguard mechanisms.

A further reflection on the building blocks shows that the issue of climate change is being successfully mainstreamed within the policies, plans, institutions, and programmes of Bangladesh. However, allocation of large amounts of funds to a few key lead ministries is a sign of selective mainstreaming toward ministries that are targeting finance to relatively manageable and also politically important areas and issues. Mainstreaming climate resilience goes beyond implementation of projects by a few key actors; wider involvement is required to ensure that effective planning reflects wider national interests.

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 do not necessarily progress in a linear fashion. Besides policy and institutional drivers; actor behaviours, underlying incentives, interests, and partisan politics influence actions and decision-making. These are the political economy dynamics that often challenge good governance and strongly influence implementation outcomes. In this paper we apply the building blocks framework to analyse how Bangladesh is nurturing its policy and institutions to address and respond to the issues of climate change. The framework is an effective way to characterise and understand a country's status and trends in evolution of climate mainstreaming efforts. Bangladesh appears to have nurtured its policies and institutions to respond to climate change; however, setting up building blocks alone is not necessarily a reflection of how well they function or perform. Various actor interests and incentives influence the outcomes of the systems which are put in place. A better understanding of the political economy dynamics early on can be used as an effective way to steer the building blocks towards achieving better development impacts. This could mean mapping interest, influence, and commitment of relevant actors prior to establishing a financial mechanism that will have major implications for steering decisions that prioritise the poor. Although this paper sets out some initial reflections on politics and governance issues while countries move from planning to implementation, a deeper political economy analysis is needed to analyse and attribute the outcomes to climate change responses.

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Notes

1. The Building Blocks framework was developed by a diverse group of government staff from least developed countries (LDCs) who came together at a course facilitated by IIED and ICCAD to share and reflect on their country's experiences and needs around integrating climate change into development planning.
2. Climate change resilience is the ability and the capacity of the system to maintain its integrity and recover from a situation when subject to climate change-related disturbances.
3. Vulnerability measured in terms of proxy indicator 'reduced death rate'.

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