

# Bangladesh's Comprehensive Approach to Disaster Management

## *World Resources Report Case Study*

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## INTRODUCTION

Bangladesh is one of the most disaster-prone nations in the world. It is estimated that about 10 million Bangladeshi citizens are impacted by one or more natural hazards annually (Ernst, *et al.*, 2007, 1). In the past, the Government of Bangladesh (GoB) had a traditional reactive approach to addressing natural disasters that focused on relief and rehabilitation activities. This began to change in the 1990s, when the need for a more proactive approach that included "hazard identification and mitigation, community preparedness and integrated response efforts" became apparent (GoB *National*, 2008, 13). The Comprehensive Disaster Management Programme (CDMP) is a product of this change in approach. It has two goals: to facilitate a paradigm shift in disaster management in Bangladesh away from relief and rehabilitation towards risk reduction, and to foster a holistic, multi-hazard approach to reducing the nation's risks and vulnerabilities to human-induced and natural hazards (Project Document, n.d., 10). The Programme was designed to have two phases, the first to create the necessary systems and the second to put them into operation. Phase I was completed in 2009 and will be the primary focus of this case study.

## NATURAL DISASTERS AND BANGLADESH

In 2004, the United Nations Development Programme (UNDP) ranked Bangladesh the number one nation at risk for tropical cyclones and number six for floods. Other common natural hazards in Bangladesh are nor'westers and tornadoes, riverbank erosion, earthquakes, drought, arsenic contamination, salinity intrusion, tsunamis, and landslides (Project Document, n.d., 7). The Centre for Research on Epidemiology of Disasters estimates that from 1979 to 2008 over 191,415 people were killed and about 229 million directly affected by natural disasters in Bangladesh. It also estimates that the economic damage caused by these natural disasters was about USD 5.6 billion (Project Document, n.d., 5). The impact of these disasters is exacerbated by the fact that about 40 percent of the nation's population lives below the poverty line (GoB *National*, 2010, 12).

Bangladesh's susceptibility to disaster lies in its geography and monsoon climate. It is a deltaic country that has been formed by the Ganges, Brahmaputra, and Meghna Rivers. In total the country contains over 310 rivers and tributaries (GoB *National*, 2010, 12). Its topography is low and

flat, with two-thirds of the country lying less than five meters above sea level. On average about 25 percent of the country is flooded annually, and every four to five years about 60 percent is flooded (GoB *Bangladesh*, 2009, 7-8). Additionally, the nation is located in a region that is seismically active, leaving it at risk to earthquakes and tsunamis.

Given these vulnerabilities, in the four decades since its independence in 1971, the Government of Bangladesh

and its development partners have invested over USD 10 billion in projects aimed at decreasing the country's vulnerability to natural hazards. This includes flood management schemes;

coastal polders protected by dikes; cyclone and flood shelters; raising roads and highways above flood levels; early warning systems for floods, cyclones, and storm surges; and the development of climate resilient crop varieties (GoB *Bangladesh*, 2009, xvii).

It is forecasted that climate change will increase the frequency and severity of many of Bangladesh's natural hazards. In fact, climate change is expected to cause more frequent and severe tropical cyclones; heavier and more erratic rainfall during the monsoon season; melting of Himalayan glaciers; lower and more erratic rainfall in the drier northern and western parts of the nation; rising sea levels;

and warmer temperatures. This will increase the likelihood of flooding, saltwater intrusion, and the number of cases of water and airborne disease (GoB *Bangladesh*, 2009, 4, 14-16). The economic and social impacts of this will likely be substantial. Since its independence, Bangladesh has made great strides in its economic and social development. Its population growth rate has declined, GDP tripled in real terms, and it is largely food secure. This being said, over 50 million of its citizens still live in poverty. Many of the areas where these individuals live are remote or ecologically fragile—for example river islands or coastal belts. It is predicted that the increased frequency and magnitude of climatic events will have negative economic and social effects. This includes increased mortality; negative effects on the assets and livelihoods of many Bangladeshis; and the undermining of the economic progress the nation has made since its independence (Project Document, n.d., 5).

The Government of Bangladesh asserts in its *Bangladesh Climate Strategy and Action Plan 2009* that climate change poses a big challenge to sustaining economic growth and poverty reduction in the country (GoB *Bangladesh*, 2009,1). The agriculture sector is particularly vulnerable to the impacts of climate change. Over 60 percent of Bangladeshis are dependent on agriculture directly or indirectly for their livelihoods. The increased frequency of droughts and floods, salinity intrusion, rising temperatures, and changes in rainfall patterns will all have negative effects upon the sector, which will in turn negatively impact livelihoods. Drought and salinity intrusion will also reduce the availability of safe drinking water, placing further stress on livelihoods (GoB *Bangladesh*, 2009, 14).

**Box 1: Key Facts:  
Bangladesh**

*Government Type:* Parliament

*Capital:* Dhaka

*Territory:* 147,570 sq km

*Population:* 144 million

*Districts:* 64

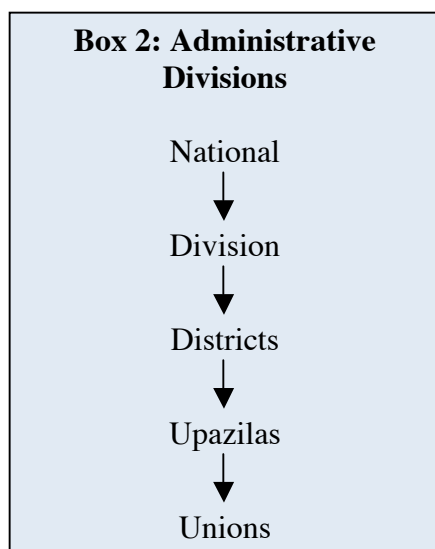
*Upazilas:* administrative units within districts

## CATALYST FOR CHANGE

Of all the natural risks facing Bangladesh, it was a tropical cyclone that hit the nation in 1991 that catalyzed the Government of Bangladesh to finally take action to shift from a reactive to a proactive approach to disaster risk reduction. This cyclone developed in the Bay of Bengal in April of 1991 and hit the Chittagong region of the country. The region is one of the most populated areas of Bangladesh and an estimated 140,000 people were killed and 10 million people lost their homes during the storm (“Bangladesh cyclone of 1991”, 2011).

Following the cyclone, a UNDP-supported workshop was held in the coastal district of Cox’s Bazar to determine what lessons could be learned from the catastrophic event. There was a large consensus at this workshop that the country had not been prepared for such an event and that it was necessary to increase preparedness for the future.

One outcome of this workshop was a UNDP initiative that supported disaster management, which ran from 1994 to 1998 and was housed in the Ministry of Food and Disaster Management.



After a cyclone hit the nation in 1998, it was determined that this program had not been successful at achieving its strategic outcomes. This was attributed to a lack of coordination between the actors involved; the limited capacity of the Ministry of Food and Disaster Management to ensure strong

leadership; and the assertion by the Ministry of Food and Disaster Management that it had been overlooked by donors in favor of other ministries.

In response, a project proposal for a Comprehensive Disaster Management Programme began to be developed in 2000 as a two phase, ten-year program. In 2003, the Comprehensive Disaster Management Programme Phase I was endorsed and approved by the Government of Bangladesh (Rector, 2011).<sup>1</sup> Funding was initially provided by the UNDP, the United Kingdom’s Department for International Development (DFID), and the United Nations Office for Project Services (UNOPS); however in 2005 a new European Union-funded component was included. The UNDP and UNOPS also served as implementing partners of the Programme.

## CURRENT STRUCTURE OF DISASTER MANAGEMENT DECISION MAKING IN BANGLADESH

The legal frameworks for addressing disaster risk reduction in Bangladesh are the Allocation of Business<sup>2</sup> for the Ministry of Food and Disaster Management and the Standing Orders on Disaster. Through the Allocation of Business, the Ministry of Food and Disaster Management is the entity responsible for coordinating disaster management across all of Bangladesh’s government agencies. The Standing Orders on Disaster were issued by the Government of Bangladesh in 1997 to provide the nation with a guide for disaster risk reduction and emergency management activities. It defines the duties of relevant government entities responsible for disaster management at various levels of

<sup>1</sup> UNDP is responsible for the original design of the CDMP. CDMP Phase I was designed by UNDP with the support of DFID.

<sup>2</sup> Allocation of Business refers to the mandate and roles that the Government of Bangladesh has assigned to its various ministries (Project document, n.d., 8).

governance. These government-mandated bodies are tasked with disaster management activities. Their roles are summarized in Table 1 below (Project Document, n.d., 8).

**Table 1: Summary of Institutional Mechanisms and Committees for Disaster Risk Reduction (Source: Project Document, n.d., 9)**

Level	Summary
<b>National Level Bodies</b>	<p><b>National Disaster Management Council (NDMC)</b> headed by the Prime Minister to formulate and review the disaster management policies and issue directives.</p> <p><b>Inter-Ministerial Disaster Management Co-ordination Committee (IMDMCC)</b> headed by the Minister for Food and Disaster Management to implement disaster management policies and decisions of NDMC/Government.</p> <p><b>National Disaster Management Advisory Committee (NDMAC)</b> headed by an experienced person nominated by the Prime Minister.</p> <p><b>Cyclone Preparedness Programme Implementation Board (CPPIB)</b> headed by the Secretary, MoFDM, to review the preparedness activities at the initial stage of an impending cyclone.</p> <p><b>Disaster Management Training and Public Awareness Building Task Force (DMTATF)</b> headed by the Director General of the Disaster Management Bureau (DMB) to co-ordinate disaster related training and public awareness activities of the government, NGOs and other organisations.</p> <p><b>Focal Point Operation Coordination Group of Disaster Management (FPOCG)</b> headed by the Director General of the DMB to review and co-ordinate the activities of various departments and agencies working on disaster management and also to review the Contingency Plan prepared by relevant departments.</p> <p><b>NGO Coordination Committee on Disaster Management (NGOCC)</b> headed by the Director General of the DMB to review and co-ordinate the activities of NGOs working on disaster management.</p> <p><b>Committee for Speedy Dissemination of Disaster Related Warning/Signals (CSDDWS)</b> headed by the Director General of the DMB to examine, ensure and identify the ways and means for speedy dissemination of warnings and signals to the population at risk.</p>
<b>Sub-National Level Bodies</b>	<p><b>District Disaster Management Committee (DDMC)</b> headed by the Deputy Commissioner (DC) to co-ordinate and review the disaster management activities at the district level.</p> <p><b>Upazilla Disaster Management Committee (UZDMC)</b> headed by the Upazilla Nirbahi Officer (UNO) to co-ordinate and review the disaster management activities at the Upazilla level.</p> <p><b>Union Disaster Management Committee (UDMC)</b> headed by the Chairman of the Union Parishad to co-ordinate, review and implement the disaster management activities of the concerned union.</p> <p><b>Pourashava Disaster Management Committee (PDMC)</b> headed by the Chairman of Pourashava (municipality) to co-ordinate, review and implement the disaster management activities within its area of jurisdiction.</p> <p><b>City Corporation Disaster Management Committee (CCDMC)</b> headed by the Mayor of City Corporations to co-ordinate, review and implement the disaster management activities within its area of jurisdiction.</p>

## COMPREHENSIVE DISASTER MANAGEMENT PROGRAMME – A DESCRIPTION

The Government of Bangladesh's vision for the Programme is, *“to reduce the risk of people, especially the poor and the disadvantaged, from the effects of natural, environment and human induced hazards to a manageable and acceptable humanitarian level and to have in place an efficient emergency response management system”* (CDMP II, 2011). To realize this vision, the CDMP takes a well-rounded approach to risk management and aims to mainstream disaster risk reduction into all government agencies (UNDP, n.d.). This includes expanding coverage to a broader range of hazards and taking an integrated approach to disaster management and climate change (Huq & Ayers, 2008, 10).

The Ministry of Food and Disaster Management is the government agency tasked with implementing the CDMP (Phases I and II) and mainstreaming it throughout the other government ministries. Its official mission with respect to CDMP is, *“to achieve a paradigm shift in disaster management from conventional response and relief to a more comprehensive risk reduction culture, and to promote food security as an important factor in ensuring the resilience of communities to hazards”* (CDMP II, 2011). During CDMP Phase I, the Secretary of the Ministry served as the National Project Director. In this capacity he was responsible for the final approval of all project decisions and proposals. The Secretary is second only to the Minister of Food and Disaster Management. It is important to note that the Secretary sought out this position and was greatly involved in

the CDMP throughout the implementation of Phase I.

The creators of the Programme realized that achieving the goals of the CDMP would be a long and challenging process. As a result, the Programme was designed to have two phases. Phase I was designed to create systems and increase capacities in order to make the Ministry of Food and Disaster Management a leader. Phase II is meant to build upon the foundation laid by Phase I and make it operational.

The CDMP is considered to be an innovative and groundbreaking initiative because it preceded the 2005 World Conference on Disaster Reduction that resulted in the Hyogo Framework of Action 2005-2015, which has catalyzed many nations to undertake disaster risk reduction efforts (Rector, 2011).

Phase I was initiated in March 2004, with an Inception Planning Workshop. It ran from 2004-2009 and is considered the pilot phase of the program. With CDMP Phase I, the Government of Bangladesh sought to set the foundations for incorporating long-term disaster management into the nation's development strategy and to mainstream disaster risk reduction approaches throughout the nation's ministries (Project Document, n.d., 10). Initially, the Programme targeted seven districts. In June 2008 following Cyclone Sidr, it was expanded to include nine more districts and by the end of CDMP Phase I it had been expanded to 32 districts (Project Document, n.d., 10). In CDMP Phase II it will be present in 40 districts.

Staff recruitment for CDMP Phase I occurred between 2004 and 2005 (Rector, 2011). However, field activities did not commence until July 2006. They were disrupted several



times, first from October-December 2006 as a result of political unrest; then again from July-September 2007 due to flooding; and finally from November 2007-February 2008 because of Cyclone Sidr. Due to these delays and disruptions it is largely agreed upon by all actors involved that the Programme was only truly active for two and a half years (Russell, *et al.*, 2009, 7-8).

## CHALLENGES

In addition to the natural and man-made delays to project implementation, other challenges arose during CDMP Phase I. One such challenge was civil service turnover. In the five-year period in which the CDMP Phase I ran there were seven Secretaries of the Ministry of Food and Disaster Management (also the National Project Director) and five Director Generals of the Disaster Management Bureau of the Ministry of Food and Disaster Management. According to UNDP's Chief Technical Advisor for CDMP Phase I, this caused problems with engagement, capacity development, and ownership of the project. Another challenge was the difficulty in retaining the services and interest of government officials engaged in the project due to challenges in getting them to take on the additional work required to implement the CDMP. Lastly, the CDMP had to gain the confidence of organizations and people who viewed it with skepticism. This involved a great deal of advocacy and time spent explaining the needs and appropriateness of the programme to various groups that could benefit from and help to implement it. It took about 18 months to overcome this difficulty (Rector, 2011). In spite of these challenges and setbacks, the Programme was able to build itself up and achieve several significant outcomes.

## PROGRAMME OUTPUT AND OUTCOMES

In the two and a half years that CDMP Phase I was active, several core Programme components were

developed that contributed significantly to the Programme's overall performance. These are the Climate Change Cell; the Disaster Management Information Centre; Community Risk Assessment and Risk Reduction Action Planning Guidelines; a Local Disaster Risk Reduction Fund; and the Livelihood Adaptation to Climate Change Program.

- The Climate Change Cell is located in the Department of the Environment of the Ministry of Environment and Forests. Its primary role is to convert global forecasts into impact statements for Bangladesh. At the time of the Government commissioned *Terminal Evaluation* of the CDMP Phase I in 2009, it had completed six research projects. It has also established a national database and library focused on climate change and a Liaison Officers network that connects representatives from various ministries and departments (Russell, *et al.*, 2009, 43). The Climate Change Cell's implementation plan was prepared jointly by the CDMP and the Department of the Environment. It is implemented by the Department of the Environment and receives technical backstopping from the CDMP. It has become an integral part of the Department of the Environment's organizational structure and has a director that leads its work. CDMP Phase II is continuing to support the functioning of the Cell (Project Document, n.d., 13).
- The Disaster Management Information Centre was established to increase emergency response and information management. It is kept operational 24/7 during emergency situations. This allows it to monitor and report on all types of natural hazards as they unfold, including earthquakes and tsunamis (Russell, *et al.*, 2009, 32). This has been accomplished by the creation of telecommunications links

between the main center and centers in all of the nation's 64 districts and 235 Upazilas that are considered to be high risk. These telecommunication links are referred to as the Disaster Management Information Network, which also has a web portal. The Disaster Management Information Centre also provides IT support to the Bangladesh Meteorological Department and the Flood Forecasting and Warning Centre. The *Terminal Evaluation* of the Programme asserts that this assistance to the Flood Forecasting and Warning Centre has increased the timeliness and effectiveness of flood warnings (Russell, *et al.*, 2009, 43).

- Community Risk Assessment, Risk Reduction Action Planning Guidelines, and Local Disaster Risk Reduction Fund were developed and implemented to complement each other. Community Risk Assessment is an approach that uses participatory methods to identify, analyze, and evaluate the hazards, risks, and vulnerabilities of communities. These Community Risk Assessments are designed to be inclusive of all community members so that scientific data and forecasts can be combined with local knowledge to form a well-rounded and accurate assessment of a community. Once a Community Risk Assessment has been completed, the communities can develop a Risk Reduction Action Plan that lists the disaster risk reduction activities that are a priority to the community (Ministry of Food and Disaster Management, n.d., 2). Examples of priority projects identified in this way include, but are not limited to, crop and agricultural risk reduction activities; trainings in disaster preparedness; afforestation initiatives; health and sanitary initiatives; and raising roads (Russell, *et al.*, 2009, 56). Both Community Risk Assessment and Risk Reduction Action

Planning are conducted by the CDMP through a standardized process that was developed via field-testing. The CDMP is assisted in the implementation of these activities by Disaster Management Committees and international and national NGOs.

At the time of the *Terminal Evaluation* in 2009, Community Risk Assessment and Risk Reduction Action Planning had been conducted in 16 districts and 622 unions (Russell, *et al.*, 2009, 43). The prioritized disaster risk reduction projects identified by communities are implemented with monies from the Local Disaster Risk Reduction Fund (Ministry of Food and Disaster Management, n.d., 2). Currently, external donors are the only contributors to this fund (Russell, *et al.*, 2009, 57). A Project Implementation Committee made up of various community members is tasked with providing oversight of the fund (Ministry of Food and Disaster Management, n.d., 2). As of September 2009, 562 community development projects, benefiting more than 600,000 people, had received funding from the Local Disaster Risk Reduction Fund (Russell, *et al.*, 2009, 56).

- The Livelihood Adaptation to Climate Change program assists farmers to adapt to climate change. It primarily focuses on areas prone to drought and saline intrusion (Russell, *et al.*, 2009, 33).

In addition to fleshing out these institutional components, the CDMP Phase I also achieved some other notable accomplishments. First, it has built up national capacity on disaster management and risk reduction through the facilitation of various training activities. Since 2007, over 25,000 officials from disaster management committees at the District Disaster Management Committee and Upazila



Disaster Management Committee level have received disaster management training (Russell, *et al.*, 2009, 27 & 43). The Programme has also enabled 46 government officials from the Ministry of Food and Disaster Management, and the Government of Bangladesh as a whole, to complete disaster management certificate courses at universities in Australia, Thailand, and Bangladesh. Furthermore, under CDMP Phase I, training manuals were developed for government and NGO staff members working on the implementation of various components of the Programme. An initiative supporting the development of disaster management curriculums for graduate and specialized courses is also underway. In fact, over fifteen Memorandums of Understanding have been signed with universities, public and private institutions, and government training centers throughout the country for this purpose (Russell, *et al.*, 2009, 17 & 43).

Second, CDMP Phase I is credited with the establishment of the Bangladesh Disaster Management Policy Framework which includes the Disaster Management Act (draft), Disaster Management Policy (draft), National Plan for Disaster Management 2010-2015, and the Standing Orders on Disaster. A revision of the Allocation of Business of the Ministry of Food and Disaster Management to include disaster risk reduction has also been completed with the assistance of the CDMP.

The Programme is also credited with the incorporation of disaster risk reduction into the country's first and second Poverty Reduction Strategy Papers and the government's development project planning and appraisal process. As part of CDMP Phase I, Bangladesh also became involved in the South Asian Association for Regional Cooperation (SAARC) Regional Framework on Comprehensive Disaster Risk Management (Russell, *et al.*, 2009, 42).

Third, the Programme has launched an earthquake risk assessment project for the cities of Dhaka, Chittagong, and Sylhet. This includes assessments of fault lines, soil texture, and building design (Russell, *et al.*, 2009, 43). City corporations, fire services, and the armed forces are utilizing the risk mapping completed for these cities. City Corporations are using these maps to inform town planning and improve building codes. Fire services and the armed forces are using the maps to create earthquake response procedures (Rector, 2011).

Fourth, tsunami and storm surge risk mapping has also been completed for the entirety of the nation's coastline. As with the risk assessment for earthquakes, the data generated provides decision-makers with information that can be used in land-use planning, protection of critical infrastructure, and early warning and evacuation systems (Rector, 2011).

Fifth, the Programme also facilitated and supported the establishment of a climate change study cell at the Bangladesh University of Engineering and Technology. It has developed climate change scenarios for Bangladesh that are specific to the different regions of the country. In collaboration with the United Kingdom's Met Office Hadley Centre for Climate Change, this study cell has provided training on PRECIS modeling (a type of region climate modeling system) to 20 Bangladeshi professionals from different government and non-governmental organizations. Bangladesh is now in a position to generate climate change scenarios downscaling from General Circulation Models and Regional Climate Models and shall be able to generate scenarios for the Upazila level. Under CDMP II, this climate change study cell will coordinate with the Climate Change Cell run by the Department of Environment.

## ENABLING FACTORS

Since independence, disaster relief and rehabilitation have been a priority for the Government of Bangladesh. Because the nation is very vulnerable to a range of natural hazards, its effort to bring about a paradigm shift in the nation's approach to disaster management is a logical transition. According to the CDMP's former Chief Technical Advisor for the program, he "received unprecedented delegations from the government to ensure that the programme maintained momentum and could overcome unnecessary hold-ups caused by government officials or red tape" (Rector, 2011). He added, "We were very fortunate throughout the first phase to have exceptional support from the various Secretaries who saw the value adding benefits that CDMP was bring to Bangladesh and through this the international recognition as a leading nation."

The formation of collaborative partnerships is another important factor that has contributed and continues to contribute greatly to the achievements of the program. In fact, the program's ability to quickly increase operations from the original seven pilot districts to 32 out of the nation's 64 districts is widely attributed to the partnerships it has established. These partnerships consist of a network of over 75 regional, national, and local organizations—including government agencies, donors, academic institutions, international and local NGOs, grassroots community organizations, United Nations agencies, private sector research institutions, and regional organizations (Russell, *et al.*, 2009, 26 & 42).

Another important enabling factor was the Secretary of the Ministry of Food and Disaster Management stepping forward to be the National Project Director. Having such a senior level official at the Ministry as the director ensured that decisions made by the project director were implemented and staff was held accountable. This was furthered by the

Secretary's commitment to the CDMP and his open door policy to those involved in the Programme. The National Project Director also created the position of Deputy Project Director in 2008 to work with the UNDP's Chief Technical Advisor on the day-to-day implementation of the Programme (Rector, 2011).

CDMP Phase I has also been praised in the past for taking a long-term view of environmental degradation and for encompassing a wide range of extreme events (Rahman, *et al.*, 2007, 69). However, it is too soon to evaluate these qualities of the program design as not enough time has passed.

## SUCCESS OR FAILURE?

Now that CDMP Phase I has been completed there are various opinions as to the degree of its success. In the Government of Bangladesh's *Terminal Evaluation* of the program, it asserts, "one of the more intangible achievements of Phase I is the way that it has contributed to a gradual change of thinking, attitude and clarity towards the important role which disaster management planning plays in the national development process (Russell, *et al.*, 2009, 30)." In other words, it has been successful in beginning the paradigm shift in the nation's approach to disaster management.

This being said, the mainstreaming of disaster risk reduction has been confined primarily to the Ministry of Food and Disaster Management. The "Project Document" for CDMP Phase II lists the mainstreaming of disaster risk reduction out of this ministry as a "key challenge" (n.d., 13). The justification for this is that it was necessary to build-up the capacity, mechanisms, and credibility of this ministry, but it also indicates that there is a long way to go before the paradigm shift is complete. Another assertion is that action needs to be taken to increase community level support for disaster risk reduction in order to achieve long-term

sustainability of the program. It advocates that the capacities of Community Risk Assessment, Risk Reduction Action Plans, and Local Disaster Risk Reduction Fund staff at district, Upazila, and union levels need to be developed to avoid bottlenecks caused by uncertainty of what needs to be done (Russell, *et al.*, 2009, 20-23).

In assessing these three programs, the Government of Bangladesh has also identified several challenges that arose during implementation. First, it was initially difficult to maintain local authorities' interest in these initiatives. For some local governments this was because disaster risk reduction was not a priority and for others it was a matter of mainstreaming fatigue. This fatigue stems from communities' desire for direct benefits from programs, and their frustration when these do not materialize project after project. Some were also skeptical of participating in planning processes because there was doubt as to whether it would bring about concrete interventions. Another challenge was to ensure transparency and accountability of the initiatives and their participants. The creation of Project Implementation Committees was meant to address these factors. Lastly, it was a challenge to ensure that vulnerable and marginalized groups, such as women and the poorest of the poor, were included in the process (Ministry of Food and Disaster Management, n.d., 5-6). These challenges were identified during the various evaluations of the program and steps were taken to overcome them. Included in this is a guidebook on how to better include women in Community Risk Assessments (Russell, *et al.*, 2009, 14).

Recent natural disasters, such as Cyclone Aila in 2009 and storm surges in the late summer/early fall of 2010, have washed away infrastructure investments in affected coastal areas. As many of these investments were made prior to the implementation of the CDMP, it is not fair to use them in determining the success or failure of the

Programme. However, the new infrastructure reconstruction efforts utilize the knowledge and advice of the CDMP, which will allow for evaluations in the future. At the same time, there is also evidence that early warning systems established under the program have been strengthened. For example, during Cyclone Sidr in 2007, effective early warning systems and early evacuation significantly reduced the number of casualties that could have resulted from the storm.

The Programme has been often criticized as being complex and too ambitious. Both of these factors have been acknowledged in the *Terminal Evaluation* and development of CDMP Phase II. With respect to complexity, CDMP Phase II has been designed in a way that aims to consolidate program components and increase integration of activities (Project Document, n.d., 13). This being said, the ambition and complexity of the program design is what distinguishes it from a program that looks at one component of disaster risk reduction.

These varying opinions indicate that while the CDMP Phase I has made considerable progress building capacity and promoting disaster risk reduction and climate change adaptation on Bangladesh's national agenda, a great deal of progress remains to be made. The decision to go forward with CDMP Phase II signifies that the Government of Bangladesh and donors believe that the Programme is worthy of continuation and has the potential to achieve its end goals.

## **THE FUTURE: COMPREHENSIVE DISASTER MANAGEMENT PROGRAMME PHASE II**

At the end of CDMP Phase I the Government of Bangladesh and its donor partners decided to proceed with Phase II. The second phase started on January 1, 2010 and will run until the end of 2014. Recruitment for CDMP Phase II was completed in 2010, as around half the staff was transferred over from Phase I. The necessary groundwork for

implementation has been done and implementation will begin in 2011. In addition to the UNDP, DFID, and the European Union, the Government of Norway, Australia's AusAID and Sweden's Sida have joined on as project donors. The only other ministry containing a component of the CDMP during Phase I was the Ministry of Environment and Forests, host of the Climate Change Cell. The aim of CDMP Phase II is to expand upon the achievements of Phase I by institutionalizing risk reduction and climate change adaptation across thirteen key ministries and agencies (GoB *Comprehensive*, 2010, 5-6).

There are four levels of focus that will be used to achieve these goals. These are policy and legal instruments; capacity building for all levels of government officers; knowledge generation and access; and the facilitation of institutional linkages. As was previously discussed, as a result of the findings of the *Terminal Evaluation* of CDMP Phase I, several changes have been made to the design of the program.

First and foremost, a full-time National Project Director has been delegated to the Programme by the Government. Unlike when the Secretary of the Ministry of Food and Disaster

Management was the National Project Director, this new appointee will be able to devote 100 percent of his time to the CDMP. According to UNDP's Steven Goldfinch (2011), "Now with a full-time National Project Director, who is an Additional Secretary, there is a dedicated senior government counterpart guiding the project towards achieving the project's outcomes."

Additionally, to reduce the complexity of the program, the number of program areas was reduced from twelve to six outcomes (desired results) in Phase II. These six outcome areas are designed to achieve set goals of the Programme. (See Box 3).

### **Box 3: CDMP Phase II Outcome Areas**

*Outcome 1:* Development of strong, well-managed and professional institutions in Bangladesh that are able to implement a comprehensive range of risk reduction programmes and interventions at the national level, as well as contributing to regional actions, international learning and best practice.

*Outcome 2:* Reduced risk to rural populations through structural and non-structural interventions, empowerment of rural communities and improved awareness of, and planning for, natural hazard events, including the likely impacts of climate change.

*Outcome 3:* Reduced risk to urban populations through structural and non-structural interventions, improved awareness of natural hazard events and the piloting of urban community risk reduction methodologies targeting the extreme poor.

*Outcome 4:* Improved overall effectiveness and timeliness of disaster preparedness and response in Bangladesh by strengthening management capacity and coordination as well as networking facilities at all levels.

*Outcome 5:* Better disaster-proofing of development funding across thirteen ministries. This will [be] achieved by generating in released awareness of hazard risks and the provision of technical information, advisory services and resources to stimulate positive changes in planning and investment decisions over the long-term.

*Outcome 6:* Community-level adaptation to disaster risks from a changing climate is effectively managed.

## CONCLUSIONS

A key factor in the success of CDMP Phase I is that it had the support of the highest levels of the government. This allowed implementation to have an extra layer of authority that it otherwise might not have been able to achieve. Since its inception in 2004, great strides have been made in building it up and initiating mainstreaming and on-the-ground implementation. The Climate Change Cell, Disaster Management Information Centre, Community Risk Assessment, Risk Reduction Action Planning, Local Disaster Risk Reduction Fund, and Livelihood Adaptation to Climate Change programs have all made significant contributions to increasing the nation's capacity to respond proactively to disasters. Such initiatives illustrate how Bangladesh is a nation that is turning its rhetoric on climate change adaptation and disaster risk reduction into action.

However, while a great deal has been accomplished, a great deal more progress needs to be made in

order to achieve the paradigm shift that the Government of Bangladesh and its partners desire. Climate proofing of projects and maintaining buy-in at all levels of governance and communities will be crucial to achieving the long-term sustainability of the Programme's work. The continued support from leaders within the government is also crucial.

Phase II is the critical phase in realizing the mainstreaming of a proactive approach to hazards including extreme weather events as well as climatic variability. It is quite possible that the changes made in the design of the second Phase will assist in furthering this shift and overcoming the challenges that the Programme is facing, but it is too soon to determine their effectiveness at this time. What is certain is that the Government of Bangladesh and its implementing partners have created a flagship program that has the potential to serve as an example for other nations to follow.

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