Final Report

Democratic Local Governance Capacity and Natural Disasters – Building Community Resilience: Bangladesh Case Study

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1. Introduction and Context

Introduction

Being a government closer to the community by default local government has to play an important and critical role before, during and after disaster. Nevertheless, in general, local government remained to be one of the most understudied institutions in the disaster management literature (Wolensky & Wolensky, 1990). Two important areas are under-explored in terms of the role of local government in managing disasters. First, the issue has been examined mostly in the context of local government in developed countries, and insufficient attention has been paid to local government in developing countries. Second, the role, capabilities and the potential of local government in managing disaster have not been adequately examined. Indeed, in recent years many local government bodies have faced difficulties in dealing with disasters since they have inadequate knowledge and capabilities to manage (Kusumasari, Alam, and Dibben, 2012).

Over the years there has been a significant paradigm shift in disaster management and preparedness. The role of Local Government has been recognized since mid 1990s with the significant paradigm shift in the approach to natural disaster prevention and management. The UN guideline for Natural Disaster prevention, preparedness and mitigation in 1994 categorically noted that along with other major institutional actors, active involvement of the vulnerable communities in disaster reduction, prevention and preparedness resulted in improved risk management. The guideline further emphasized the need for "promote community based approaches to vulnerability reduction"[1]. The UN guideline also made a major shift from the traditional emphasis on disaster response to disaster reduction to promote a "culture of prevention" as well as involvement of the local level actors including the local government".

This study aims at analyzing the state of local governance at the grass roots level i.e. Union Parishad (UP)2 of Bangladesh. The study broadly attempts to address two research questions: i. What are the strengths and weakness of local government (in particular the Union Parishads) to respond to natural disasters? ii. How can local governance capacity and community resilience be strengthened and collaborative processes improved as to make governance of natural disasters more effective?

[1] Yokohama Strategy and Plan of Action for a Safer World – Guidelines for Natural Disaster Prevention, Preparedness and Mitigation, World Conference on Natural Disaster Reduction, Yokohama, Japan 23-27 May 1994.

[2]Union Parishad (UP) is the lowest level Local Government Unit in Bangladesh. There are 4586 Union Parishad in Bangladesh. An UP is composed of 15 to 20 villages with an average population of 28 thousand.

The study further attempts to assess the institutional capacities and governance features of the UP to respond to the natural disasters and also assess the potential of enhancing the governance capacity and community resilience to address natural disasters more effectively.

The study report is presented in nine chapters. Chapter 1 narrates the country context and background of the study. Chapter 2 of the study report describes the nature and types of Natural Disaster in Bangladesh. Chapter 3 presents a brief conceptual overview of Disaster Management and Governance, Chapter 4 presents the overall policy framework of disaster management in Bangladesh. Chapter 5 and 6 respectively describes the policy and institutional framework of disaster Management in Bangladesh Chapter 7 narrates the roles of the Local government in Disaster Management. The role and experiences of NGOs and Civil Society Organizations in disaster management is presented in Chapter 7 while Chapter 8 presents the findings of the state of disaster management in three Case study Union Parishads in disaster-prone areas of Bangladesh, and finally Chapter 9 summaries the lessons Learned and Policy Implications.

The study is based on review of secondary information and documents, series of in-depth interviews, selected field observation trips in different Unions of disaster prone Upazila3s in the southern part of Bangladesh. Opinions and observations have been drawn from a select number of people's representatives of the UP, local civil society members and extension workers of the Government. Records and documents of the UPs have been also reviewed. Semi structured interviews were conducted to tap the opinions and observations of the UP officials and members of the community of the UPs and Upazila based public officials. Three Focused Group Dissuasion Sessions have been organized at the Upazila level to tap the opinion, observations and views of various stakeholders.

Bangladesh: Country Context

Over the past 40 years since independence, Bangladesh has increased its real per capita income by more than 130 percent. There has been a significant progress made in reducing poverty where the percent of population living below the poverty line went down from more than 80 percent in early 1970s to 38.7 percent in 2010. However, Bangladesh still faces the reality that over 60 million of its population lives in poverty (GOB-SFYP, 1998). The majority of the country's 50 million extreme poor is particularly vulnerable, since many live on marginal land such as river islands or along the coast.

Since Bangladesh achieved Independence in 1971, GDP has more than tripled in real terms[4,]

[3]Upazila is the second tier of local government in Bangladesh. Each Upazila is composed of 12 to 15 Union Parishads.

[4]Govt of Bangladesh (1998), *Sixth Five-Year Plan Planning Commission* Dhaka and Govt of Bangladesh (2007); *Bangladesh Economic Survey,* 2007, Ministry of Finance, Dhaka.

food production has increased three-fold[5], the population growth rate has declined from around 2.9% per annum in 1974 to 1.4% in 2009and the country is now largely food secure. Over the last 20 years, growth has accelerated and the country is on track to become a middle income country by 2021 when it celebrates its 50 years of independence. In t the last two decades the economy has grown at over 6%. Between 1991 and 2005, the percentage of people living in poverty declined from 59% to 40% and the country's Human Development Index improved from 0.347 in 1975 to 0.547 in '2005. According to the HDR 2013 and UNDP, Bangladesh's HDI value for 2012 is 0.515.

Bangladesh is a disaster-prone country of an area of about 1,47,570 sq. km. with population nearing 160 million. The country is well within the tropics and is the largest delta in the world formed by the mighty rivers namely the Ganges, the Brahamaputra and the Meghna. Bangladesh is home to one of the world's largest delta systems. Two-thirds of the country is less than five meters above sea level. Bangladesh is in the top of the list of 10 most disaster affected countries (Haque, M,2013).

Bangladesh is recognized to be one of the most susceptible countries in the world, highly vulnerable to both short-term and long-term impacts of climate change due to its unique geographic location, hydro-geological characters, dominance of floodplains, low-elevation from the sea and the socio-economical characters like high population density, high levels of poverty, and overwhelming dependence on nature (Haque, M, 2013).

Many Bangladeshi live in remote or ecologically fragile parts of the country, such as river islands (chars) and cyclone-prone coastal belts, which are especially vulnerable to natural disasters. Climate change and recurring disasters severely challenge the country's ability to achieve the high rates of economic growth. In coming years, it is predicted that there will be increasingly frequent and severe floods, tropical cyclones, storm surges, and droughts, which will further disrupt the life of the nation and the economy (Dasgupta et.al, 2011).

Bangladesh is already a global hotspot for tropical cyclones and other climatic events and is highly vulnerable to increased intensity of storms and droughts that will result from climate change (Harmeling & Eckstein, 2012). Coastal areas are particularly at risk, and deltaic countries like Bangladesh are recognized as the most of vulnerable spots (Nicholls et al, 2007). Approximately every three to five years, Bangladesh experiences massive floods that may affect as much as two--thirds of the country, and about every three years it experiences a major cyclone. Other major impacts include saline water intrusion, which threatens crop production, and droughts in some regions (World Bank, 2010). Climate change is expected to lead to sea level and sea surface temperature rise, which in turn could increase the frequency and intensity of tropical cyclones and the height of storm surges (World Bank, 2008, Khan & Rahman, 2000)).

[5]*Bangladesh Economic Survey,* 2009, Ministry of Finance, Dhaka.

The coastal zone of Bangladesh hosts over 35 million of people who are exposed to cyclones, storm surges, rough seas, salinity intrusion and permanent inundation due to sea level rising. There are 72 offshore islands with an area of 4,200 square km leaving over 3 million people extremely vulnerable. About 18 percent households of the Sundarbans[6] impact zone are dependent on forest resources (shrimp fry collectors, honey collectors, *golpata* collectors, shell/crab collectors and medicinal plant collectors) are vulnerable to the weather extremes and salinity intrusion. Around 0.5 million households' (family members 2.7 million) primary income source is fishing and they lose working days because of rough weather in the Bay. Over 160,000 coastal fishermen and an estimated 185,000 shrimp fry collectors are involved in marine fisheries. In the dry season, 5 ppt isohaline intruded more than 90 km landward (than monsoon period, base year 2005) at the western part of the coastal area in the Sundarbans (GOB,2010).

According to Intergovernmental Panel on Climate Change (IPCC), Bangladesh will be among the worst victims due to climate change. Sea level is expected to rise on account of escalating atmospheric temperature and the frequency of cyclone-storms will increase. As a result, food and energy security will be threatened leading to rise in different types of diseases and frequency of natural calamities. To top it all, the high density of population will make the problem worse.

Over the last three decades, the Government has invested over $10 billion to make the country more climate resilient and less vulnerable to natural disasters. Flood management embankments, coastal polders and cyclone shelters have been built, and important lessons learnt on how to implement such projects successfully in the dynamic hydrological conditions in Bangladesh and with the active participation of communities. A comprehensive system of disaster preparedness and management, including, Standing Orders on Disaster which details the responsibilities of Government officials and others at times of disaster, has also been put in place. The Government demonstrated its readiness in dealing with disasters in 2007 when the country suffered two serious floods and a severe tropical cyclone in the same year.

Bangladesh was actively involved in the 13th Conference of Parties to the UN Framework Convention on Climate Change (UNFCCC) 2007 which launched the Bali Action Plan and identified a set of actions essential to achieve a secure climate future. Bangladesh in its subsequent submission on the Bali Action Plan, made it explicit that development and poverty eradication is the priority for the country. The country also reconfirms its commitment to oppose any action that may jeopardize the attainment of secure access to food, water, energy and livelihoods[7].

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[6]It is largest Mangrove forest of the world covering about 35800 sq kilometer of Bangladesh and adjacent part of West Bengal of India.

[7]http://www,ut)fccc.int/resources/docs/2008/awgtcal/eno,(ish/miscOl.pdf

The statement given by Bangladesh, at the UN General Assembly in February 2008, on behalf of the Least Developed Countries (LDCs), also emphasized the need for immediate international support to build the LDC's resilience to global warming and climate change and disaster management. Subsequently Bangladesh actively took part in climate change talks in COP 14 in Poznan in December 2008 and in Bonn in March-April 2009 and made submissions for negotiations. Bangladesh has already emerged as a world leader in the research, design and implementation of adaptation strategies. Bangladesh is working to ensure that the current round of climate change negotiations, leading to the establishment of a fair and equitable post-Kyoto Framework and outcome for developing countries at the 2009 Copenhagen Conference of Parties (COP-15).

The Government of Bangladesh is firmly committed to "an integrated policy and plan to protect the country from the adverse effects of global warming". The election manifesto of the ruling party manifesto emphasizes water management and basin-wise drainage and development program, careful forest resource management, protection of flora and fauna species, control of polluting chemicals in agricultural development, restraint on air pollution by transport and power sectors, and environmental protection[8].

[8] Bangladesh Awami League, *Election Manifesto, 2008.*

2. Nature and Types of Natural Disaster in Bangladesh

Bangladesh is exposed to variety of natural hazards, such as, floods, river erosion, cyclones, droughts, tornadoes, cold waves, earthquakes, drainage congestion/water logging, arsenic contamination, salinity intrusion etc. But the nature of such occurrences, the seasons and extent of effects of the hazards are not the same in all places.

Floods

Most of Bangladesh lies in the delta of three of the largest rivers in the world - the Brahmaputra, the Ganges and the Meghna. These rivers have a combined peak discharge in the flood season of 180,000 M3 /sec. (the second highest in the world, after the Amazon) and carry about two billion tones of sediment each year. The topography of the country is mostly low and flat. Two-thirds of the country is less than 5 meters above sea level and is susceptible to river and rainwater flooding and, in lower lying coastal areas, to tidal flooding during storms (Ministry of Environment and Forestry, 2009).

In an 'average' year, approximately one quarter of the country is inundated. The people living in these areas have adapted by building their houses on raised mounds and adjusting their farming systems. In the past, people here grew low-yielding deepwater rice during the monsoon season. Now they mostly cultivate high-yielding rice crops, often using irrigation. Once in every 4 to 5 years, however, there is a severe flood that may cover over 60% of the country and cause loss of life and substantial damage to infrastructure, housing, agriculture and livelihoods. During severe floods, it is the poorest and most vulnerable who suffer most because their houses are often in more exposed locations ([1]Ministry of Environment and Forestry, Bangladesh Climate Strategy and Action Plan, Government of Bangladesh, 2009, p.8)

Floods are an annual phenomena, with the most severe occurring during the months of July and August. Bangladesh is divided into three zones according to flood inundation classification: 80 percent floodplains, 12 percent hills and 8 percent terraces. Floods turn into natural disasters when water level rises higher than the expected level and occur earlier or later than the usual timing. In the past two decades three major catastrophic floods affected a large portion of Bangladesh, damaging crops, livestock, houses and other infrastructure. According to Bangladesh Water Development Board, floods in 1988, 1998 and 2004 affected 84 percent, 68 percent and 36 percent of total area respectively (Government of Bangladesh, *Sixth Five Year Plan*, p176).

However a regular river floods affect 20% of the country, increasing up to 84% in extreme years. The floods of 1988, 1998 and 2004 were particularly catastrophic, resulting in large-scale destruction and loss of lives. Approximately 37%, 43%, 52% and 68% of the country is

inundated with floods of return periods of 10, 20, 50 and 100 years respectively (MPO, 1986).

Four types of flooding occur in Bangladesh:

- Flash floods caused by overflowing of hilly rivers in eastern and northern Bangladesh (in April-May and September-November).
- Rain floods caused by drainage congestion and heavy rains.
- Monsoon floods caused by major rivers usually in the monsoon (during June-September).
- Coastal floods caused by storm surges.

The 1988 flood affected about two-third area of the country. The 1998 flood alone caused 1,100 deaths, rendered 30 million people homeless, damaged 500,000 homes and caused heavy loss to infrastructure. The 1998 flood lasted for 65 days from July 12 to September 14 and affected about 67% area of the country. This devastating flood had an enormous impact on the national economy, in addition to causing hardships for people, and disrupting livelihood systems in urban and rural areas (**REFERENCE)**.

In the year 2000, Bangladesh faced an unusual flood over its usually flood-free south western plain, which also caused loss of life and massive damage to property. In 2004, floods inundated about 38% of the country (WARPO, 2005). About 747 people lost their lives. About 2,500 kilometers of embankment were damaged and about 74 primary school buildings were washed away. This flood caused economic losses of about US$2,200 Million. Floods continue to be major hazards in Bangladesh.

A Rural Household during flood

Cyclone and Strom surge

The southern districts of Bangladesh along the Bay of Bengal are prone to severe tropical storms known as cyclones, which develop over warm tropical oceans and have

sustained winds of 64 knots (74 miles/hour) or more. In addition to strong winds, cyclones also generate storm surges and huge waves. Water can rise as high as seven metres and flood waves can travel up to 30 miles inland. In order to protect people from severe storms and tidal surges, more than 2,100 cyclone shelters have been built in the coastal districts. Construction of cyclone shelters is one of six key mitigating measures along with embankments, afforestation, early warning systems, awareness building and communications.

The flat southern part of Bangladesh is highly populated with over 27 million people exposed to cyclone risk. The vulnerability to natural disasters is exacerbated by the fact that Bangladesh is highly vulnerable to the impact of climate change, and has the eighth largest population in the world. This high population density (800/km2) increases the vulnerability to storm surges and other disasters. In addition, this exposure to natural hazards is further intensified by people migrating for work during the months of April, May, October and November to the southern regions of the country which are more prone to cyclone and tidal surge.

With about 700 km of coastline (20% of land-mass in coastal areas), a huge part of Bangladesh is highly vulnerable to cyclonic storms. Of the 13 coastal districts, 12 are at very high risk of cyclones while the remaining one coastal district of Barisal is at moderate risk. Furthermore, several of these areas are also prone to flooding and riverbank erosions. The funnel-shaped northern portion of the Bay of Bengal causes tidal bores when cyclones make landfall. The coastal areas and off-shore islands of Bangladesh are low lying and very flat with average heights above mean sea level of less than 3 meters. This makes these areas especially susceptible to tidal floods.

A severe tropical cyclone hits Bangladesh, on average, every 3 years. These storms generally form in the months just before and after the monsoon and intensify as they move north over the warm waters of the Bay of Bengal. They are accompanied by high winds of over 150 kph and can result in storm surges up to seven meters high, resulting in extensive damage to houses and high loss of life to humans and livestock in coastal communities. The tropical cyclones in 1970 and 1991 are estimated to have killed 500,000 and 140,000 people, respectively. The storm surges are higher in Bangladesh than in neighboring countries because the Bay of Bengal narrows towards the north, where Bangladesh is located. In recent years, general cyclonic activity in the Bay of Bengal has become more frequent, causing rougher seas that can make it difficult for fishermen and small craft to put to sea.

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Bangladesh has a world-renowned community-based early warning system and has built cyclone shelters on stilts, so that the storm surge can flow underneath. These shelters typically provide refuge to over 700 people and have separate spaces for women and men. However, people are often reluctant to go to the shelters, leaving their livestock and other assets behind.

Tropical cyclones from the Bay of Bengal accompanied by storm surges are one of the major disasters in Bangladesh. The country is one of the worst sufferers of all cyclonic casualties in the world. The high number of casualties is due to the fact that cyclones are always associated with storm surges. Storm surge height in excess of 9m is not uncommon in this region. For example, the 1876 cyclone had a surge height of 13.6 m and in 1970 the height was 9.11 m (WARPO, 2005). In fact, the 1970 cyclone is the deadliest cyclone that has hit Bangladesh coastline. With a wind-speed of about 224 km per hour and associated storm surge of 6.1 to 9.11m, it was responsible for deaths of about 300,000 people.

Cyclone Sidr 2007 erupted from the Bay of Bengal packing winds of 240 kilometers per hour, swept through the southwestern coastal areas within 155-miles radius of its eye with heavy rain and storm surges reached up to 15-20 feet high in some places on 15th November'07. According to Bangladesh Metrological Department, the Sidr's eye crossed the Khulna-Barisal coast near the Sunderbans mangrove forests around 9:30pm, while it crossed over the Baleshwar River in Barguna district at midnight. The coastal districts of Barisal Patuakhali, Borguna, Pirojpur, Jhalkthi, Bhola, Bagerhat, Khulna, Satkhira, Shariatpur, Chittagong and Cox's Bazar and their offshore islands and chars received the major destructions by the SIDR. Out of 12 severely affected districts, four are the worst affected, these areBagerhat, Barguna, Pirojpur and Patuakhali.

As of the reporting period, it was observed that 3,363 peoples are dead and 55,282 are injured. Approximately 563,877 houses were totally destroyed and 9,55,065 houses were partly damaged. It is also reported that 186,883 hectares of crop areas are fully and 498,645-hectare area partly damaged by Cyclone Sidr.

Tornedo

The two transitional periods between southwest and northeast monsoons over the Indian sub-continent are characterized by local severe storms. The transitional periods are usually referred to as pre-monsoon (March-May), and post-monsoon (October- November). It is the pre-monsoon period when most of the abnormal rainfall or drought conditions frequently occur in different parts of Bangladesh. Also there are severe local seasonal storms, popularly known as nor'westers (*kalbaishakhi*). Severe nor'westers are generally associated with tornadoes. Tornadoes are embedded within a mother thundercloud, and moves along the duration of the squall of the mother storm. The frequency of devastating nor'westers usually

reaches the maximum in April, while a few occur in May, and the minimum in March. Nor'westers and tornadoes are more frequent in the afternoon. Table 3 shows some of the devastating nor'westers and tornadoes that hit Bangladesh. Nor'westers may occur in late February due to early withdrawal of winter from Bangladesh, Bihar, West Bengal, Assam, and adjoining areas. The occasional occurrence of nor'westers in early June is due to the delay in the onset of the southwest monsoon over the region (Karmakar, 1989).

River Erosion

This is an ongoing disaster and there is no specific indicator to measure the extent of damage. So the extent of damage caused by river erosion in most cases is based on various reports/information. Needless to say whatever the difference in ascertaining the extent of damage river erosion causes huge loss of property throughout the year. According to "World Disaster Report 2001" published by IFRCS every year about 10,00,000 people are affected by river erosion and 9,000 hectare cultivable lands are banished in river. Among these only a few affected people are able to find new shelters while others become homeless for uncertain period.

River erosion in Bangladesh is no less dangerous than other sudden and devastating calamities. Losses due to river erosion occur slowly and gradually. Though losses are slow and gradual, they are more destructive and far-reaching than other sudden and devastating calamities. The effects of river erosion are long-term . It takes a few decades to make up the losses, which a family has incurred by river erosion. There has been little progress, however, for improving the lives of erosion-affected people due to resource constraint.

Rivers in Bangladesh are morphologically highly dynamic. The main rivers are braided, and form islands or chars between the braiding channels. These chars, of which many are

A typical scene of River erosion

inhabited, "move with the flow" and are extremely sensitive to changes in the river conditions. Erosion processes are highly unpredictable, and not compensated by accretion. These processes also have dramatic consequences in the lives of people living in those areas. A study concluded in 1991 reported that: out of the 462 administrative units in the country, 100 were subject to some form of riverbank erosion, of which 35 were serious, and affected about 1 million people on a yearly basis. Around 10,000 hectares land is eroded by river per year in Bangladesh (NWMP, 2001).

Kurigram, Gaibandha, Jamalpur, Bogra, Sirajganj, Tangail, Pabna and Manikganj districts lie in the erosion prone area along Jamuna River. Erosion of total area and settlement is higher along the left bank than that of the right bank. Along Padma River, there are the districts of Rajbari, Faridpur, Manikganj, Dhaka, Munshiganj, Shariatpur and Chandpur. A recent study of CEGIS (2005) shows that bank erosion along Padma River during 1973 – 2004 was 29,390 hectares and along Jamuna River during 1973 – 2004, it was 87,790 hectares.

Drought

Every five years, Bangladesh is affected by the major country- wide droughts. However, local droughts occur regularly and affect crop production. Bangladesh faces unpredictable drought hazard in the dry monsoon due to inadequate and uneven rainfall. It varies from place to place, however, and the northwestern region suffers most from the drought. The agricultural drought, linked to soil moisture scarcity, occurs at different stages of crop growth, development and reproduction. Monsoon failure often brings famine to the affected regions and as a result crop production reduces drastically. Northwestern regions of Bangladesh are particularly exposed to droughts. A strong drought can cause greater than 40% damage to broadcast Aus[9]. During the *kharif* season, it causes significant destruction to the transplanted *aman* crop in approximately 2.32 million hector every year. In the *rabi* season, about 1.2 million ha of agricultural land face droughts of different magnitudes. Apart from the agricultural loss, droughts have important effect on livestock population, land degradation, health and employment . Between 1960 and 1991, drought events occurred 19 times in Bangladesh. Past droughts have naturally affected about 53 % of the population of the country.

Drought affects not only seasonal crops, but also fruit-bearing trees, forestry and the environment as a whole. Moreover, the crop environment during the monsoon season is not favorable for achieving full potential yields because of uneven distribution of rainfall, flooding etc.

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[9]*Aus* is variety of paddy.

favorable for achieving full potential yields because of uneven distribution of rainfall, flooding etc.

It is one of the most insidious causes of human misery. Basically, there are three types of droughts in Bangladesh: a. Permanent drought characterizes regions with the driest climate, having sparse vegetation that is adapted to aridity. Agriculture cannot be practiced without irrigation; b. Seasonal drought occurs due to abnormal rainfall shortage in places where there are well defined annual rainy and dry seasons; c. Unpredictable drought involves an abnormal rainfall failure, mostly in localized areas of humid and sub-humid climates.

Drought in Northern Bangladesh

Arsenic contamination

Arsenic contamination is one of the recent disaster and is considered to be a dangerous environmental threat and a serious health risk. It is identified as a public health emergency in Bangladesh. There is no specific treatment for chronic arsenicosis other than ceasing further intake of arsenic contaminated water.

The value (recommended limit) for arsenic in drinking water as per the guideline of the World Health Organization (WHO) is 10 mg/L while the national standard in most countries, including Bangladesh, is 50 mg/L. With varying levels of contamination from region to region, groundwater in 61 out of the 64 districts in Bangladesh is contaminated with arsenic. According to a study conducted by the British Geological Survey and DPHE, Bangladesh, arsenic concentrations in the country range from less than 0.25 mg/L to more than 1600 mg/L. This study report estimates that out of the Bangladesh population of 125.5 million, up to 57 million people drink water that has an arsenic concentration greater than the WHO guideline value and up to 35 million people consume water that has

concentrations in excess of the Bangladesh standard. The waters in the southwest and southeast parts of Bangladesh are highly contaminated with arsenic.

Salinity intrusion

Saline water intrusion is mostly seasonal in Bangladesh; in winter months the saline front begins to penetrate inland, and the affected areas rise sharply from 10 percent in the monsoon to over 40 percentin the dry season. Coastal districts such as Satkhira, Khulna, Bagerhat, Barguna, Pataskala, Barisal are the victims of salinity intrusion. Agricultural production, fisheries, livestock, and mangrove forests are affected by higher salinity in the dry season. It is observed that dry flow trend has declined as a result of which sea flow (saline water) is traveling far inside the country resulting in contamination both in surface and ground water.

Landslide

In the past, landslide was not considered a major hazard in Bangladesh. However, recently landslide has emerged as a major hazard, particularly after the Chittagong Landslide 2007. Due to heavy rainfall during 10 -11 June 2007, landslides and collapsed walls caused widespread damages in six areas of Chittagong city and in different Upazilas of the District. Landslides are a complex-disaster phenomenon that can be caused by earthquakes, volcanic eruptions, heavy rainfall (typhoons, hurricanes), sustained rainfall, heavy snowmelt, unregulated anthropogenic developments, mining, and others. In Bangladesh, landslides are mostly triggered by heavy rainfall. However, underlying causes of landslide include deforestation, hill cutting, unregulated development work, etc. Moreover, poverty and landlessness force poor people to live in the risky hill-slopes.

Climate Change and Disasters in Bangladesh

Bangladesh is one of the most disaster-prone countries in the world, suffering from regular floods, cyclones, earthquakes and drought. It is estimated that in the past 20 years, 135 million people in Bangladesh have been affected by natural disasters, and while many have lost their lives or been injured, millions of others have also lost their homes, land and livelihoods. According to the World Risk Report 2012, Bangladesh is fifth in the list of 173 countries that are most prone to natural disasters worldwide. Since 1980, the country has experienced over 200 natural disasters, leaving a total death toll of almost 200,000 people, and causing economic damages of approximately USD 17 billion. The country is also highly vulnerable to the impact of climate change which in the short and medium term is likely to be felt through more frequent and severe natural disasters.

Bangladesh has been identified as the most vulnerable country in the world to tropical cyclones (UNDP 2004), with a severe cyclone striking Bangladesh every three years on average (GoB 2009). Cyclone Sidr alone resulted in damages and losses of $1.7 billion, or 2.6 percent of GDP in 2007, primarily in the coastal region. The largest damages from cyclones result from the storm surges they induce. Storm surge heights are typically less than 10m, but Bangladesh has experienced surges in excess of 10m in some areas on occasion. A surge can be even more devastating if it makes landfall during high tide.

Disasters do not only cause short-term devastation and suffering amongst the communities they hit. These also hamper the ability of Bangladesh to effectively tackle poverty, as the limited resources of government, communities and non-governmental organisations are diverted from development program to relief and response work.

The vulnerability to natural disasters is exacerbated by the fact that Bangladesh has the eighth largest population in the world. This high population density (800/km2)[10] increases the vulnerability to storm surges and other hazards. The exposure to natural disasters is further intensified by work migration in the months of April, May, October and November to the southern regions of the country which are more prone to natural disasters[11].

The Fourth Assessment Report of the IPCC projects that climate change is likely to increase the severity of tropical cyclones and storm surges over the 21st century (IPCC 2007b). For the Bay of Bengal, there is an increase in the frequency of the highest storm surges, despite no significant change in the frequency of cyclones (Unnikrishnan et al. ,2006).

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[10]Bangladesh Bureau of Statistics. http://bbs.gov.bd/Home.aspx.

[11]Cyclone Preparedness Centre CPP. http://www.cpp.gov.bd/.

Due to its unique geographical location in the Bay of Bengal, Bangladesh suffers from devastating tropical cyclones frequently. These cyclones are accountable for large scale destruction and loss of life. The funnel-shaped northern portion of the Bay of Bengal causes tidal bores when cyclones make landfall due to which thousands of people living in the coastal areas are affected. Some of the most devastating natural disasters in history with high casualties were tropical cyclones that hit the region now forming Bangladesh.

The coastal areas and off-shore islands of Bangladesh are low lying and very flat with average heights above mean sea level of less than 3m. This makes these areas especially susceptible to tidal floods. Since 1970, Bangladesh has faced more than 70 devastating cyclonic storms causing millions of people's death and damage of billions of dollars.

Faced with significant cyclone and storm surge risk, Bangladesh has invested over $10 billion during the past 35 years on disaster risk mitigation measures—both structural (polders, cyclone shelters, cyclone resistant housing) and non-structural (early warning dissemination and awareness raising)—and enhanced its disaster preparedness system to address unavoidable risks (GoB 2009).

UNDP has identified Bangladesh as the most vulnerable country in the world to tropical cyclones (UNDP 2004). Cyclones hit the coastal regions of Bangladesh almost every year, in early summer (April–May) or late rainy season (October– November). A severe cyclone strikes Bangladesh every three years on average (Government of the People's Republic of Bangladesh. 2009.). Between 1877 and 1995, Bangladesh was hit by 154 cyclones, including 43 severe cyclonic storms, 43 cyclonic storms, and 68 tropical depressions.16 Since 1995, five severe cyclones hit the Bangladesh coast in May 1997, September 1997, May 1998, November 2007, and May 2009[12].

The largest adverse impacts of a cyclone occur from the inundation resulting from the storm surges that cyclones induce in coastal regions. The Meghna estuarine region is the area where most of the surge amplifications occur. Bangladesh is on the receiving end of about 40 percent of the impact of total storm surges in the world (Murty, T.S., and M.I. El-Sabh. 1992.

The reasons for this disproportionately large impact of storm surges on the coast of Bangladesh were reported (A. Ali, 1999) to be the following: (a) recurvature of tropical cyclones in the Bay of Bengal; (b) a shallow continental shelf, especially in the eastern part

[12] The Indian Meteorological Department (IMD) is responsible for tracking tropical storms and cyclones in South Asia, including the Bay of Bengal. The IMD classifies tropical storms based on the observed maximum sustained surface wind measured at a height of 10m and averaged over 3 minutes as follows: Super Cyclonic Storm (greater than 220 km/hour), very severe cyclonic storm (119–220 km /hour), severe cyclonic storms (90–119 km/hour), cyclonic storms (60–90 km/hour), Deep depression (51–59 km/ hour), Depression (32–50 km/hour) (IMD 2010).

of Bangladesh;[13] (c) high tidal range; (d) the triangular shape at the head of the Bay of Bengal;14 (e)almost sea-level geography of the Bangladesh coastal land; and (f) the high density of population and coastal protection system.

Surge inundation characteristics for cyclones of varying strength in Bangladesh as documented by the MCSP (1993). While historical (time series) records of storm surge height are scarce in Bangladesh, the existing literature suggests typical storm surge height during severe cyclones is between 1.5 and 9.0 meters. Storm surge heights in excess of 10 m are less common, but occasional references are in the literature. A surge can be even more devastating if it makes a landfall during high tide. In general, it has been observed that the frequency of a wave (surge plus tide) along the Bangladesh coast with a height of about 10 meters is approximately once in 20 years, and the frequency of a wave with a height of about 7 meters is approximately once in 5 years (MCSP 1993). It has been observed that wind-induced waves of up to 3.0 m in height may occur under unfavorable conditions in the coastal regions (MCSP 1993).

Bangladesh is already a global hotspot for tropical cyclones and other climatic events and is highly vulnerable to increased intensity of storms and droughts that will result from climate change (Harmeling & Eckstein, 2012). Coastal areas are particularly at risk, and deltaic countries like Bangladesh are recognized as the most of vulnerable spots (Nicholls et al, 2007). Approximately every three to five years, Bangladesh experiences massive floods that may affect as much as two--thirds of the country, and about every three years it experiences a major cyclone. Other major impacts include saline water intrusion, which threatens crop production, and droughts in some regions (World Bank, 2010). Climate change is expected to lead to sea level and sea surface temperature rise, which in turn could increase the frequency and intensity of tropical cyclones (Khan & Rahman, 2000) and the height of storm surges (World Bank).

It is estimated that around 9.6 million people from 29 districts of the country will be bound to migrate domestically or internationally due to climate change by 2050. A recent study predicts that about 1.9 million people to be displaced by river erosion, 2.3 million will be displaced by coastal surge, and 5.4 million people will be displaced by inland floods by 2050(RMMRU, 2013). Household survey[15] in the disaster prone areas reveals that 75 percent of the households faced different types of environmental stresses in their dwellings

[13]A wide continental shelf, especially off the eastern part of Bangladesh, characterizes the coastline of Bangladesh. This wide shelf amplifies the storm surges as the tangential sea-level wind-stress field associated with the tropical cyclone pushes the seawater from the deepwater side onto the shelf. Being pushed from the south by wind stress, the water has no place to go but upwards, which is the storm surge.

[14]The triangular shape at the head of the Bay of Bengal helps to funnel the seawater pushed by the wind toward the coast and causes further amplification of the surge.

[15]Survey was carried out by the RMMRU in Satkhira, Khulna in the coastal belt, Chapainawabganj in Northen Bangladesh and Keraniganj nearby the capital city of Dhaka.

in different periods of life while more than half faced multiple stresses. Falling victim to different disaster, a large number of people from rural areas migrate to cities every year.

The direct annual cost to the national economy of natural disasters over the last 10 years (damage and lost production) is estimated to be between 0.5% and 1% of GDP (GOB, 2011). During 1990-2008 the country incurred an annual loss of US$2,189 million (1.8% of annual GDP) from disasters.

According to BBS (1993, 2002d), from a statistics of recorded cyclones over the last 200 years, it has been found that number of occurrences of major cyclones has drastically increased in the recent decades. While the number of cyclones was 3 during the period of 1795-1845 and 1846-1896 respectively, the number increased to 13 during 1897-1947 and 51 during the period of 1848-1998 (Chowdhury, 2009).

November 12, 1970	A cyclone hit the entire coast of Bangladesh with a maximum wind speed of 222-km per hour causing 10 to 20 feet of high tidal surge. The official death toll was 500,000, but the unofficial figure was about 120, 0000.
May 24 -25, 1985	A severe cyclone hit Chittagong, Cox's Bazar, Noakhali and coastal islands causing 10 to 15 feet of high tidal surge, killing about 11,069 people.
April 29 -30, 1991	A cyclone hit Bangladesh with the maximum wind speed reached 225-km per hour. Official death toll was 150,000.
November 15, 2007	Cyclone *Sidr* hit Bangaldesh with a wind of 215 km/h. Massive evacuations of low-lying coastal areas also took place; a total of 650,000 people evacuated to emergency shelters. Approximately there were 3,447 deaths. Cyclone Sidr caused £900 million of damage (2.7% of Gross Domestic Product in 2007).

Cyclone Sidr struck the coast of Bangladesh on 15 November 2007 and was the most powerful mega-cyclone to impact Bangladesh since 1991. However, the death toll (officially, 3,406 lives were lost) caused by Cyclone Sidr was significantly lower than comparable cyclones in previous years due to the improved warning system and evacuation. Nonetheless, the damage to crops and infrastructure was considerable across 30 districts, 200 Upazilas and 1,950 unions. In total, more than 55,000 people were injured by the Cyclone Sidr event. The Joint Damage, Loss, and Needs Assessment (JDNLA) committee estimated that the total damage and losses caused by the cyclone were more than US $1.7 billion C. Emdad Haque and M. Salim Uddin, 2013).

April 14-15, 2009	Cyclonic Storm *Bijli* hit the ports of Chittagong and Cox's Bazar, brought heavy rain and wind gusts of up to 90 kilometers an hour. More than 200,000 residents took refuge in shelters.
May 25, 2009	Cyclone *Aila* hit Bangladesh with a wind of 120 km/h causing 2-3 m tidal surge. Cyclone 'Aila' was not as strong as the cyclone 'Sidr' in 2007, the damages caused by its storm was relatively moderate. However, a high tide and a new moon spurred Aila to whip up surges higher than normal and it repeatedly inundated the area. Over 210 fatalities reported in Bangladesh and India. One of world's largest tiger reserve in the mangrove forests of Sundarbans was severely inundated and a lot of tigers estimated to have died.
May 2013	Cyclone MahasenAlthough the eye of the cyclone *Mahasen* did not hit Bangladesh directly but it has destroyed 49,000 houses completely and 45,000 houses partially. Over 1.2 million people were affected. Because was advance warning life casualty was only 18. (Daily Star 13, July 2013)

Cost of disaster in Bangladesh

Most of climate models estimates that summer monsoon precipitation is likely to increase, with potential small decreases in the winter (Agrawala et,al, 2003). Climate change is expected to lead to sea level and sea surface temperature rise, which in turn could increase the frequency and intensity of tropical cyclones.A OECD estimates that climate change could potentially impact up to about 50% of all development activities in Bangladesh, when measured by funding amounts (cited in Agrawala et,al, 2003)..

Bangladesh, because of its geo-physical location, topography and high population density is at risk of recurring natural and human induced hazards with an average 10 million people affected every year. Frequent floods, cyclones, river bank erosion, water-logging, drought and tornadoes significantly disrupt Bangladesh's economy and the lives and livelihoods of its population. Bangladesh is in the top of the list of 10 most disaster affected countries. During 1990-2008 the country incurred annual loss of US$2,189 million (1.8% of annual GDP) from disaster[16].s. Climate change is adding a new dimension to the current risk environment with global predications suggesting that the country could expect more intense cyclones, storm surge and flooding (disaster)-and that a rise in sea levels could have a significant impact on the lives and livelihoods of up to 30 million people.

According to World Bank estimates, the impact of climate change on agriculture in Bangladesh could amount to an average of US$2.9 billion in damages per year

[16]Budget Speech 2013-2014 of the Minister of Finance, Government of Bangladesh, June 28, 2013

between 2005 and 2050, and potentially up to as much as US$5.1 billion per year, with most of the impacts falling directly on households. Furthermore, the cost of an average severe cyclone is expected to increase to over US$9 billion by 2050. These increases come on top of an already difficult situation in Bangladesh, where natural disasters cost an estimated 0.5% to 1% of GDP in an average year. Such economic measures fail to even begin accounting for the costs in human life (World Bank, 2010).

The risk of disaster is getting higher each year. In 30 years (from 1971 to 2000), a total of 2,16,150 people died in 181 disasters occurred in Bangladesh. This number is much higher compared to India (1,24,069 in 345 disasters) over the same period (Karmakar, 1989). Intense rainfall in a short spell of time, described as a climate change impact in the IPCC report, is happening in Bangladesh. There was 333mm of rainfall in Dhaka on 28 July 2009 (290mm in six hours, a record six-hour rainfall for the capital in 60 years) resulted in serious drainage congestion. A total of 408mm rainfall in Chittagong (measured on 11 June until 9 pm, the heaviest in 25 years) resulted in a landslide killing at least 124 people. On the other hand there was 21% less rain during the monsoon period (June-August) in 2009 and the northern districts suffer from drought. Droughts were reported even in the coastal zone (GOB, 2010).

An increased number of severe floods hit Bangladesh in the last decade. Recurring floods occurred in 2002, 2003, 2004, and twice in 2007 (July-August and September). Flash flood occurring in the hilly terrain of eastern and north eastern part of Bangladesh has been increasing and also occurring a few days earlier in recent years than 40-50 years ago (community perception). Increased rainfall (from an average of 150mm to 250mm) in Meghalaya in March in the last 30 years has increased.

According to IPCC, in their recently published Fourth Assessment, the following changes have been observed in climate trends, variability and extreme events for Bangladesh:

In Bangladesh, average temperature has registered an increasing trend of about 1 C in May and 0.5 C in November during the 14 year period from 1985 to 1998.

The annual mean rainfall exhibits increasing trends. Decadal rain anomalies are above long term averages since 1960s.

Serious and recurring floods have taken place during 2002, 2003, and 2004. Intensity of cyclones originating from the Bay of Bengal has increased.

Frequency of monsoon depressions and cyclones formation in Bay of Bengal has increased.

Salt water from the Bay of Bengal is reported to have penetrated 100 km or more inland along tributary channels.

The precipitation decline and droughts have resulted in the drying up of wetlands and severe degradation of ecosystems.

3. Disaster Management and Governance: Conceptual Overview

What is Disaster?

Disaster can be defined as hazard that causes significant damage to a valuable community or locality resulting deaths, property loss and so on. WHO define disaster as "any occurrence that causes damage, ecological disruption, loss of human life, and deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside that affected community or area" ([1] Golam M. Mathbor, 2012). Generally disaster is defined into two types – natural and human made. Considering the nature of causes, sources of disaster, it can then be classified into two distinct but overlapping categories: a. Natural disaster : Disaster caused by nature, such as earth quakes, cyclones, floods, volcanoes, erosions, anmd hurricane; b. Human made disaster: Disaster caused by human beings either by deliberately or accidental scuh as fire, terrorism, riot, pollution, accidents and war.

Zakour (2007) develops a framework to understand the causes of disaster through a formula:

$$\text{Disaster} = \text{Hazard X Vulnerability / Capacity}$$

A hazard can be a disaster if it affects certain portion of society to such an extent that the people need an extraordinary response from outside the community. Absence of capacity can be termed as *vulnerability,* andsimilarly, capacity lacks vulnerability. Vulnerability is a political-ecological concept in that it refers to the relationship of people with their environment and political economy of the society and culture that shapes and conditions this relationship.(M.J. Zakour ,"2007)

The International Federation of Red Cross and Red Crescent Societies defines "disaster" as "a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community's or society's ability to cope using its own resources.[17]

Disaster arises from a "combination of hazards, vulnerability and inability to reduce the potential negative consequences of risk".

$$\text{Disaster} = \frac{\text{Hazard+vulnerability}}{\text{Capacity}} \qquad (1)$$

[17]http://www.ifrc.org/en"what –we-do/disaster-management/about-disasters/what-is-a-disaster

The above equation (1) describes disaster as an inverse relationship between natural hazard plus social vulnerability and the responsive capacity of human institutions The numerator expresses the risk of a "sudden, calamitous event" as a function of hazard and social vulnerability. Vulnerability, the social component of risk, consists of two subcomponents: the static, ex-ante susceptibility of certain groups, plus the dynamic, ex post resilience of those groups.

Chen (2011) further argues that Disaster Laws and regulatory framework and policies should therefore consist of social preparedness for calamitous events. Preparedness is in fact is the reciprocal of disaster .

$$\text{Preparedness} = \frac{1}{\text{Disaster}} = \frac{\text{Capacity}}{\text{Hazard + vulnerability}} \qquad (2)$$

Preparedness is the performance of legal institutions and rules during disaster, adjusted for risks posed by hazards and social vulnerability.

$$\text{Preparedness} = \frac{\text{Performance (of legal institutions and rules in time of disaster)}}{\text{Risk (as posed by environmental hazard and social vulnerability)}} \qquad (3)$$

Defining disaster preparedness as institutional performance discounted by risk expresses the goals of disaster law. Disaster law begins with awareness of the social contribution to catastrophic loss. Natural events do not destroy in their own right; environmental calamities inflict loss only to the extent that human institutions place people and property in destruction's path.

Chen's definition of disaster preparedness in fact inverts the IRFC's definition of disaster . As the reciprocal of disaster, preparedness contrasts legal, financial, and political capacity with the risk posed by environmental hazard and social vulnerability. This relationship between institutional performance and social risk is analogous to the relationship between the premium commanded be particular investments and some measure of those investments risk, such as volatility.

$$\text{Preparedness} = \frac{1}{\text{Disaster}} = \frac{\text{Capacity}}{\text{Hazard + vulnerability}} + \frac{\text{Institutional performance}}{\text{Social risk}} \qquad (3)$$

This definition of preparedness as Chen claims to give the gives policy makers more distinct benchmarks which they can gauge their contributions to expanding capacity and lowering hazard and vulnerability.

Chen finally questions the definition of IFRC on disaster management as hazards plus vulnerability, offset capacity. He therefore argued that the whole equation 2 transforms the reciprocity of this definition in to a definition of preparedness as a capacity in anticipation of hazards and vulnerability. He proposes that breaking down vulnerability into its constituents components of susceptibility and resilience aligns all four variables along a single equation as follows:

Hazards ⇔ Susceptibility ⇔ Resilience ⇔ Capacity

Disaster Management Cycle:

If fact there are three stages of Disaster cycle: a. Readiness / Preparedness – ie planning how to respond to disaster; b. Response – Minimizing the hazards created by an emergency; and c. Recovery – Returning the community or environment to normality.
Following are some of the stages of disaster preparedness:

a. Creating more awareness and providing information about what to do at the time of disaster;
b. Regularly update the existing forecasting systems
c. Preserve foods at regional stocks to serve the affected people effectively.
d. Providing adequate training to the community based organizations and NGOs, field level officials of the government about search and resue, evacuation, first aid and other logistic.

Disaster Preparedness: Disaster readiness refers to the effective readiness measures to expedite emergency actions, rehabilitation and recovery. It includes emergency warning, emergency shelter, emergency evacuation plans, and maintenance of resources and training of personnel.

Disaster Response: The response phase includes the mobilization of the necessary emergency services and first responders in the disaster affected area. Here, necessary emergency services include search and rescue, evacuation, demand analysis, resource analysis, emergency relief (food, water, sanitation, first aid) and logistic supply (tent, alternative shelters). First responders generally include local government leaders, police, fire brigade, volunteers, social workers, NGO/ CBO workers.

Disaster recovery: The aim of disaster recovery is to restore the affected area to its previous or close to previous state. It includes the following: *Rehabilitation*- cleaning up the debris, rebuilding destroyed houses and properties, reemployment and so on; *Reconstruction:* Rebuilding or repairing essential infrastructure (roads, schools, canal, irrigational facilities etc.).

In terms of disaster preparedness process and track record of Bangladesh has earned a reputation globally. Head of International Red Cross for USA and Canada noted that:

> *Bangladesh has the most exposed and vulnerable coastline to flooding with the largest population presence of anywhere in the world. On an annual basis, thousands of persons are displaced and lives destroyed through flooding. Anticipation of flood is thus somewhat straightforward and because of this a great emphasis can be placed on preparation an d response. Again it is not surprising that the country has one of the best prepared local capabilities for disaster response and for anyone trying to draw lessons in relations to coping mechanisms, this case provides fascinating insight into how societies manage their disaster response mechanism. (Leone, 2007, p.14)*

4. National Policy and Regulatory framework Disaster Management

Considering its cost dimensions, human sufferings and overall impact on the economy, Bangladesh, as a matter of policy, has attached special importance to mitigating the impacts of climate change, preservation of environment and disaster management[18]. Over the years Bangladesh has developed a comprehensive policy framework as well implementation system and structure on disaster management

Policy context

The geographical location, land characteristics, multiplicity of rivers and the monsoon climate render Bangladesh highly vulnerable to natural hazard . Human induced disasters caused by deforestation, environmental degradation, exploitation of natural resources and unplanned urban structures have further aggravated the socioeconomic environment. There is a strong need for a harmonized model to strengthen the capacities of those working within the local, district and national institution on disaster risk reduction and management as well as develop a continual process of capacity building by institutionalizing national Disaster Management systems. The principle objective of this initiative is to increase resilience and establish a culture of disaster risk reduction among communities and institutions vulnerable to hazards in Bangladesh. This model focuses on strengthening the state mechanism for disaster preparedness through Community Based Rural and Urban Disaster Preparedness.

A Disaster Management regulatory framework has already been well defined in Bangladesh. Separate ministries and line departments at national level are dedicated to overseeing the implementation of development and disaster preparedness. Government has initiated flagship projects like the Comprehensive Disaster Management Programme (CDMP), which provides considerable space to carry out national level policy formulation, implementation, capacity development and institutionalization of Disaster Risk Reduction (DRR).Performing the defined roles and responsibilities on Disaster Management can positively contribute to the disaster risk reduction. However, there lacks a harmonized approaches at different levels.

Policy framework

The Hyogo Framework for Action 2005-2015 adopted by the World Conference on Disaster Reduction in 2005 and its subsequent endorsement by the General Assembly of the United Nations (A/RES/60/195) is the inspiration for knowledge and practice, implementation for

[18]Budget Speech 2013-2014 of the Minister of Finance, Government of Bangladesh, June 28, 2013

disaster risk reduction in Bangladesh while the United Nations Framework Convention on Climate Change (UNFCCC) provides the framework for negotiations and action in climate change. Bangladesh has been progressing significantly in respect of the three pillars of sustainable development being pursued in association with and through the Millennium Development Goals (MDGs).

The complex and multi-dimensional vulnerabilities of Bangladesh are well documented. Natural hazards have been part of geographical and indeed historical realities of Bangladesh. Building on the experiences and combination of indigenous and modern disaster management practices the country has dramatically reduced impacts of extreme events or rapid onset disasters such as cyclone and floods. Drought and salinity intrusion that are considered to be slow-onset disasters at the Northwest while the Southwest region experience disastrous impacts of salinity intrusion. These hazards are exacerbated by the effects of climate change and thus disasters occur more frequent and more intensity. As poverty continues to be a major challenge, the consequences of rapid, unplanned growing cities also increase the vulnerability.

Far from merely disaster or climate phenomenon these issues are sustainable development challenges and at the same time human rights and justice issues. The country, therefore, attaches importance to pro-active policy response to disaster management, climate change and in the context of sustainable development that shifting the focus from response and relief to risk reduction and building resilience through comprehensive disaster management policies and programs.

Disaster Management in Bangladesh is guided by a number of national and international drivers which among others includes a) the Standing Orders on Disasters first introduced in 1997; b) the Millennium Declaration of September 2000 to protecting the vulnerable from the consequences of natural disasters; c) the Hyogo Framework for Action (HFA) 2005-15**;** and) the SAARC Framework for Action (SFA) 2006-15. Bangladesh recognizes that disaster management, which includes both risk reduction and response management, is the responsibility of all sectors, all organizations and all agencies. Disasters can either be human induced, natural or even arising out of technological causes; the risk is dynamic and changing. Therefore, mainstreaming risk reduction efforts within the government, NGOs and private sector is critical to achieving sustainability in all hazards risk-reduction interventions.

Bangladesh links the Post-HFA with the 2012 Disaster Management Act as well as the various policy instruments that have been developed. These include the Perspective Plan, the 6th Five-Year Plan, National Water Management Plan, Water Policy, Draft National Energy Policy, Actionable Policy Briefs on Agriculture, Bangladesh Climate Change Strategy and Action Plan, Standing Orders on Disasters, National Plan for Disaster Management, National ICT Policy, and Vision 2021 to mention a few.

South Asian Association of Regional Cooperation (SAARC) Declaration

Bangladesh being the founder member of the SAARC played a significant role to develop a comprehensive policy framework and institutional approach to address disaster and climate change in the region. The Heads of State or Governments in the 13th Dhaka Summit called for elaboration of a Comprehensive Framework on Early Warning and Disaster Management.

In view of the December 2004 Asia Tsunami and the 2005 Pakistan Earthquake, the Heads of State or Governments underscored the urgency to put in place a regional response mechanism dedicated to disaster preparedness, emergency relief and rehabilitation to ensure immediate response. They directed the concerned national authorities to coordinate their activities in the areas of disaster management such as early warning, exchange of information, training and sharing of experiences and best practices in emergency relief efforts.

Following the *Dhaka Declaration*, a SAARC (South Asian Association for Regional Cooperation) Expert Group was formed to formulate a regional comprehensive framework on disaster management for the SAARC region. The expert group met in Dhaka on 7-9 February 2006. Asper the mandate of the Meeting and taking into account the deliberations of the Meeting, Bangladesh circulated a draft Comprehensive Framework on Disaster Management titled "Disaster Management in South Asia: A Comprehensive Regional Framework for Action 2006-2015", for consideration. After detailed discussions and amendments, the Framework was adopted in the meeting. The strategic goals of the framework include the following:

- Professionalizing the disaster management system;
- Mainstreaming disaster risk reduction;
- Strengthening of community institutional mechanisms;
- Empowering community at risk particularly women, the poor and the disadvantaged;
- Expanding risk reduction programming across a broader range of hazards (all hazards approach);
- Strengthening emergency response systems; and
- Developing and strengthening networks of relevant national, regional and international organizations.

The Strategic framework Agreement (SFA) of SAARC countries identified the following as the priority areas for action:

- Develop and implement risk reduction strategies;

- Establish Regional and National Response Mechanisms Organizations
- Develop and implement Disaster Management training, education, research and awareness programs
- Apply the ICT for disaster management.
- Establish an effective monitoring and evaluation mechanism.

78 The SFA urged the member states to prepare their own plans of actions for implementation of the SAARC framework. For implementation and follow up of the SFA, it has been emphasized that:

- The strategic goals and priorities for action should be addressed by different stakeholders in a multi-sectoral approach, including the development sector.
- Member States and regional organizations will integrate disaster risk reduction considerations into their sustainable development policy, planning and programming at all levels.
- Civil society, including volunteers and community-based organizations, the scientific community and the private sector are vital stakeholders in supporting the implementation of disaster risk reduction at all levels.
- While each Member State has primary responsibility for its own economic and social development, an enabling regional environment is vital to stimulate and contribute to developing the knowledge, capacities and motivation needed to build disaster resilient nations and communities.

The SFA also recognized that all the Member States will apply a holistic approach and maintain consistency in programming and building multi-stakeholder partnerships at all levels, as appropriate, to contribute to the implementation of this Framework for Action. Member States and other actors agreed to encourage to promote the strengthening or establishment of volunteer corps, which can be made available during disasters, and the Member countries will develop their own plan of action for implementation of this framework. The objectives of SFA plan are to:

- Align the strategic direction of disaster management programs with national priorities and international commitments.
- Articulate the vision and goals for disaster management.
- Outline the strategic direction and priorities to guide the design and implementation of disaster management policies and programs.
- Create a cohesive and well-coordinated programming framework incorporating government, non-government and private sector.

- Ensure that disaster management has a comprehensive and all-hazards focus comprising disaster risk reduction and emergency response.
- Illustrate to other ministries, NGOs, civil society and the private sector how their work can contribute to the achievements of the strategic goals and government vision on disaster management.

The SAARC Disaster Management Framework has set seven strategic goals, which include: Professionalizing the Disaster Management System; Mainstreaming Risk Reduction; Strengthening Institutional Mechanism, Empowering at Risk Communities, Expanding Risk Reduction Programming, Strengthening Emergency Response Systems, and Developing and strengthening networks.

Disaster Management Policies of Government of Bangladesh

The core principles of disaster management plans have been adopted from the Poverty Reduction Strategy Paper of the Government of Bangladesh which noted that all plans should be:

- Country-driven, promoting national ownership of strategies through broad based participation of government, NGOs and civil society.
- Result oriented and focused on outcomes that will benefit vulnerable communities, especially women, the poor and socially disadvantaged.
- Comprehensive in recognizing the multidimensional nature of risk reduction.
- Partnership oriented, involving coordinated participation of development partners (government, domestic stakeholders, and external donors), and
- Based on a long-term perspective for risk reduction.

Sixth Five Year Plan: Perspectives on Disaster Management and Climate change

Sixth Five Year Plan has also recognized the need for Government's policy for proper handling of disasters in a coordinated fashion at different stages in the disaster management cycle, like disaster management practice, disaster mitigation, emergency preparedness, emergency response, disaster management mechanism, early recovery and immediate rehabilitation, space technology and disaster management, space technology in disaster prediction, warning, flood monitoring, mapping and use of internet facilities for disaster monitoring, prediction and information dissemination (GOB, SFYP p.152)

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6th Five Year Plan- Proposed Programs/ Projects on Disaster Management & Climate Change

Theme	***Program***
Food security, social protection and health	Institutional capacity for research on climate resilient cultivars and dissemination
	Adaptation against drought, salinity resistance and heat
	Adaptation in fisheries sector
	Adaptation in livestock sector
	Adaptation in health sector
	Water and sanitation programs for climate-vulnerable areas
	Livelihood protection in ecologically fragile areas
	Livelihood protection of vulnerable socio-economic groups
Comprehensive disaster management	Improvement of cyclone and storm surge warning
	Awareness raising and public dissemination
	Risk management against loss of income and property
Infrastructure	Repair and maintenance of existing flood embankments
	Repair and maintenance of existing cyclone shelters
	Repair and maintenance of existing coastal polders
	Urban drainage needs assessment
	Adaptation against Floods and constructing new embankments and flood shelters
	Adaptation against tropical cyclones and storm surges through land use planning
	Planning & Design of river training and bank erosion mitigation works
	Resuscitation of rivers and *khals* (small canals) through
	Earthquake resilient structure and land slide protected structure have to be constructed and retrofitted
Research and knowledge management	National Centre for research, knowledge management and training on disaster and climate change
	Climate change modeling and their impacts
	Preparatory studies for adaptation against SLR
	Research on the climate change adaptation for knowledge and technology generation
Low carbon development	Renewable energy development
	Management of urban waste
	Aforestation and reforestation
	Rapid expansion of energy saving devices

Theme	***Program***
	Improving energy efficiency in transport sector
Capacity building	Revision of sectoral policies for climate resilience
	Mainstreaming CC in national, sectoral and spatial development programs and policies
	Strengthening human resource capacity
	Gender considerations in CC
	Strengthening institutional capacity
	Mainstreaming CC in media

Source: *Sixth Five Year Plan, Government of Bangladesh*

Disaster Management Strategy in the Sixth Five Year Plan (SFYP)

In line with the goals and objectives of the SFYP, a National Disaster Management Plan has been approved. The SFY plan focus more on Disaster Risk Reduction (DRR) in order for reducing the relief and recovery needs and also be prepared to deal with any emergencies. The SFYP identified the following DRR Activities and interventions:

- Professionalizing the Disaster Management systems and institutions through execution of the Disaster Management Regulatory Framework already established.
- Strengthening the Disaster Management Bureau's capacity to monitor and take part in cross-government mainstreaming of disaster risk reduction through pre, during and post disaster assessment.
- Strengthening institutional capacity of government sectoral ministries, departments and other technical and academic actors in ensuring inclusion of DRR and Climate Change Adaptation (CCA) issues and agendas within their respective sectoral policies, plans, programs and allocations of businesses.
- Empowering at risk communities to withstand and cope up with the disastrous situations through community and household level risk reduction interventions and livelihood support services.
- Reducing vulnerabilities of at risk communities through social safety nets – ensuring protection of women, children, the aged and differently able people giving due attention to their special needs.
- Preparedness for Earthquake and Tsunami risks through
  - vulnerability and risks assessments and mapping,
  - hazard land zoning,
  - Land use planning
  - contingency planning,
  - strengthening search and rescue capacity of fast responding institutions; and
  - mass public awareness

- Building Knowledge on DRR and CCA through
  - piloting and adaptation research
  - Establishing an Integrated Approach to disaster management including Climate Change and climate variability impacts
  - Developing climate change scenarios and accordingly anticipated hazard risks following climate change
  - Updating hazard maps such as flood, cyclone, drought, earthquake and tsunami
- Strengthening national capability to reduce the risks of Chemical, technological and biological hazards; Infrastructure collapse; Fire; Road accidents; Launch capsize and Landslide.
- Strengthening national capacity for erosion prediction and monitoring.
- Developing and establishing policy and planning frameworks to incorporate all hazard Establishing public - private partnerships for disaster risk reduction.
- Supporting regional and global risk reduction initiatives and ensure representation that is consistent with the government integrated all sector risk reduction approach at all levels.

Furthermore the SFYP emphasized the need for the Emergency Response Activities – which include the following:

- Strengthening and improving an all Hazard Early Warning Systems through technical, technological and physical capacity strengthening of Bangladesh Meteorological Department and Flood Forecasting and Warning Center.
- Establishing and strengthening regional networks for real time data/information sharing
- Establishing an effective Community Alerting System through capacity strengthening of Cyclone Preparedness Program and Disaster Management Committees (DMC) at District, Upazila and Union levels.
- Introducing Contingency Planning and Disaster Preparedness across all sectors and at all levels.
- Establishing and improving Search and Rescue Mechanism by: (i) preparing a potential search and rescue scenario; (ii) strengthening Search and Rescue capability of first responding institutions by providing training and equipments support; (iii) establishing an all hazard volunteer groups for Search and Rescue operations; (iv) establishing an effective command and control system and, (v) construction and maintenance of sufficient multi-purpose disaster shelters.
- Strengthening GO-NGO and private sector co-ordinations on relief and emergency management.

- Developing and establishing a well coordinated multi-sectoral post-disaster recovery and reconstruction mechanism.
- Establishing and operational a National Disaster Management Information Centre connected with all the 64 Districts and high-risk Upazila DMCs to: (i) archive and share disaster risk reduction information; (ii) to produce and share policy briefs; (iii) to receive and disseminate early warning information; and (iv) to receive and disseminate information on emergency need assessments and management.

The SFYP emphasized the need for strengthening institutional process in disaster management. The plan recognized and highlighted the importance of the role of various non-government organizations are working in the field of disaster management and mitigation. The Plan document noted that "a key effort in the SFYP will be to strengthen the inter-ministerial coordination as well as coordination with the NGOs" (p.156).

Seventh Five Year Plan

The Seventh Five Year Plan of Bangladesh, which is under preparation, The Concept note as the out line of the Seventh Five Year Plan recognized that additional efforts are needed for climate change and disaster management. The Concept paper has further noted that "adaptation to alleviate the long term adverse implications of climate change requires substantial efforts" (GOB, Government of Bangladesh, Concept Note Seventh Five Year Plan (SFYP). Furthermore the Seventh Five Year Plan aims to strengthen planning, budgeting and development program implementation at the local level and plans as well as recognized the need to initiate reform agenda to strengthen the local government to play wider role in development management, disaster risk mitigation in the rural milieu .

In last few years, country's emphasis has been placed to create a foundation to achieve a paradigm shift in disaster management from a conventional relief and response practice to a more holistic risk reduction culture. To achieve this paradigm shift, the Standing Orders on Disasters (SOD) was revised and the National Plan for Disaster Management 2010-15 (NPDM) was introduced. In April 2010 the National Disaster Management Council approved the Revised SOD and NPDM which will guide Government sectoral ministries and departments, NGOs, civil society organizations and public representatives to carry out disaster risk reduction and climate change adaptation functions. Disaster management has become an integral part of the educational curricula at primary, secondary and tertiary levels as well as major training courses of all public training institutions. The Executive Committee of the National Economic Council (ECNEC) on 8th October 2007 meeting approved the decision to include information on "lessons learnt from the previous project" as well as "Risk Identification and Risk Mitigation" in all Development Project Proposal (DPP) and Working Paper for the ECNEC as the first milestone achieved to ensure the integration of risk management in the development activities.

The Government of Bangladesh has focused more on risk reduction through community mobilization, capacity-building and linking risk reduction with the socio-economic development of the poor and vulnerable groups and with developing the Department of Disaster Management's partnership with other government agencies, NGOs and international organizations.

Bangladesh has also achieved a number of other milestones. The country has established a planning and strategic framework with the following seven strategic goals which were set as the basis of action matrix under the NPDM:

- Professionalizing the disaster management system
- Mainstreaming disaster risk reduction and climate change adaptation
- Strengthening institutional mechanisms
- Empowering at risk communities
- Expanding risk reduction programming across all hazards and all sectors
- Strengthening emergency response systems
- Developing and strengthening regional and global networks.

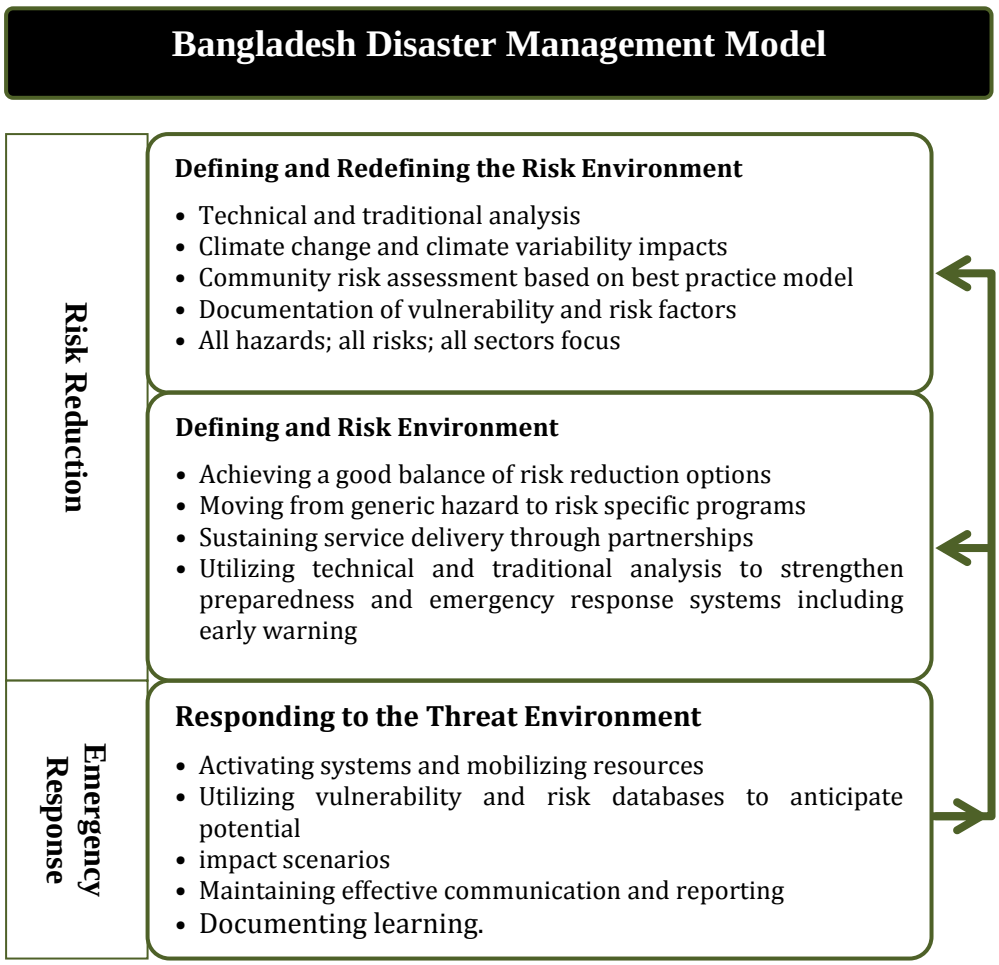
Disaster Management Model of Bangladesh

In recent years, government agencies, non-governmental organizations (NGOs) and local communities in Bangladesh have undertaken various measures to mitigate the impacts of natural disasters, including floods and cyclones, on the people, economy and society. The concept of developing national preparedness, as opposed to post-event response, to disasters like floods and cyclones evolved after the floods of 1988 and the devastating cyclone of 1991. The main argument behind this shift was that if people were well prepared for frequent disasters they would minimize their impacts, resulting in a reduced need for relief and rehabilitation. It was also strongly felt by the public institutions that if disaster preparedness could be integrated in the socio-economic development process at household, community, regional and national levels, it would build the long-term capacity of the community to mitigate risk and vulnerability to disasters. The aim of the shift also included changing disaster management approaches and measures from structural engineering interventions to the social dimensions and community partnerships (. Emdad Haque and M. Salim Uddin , 2013).

The Government of Bangladesh sets the *Disaster Management Vision* as "to reduce the risk of people, especially the poor and the disadvantaged, from the effects of natural, environmental and human induced hazards, to a manageable and acceptable humanitarian level, and to have in place an efficient emergency response system capable of handling large scale disasters." (http://www.ddm.gov.bd/govvision.php).

In line with the vision, the *Bangladesh Disaster Management Model* (BDMM) has been prepared which made the basis for revising the disaster management policy and planning documents. The *Bangladesh Disaster Management Model* has mainly comprised of two inter-related elements: Disaster Risk Reduction and Emergency Response. The plan focuses more on Disaster Risk Reduction (DRR) in order for reducing the relief and recovery needs and also be prepared to deal with any emergencies.

Bangladesh has created a simplistic model to guide disaster risk reduction and emergency response management efforts in Bangladesh. The model has three key elements and ensures that the move to a more comprehensive risk reduction culture remains central to all efforts (Government of the People's Republic of Bangladesh, National Plan for Disaster Management 2010-2015, Disaster Management Bureau, Disaster Management & Relief Division, April 2010).



Source: National Plan for Disaster Management 2010-2015

Defining and redefining the risk environment

This element of the model promotes the use of scientific analysis (including climate change impacts) as the basis for accurately determining the future risk environment relative to all hazards, all sectors and all geographical areas. The plan assumes that defining the risk environment involves both the traditional and formal hazard analysis, and includes the following steps:

- Understanding the social, political and community environment (Establishing the context)
- Establishing what are the likely threats (Identifying hazards and risks)
- Understanding the likelihood and consequences (Analyze the risks)
- Rank risks in priority (Evaluate risks)
- What can be done to eliminate, reduce or manage risk (Identify risk treatment strategies).

Furthermore it assumes that definition of risk environment also includes Hazard Analysis, Vulnerability assessment and risk treatments:

Hazard Assessment is defined as the process of identification of events that lead to harm or loss. It may be undertaken using traditional or formal methods, and take into account both primary hazards (e.g. cyclone) and secondary hazards (e.g. storm surge, wind, rain). Hazards analysis in its process may use GIS and modern mapping methodologies, and include details of the effects to communities of the hazard.

Vulnerability Assessment would attempt to understand the interaction of hazards on communities, it is important to conduct a vulnerability assessment. The vulnerability assessment considers the elements within the community (e.g. women, children, and the poor), support elements to the community (e.g. power, transportation links, community services) and livelihood factors within the community (e.g. food, accommodation, farm activity, livelihood opportunities)

Risk treatment options involve ranking risk in priority, and addressing vulnerability by determining actions that reduce or eliminate risk or by determining mitigation programs for communities.

Managing the risk environment

This element of the model promotes the design of risk reduction strategies (Community Based Adaptation Programs) as an outcome of the risk assessment process. This ensures Prevention, Preparedness, Response and Recovery programs are multi hazard focused and

that the move from being hazard generic in nature to risk specific. This will enable communities to better understand their changing risk environment and thus become more resilient through proactive risk reduction efforts.

Responding to the threat environment

This element of the model involves responding to an actual threat situation. It helps Bangladesh disaster management officials to clearly articulate the difference between risk reduction and emergency response and how accurately defining risk environments can influence and enhance emergency response systems and decisions.

81. Not all hazards can be managed and not all risks can be eliminated or minimized. At times a response to an emerging threat or an event that has happened will be necessary. In this case, response and recovery systems that have been developed in managing the risk environment are activated as needed to respond to the threat. Such response may include: warning Period (Alert and activation); Hazard Onset (Response), and Post Hazard Period (Relief, early recovery and Rehabilitation).

The key attributes of the model are:

- It provides a framework to guide the achievement of the Hyogo Framework for Action commitments.
- It clearly articulates the key elements of disaster management and their interactive relationships.
- It facilitates the transition from generic hazard based to specific risk based programs through the inclusion of technical inputs.
- It provides guidance for the design of policy, planning and training.
- It provides a mechanism to achieve consistency in process and methodology.
- It ensures preparedness and response strategies are influenced by technical and traditional considerations.

Strategic Approach of Mainstreaming disaster management and risk Reduction

Mainstreaming disaster management and risk reduction efforts within government, NGOs and private sector is viewed as being the key to achieving sustainable all hazards risk reduction interventions across the whole country. In Bangladesh mainstreaming is seen in much the same light as poverty reduction in that it is the outcome of many top down and bottom up interventions. Following are the main components of the disaster management and risk reduction strategies:

Advocacy: Awareness raising among Political, Senior Policy and Government Department Officials, Media and Academic Institutions is a priority strategy for building knowledge and understanding on the benefits of risk reduction and the roles these organizations play in implementing risk reduction programs.
85. Policy and Planning Reform: A significant review of disaster management and development planning policy is being undertaken to ensure that they facilitate mainstreaming and promote a comprehensive risk reduction culture.

Capacity Building: This strategy has targeted a complete review of the roles and responsibilities of disaster management committees (DMCs) at all levels to ensure they reflect risk reduction as well as emergency response functions. A national training curriculum is being developed to ensure that committees receive capacity building training to ensure they understand and can fulfill their functions effectively.
87. Planning Frameworks: Disaster management planning at all levels is being significantly overhauled to ensure that DMC plans accommodate risk reduction mainstreaming at all levels.
Uniform Community Risk Assessment (CRA) Guidelines: Uniform CRA processes are being established to ensure consistency in the conduct of community risk identification and compatibility with the risk reduction planning processes of the respective DMCs. The guidelines also have steps to ensure strong linkages with scientific analysis information.
89. In view of the disaster management framework, the Government of Bangladesh is in a process of developing following guidelines for disaster management. These guide lines are being developed for all levels on the basis and experiences of as best practice models being practiced by NGOs, disaster management committees and civil society in implementing disaster risk management.

Following guidelines are in a process of development:

- Disaster Impact and Risk Assessment Guideline
- Local Disaster Risk Reduction Fund Management Guidelines
- Emergency Fund Management Guidelines
- Indigenous Coping Mechanism Guidebook
- Community Risk Assessment Guidelines
- Damage and Needs Assessment Methodology
- Hazard Specific Risk Assessment Guidelines
- Emergency Response and Information Management Guideline
- Contingency Planning Template
- Sectoral Disaster Risk Reduction Planning Template
- Local Level Planning Template

- National Risk Reduction Fund Management Guideline
- National Disaster Reduction and Emergency Fund Management Guideline
- Local Disaster Management Fund Guideline
- Guideline for Road and Water Safety
- Guideline for Industrial Safety
- Guideline for Disaster Shelter Management
- Monitoring and Evaluation Guideline for the Implementation of the Plan
- Guideline for International Assistance in Disaster Emergency

5. National Policy and Regulatory and institutional framework of Disaster Management in Bangladesh

Disaster Management Regulatory Framework

The Disaster Management Vision of the Government of Bangladesh is "to reduce the risk of people, especially the poor and the disadvantaged, from the effects of natural, environmental and human induced hazards, to a manageable and acceptable humanitarian level, and to have in place an efficient emergency response system capable of handling large scale disasters"[19]. Subsequently over last two decades Bangladesh has developed an elaborate disaster management regulatory framework and operational structure.

Bangladesh's regulative framework for disaster management provides for the relevant legislative, policy and best practice framework under which the activity of Disaster Risk Reduction and Emergency Management in Bangladesh is managed and implemented. Disaster management policy as spelled out in various document provides the broad outline of the disaster management in Bangladesh. The policy is translated to a legal framework called *Disaster Management Act*. Furthermore in line with the policy and Act there are number of plan documents that lay down the functional strategies of the disaster management system in Bangladesh.

Disaster Management Act

A Disaster Management Act has been enacted by the Parliament on 24th September 2012 with a view to create the legislative tool under which disaster risk and emergency management to be undertaken in Bangladesh, and the legal basis in which activities and actions to be managed. The Act has created mandatory obligations and responsibilities on Ministries, committees and appointments. The objectives of the Act is : a) To help communities to mitigate the potential adverse effects of hazard events, prepare for managing the effects of a disaster event, effectively respond to and recover from a disaster or an emergency situation, and adapt to adverse effects of climate change; b) To provide for effective disaster management for Bangladesh; c) To establish an institutional framework for disaster management; and d) To establish risk reduction as a core element of disaster management.

The Act (Part II, Section 4.2) narrates the detail provisions of various institutional arrangement of disaster management and the structure, role and function of the high power disaster management council. Section 7 narrates the structural and functional provisions of the Directorate of the Disaster Management. Section 16 provides the legal approval of

[19]http://www.ddm.gov.bd/govvision.php

formation of various coordination committee at national and local levels. The Act (Section 12) has a provision for the establishment of a disaster a management research institute. The Act provides the provision of formulation of a National Disaster Management policy.

National Disaster Management Plans

The Bangladesh National Plan 2010 for Disaster Management (NDMP) is a strategic document and an umbrella plan that provides the overall guideline for the relevant sectors and the disaster management committees at all levels to prepare and implement their area of roles specific plans (GOB, 2010). The Disaster Management and Relief (DM&R) being the focal ministry for disaster risk reduction and emergency management take the lead role in undertaking the disaster risk reduction and emergency management planning. Additionally, there are few other hazard specific management plans, such as Flood Management Plan, Cyclone and Storm Surge and Tsunami Management Plan, Earthquake Management Plan, Drought Management Plan, River Erosion Management Plan, etc to supplement the NDMP. Moreover, there are detailed Disaster Management Plan for each District, Upazila, Union and Pourashava and City Corporation of the country. A District Disaster Management Plan compiles the Upazila Disaster Management Plans for each District. Similarly an Upazila Disaster Management Plan compiles the Union Disaster Management Plans prepared by the Union Disaster Management Committees (UDMCs). In fact Disaster Management Committees (DMCs) at Union and Pourashava levels are mainly responsible for conducting the risk assessments and prepare the ground level plans. Once developed those are sent to the DMCs at one level higher.

Standing Orders on Disaster (SOD)

Bangladesh's regulative framework for disaster management provides for the relevant legislative, policy and best practice framework under which the activity of Disaster Risk Reduction and Emergency Management in Bangladesh is managed and implemented. The framework includes:

Standing Orders on Disaster: The Standing Orders on Disasters (SOD), promulgated by the Government of Bangladesh (GOB) in November, 1985 and updated thereafter, constitute the basic plan for coping with disasters. SOD laid down the guidelines for action at various stages of disaster by all government and non-governmental agencies to cope with situation arising out of cyclone disaster. It has been updated to incorporate all new lessons learnt. The Standing Orders on Disaster describes the detailed roles and responsibilities of committees, Ministries and other organizations in disaster risk reduction and emergency management, and establish the necessary actions required in implementing Bangladesh's Disaster Management Model. All Ministries, Divisions/Departments and Agencies have to prepare their own Action Plans as regards their responsibilities under the Standing Orders.

In addition there are several specific guidelines for disaster management applicable to all levels[20].

The Standing Orders have been prepared with the avowed objective of making the concerned persons understand their duties and responsibilities regarding disaster management at all levels, and accomplishing them. All Ministries, Divisions/Departments and Agencies shall prepare their own Action Plans in respect of their responsibilities under the Standing Orders for efficient implementation. The National Disaster Management Council (NDMC) and Inter-Ministerial Disaster Management Coordination Committee (IMDMCC) are authorized to ensure coordination of disaster related activities at the National level. Coordination at District, Upazila Upazila and Union levels are done by the respective District, Upazila and Union Disaster Management Committees. The Directorate of Disaster Management has been empowered to render all assistance to such bodies by facilitating the process.

Disaster Management Structure

Bangladesh has a fairly well-developed institutional mechanism at the national and field levels for managing particularly the consequences of natural disasters. A series of inter-related institutions, at both national and sub-national levels have been created to ensure effective planning and coordination of disaster risk reduction and emergency response management.

The Ministry of Disaster Management and Relief (MoDMR) of government of Bangladesh has been given the mandate to drive national risk reduction reform programs. Its mission relative to this agenda 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".[21] The MODMP has set the following vision" The disaster management vision of the Government of the People's Republic of Bangladesh 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"
(http://www.ddm.gov.bd/govvision.php)

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[20] These guidelines are based on best practice models and are applicable to Ministries, NGOs, disaster management committees and civil society in implementing disaster risk management. Guidelines cover among others: a. Disaster Impact and Risk Assessment, Local Disaster Risk Reduction Fund Management, Emergency Fund Management, Indigenous Coping Mechanism, Community Risk Assessment, Damage and Needs Assessment Methodology, Hazard Specific Risk Assessment, Emergency Response and Information Management Guideline, Contingency Planning Template, Sectoral Disaster Risk Reduction Planning Template, Local Level Planning Template, National Risk Reduction Fund Management, National Disaster Reduction and Emergency Fund Management, Local Disaster Management Fund, Road and Water Safety, Industrial Safety, Disaster Shelter Management, Monitoring and Evaluation Guideline for the Implementation of the Plan, International Assistance in Disaster Emergency.

[21] http://www.dmrd.gov.bd/

Role and function of the Ministry of Disaster Management and Relief include the following:

- Formulation review and execution of legislation, policies, plans, procedures, standing orders and guidelines relating to overall disaster risk reduction and emergency response management including relief, rehabilitation and safety net programs.
- Maintaining database on recipient of Vulnerable Group Feeding (VGF), Vulnerable Group Development (VGD) and other safety net management information system.
- Relief and Disaster risk reduction programs, planning, research and monitoring.
- Administration of technical and non-cadre services under this Division and its attached Directorates/Bureau and subordinate offices including personnel management, control, performance appraisal and oversight functions.
- Coordination of all activities relating to disaster management and relief incorporating disaster risk reduction and emergency response management.
- Mainstreaming Disaster Risk Reduction across line ministries and agencies at all levels, local governments, NGOs, CBOs, Civil society and all other stakeholders.
- Implementation of the disaster related programs/projects undertaken due to adverse impacts of climate change.
- Design, approval, administration, coordination and monitoring of emergency relief and rehabilitation programs including distribution of relief materials, gratuitous relief etc.
- Approval, administration and monitoring of safety net programs, such as Test relief, Vulnerable Group Feeding (VGF), Vulnerable Group Development (VGD), Food For Works Program. Institutional Feeding Program, Rural Infrastructure Maintenance Program, Risk Reduction Program, Road Maintenance Program, House Building Grants, etc.
- Construction and Maintenance of small bridges/culverts, multi-purpose disaster shelters, Cyclone shelters, flood shelters with a view to eliminating/reducing disaster risks.
- Preparation and execution of various development projects/programs on subjects allotted to this Division.

The Ministry of Disaster Management and Relief (MoDMR) of the Government of Bangladesh has the responsibility for coordinating national disaster management efforts across all agencies. In January 1997 the Ministry issued the Standing Orders on Disaster (SOD) to guide and monitor disaster management activities in Bangladesh. The SOD have been prepared with the avowed objective of making the concerned persons understand their

duties and responsibilities regarding disaster management at all levels, and accomplishing them. All Ministries, Divisions/Departments and Agencies prepare their own Action Plans in respect of their responsibilities under the Standing Orders for efficient implementation. The National Disaster Management Council (NDMC) and Inter-Ministerial Disaster Management Coordination Committee (IMDMCC) ensure coordination of disaster related activities at the National level. Coordination at District, Upazila and Union levels is done by the respective District, Upazila and Union Disaster Management Committees.

Department of Disaster Management (DDM) under the Ministry of Disaster Management and Relief was set up in November 2012 following enactment of the Disaster Management Act 2012. The Department has the mandate to implement the objectives of Disaster Management Act by reducing the overall vulnerability from different impacts of disaster by undertaking risk reduction activities; conducting humanitarian assistance programs efficiently to enhance the capacity of poor and disadvantaged as well as strengthening and coordinating programs undertaken by various government and non-government organizations related to disaster risk reduction and emergency response. DDM is responsible to execute the directions, recommendations by the Government in connection with disaster management as well as the national disaster management principles and planning.

The mission of Department of Disaster Management (DDM) is to serve the Ministry of Disaster Management and Relief to implement the objectives of Disaster management Act 2012 by undertaking risk reduction activities; responding to disaster events efficiently as well as strengthening and coordinating programs undertaken by different stakeholders related to DRR and DRM.

DDM has the vision to be recognized as a vibrant Centre of Excellence for knowledge, research and capacity building on disaster management for the Disaster Management professionals across level.

DDM conducts research, organizes workshops and training programmes, publishes its reports and documents and provide various policy advisory services to the concerned Ministry of the Government of Bangladesh.

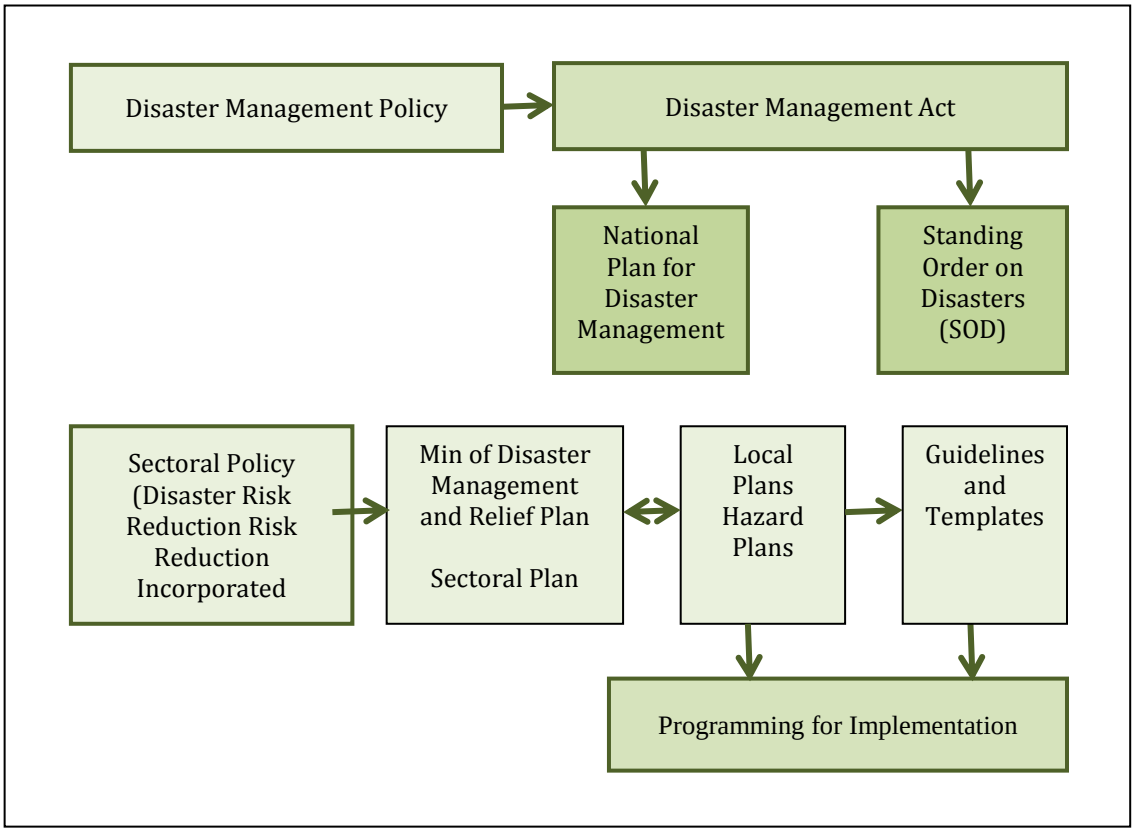
Other Ministries

Of all the other ministries, it is the Ministry of Water Resources (MWR) which plays a vital role in flood management. It is involved in the planning of water resources in relation to water-related natural disasters, such as cyclone protection, flood proofing, riverbank erosion control and drought management, although the mitigation of disasters remains beyond its mandate. The Flood Forecasting and Warning Center (FFWC) of MWR plays an important role in providing early warning to the agencies involved.

Bangladesh Red Crescent/Cross Society (BRCS) play an important role in overall disaster management programs. One of such lead program is the Cyclone Preparedness Program (CPP) which was first established in 1972, following the devastating cyclone of 1970. The CPP came out of an agreement between the Bangladesh Red Crescent Society (BRCS) and the Government of Bangladesh, with the aim of undertaking effective cyclone preparedness measures in the coastal areas. CPP under the Bangladesh Red Crescent Society (BRCS) has a joint management structure, with two committees—a 7-member Policy Committee headed by the Minister of MFDM and a 15-member Implementation Board, led by the Secretary of the MFDM. Now the CPP has about 33,120 trained volunteers, including 5,520 female volunteers (Ministry of Food and Disaster Management) (2005) Corporate Plan 2005–2009—ComprehensiveDisasterManagement: A Framework for Action, Government of Bangladesh, Dhaka)

Figure below shows the inter-linkages between various regulative instruments and programming for implementation.

Disaster Management Regulatory Framework



Policy Making, Management Council & Committees on Disaster Management

NDMC : *National Disaster Management Council (NDMC*) At the apex level, the National Disaster Management Council is established to provide policy guidance towards disaster risk reduction and emergency response management in Bangladesh. The NDMC headed by the Prime Minister to formulate and review the disaster management policies and issue directives to all concerns. The Council is multi-sectoral and inter-disciplinary in nature, with public, private and civil society participation involving all concerned entities within a country including representation from the United Nations. NDMC has been constituted to ensure coordination of disaster related activities at the National level. For coordinating disaster management activities at District, Upazila[22] and Union levels- there are respective District, Thana and Union Disaster Management Committees. The Department of Disaster Management and Relief at the center renders all assistance to them by facilitating the process.

NDMAC : *National Disaster Management Advisory Committee (NDMAC)* is headed by a person nominated by the Prime Minister, is responsible to advise committees and Department of Disaster Management on technical matters and socio-economic aspects of Disaster Risk Reduction and emergency response management.

IMDMCC : *Inter-Ministerial Disaster Management Co-ordination Committee (IMDMCC)* headed by the Minister in charge of the Disaster Management and Relief Division (DM&RD) to implement disaster management policies and decisions of NDMC / Government.

NPDRR : *National Platform for Disaster Risk Reduction (NPDRR)* headed by Secretary, DM&RD and Director General (DG), Disaster Management Bureau (DMB) functions as the member Secretary. This platform shall coordinate and provide necessary facilitation to the relevant stakeholders.

[22]Upazila means sub-district. There are 468 Upazila in Bangladesh. Each Upazila has a elected council composed a Chair, two Vice Chair (one male and one female), elected Chairperson of the Union Parishads are the members of the Upazila Parishad. All Upazila based line agency officers are also non-voting members of the Upazila Parishad.

CPPIB : *Cyclone Preparedness Program Implementation Board (CPPIB)* headed by the Secretary, Disaster Management and Relief Division to review the preparedness activities in the face of initial stage of an impending cyclone.

DMTATF : *Disaster Management Training and Public Awareness Building Task Force (DMTATF)* headed by the Director General of Disaster Management Bureau (DMB) to coordinate the disaster related training and public awareness activities of the Government and NGOs.

CNDMCC : *Committee of NGOs relating to Disaster Management (NGO Coordination), (CNDMCC)* headed by the Director General of DMB to review and coordinate the activities of concerned NGOs in the country.

CSDSSSWB : *Committee for Speedy Dissemination and Determination of Strategy of Special Weather Bulletin (CSDSSSWB),*headed by the Director General of DMB to examine, ensure and find out the ways and means for the speedy dissemination of warning/ signals among the people.

EPAC : *Earthquake Preparedness and Awareness Committee (EPAC)* headed by minister for MoFDM and DG, DMB act as member secretary.

CPPPC *Cyclone Preparedness Program Implementation Board (CPPIB)* headed by the Secretary, Disaster Management and Relief Division to review the preparedness activities in the face of initial stage of an impending cyclone. Secretary, MoDMR act as member secretary.

DMTATF : Disaster Management Training and Public Awareness Building Task Force (DMTATF) headed by the Director General of Disaster Management Bureau (DMB) to coordinate the disaster related training and public awareness activities of the Government, NGOs and other organizations.

CSDDWS : *Committee for Speedy Dissemination of Disaster Related Warning/ Signals (CSDDWS)* headed by the Director General of DMB to examine, ensure and find out the ways and means for the speedy dissemination of warning/ signals among the people.

Focal Points Operational Co-ordination Group (FPOCG).

In order to coordinate the entire disaster management system at various levels there is a Committee for Focal Points Operational Co-ordination Group (FPOCG). The Committee meets once in every three months during normal time and more than once in every week during disaster period. The TOR of the Committee includes:

- It shall supervise the overall co-ordination of national and field-level activities of the Disaster Management Committees and give appropriate directions in this respect.
- If necessary, the chairman of the committee may co-opt more members. The committee shall review the disaster preparedness and post disaster programs.
- The Committee shall identify the different problems relating to disaster management and make recommendations for their solutions.

Local Consultative Group of Donor on Disaster and Emergency Response

The Local Consultative Group on Disaster and Emergency Response (LCG-DER) includes representation of all key stakeholders and is the central forum for Government and its development partners to take strategic decisions and share ideas and information on disaster management. Being one of the 18 thematic working groups of the LCG, the Disaster and emergency is mandated to ensure effective coordination of the national and international stakeholders in the broader scope of disaster management (risk reduction, preparedness, relief/response, and recovery/rehabilitation). The LCG-DER is chaired by the Secretary, Ministry of Disaster Management and Relief and Co-Chaired by the UN Resident Coordinator in Bangladesh.

In January 2012, following an in-depth review of the humanitarian coordination system in Bangladesh, a reformed Humanitarian Coordination structure was approved by the LCG-DER. This reformed structure includes the Humanitarian Coordination Task Team (HCTT) with its eight humanitarian clusters (Food Security, Nutrition, Health, Water, Sanitation and Health (WASH), Education, Shelter, Early Recovery and Logistics. Each cluster's lead agency is tasked with ensuring a coordinated, timely and inclusive response among partners in their respective sectors in close collaboration with the relevant line ministries and in support of the government response plan.

Sub-national levels committee and structures

At the district, Upazila and Union level there are different oversight and planning and management committees:

DDMC : *District Disaster Management Committee (DDMC)* headed by the Deputy Commissioner (DC) to coordinate and review the disaster management activities at the District level.

CCDMC : *City Corporation Disaster Management Committee (CCDMC)* headed by the Mayor of City Corporations to coordinate, review and implement the disaster management activities within its area of jurisdiction.

PDMC : *Pourashava Disaster Management Committee (PDMC)* headed by Chairman of Pourashava (municipality) to coordinate, review and implement the disaster management activities within its area of jurisdiction.

UZDMC : *Upazila Disaster Management Committee (UZDMC)* headed by the Upazila Nirbahi Officer (UNO) to coordinate and review the disaster management activities at the Upazila level.

UDMC : *Union Disaster Management Committee (UDMC)* headed by the Chairman of the Union Parishad to coordinate, review and implement the disaster management activities of the concerned Union.

In addition to the structures there are some funding provisions and projects which have direct and indirect implications on disaster management in Bangladesh. Following are the projects/ programs.

BCCRF : *Bangladesh Climate Change Resilience Fund (BCCRF)* is a coordinated financing of over $170m grant funds of the Government of Bangladesh, development partners and the World Bank to address the impacts of climate change. It was in May 2010. The prime aim of the grant funds to build resilience to the effects of climate change.

BCCTF : *Bangladesh Climate Change Trust Fund (BCCTF)* Bangladesh with its own money has created a $340 Trust Fund (BCCTF) to combat climate change. An amount of 10% of the amount is being spent by NGOs under the overall supervision of Palli Karma-Sahayak Foundation (PKSF)[23] and the rest by different ministries of the government.

Plans & Programs

The National Plan for Disaster Management *(NPDM) (*GOB2010) is an outcome of national and international commitments made by the Government of Bangladesh to address disaster risks comprehensively. This model is designed with the aim of strengthening national and local government work in DRR. The focus of the model is to enforce implementation of Standing Orders on Disaster (SOD) in addressing disaster risks reduction through (re)activation of Disaster Management Committees (DMCs) at district, upazilla, union, Pourashava and city corporation levels.

NPDM is an umbrella plan that provides the overall guideline for the relevant sectors and the disaster management committees at all levels to prepare and implement their area of

[23]A Micro Credit Foundation of the Government of Bangladesh

roles specific plans. The Ministry of Disaster Management and Relief being the focal ministry for disaster risk reduction and emergency management take the lead role in disaster risk reduction and emergency management planning. One of the goals of the NPDM is to devise "a mechanism for dealing with many convergent issues of climate change and disaster risk reduction, translating the hard science of climate change prediction into tangible, community-level actions that support adaptation".

Comprehensive Disaster Management Program

It is one of the core program of the MoDMR with a strategic focus to lay the foundation for the paradigm shift from a post-disaster relief and response strategy towards a comprehensive risk minimization culture that encourages disaster resilience initiatives. The program aims at reducing Bangladesh's vulnerability to adverse natural and anthropogenic hazards and extreme events, including the devastating potential impacts of climate change. The program targets to institutionalize the adoption of risk reduction approaches, not just in its host Ministry of Disaster Management, but more broadly across other key ministries and agencies. The CDMP has a number of elements with a strong focus on local-level efforts, including a standardized Community Risk Assessment (CRA) process that combines local knowledge with technical and scientific information to facilitate an analysis of hazards and vulnerabilities. This approach is to be realized through a series of inter-connected strategic directives and processes:

- Raising the level of expertise of the Disaster Management Systems
- Mainstreaming Disaster Risk Management Programming
- Strengthening Community Institutional Mechanisms
- Expanding Preparedness Programs across a broad range of hazards
- Operationalizing Response Systems.

District Disaster Management Plan (DDMP)

There is a District Disaster Management Committee (DDMC) at the District level. The DDMC consists of the Deputy Commissioner of the District as the chairperson and members comprising all District level department heads, NGO leaders and civil society members. District Relief and Rehabilitation Officer (DRRO) acts as member secretary of the committee. Members of Parliament act as advisors of the committees. The committee is required to meet bi-monthly during normal period and as and when necessary during emergency situation. There is a plan for each District titled "District Disaster Management Plan" comprising both disaster risk reduction and emergency response to be prepared by the District Disaster Management Committee. This is a plan to be prepared by compilation of the Upazila and Pourashava Disaster Management Plans of the District being received from the

respective Upazila and Pourashava/City Corporation DMCs. The DDMP should assess, highlight and articulate following:

- Assess the areas in the District vulnerable to different forms of hazards and risks.
- Assess the total resource requirements and the planned action for the District.
- Take measures for prevention and mitigation of disasters by government agencies, NGOs, CBOs and the private sector within the District.
- Initiate capacity building and preparedness measures to be taken by government agencies, NGOs, CBOs and the private sector within the district.
- Strengthening emergency response management system plans and procedures in the event of a disaster.
- Prepare the response plans and procedures in the event of a disaster : plan allocation of responsibilities to the departments of the government at District level and other DMC members including setting the procedure for mobilization of resources, procurement of emergency supplies, operation of disaster shelters; restoration of emergency services, such as water supply, gas supply, power, telecommunication, road links; provision of emergency medical services; burial of dead bodies; trauma counseling; and dissemination of information

Upazila Disaster Management Plan (UzDMC)

Upazila is an important and vital administrative unit of Bangladesh. There is an Upazila Disaster Management Committee (UzDMC) at the Upazila level. The UzDMC consists of the Upazila Nirbahi Officer as the chairperson and members comprising all Upazila level department heads, NGO leaders and civil society members. The Project Implementation Officer (PIO) acts as the member secretary of the committee. The Members of Parliament of the local constituency act as advisors of the committees. The committee is required to meet bimonthly during normal period and as and when necessary during emergency situation.
For each each Upazila there is a Upazila Disaster Management Plan comprising both disaster risk reduction and emergency response which is prepared by the Upazila Disaster Management Committee by compiling all the Union Disaster Management Plans of the Upazila being received from the respective Union DMCs of the Upazila. The UzDMP is expected to highlight and articulate, among others, the following:

- The areas in the Upazila vulnerable to different forms of hazards and risks.
- Total resource requirements and the planned action for the District to take measures for prevention and mitigation of disasters by government agencies, NGOs, CBOs and the private sector within the District, assess cost of capacity building and preparedness measures to be taken by government agencies, NGOs, CBOs and the private sector; strengthening emergency response management system plans and procedures in the event of a disaster.

UzDMP also prepares response plans and procedures in the event of a disaster, providing for:

i. Allocation of responsibilities to the departments of the government at Upazila level and other DMC members; procedure for mobilization of resources; procurement of emergency supplies;

ii. Operation of disaster shelters; restoration of emergency services, such as water supply, gas supply, power, telecommunication, road links; provision of emergency medical services; burial of dead bodies and trauma counseling; and the dissemination of information

UzDMP prepares the recovery plans and procedures delineating damage assessment procedure, restoration of damaged public infrastructure, resumption of educational institutions, restoration of livelihood, rehabilitation of affected people, especially the disabled, and elderly women and children.

The UzDMP is reviewed and updated annually. The copies of the UzDMP are be made available to all Upazila level stakeholders and members of DDMCs. A copy of the UzDMP is sent to the District Disaster Management Committee and Department of Disaster Management (DDM). The DDM provides technical advice and capacity building services to all DMCs.

Union Disaster Management Plan (UDMP)

Union Parishad is the lowest administrative unit of Bangladesh. There is a Disaster Management Committee (UPDMC)at the Union level. The UDMC is chaired by the elected Chairman of the respective Union Parishad. The Union Disaster Management Committee consists of the Union Parishad Chairman as the Chairperson and members comprising all the Government department head at Union level, members of Union Parishad, NGO leaders working in respective union and civil society members. Secretary of the respective Union Parishad acts as the member secretary of the committee. The committee is required to meet bimonthly during normal period and as and when necessary during emergency situation.

Union Disaster Management Plan comprises both disaster risk reduction and emergency response. The plan is prepared by the Union Disaster Management Committee following a proper community risk assessment procedure with the participation of vulnerable groups and the communities. The roles and responsibilities of the UDMP covers the following:

- Defining and redefining community risks to hazards utilizing both traditional and scientific knowledge.
- Estimate total resource requirements and the planned action for the Union.

- Take measures for prevention and mitigation of disasters with the assistance of government agencies, NGOs, CBOs and the private sector within the Union.
- Develop capacity and preparedness measures with assistance and collaboration of the government agencies, NGOs, CBOs and the private sector.
- Strengthen emergency response management system plans and procedures in the event of a disaster.

UPDMP prepares the response plans and procedures in the event of a disaster, providing for: Allocation of responsibilities to the departments of the government at UP level; mobilization of resources for prompt response to disaster and relief; procurement of emergency supplies and operation of disaster shelters; restoration of emergency services, such as water supply, gas supply, power, telecommunication, road links, emergency medical services and burial of dead bodies; provide trauma counseling and dissemination of information

UPDMP also prepares recovery plans and procedures delineating damage assessment procedure, restoration of damaged public infrastructure, resumption of educational institutions, restoration of livelihood, rehabilitation of affected people, especially the disabled, and elderly women and
children.

The copies of the UDMP shall be made available to all Union level stakeholders, UNOs and DCs. A copy of the UDMP will be sent to the Upazila Disaster Management Committee. The DDM provides technical advice and capacity building services to all DMCs.

Challenges of Disaster Management Committee and Disaster Management Plans at Field levels

Disaster Management Committee (DMC) structure at District, Upazilla, Pourashva, Union and City Corporation levels are key institutions for ensuring a comprehensive disaster risk reduction and management at local level. These structure bridges the gap between government and community by supporting resilience building of communities and institutions throughout Bangladesh.

Abiding by legal provisions, DMCs are mandated to lead disaster management initiatives at local level. Building on the existing institutional set-up of the government, it is imperative that DMCs at different levels function effectively to ensure a holistic disaster management. DMCs being among the first responders in emergency can play a critical role in facilitating effective emergency response and early recovery as well as linking relief and rehabilitation work with long term development thereby sustainable disaster management. Having the legal authority to respond and undertake short to long term development work at the

ground, resilience building initiatives will be sustained through effective functioning of DMCs at different levels.

Limited resources and funding opportunities as well as capacity to implement the DM framework have restricted DMCs from performing effectively. There is a need to adopt a comprehensive approach which will not only empower DMCs to function as per the policy mandates to them, but also to increase overall resilience of communities at risk. The approach should also be self-sustained and should provide cost-effective solutions for resilience building.

Sectoral Development Plans Incorporating Disaster Risk Reduction

Every Ministry/Division of the Government of Bangladesh prepares their respective Sectoral Development Plans. The MoDMR with the participation of sectoral experts will prepare a general guideline to incorporate disaster risk reduction agenda for the sectors. The MoDMR is also responsible for overall monitoring and follow-up of the process to ensure that disaster risk reduction agenda are mainstreamed within the sectoral policies, plans and programs. As per the Disaster Management Act, the development plans should address, among others, the following:

a. Defining and redefining risk environment through hazard analysis, vulnerability assessment, risk evaluation, risk treatment options, and risk treatments;

b. Managing the risk environment by developing programs and strategies that eliminate, or reduce the level of risk. Traditionally mitigation programs were viewed as engineering solutions to eliminate risk, but it is now accepted that all activities undertaken to eliminate or reduce risk are "mitigation" strategies (e.g. community education and awareness, planning activities, development of warning systems). This includes activities previously described as the PPRR Model- Prevention, Preparedness, Response and Recovery.

c. Regularly review and update the plan.

Each sectoral Ministry plan is expected submit a copy of their plan to the Ministry of Disaster Management and Relief for horizontal coordination and integration..

Hazard Specific Multi-sectoral Disaster Management Plans

In addition to area specific disaster management plans and sector specific disaster risk reduction Plans, there are few hazard-specific management plans, such as earthquake management plan. Such plans also have two components: risk reduction and emergency response to address specific necessities to deal with the hazard.

Earth Quack Contingency Plan

It is evident from the past history of higher intensity earthquake in this region and the mild shakes experienced in recent dates as an initial call for earthquake in major cities of Bangladesh. The over all development of these cities has taken place with out any caution for the earthquake. As such, it is feared that a high intensity earthquake in these cities may result in to serious devastation and collapse the cities.

Emergency Preparedness Plan for cyclone

Since Bangladesh is approaching cyclone season, the Department of Disaster Management has initiated preparation of this Emergency Preparedness Plan for cyclone with assistance from the Early Recovery Facility (ERF). The emergency preparedness plan consists of five areas of preparedness: 1) Vulnerability and Risk Analysis; 2) pre-positioning of emergency relief items; 3) information management; 4) local level preparedness; and 5) resource mobilization.

This Emergency Preparedness Plan is designed to provide guidance on how to meet the desired state of preparedness and the necessary state of readiness to respond to cyclone risks in Bangladesh. This plan will engage all relevant actors and will assist government agencies, local authorities, and other stakeholders active in cyclone emergency preparedness and response.

The Plan is aligned with the Standing Orders on Disaster (SOD). It is designed to complement and expand upon the disaster preparedness and response mandate of the Government of Bangladesh, as outlined in the SOD. The guidance also draws upon previous experiences with preparedness and response work before, during and after cyclone events in Bangladesh.

Disaster and Climate Adaptation Funds

Local Disaster Risk Reduction Fund (LDRRF) is a funding mechanism established jointly by Government and the donors in the Comprehensive Disaster Management Program (CDMP) to provide resources and financial supports for the most vulnerable communities in the form of grants to broaden and strengthen their coping capacities against disaster and climate change. The projects are being implemented by local government and /or CBOs/NGOs through a competitive bidding process.

Poverty, Environment and Climate Mainstreaming (PECM): The project seeks to enhance the institutional capacity of targeted national stakeholders, allowing them to integrate poverty-environment-climate. The Project supports the development and dissemination of analysis

on the economic and social impacts of climate change with greater evidence-based climate planning.

*Upazila Governance Project (UZGP)*The specific objective of the Upazila Governance Project (UZGP) is to strengthen the capacities of the local government institutions and stakeholders to foster participatory local development service delivery for the MDGs.

*Union Parishad Governance Program (UPGP)*The specific objective of UPGP is to strength the capacities of Union Parishad to foster participatory local development service delivery for the MDGs. The project intends to carry out piloting and evaluating innovations to improve the functional and institutional capacity and democratic accountability of Union Parishads.

Local Governance Support Program (LGSP): The development objectives of the Local Governance Support Program is to strengthen Union Parishad to become accountable and responsive, supported by an efficient and transparent intergovernmental fiscal system. The project provides the UP with direct block grant for improving local level services and also incentive based performance grants.

Bangladesh has so far created a $300 million Climate Change Trust Fund (BCCTF) with its own money and a $125 million Climate Change Resilient Fund (BCCRF) with foreign money. The former is governed by a high-powered trustee board while the latter is managed by the World Bank.

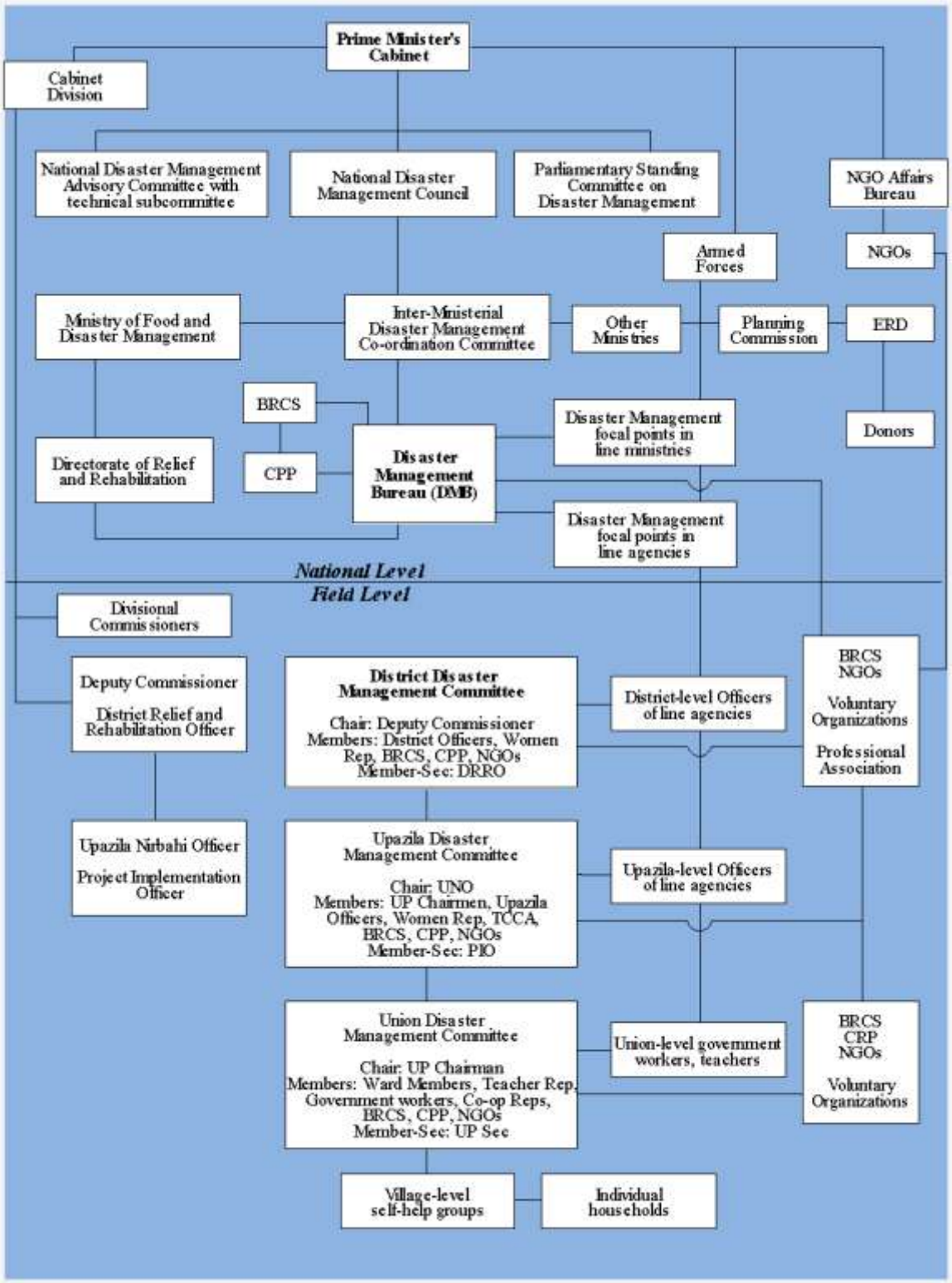
In line with the Sixth Five-Year Plan and Perspective Plan and National Plan for Disaster Management 2010-15. MoDMR is planned to establish a National Disaster Management Research and Training Institute with the objective of undertaking research initiatives regarding the impact of disaster and climate change and to increase the capacity of disaster management system of Bangladesh.

According to the National Plan for Disaster Management 2010-15, the government has adopted significant goals and strategies to achieve progress in terms of disaster risk reduction and emergency management by 2015. The national budget 2013-14 has demonstrated the government's commitment with significantly enhanced allocation towards accomplishment of such goals and strategies for disaster risk reduction and emergency response. Tk.6,524 crore (development and non-development budgets combined) has been allocated for the Ministry of Disaster Management and Relief (MoDMR) for 2013-14 fiscal24.

During the current Fiscal Year Tk.253.71 mil has been allocated for the Social Safety Net Program (SSNPs), which is 11.4% of the total budget. While planning for SSN programs,

[24]Budget Speech of the Minister of Finance, 2013-2014

geographical vulnerability in terms of natural disaster and poverty is considered in targeting the beneficiaries. In order to strengthen the disaster management, the Government has trained 48,000 volunteers under the cyclone preparedness program.



6. Role of Local Government in Disaster Management

International experiences

Based on a comprehensive review of the experiences of different continents, United Nations Secretariat of the International Strategy for Disaster Reduction (UNISDR) has identified four major roles of local governments in implementing disaster risk reduction. (UNISDR 2010).

To play a central role in coordinating and sustaining a multi-level, multi-stakeholder platform to promote disaster risk reduction in the region or for a specific hazard:
The active commitment and leadership of a local government is important for the implementation of any local disaster risk reduction measures to deal with different stakeholders and multiple layers of government. In many cases, a comprehensive disaster risk reduction measure takes long time to fully implement, and the leadership of the local government is particularly crucial to ensure the political momentum and support among external stakeholders throughout the process.

To effectively engage local communities and citizens with disaster risk reduction activities and link their concerns with government priorities: As the most immediate public service provider and interface with citizens, local governments are naturally situated in the best position to raise citizens' awareness of disaster risks and to listen to their concerns. Even the most sophisticated national disaster risk reduction measures (such as early warning systems) may fail, if communities are not properly informed and engaged. Likewise, community preparedness measures are sometimes as effective as costly public investments in reducing casualties from disasters, and local governments should play a central role in community education and training.

To strengthen their own institutional capacities and implement practical disaster risk reduction actions by themselves: As the governmental body responsible for the long-term development and viability of its area, a local government is required to consider and institutionalize disaster risk reduction in its day-to-day operations, including development planning, land use control and the provision of public facilities and services.

To devise and implement innovative tools and techniques for disaster risk reduction, which can be replicated elsewhere or scaled up nationwide: Because of its smaller scale and flexibility, a local government is better positioned than a national government to develop and experiment with various new tools and techniques, applying them to unique settings and policy priorities.

Scope for engagement of Local Government in Disaster Management

Based on empirical evidences Jeanne Col (2007) draws four lessons for the local government to be effective in disaster management. *First*, local governments must be able to act decisively and as early as possible in preparation for disaster; *Second* – The local government must be supported in its disaster preparation and mitigation efforts by higher levels of government, *Third*, citizens must participate in all phases of preparation and execution of emergency management measures, and *Fourth*, in order to manage disaster, linking scientific information to operational plan and management play an important role.

The effectiveness of local government in disaster management depend not only on its resources base but also critically dependent upon skills of social mobilization, level of awareness, regular flow of information from various agencies, and requisite skills, technical understanding and knowledge to make use of technologies. More precisely, the most critical elements are: capacity building, access to information, use of technology, building linkages local CSOs/NGOs.

Capacity Building: Any efforts to tackle disaster must begin by strengthening the capacities of the UP representatives and the local volunteers to handle disasters more skillfully. Evidences suggest that the capacity building programs designed on a community driven approach enables the volunteers to understand their vulnerabilities, to identify hot-spot areas, map their resources and required support [25.] Furthermore training would help them to know the techniques of administering relief and rescue operations, assisting the external support agencies in rehabilitation and reconstruction activities.

Access to Information: The local government can handle disasters far more effectively when they have timely and regular access to information on disasters. Elaborate databank profiling local socio-economic situations, vulnerability intensities, hot-spots, target populations, resource availability would widen the opportunity of the UP to enhance its capacity and effectiveness during the time of a disaster. Further, databank would be useful for the external agencies to come forward with a comprehensive planning and management of their disaster management support programs at local government level.

Use of Technology: With the advancement of mobile phone and internet, some of the cutting edges of technology should help the UPs in managing disaster. Internet and a host of other tools can be of immense help to local government and communities in their efforts to meet the disasters more decisively. Use of such technologies and effective use of the UP Information Center could help the UP enhance the monitoring the occurrence of different types of disasters and in evaluating the report and monitor the losses, relief needs and the

[25]NiranjanSahoo, Decentralising Disaster Management, www.observerindia.com/cms/export/.../dm_1164974603042.pdf

impact of the disaster. IT could be used also for developing early warning strategies mobilizing resources, and even tele-medical services in the post disaster response, rehabilitation and reconstruction.

Building Linkages with local NGOs: The need for action and intervention in a disaster situation is at multiple levels and cut across various sectors. The quality of intervention depends a lot on the inter-sectoral, inter-departmental coordination and efficient teamwork. It is now acknowledged that in most countries including Bangladesh a good number of local and regional NGOs are well trained, equipped and have rich data base on local communities. Furthermore they have an excellent networking with the community based groups and have accumulated local knowledge. All such relative advantages of the NGOs should ideally be exploited the UP. The UP may institutionalize the relations by inducting NGO representatives in a number of UP Standing Committees dealing with development planning and most importantly in the UP Standing Committee on Social welfare and disaster management.

Social Communication and awareness building: NGOs can substantively help the UP to undertake social awareness programs to ensure active people's participation in disaster preparedness activities. NGOs could act as an ideal agency for creating a demand side of effective disaster management services. Some NGOs have already started working at the remote communities to mobilize community members specially the marginalized groups to actively engage in the disaster risk mitigation and management.

Local Government Policy Framework in Bangladesh

Decentralization has long been a recurring policy theme of governments of all persuasions in Bangladesh. All policy documents irrespective of the regime have emphasized the importance of decentralization. Importance of local government in Bangladesh has been recognized by the Constitution and several policy documents, including the National Rural Development Policy (NRDP) and the Poverty Reduction Strategy Paper (PRSP) (GOB, 2009) The National Rural Development Policy provides support for the development of mechanisms and the Sixth Five Year Plan (SFYP) (GOB, 2011:216). Of late the concept paper of the Seventh Five Year Plan has also highlighted the role of Local Government.

Importance of local government in Bangladesh has also been recognized by several policy documents, including the National Rural Development Policy and the Poverty Reduction Strategy Paper (PRSP). The National Rural Development Policy provides support for the development of mechanisms to develop the role of the local government as a facilitator and creator of the 'necessary conducive environment for the required services to be provided to the rural people and also expand the opportunities'. It underlines the importance of 'accountable and responsive' local government institutions, where 'people will be made

aware of and given access to services and opportunities offered by government'. The document further asserts:

> *"The centre-piece of the National Rural Development Policy is a strong and accountable system of local government, especially the Union Parishads. Union Parishads need to be empowered with additional resources, authority and training. A transparent formula needs to be put in place by which a significant amount of funds will be devolved to the union level as a matter of right, rather than as a function of central control. Union Parishads also need to be made accountable to the people through a system of regular village meetings as well as mandatory public display of information regarding government expenditure at all levels'.(GOB, 2000:5)*

Similarly the second Poverty Reduction Strategy underlines the multidimensional nature of poverty and suggests few important areas of intervention of LGIs (Local Government Institution/UPs. PRSP has recognized the need, importance and the role of Local Governments as active partners/ implementers of the programme. PRSP categorically noted that: a. "Local governments will be involved in microcredit delivery"; b. "In order to mainstream rural non-farm activities in rural development, an institutional set-up will be formed with different stakeholders, including local government institutions"; c. "There will be involvement of local government bodies and NGOs for greater participation of the community with a view to ensuring community driven primary health care services"; d. In extending the rural road connectivity "more involvement of local government institutions (LGIs)" will be made and the LGIs will be involved in "ensuring utilization and maintenance of constructed facilities"; e. For Disaster management "greater involvement of local government bodies and emphasis on non-structural mitigation" will be given; f. For the Control of Non-communicable Diseases "the government will, in partnership with local government administration and private sector create greater awareness"; g. For promoting good governance the PRSP acknowledged the importance of local government for "Improving the quality and predictability of public service delivery, expand citizens' participation and promotion open hearings to ensure that local government is responsive to citizens' needs."

The Sixth Five Year Plan (SFYP) has identified "*promoting devolution to local governments*" as one of the four pillars of development management. The Plan document further recognized that "*Efficient and dedicated local government bodies can deliver services and generate social and economic awareness to achieve the national goals (*[1]Bangladesh Sixth five Year Plan FY 2011-2015 - Accelerating Growth and Reducing Poverty, General Economics Division, Planning Commission, 2011)". As regards the local government, the main strategic elements of the SFYP include developing a well designed legal framework for decentralized governance; increasing the transparency and improving the accountability of local governments; building the capacity of local governments, expanding and strengthening participation of the citizens in prioritizing in the implementing and monitoring of development programs and other functions of the local government.

The SFYP provides the following vision:

> "*The local governments will be strengthened and much of the responsibility for delivering basic services such as irrigation, district roads, education, health, population management, water and sanitation services will progressively be decentralized to local governments".(GOB: 2010:211)*

Bangladesh policy documents have duly recognized the need and importance of the role of local government and reiterated strong commitments towards institutionalizing an effective and accountable local government to help implement the Vision 2021 and the programs of associated development plans. The plan documents have further emphasized the need for "empowering local government as the engine for delivering services and carrying out development activities, ensuring equal status for women in all spheres of society and state, and creating gainful employment for the labor force" (GOB, 2009:216)

The Second Five Year Plan strongly recognized "the potential of local government bodies, particularly the Union Parishad, to coordinate a streamlined institutional strategy needs to be actively explored". (GOB, 2009:164)

Furthermore the SFYP acknowledged the need for strengthening of local government and decentralization of authority imply delegating powers of the central government to the local level with the aim to addressing major issues like poverty reduction, good governance, infrastructure development and disaster management. Efficient and dedicated local government bodies can deliver services and generate social and economic awareness to achieve the national goals.

Noting the importance of the grassroots based local government, the SFYP observed that:

> *"an important corollary of moving towards a comprehensive approach on social protection programs will be the need to streamline the institutional strategy on implementation. The potential of local government bodies, particularly the Union Parishad, to coordinate a streamlined institutional strategy needs to be actively explored"(p.164).*

The SFYP strongly emphasized that:

> "*a strong local government that has well defined responsibilities and accountabilities can play a major positive role in delivering basic public services. Strengthening of local government and decentralization of authority imply delegating powers of the central government to the local level with the aim to addressing major issues like poverty reduction, good governance, infrastructure development and disaster*

management. Efficient and dedicated local government bodies can deliver services and generate social and economic awareness to achieve the national goals"(p.164)

The Seventh Five Year Plan of Bangladesh, which is under preparation, has recognized that some of the reform agenda issues are "unfinished". The concept note reiterated that the government is keen to initiate several reform agenda to strengthen institutions and improve the capacity of the core government agencies. Progress in several institution building efforts such as the development of the local government and municipalities has been below the expected level. This is an unfinished agenda. The Concept note also noted that additional efforts are needed concerning the adaptation to climate change and "*adaptation to alleviate the long term adverse implications of climate change requires substantial efforts*" (GOB, 2013:2). Furthermore the Seventh Five Year Plan aims to strengthen planning, budgeting and development program implementation at the local level and plans to include a dedicated chapter on Strategy for Local Government (GOB, 2013:8).

The Ruling Party Awami League in its election manifesto has also highlighted the role of grassroots based local government. The manifesto noted that the Union and Upazilla will be strengthened through decentralization of power. It is mentioned that "every union will be made the headquarter for development and administration of the area and be developed as a planned rural township. And every Upazilla headquarter will be developed as an industrial growth centre and a planned township". [26]

Government of Bangladesh in line with the Constitutional spirit has recently enacted a new law called Union Parishad Act 2009 replacing the old UP Ordinance of 1983.The UP Act 2009 has rightly recognized the importance of community participation, transparency and accountability by including specific sections on formation of ward committees, participatory planning, access to information, and extended authority of the Standing Committee [27]etc.

It therefore appears that, in addition to the strong Constitutional commitment, Bangladesh has a number of supplementary policy pronouncements and regulatory framework to establish an effective local government system. At the policy level, Local government has been repeatedly identified as a key strategic sector for improving governance and development in Bangladesh[28]. These policies have further widened the scope, role and

[26]Bangladesh Awami League, Election Manifesto, Item 6.

[27]There are 13 Standing Committee at UP level. These include: 1. Finance and establishment; 2. Audit and accounts; 3.Tax assessment and collection; 4. Education, health and family planning; 5. Agriculture, fisheries and livestock and other economic development work; 6. Rural infrastructure development, protection and maintenance; 7. Law and order; 8. Birth-death registration; 9. Sanitation, water supply and drainage; 10. Social welfare and disaster management; 11.Development & conservation of environment and tree plantation; 12.Resolution of family conflicts, women and children welfare (not applicable for Chittagong hill tracks people); 13.culture and sports.

[28]All Five Year Plans of the Govt. of Bangladesh highlighted the need and importance of local government as the prime institution for revitalizing the rural hinterland of Bangladesh.

function of the local government system of Bangladesh to address the developmental challenges of the country.

Local Governance Structures and Capacity

Local government in Bangladesh has a long historical lineage and a strong constitutional framework. The Constitution of Bangladesh is one of the most progressive ones in the region as far as the emphasis and importance to Local Government are concerned. Articles 59 and 60 set the prime foundation of the role and structure of Local Government[29]. Local Government system in Bangladesh as far the Constitution is concerned is unique of its kind in this part of the world[30].

There are two types of local government institutions (LGI)—rural and urban. Among the elected LGI, there are 7 City Corporations and 307 Pourasabhas (municipality) in urban areas and 4,502 Union Parishads (UP) in rural areas. The UP, the lowest tier local government body in the rural areas, was formed in 1870 and has continued to exist in different names for over 144 years. The local government system is overseen at the central government level by the Ministry of Local Government, Rural Development and Cooperatives (MoLGRDC). Each Union Parishad consists of nine wards, and each ward elects one ward representative to serve as a member of the Union Parishad (UP). In addition, three women members are elected to serve in the UP, with each woman member representing three wards. The UP chairman is elected from constituents of the entire union to lead the UP. Thus, in total, a UP consists of 13 elected officials. A UP secretary, appointed by the central government, manages records and accounts. The UP is also expected to form 13 standing committees to address various important issues for the union, but in reality these committees are often not highly active.

At the Upazila level, the Upazila Parishad (UZP) is tasked with overseeing all Upazila development activities and its membership include an elected chairman, two vice--chair men, one of which should be a woman, all of the UP chairmen from Unions within the Upazila, any mayors of Poursashas (municipality) within the Upazila, and a set of women members selected from among the women members of the UPs and

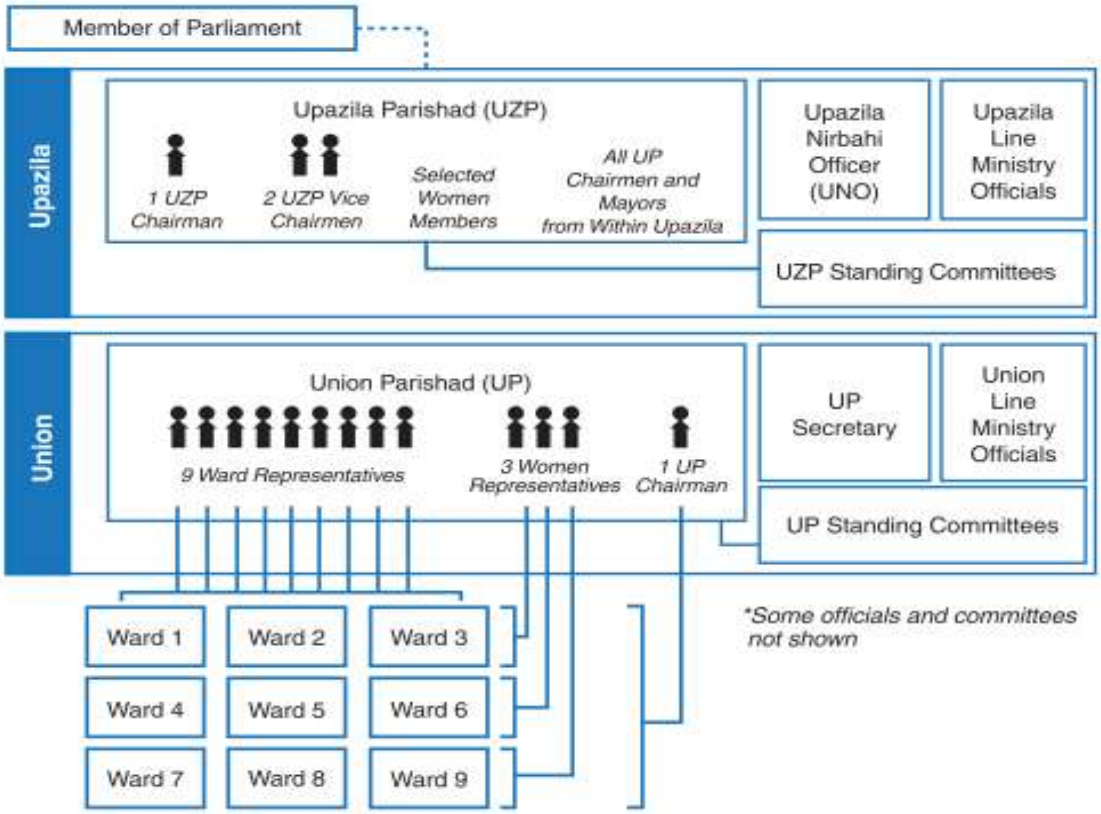
[29]The Constitution of Bangladesh in Articles 59 and 60 lay down a framework for local government bodies. Article 59(1) provides that 'Local Government in every administrative unit of the Republic shall be entrusted to bodies, composed of persons elected in accordance with law. Article 59(2) provides the broad functions of local government as: 'administration and the work of public officers; the maintenance of public order; the preparation and implementation of plans relating to public services and economic development'. Article 60 stipulates that 'For the purpose of giving full effect to the provisions of Article 59 Parliament shall by law, confer powers on the local government bodies referred to in that article, including power to impose taxes for local purposes, to prepare their budgets and to maintain funds'.

[30]Former Chief Justice Mustafa Kamal noted that the constitutional provisions on local Government (Articles 11, 59 and 60) mark out the Constitution of Bangladesh as clearly distinctive from other Constitutions of the world. No Constitution contains any definitive provision on local government. It is the Constitution of Bangladesh which for the first time devised an integrated scheme of local Government within a constitutional pattern. This is a most distinctive and unique feature of the Constitution of Bangladesh". (Supra note 6, at 341).

municipalities. This elected body at the Upazila level was only recently reconstituted in 2009, after having been previously removed in the 1990s.

In addition to this elected body, numerous central government bureaucrats also have influential roles at the Upazila level. The Upazila Nirbahi Officer (UNO) is a central government official who formerly had the role of overseeing and coordinating all activities at the Upazila level, prior to the reintroduction of elected UZPs, and now serves as a sort of "CEO" of the Upazila. Furthermore, numerous line ministries have offices and representatives at the Upazila level, such as the Upazila Agriculture Officer, the Upazila Livestock Officer, and the Upazila Engineer etc. All these officials are the employees of the central government (Ahmed, N, Tofail Ahmed& Faizullah , 2010).

About 65,000 elected functionaries (Mayors, Chairpersons, Ward Commissioners, and Members) lead and manage these institutions. Of all the LGIs, there is a provision of 30 % seats reserved for women. However, there are some deputed as well as transferred employees of the central government at Upazila, Pourashava and City Corporations. In case of UP, there is one permanent staff member who is appointed by the Government and his salary is jointly paid by the Government and UP.



Functional Assignments of Local Governments : Role of UP

Although the UP has a long list of role and functional responsibilities, its institutional visibility is yet limited[31]. UPs are broadly responsible for economic, social and community development. As set out in the Local Government (Union Parishad) Act 2009, UPs have several functions including: Maintenance of law and order, including assistance to the law enforcement agencies and resolution of disputes; adoption of measures to prevent disorder and smuggling; conducting of censuses of all kinds; registration of births, deaths, blind people, beggars and destitute; planning and implementation of development schemes in the field of agriculture, forestry, fisheries, livestock, education, health, small and micro enterprises, communications, irrigation and flood control; implementation of other development schemes as assigned; development and use of local resources; motivation of people to use sanitary latrines; promotion of family planning; monitoring of development activities undertaken by different agencies (government, semi-government) in the Union; protection and maintenance of public property such as roads, bridges, canals, embankments, markets, telephones and electricity lines. In addition, specific rural infrastructure responsibilities defined for UPs are the maintenance of Rural Roads and the Planning and implementation of small construction projects, these include improvement of works on Rural Roads -for example schemes under some food-aided infrastructure projects are implemented through the UPs. The UP is also responsible, through the Union Market Management Committees (UMMC) for the operation and maintenance of markets within the Union. Water supply, rural sanitation and building rural road network are also included in the list of the core responsibilities of the UP. In addition, the DPHE works closely with the WATSAN Committee at the UP level for supply of drinking water and sanitation. LGED has number of dedicated project for rural road and infrastructure projects at UP level. However in such projects UP's role is nominal.

Nature of Local Governance in Bangladesh

Local government reforms in Bangladesh evolved very distinctly according to the needs of the ruling elites (Westergaard, 2000; Khan and Hussain, 2001, Majumdar, 2010). With the changes of government, the policy of local government has also been kept changing. Such changes were generally dictated by the imperative of creating loyalty to as well as

[31]UPs are broadly responsible for economic, social and community development. As set out in the Local Government (Union Parishad) Act 2009 have several functions including: Maintenance of law and order, including assistance to the law enforcement agencies and resolution of disputes; Adoption of measures to prevent disorder and smuggling; Conducting of censuses of all kinds; Registration of births, deaths, blind people, beggars and destitute; Planning and implementation of development schemes in the field of agriculture, forestry, fisheries, livestock, education, health, small and micro enterprises, communications, irrigation and flood control; Implementation of other development schemes as assigned; Development and use of local resources; Motivation of people to use sanitary latrines; Promotion of family planning; Monitoring of development activities undertaken by different agencies (government, semi-government) in the Union; Protection and maintenance of public property such as roads, bridges, canals, embankments, markets, telephones and electricity lines. In addition, specific rural infrastructure responsibilities defined for UPs are the maintenance of Rural Roads and the Planning and implementation of small construction projects, these include improvement of works on Rural Roads -for example schemes under some food-aided infrastructure projects are implemented through the UPs. The UP is also responsible, through the Union Market Management Committees (UMMC) for the operation and maintenance of markets within the Union.

legitimizing and broadening the narrow base of the power-holders in the national government. As a consequence, Local Government institutions (LGIs) have not had any opportunity to act as effective tiers of governments with mandates and funds to carry out their roles and responsibilities. Though several attempts have been made to improve local government in Bangladesh, they continue to be managed and controlled by the central government administrative structures. Furthermore, empirical evidences (Akash, 2009) suggest that limited resources are allocated to the Local Government. Independent reviews observed that Bangladesh has not been successful in establishing a decentralized system of governance and accountability. A World Bank review of decentralization process in 19 countries ranks Bangladesh lowest in the decentralization scale (Williams, 1998).

Local government institutions in Bangladesh have evolved in response to the interests of the national political leadership and central bureaucracy (Siddique, 2000). With changes in regimes, policies to devolve power or create new representative institutions have also changed abruptly, generally with the aim of preserving centralized authority and ensuring partisan control over local government. In this context, decentralization reform efforts have been, at best, partial; any limited gains have been quickly overturned, by incoming regimes focused on reasserting central control.

Allocation of resources to rural local government during the last ten years has ranged from .25 to .52% of the national budget. During the fiscal year 2010-2011 all central government agencies working at the local level (i.e., at UP and Upazila levels) have spent about 700% higher amount of resources compared to the resources allocated to local elected bodies. There is a conventional allegation that the Local government bodies, especially the UP, has a lower level of capacity to absorb a higher amount of resources. Ironically, empirical evidences suggest that the implementation rate of projects with centrally allocated fund is 100 percent for the UPs compared to around 54 percent for the different line agencies working at the field levels. (Akash, 2012).

A study on the governance and local power actors reveals the following findings on power relations, governance process and dynamics at Union Parishad level (Aminuzzaman, 2009a).

- *Role of UP*: UP is an elite-dominated, male-controlled body where the Chairman is placed in a relatively powerful position, and often makes decisions in conjunction with a small circle of associates, from which women members, in particular, are excluded. As a body, it is heavily influenced by the local Member of Parliament (MP), especially in the allocation process and use of the Annual Development Programme fund, as well as various safety-net programs. The UP chair acts as the gatekeeper of relations and controller of limited development resources of direct grants of the central government.
- *Limited or no access to project implementation process*: Evidence indicates that, in spite of legal provisions of the UP Act, the members of the community have limited access to and or control over the selection of the types of community based

development projects. Members of the Project Implementation Committees (PIC) are handpicked by the UP or are nominated by the MPs who mostly belong to the ruling party vanguards rather than community representatives.

- *Exclusion of "declining and coping poor"*: Most studies and assessments have observed that "declining and coping poor" (especiallywomen, old and marginalized are generally excluded from major decision-making arenas as well as various services of the state and or UP. Even the safety-net programs are misused within the patronage system of politics.
- *Lack of accountability of government officials*: Government officials located at the Upazila and the Union level are answerable only to their own line departments and tend not to consult with let alone coordinate work through the UP. Local MPs especially of the ruling regime act as the *defecto* authority to regulate and instruct the line agency officials.
- *Role of UNO*[32] *is critical*: A range of line departments performing both regulatory and developmental roles are located at the Upazila and most of these agencies have extension workers at UP level. The UNO, in effect, does not have effective role to play to coordinate the line agencies. However UNO are controlling, monitoring the UPs and also informally influencing the UP decisions on behalf of the MPs.
- *Dependency syndrome of the UP elected officials on UNO*: Relationship between elected representatives and local officials is characterized by mutual mistrust, suspicion and dependency to control the UP elected officials and staff. However this does not preclude collusion, where this is in the mutual interest of the parties concerned. The UNO in effect directly and indirectly control and monitor the functions of the UP.
- *Role and relationship of MPs with local government*: MPs are only expected to perform a relatively minor and advisory role at the local government. In practice, MPs both formally and informally control the role, activities, project selection and implementation of Upazila and Union Parishads.

Furthermore, an overview of the political economic analyses of local governance (especially at the UP level) indicates that, in general, rural Bangladesh is characterized by following features:

a. *Culture of effective participation in formal community activities is still non-existent*. Though NGOs have worked hard to develop some client based community groups (some form of "social capital") – still they are more concerned with their own group interest than visible community involvement (Mohammed Noor, 2010).

[32]Upazila Nirbahi Officer (UNO) is the chief executive of the Upazila (Sub-district). He is also the focal point of the central government at the Upazila and coordinates all the line agency departments of the central government based at the Upazila. The UNO also acts as the member secretary of the Upazila Parishad (Sub-district Council).

b. *There is a range of new and emerging leaders*. They tend to be relatively young. The power base of such young and new is grounded more on political linkage and support than social recognition (Aminuzzaman, 2008). The new alternative leadership is sometime more powerful than the elected officials and maintain alternative channels of privilege distribution bypassing the UP and even the GOB line agencies. In almost all cases they use the clout of the local MPs.

c. *Confrontation and violence* are other features that characterize the rural politics. Such confrontational conditions shy away the civil society, social elite and traditional leaders to get integrated with the local governance affairs. As a result the traditional practice and process of social accountability is fading out.

d. *Dominance of Patronage politics* –The UP chairpersons and some dominant members tend to maintain strong patron-client relations with a section of rural community. Unfortunately such clients are not necessarily the weaker or poorer section of the rural community. UP therefore tend to take some of its development management and distributive decisions on the basic of such patron-client dependency syndrome. Different local level power players/ brokers (UP Chairman, political party leaders, and the representatives / sycophants of the members of parliament) tend to influence all vital local level decisions including the UP development project implementation. The political identity of the Chairperson of the UP and his network have significant influence on the smooth functioning of the Parishad.

e. *Top Down project ignores political dynamics* – Various central government funded program interventions and innovations do not take into cognizance the role of power structure and the local political-economic milieu and political dynamics at the UP and Upazila level and thus do not get institutionalized at the UP level.

f. *Missed opportunity to use social capital*- Rural local governments have not been able to link up and fully utilize the already established "social capital" being formed by different NGOs of the rural areas and thereby cannot mobilize the relatively disadvantaged members of the community.

g. *Lack of integrity, initiatives, commitment and vision of local leaders* – Empirical evidences suggest that it is not necessarily only the availability of resource and technical/ management skill but the integrity, initiatives, commitment and vision are the leading factors that affect the quality and nature of the service delivery of the UP.

h. *Non accountable parallel development window* – Most of the safety net programs and some development activities of the central government are run by the non-elected political channel. Such programs are designed and managed by the political workers/ leaders of the ruling party under the administrative and political support of the Members of the Parliament. UP has been kept in sideline in administering and managing these projects.

i. *Poor law and order system*– Over all law and order situation and the nature of violence in politics have significant impact on the role and function of UPs. In many

cases UP elected officials do not take a decisive position at the cost of their personal security.

A governance mapping exercise about the UP reveals that a significant majority of the poor and marginalized people in rural Bangladesh is not in the service delivery net of the UP. The following broad observations have been drawn from the mapping exercise (Aminuzzaman, 2011a):

Institutional Issues that affect UP governance

Local governments, in particular the UP, have had a long institutional history. During its life of about one and a half centuries, it has gone through different stages of institutional evolution and structural experimentation. Nevertheless, UP still suffers from image crises, poor capacity and lack of competence. But empirical evidence aptly suggests that the role, function and overall governance of UP is essentially a result of a number of structural and institutional limitations.

Limited manpower and resources: It is no doubt that, considering the workload and responsibilities, the UPs are understaffed. UP also lacks logistic supports, like computer and transport, like motorbike, etc. Although the UP has a relatively large tax base (as per the Model Tax Schedule), political reality and overall socio-cultural and economic conditions[33] do not permit the UP to collect taxes up to the potential target. UPs therefore become more dependent. UPs, in general, lack *managerial capability* and resources to design and run innovative service delivery in areas like employment generation, health and education. Rather,UPs tend to be more interested and confined to infrastructure specially construction of roads and culverts. *Delayed release* of Government development grants also hampers the timely completion and quality of UP projects. There are reports that such delays also open the window of opportunity for corruption and leakages of public resources and subsequently hamper the quality of the service delivery projects.

Lack of Coordination: The participants, in general, observed that there was a lack of coordination between UP and extension service delivery workers of the government at the field level. In fact,there are no formal links even between the Standing Committees of the UP with the extension workers of the corresponding line agencies of the Government. Such isolation makes lots of the UP services dysfunctional and ineffective. This also deprives the UP of getting technical assistance and other professional support from the GOB line agencies.

[33]Field studies observed that rural people even the financially able ones are not happy with the performance of the UP. In general they consider that they do not get the real "value for their money by the services being rendered by the UP. (Aminuzzaman, 2008)

Lack of appropriate rules and regulation: During the field level interviews a number of Upazila-based officials acknowledged that there was a lack of integrated rules and regulations for the coordination and monitoring of the field-level extension staff of the Government of Bangladesh, like health assistant, family planning assistant, sub assistant agriculture officer and social welfare, etc. Moreover, appropriate instructions from different line ministries to their respective extension workers are still missing.

Weak and ineffective monitoring: The existing system to oversee and monitor UP functions are ineffective. Although the Deputy Director Local Government (DDLG), on behalf of the Deputy Commissioner, is supposed to visit Union Parishad periodically; but for lack of time, transport and other logistics, most of the time it is difficult for the DDLG to inspect Union Parishad in due time. The conventional monitoring tool being developed by the monitoring wing of the LGD is also not done with proper care. Respective line agencies also do not monitor their UP-based programs in collaboration with the UP. Due to a lack of logistic support and incentive systems, the Upazila based Union Tag officers[34] of respective line ministries hardly visit the UPs for supervision of development activities.

Lack of accountability and transparency: There was hardly any scope for the members of the community to lodge any complaint to the appropriate authority when there was any service delivery forgery or corruption (Mohammed, S. N. (2010). Most of the UPs tend to practice a "pseudo participatory" planning system, where only handpicked persons are involved, and even that is done without the knowledge of the community members at large. Such practices keep the members of community, specially, the marginal poor, women and destitute in complete dark about the projects undertaken by the UP. Civil society members further noted that there was no formal mechanism for the UP to work closely with NGOs. UPs are not aware of which activities are being carried out by a number of NGOs in their respective areas. The NGOs, also being a service provider to the rural communities, tend to work in isolation. These result in a lack of coordination and thus the actual needs of the community are not appropriately served and accountability and transparency to the community, as well as to the UP, remain weak. Such lack of transparency and accountability has some bearings on the service delivery, especially to the poor and disadvantaged community.

Political manipulation: Community people noted that the influential local political elite, especially those in the ruling party coalition with UP Chairman/ members, tend to manipulate the service delivery process of the UP. Thus, in some cases UP services are delivered on "political" criteria rather than on an "objective" assessment. This is especially true for safety net programmes. A section of UP Chairmen endorsed the observation and noted that some UP projects were determined not by "development need of the area but on the political priority of the influencing political elite". Such elite generally refers to the ruling party local chapter and in many cases the Member of the Parliament of the

[34] For each Union of an Upazila, there is a Union specific Tag Officer. The Tag Office is supposed to visit and monitor the activities of the respective Union and report back to Upazila Parishad.

constituency. It is also alleged that a new nexus has been formed between Upazila-based GOB officials and MPs to dictate the UP in determining and prioritizing the projects.

Non-Cooperation from Upazila-based bureaucracy: Non-cooperation from field bureaucracy is also a critical factor that affects the quality and process of service delivery. There appears to be a *low trust* relations between UP and Upazila based central government officials. A section of UP Chairmen complained that, on various occasions, they were treated as subordinate institutions by the Upazila administration/ or a section of Upazila officials.

The governance context and the overall political environment and dynamics of rural Bangladesh do not appear to be conducive for institutional development of Union Parishad which could ensure effective delivery of services and development management at the grass roots level. The practices of local governance and decentralization therefore are very difficult to establish under the above political and administrative milieu (Siddiquee, and Hulme 2000).

Challenges and constraints of UP

Empirical evidences (Akash 2011; Rahman, H.Z, 2006; Aminuzzaman 2009b) however identify some serious challenges that characterize the governance of the local government. Allocation of resources to rural local government during the last 10 years has ranged from 0.25 to 0.52 % of the national budget. During the fiscal year 2010-2011 all central government agencies working at the local level (i.e., at UP and Upazila levels) have spent about 700 % higher amount of resources compared to the resources allocated to local elected bodies. There is a conventional allegation that the Local government body, especially the UP, has a lower level of capacity to absorb a higher amount of resources. Ironically, empirical evidences suggest that the implementation rate of projects with centrally allocated fund is 100 % for the UPs compared to around 54 % for the different line agencies working at the field levels (Akash, 2011).

The UP has a long list of role and functional responsibilities and its institutional effectiveness is far too limited, as far as the poor and disadvantaged are concerned[35]. A

[35] UP is broadly responsible for economic, social and community development. As set out in the Local Government UP Act 2009 have several functions including: Maintenance of law and order, including assistance to the law enforcement agencies and resolution of disputes; Adoption of measures to prevent disorder and smuggling; Conducting of censuses of all kinds; Registration of births, deaths, blind people, beggars and destitute; Planning and implementation of development schemes in the field of agriculture, forestry, fisheries, livestock, education, health, small and micro enterprises, communications, irrigation, and flood control; Implementation of other development schemes as assigned; Development and use of local resources; Motivation of people to use sanitary latrines; Promotion of family planning; Monitoring of development activities undertaken by different agencies (government, semi-government) in the Union; Protection and maintenance of public property such as roads, bridges, canals, embankments, markets, telephones, and electricity lines. In addition, specific rural infrastructure responsibilities defined for UP is the maintenance of Rural Roads and the Planning and implementation of small construction projects, these include improvement of works on Rural Roads—for example, schemes under some food-aided infrastructure projects are

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The following box presents the institutional features and challenges of the UPs.

Limited understanding of functions of UP held by population at large. Community members are often not consulted and have low expectations of what the UP will accomplish.

Low level of awareness: UP members are only partially aware of their formally prescribed responsibilities, and in many cases lack the skills and resources required to discharge those functions.

Power of Chair: UP membership does not itself provide any guarantee of influence over the activities in which the body engages. The Chairman is placed in a relatively powerful position, and often takes decisions in conjunction with a small circle of associates, from which women members, in particular are often to be excluded.

Exclusion of women: Most studies and assessments have found that women members are often excluded from major decision-making arenas.

Limited and insecure revenue base: The UP has limited capacity and incentive to raise revenue and is therefore highly dependent upon central government grants.

Lack of accountability of government officials: Government officials located at union level are answerable only to their own line departments and tend not to consult with let alone coordinate work through the UP.

Centralized project and program design: Evidence indicates that the upazila line staff have limited control over the types of projects to be undertaken at Upazila level. Projects are designed and decisions are being undertaken at the Ministry level and relegated to the Upazila based line agencies for implementation only.

Poor relationship between administration and elected representatives: Relationship between elected representatives and local officials is characterized by mutual mistrust, suspicion and even hostility, but this does not preclude collusion where this is in the mutual interest of the parties concerned.

Coordination power of UNO is limited: A range of line departments performing both regulatory and developmental roles are located at the Upazila. The UNO, as the senior executive cum coordinating officer, has formal responsibilities of coordination but can exert little practical control over most of the activities undertaken by line departments.

Increasing power of MPs over the local elected actors: MPs are only expected to perform a relatively minor and advisory role at Upazila level. In practice their influence from the Union and upwards is much more extensive and their views tend to outweigh other actors.

Source: Salahuddin Aminuzzaman, 2008

implemented through the UP. The UP is also responsible, through the union market management committees (UMMC) for the operation and maintenance of markets within the Union.

Furthermore, an overview of the political economic analyses of local governance, specially at the UP level, indicates that, in general, rural Bangladesh is characterized by following features:

a. Culture of effective participation in formal community activities is still non-existent (Mohammed, N, 2010). Although NGOs have worked hard to develop some client based community groups (some form of "social capital") – still they are more concerned with their own group interest than visible community involvement (Aminuzzaman, 2011)

b. There appears to be a continuity of patron -client relationship in the rural milieu[36].

c. There is a range of new and emerging leaders. They are relatively young. The power base of such young and new is grounded more on political linkage and support than social recognition (Aminuzzaman, 2013). The new alternative leadership is sometime more powerful than the elected officials and do maintain alternative channels of privilege distribution bypassing the UP and even the GOB line agencies. In almost all cases they use the clout of the local MPs.

d. Confrontation and violence are other features that characterize the rural politics. Such confrontational conditions shy away the civil society, social elite and traditional leaders to get integrated with the local governance affairs. As a result the traditional practice and process of social accountability is fading out.

The governance context and the overall political environment and dynamics of rural Bangladesh do not appear to be conducive for institutional development of Union Parishad which could ensure effective delivery of services and development management at the grass roots level. The practices of local governance and decentralization therefore are very difficult to establish under the above political and administrative milieu.

Potential of Union Parishad as a Service Delivery Agency

The findings of the evaluation study of the newly introduced Local Governance Support Program and its pilot component on Learning and Innovation (LIC), recognized some significant potentials of UP as a unit of local level development and service delivery. Following are some of the most noteworthy potentials (Aminuzzaman, 2010):

- UPs are capability to absorb and manage additional financial resources to undertake both conventional and non-conventional development activities.

[36]Findings of a study reveal that a powerful network termed as *Dalal Chokra(*mediators) play important role at the local governance in Bangladesh. They play intermediary role between the villagers and the ruling party leaders and the civil servants. The study confirmed three categories of Mediators. The first category includes the leaders of the ruling party and dominant opposition, student leaders and the UP Chairmen. The second category comprises local contractors, trade union leaders, and UP members. Lower ranked employees such as office assistants, clerks, the messengers of different offices have been identified as the third category. For detail see Aminuzzaman, 2008.

- UPs are capable of mobilizing additional resources for its own development activities with new innovative techniques and delegated authority and autonomy, if adequate technical competence is created.
- UPs have the potential to mobilize 'social capital' i,e, women, community members, union facilitators to ensure 'social accountability" and "quality assurance" of the delivery of services.
- UPs become more 'responsive" to community needs and 'accountable" to the community at large with appropriate "watch dog" role of community. Higher level of community participation has enhanced quality and durability of UP projects.
- UP complex[37] could be developed as a 'development hub" with better coordination, collaboration of field level GOB extension agencies/workers and UP elected officials including the UP Standing Committees.

Community Participation in the local decision making process: UP Act 2009 has ensured expected level of community participation in the operation of UP through the provision of Ward Shava (Article 4)[38]. This is an epoch-making step, since People's participation in the operation of UP is recognized as the cornerstone of local level democracy. It is particularly important in ensuring pro-poor service delivery and in playing pivotal role in local development by UPs. Community participation in the functioning of UPs also promotes transparency and accountability in the management of public finances at local level. The provision of Ward Shava will allow the local community to participate in planning process of UPs and also in reviewing the progress of different development initiatives in their community.

Participatory planning: Participatory planning as provided by UP Act 2009 (Article 6) allows the community to identify the critical problems, priorities, elaboration and adoption of socio economic development strategies. Internationally the use of participatory methods and tools has become common practice in the field. The UPs will be able to recognise the felt needs of the people. The following benefits will be drawn from the provision of participatory short and long term planning as provided by regulations[39] formulated in line with the UP Act 2009: - Establish consensus, - Promote empowerment of local disadvantaged groups; Integration of local knowledge systems in designing development scheme. The Act promotes a two way learning process between the development initiative

[37]UP Complex is the formal office complex where all line agency officials/extension workers and the UP elected office are stationed. The UP complex is a two storied building is generally located in a central place of the Union and has other community utility facilities. Only about 2800 UP have their own UP Complex building.

[38]*Ward Shava*. - There shall be constituted, in accordance with the provisions of this act, a Ward Shava in each ward of a union. A Ward Shava shall consist of the persons enlisted in the voter list of the respective ward.

[39]According to the regulations formulated by the Ministry of LGRD&C, Union Parishads shall formulate five-year and annual development plan to implement its development activities.

and local people: i) Political commitment and support; and ii) Accountability in local governance.

Participatory Budgeting: Article 57 of UP Act 2009 ensures provision for UPs to prepare budget on the basis of the priority list received from the *Ward Shava*. According to the Act "The Union Parishad shall organize an open budget session ensuring presence of concerned standing committees and the local people and present the budget thereof and send the copy of the budget, passed in the following meeting of the Parishad, to the *Upazila Nirbahi Officer*". Participatory budgeting at local level offers citizens at large an opportunity to learn about local government operations and to discuss, debate, and influence the allocation of public resources as per local needs. It is a tool for educating, engaging, and empowering citizens and strengthening demand for good governance.

Transparency in accounting/financial management: Article 58 of UP Act 2009 provides that "An annual statement of the receipts and expenditure accounts shall be prepared after the close of every financial year and present such accounts in the open budget session ensuring presence of all standing committees and thelocal people". This practice will undoubtedly promote transparency and accountability in public financial management at UP level. This will also enhance the confidence of people on their elected representatives, which will promote good governance.

Standing Committees: Formation of 13 standing committees and making them functional increases transparency in managing public finance at local level and also ensures accountability of the elected officials to their constituents. This also ensures community participation in the functioning of UP. Some of the very important functions of UP such as health, education and family planning; rural infrastructure development, protection and maintenance; maintenance of law and order; own source revenue generation, etc. are planned and managed by these standing committees. In addition to these mandatory committees, a number of programs/project/initiatives have supported establishment of additional committees, see Annex 8, which put a pressure on the limited capacity at the local level.

Citizen Charter: Article 49 of UP Act 2009 provides that "*Every Union Parishad constituted under this act, by pursuing the instructions prepared by the Government, shall publicize a statement, detailing the particulars of various services to be provided to people, conditions of available services, and the stipulated time for ensuring such services, which is to be called "Citizen Charters".* Provision of citizen charter is a milestone in promoting local level democracy and accountability. The Citizen's Charter marked a significant shift in thinking about public service provision local level. The Citizen Charter put the users of public services at the heart of public service delivery. It is this key idea that endures, particularly as elements of the Charter programme are reassessed and updated to meet the needs of public service provision of the day. The Citizen Charter informs people of their entitlements to

public services. Charters for individual public services were intended to outline the assurance and standards of service that people are entitled to receive. However, it is important that the UPs in line with the provision of the Act ensures that the Citizen Charter are not vague and unrealistic, rather they are practical that people readily understand and use.

Women's empowerment: The UP Act 2009 has at partially addressed the issue of women's empowerment. Some of the articles[40] where women's empowerment through their effective participation has been highlighted include Section 5, 33, 45, and 47.

Use of information technology and promotion of good governance:Article 50 of UP Act 2009 provides that (1) Every Union Parishad, within a certain period, shall use modern technology in view of ensuring good governance; (3) The Parishad, through modern information technology, shall make arrangement to inform the citizen about the particulars of services being provided by the Government including the modern services illustrated in the Citizen Charters. This is recognised as an important step towards building "A Digital Bangladesh" which is one of the major electoral pledges of the current government. The importance of use of modern information technology by local government is internationally recognized.

Right to information: Article 78 of the UP Act 2009 ensures the right of all citizens of a UP to obtain information regarding the UP and article 79 describes the procedure and article 80 describes the obligations on the part of UPs to deliver information[41].

UPs role in Disaster Management

For the purpose of dismissal of the UP's functions efficiently the Local Government (Union Parishad) Act, 2009 has made a provision to constitute 13 different Standing

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[40]Article 5 (5) – The member of the reserved seat of the respective ward shall be the adviser of ward meeting. Article 33 (1) – The members of a Union Parishad shall select a panel of Chairman comprising three members from amongst the members, on priority basis within 30 (thirty) working days from the day of first meeting after the Parishad constituted: Provided that, at least one of the three Chairman panels shall be selected from the women members elected from reserved seats. Article 45 (3) – A Standing Committee shall elect one of its members, other than a co-opted member to be its Chairman and minimum one third of the total number of Chairmen of the Standing Committees shall be elected from amongst the members elected in reserved seats for women. Article 47 (3) – one-third of the total development projects of union parishad (TR, KABIKHA, Block grant & Others) would be chaired by female members related with respective ward level project implementation committees.

[41]UP Act 2009; article 78 – Subject to the rules under the current laws, any citizen of Bangladesh shall have the right to get any information regarding a Parishad, in such manner as may be prescribed. Article 79 – If any person requires any information, shall apply to the Chairman of the Parishad in written, in the prescribed form with a fixed amount of fee; The secretary shall deliver the information as asked for within the time allowed, unless the application is disallowed or not settled otherwise. Article 80 – (1) The secretary of the Parishad or any other responsible officer or employee, shall be obliged to deliver any other information, excepting the notified records described in this chapter, in a prescribed manner within the stipulated period.

Committees[42],one of such Committees is social welfare and disaster management.As of date the Ministry of LGRD (MLGRD) has not drafted the terms of reference for such Standing Committees.

The Standing Order on Disaster (SOD) of the Government has also made it obligatory for all Union Parishad to constitute a Union Parishad Disaster Management Committee (UPDMC) to be chaired by the Union Parishad Chairman. The prime function of the UPDMC is to prepare Union Disaster Management Plan following the community risk assessment procedure provided by MLGRD.

Union Disaster Management Committee (UDMC)

A Union Disaster Management Committee is comprised of the following members (i) Union Parishad Chairman as Chairperson, (ii) Members of the Union Parishad 12 Member (iii) Teacher Representative (Nominated by Chairman) Member (iv) Government officials working at Union Level (Sub-Assistant Agriculture Officer, Union Health and Family Planning Centre in-charge, Union Tax Collector (Tahshildar), BRDB Field Worker, Representative of Social welfare department) as Member (v) Representative of Vulnerable Women (Nominated by Chairman) Member (vi) Representative of the CPP (in appropriate case) Member (vii) Representative of Bangladesh Red Crescent Society (in appropriate case) Member, (viii) Representatives of NGOs (one representative each from Local, National and International NGOs nominated by the Chairman) as 3 Members (ix) Representative of the Peasant and Fishermen Society (If no society, person will be nominated by Chairman) 2 Member (x) Socially Reputed Persons or Civil Society Representatives (Nominated by the Chairman) 2 Member; (xi) Representative of Freedom Fighter (Nominated by Upazila Freedom Fighters Command Council) 1 Member; (xii) Imam/Priest/Other religious leader (Nominated by Chairman) 2 Membe rxiii) Representative of Ansar and VDP (Nominated by Upazila Ansar VDP Officer) 1 Member, (xiv) Secretary, Union Parishad 1 Member Secretary. The Chairperson of the Committee can co-opt maximum 3 (three) more members and form groups and sub-groups considering the local situation and special circumstances.

Meetings

As per the SOD, during normal time, the committee is supposed meet once in a month. During warning phase and pre-disaster period, the committee shall meet more than one time in a week. During disaster period the committee is supposed to meet as and when needed (once daily), at least once in a week. In recovery phase the committee meet once a week. However the UDMCcan meet any time if needed or part of the committee can meet with the other development committees bi-laterally or multilaterally.

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[42]The other UP Standing Committees are: Finance and establishment; audit and accounts; tax assessment and collection; education, health and family planning; agriculture, fisheries and livestock and other economic development work; rural infrastructure development, protection and maintenance; maintenance of law and order; birth-death registration; sanitation, water supply and drainage; social welfare and disaster management; development & conservation of environment and tree plantation; resolution of family conflicts, women and children welfare; culture and sports.

Responsibilities of Union Disaster Management Committee

Risk Reduction:
Ensure that local people are kept informed and capable of taking practical measures for the reduction of risk at household and community level and also disseminate the success stories of reducing disaster risks at household and community level widely among the local people.

Arrange training and workshops on regular basis on disaster issues and update the progress of implementation of action plan and other activities and report to the Upazila DMC

Hold a hazard, vulnerability and risk analysis at Union level and prepare risk reduction action plan (RRAP) and contingency plan for Earthquake and other hazards.

Identify the most vulnerable or people at high risk by sex, age, physical ability, social status, occupation and economic status.

Prepare a short, medium and long term vulnerability reduction and capacity building action plan for the identified high-risk people with active participation of the people at risk.

Facilitate coordination among the development agencies and service providers through quarterly coordination meeting and take decision about implementation of the action plan for risk reduction as well as review the progress of the risk reduction action plan.

Raise fund at local level to implement the risk reduction action plan.

Prepare a Comprehensive Disaster Management Action Plan with a view to enabling local people, Union authority and local organizations to increase the capacity of poor and vulnerable people to enhance their income and other assets for risk reduction and also to take up security arrangement in the perspective of imminent danger related warnings or occurrence of disaster including the issues already mentioned under this paragraph.

Take steps for capacity building of relevant persons and institutions, union authority, volunteers and people in a way that they can forecast and publicize warnings relating to hazards (cyclones, storms, floods, droughts, tidal surge, tsunami, over-rainfall under-rainfall, water logging, high tide, cold wave etc.) in the quickest possible manner and also inform people about their responsibilities of saving their lives and properties from disaster.

Build the capacity of local institutions, volunteers and people in a way that they can help and motivate people to adopt disaster (Cyclone/Tidal surge/Tsunami/ Earthquake/ Tornado/ Flood/ Water Logging/ Salinity/ High Tide/ Cold Wave) resistant housing features.

Build the capacity of local institutions, volunteers and people in a way that they can help and motivate people to adapt with disaster resistant agriculture and other livelihood options.

Determine specific safe centre/shelter where the population of certain areas will go at the time of need and assign responsibilities to different persons for various services and securities at the shelter/centre.

Ensure supply of safe water and if necessary other services from specific points near the shelter/centre with the help of Upazila authority.

Train the students, youths, local club members and volunteers on community based water purification technology. So that during disaster, they can supply water-purifying technology during emergencies in their community until external support reaches the high-risk people.
Plan for preparing some community Based High land, which can be used as play ground in normal time and can be used as shelter place during disaster period and where livestock, poultry, emergency food, kerosene, lamp, candle, matches, fuel wood, radio and other important resources could be shifted along with the people.

Stock emergency life-saving medicines at union level (Union Health and Family Welfare Centre) for use during disaster.

Prepare relevant plans for rescue, primary relief operation, and restoration of communication with Upazila Headquarters and local arrangement for rehabilitation of severely affected families.

Arrange for rehearsals or drills on the dissemination of warning signals/forecasts, evacuation, rescue and primary relief operations (if necessary committee can seek assistance from Upazila Authority).

Emergency Response

Warning Period

Disseminate warning and security messages, evacuate the vulnerable people as per evacuation plan, cast an eye on the last moment check of rescue team and its preparation and take effective measure to minimize gap as a high priority.

Engage trained institutions, volunteers and people in field for effective and rapid dissemination of early warning messages to the vulnerable community and monitor the whole security and warning message dissemination activities.

Visit the pre-determined emergency shelter centre and be sure that for essential services and security different organizations and volunteers are alert and ready to provide services.

Review the practicality of water supply sources nearby the shelter/centre and if necessary, fill the gaps that people can get safe water supply during disaster from these water sources.

Conduct a mock or drill to ensure that the trained students, youths, clubs and volunteers can prepare water-purification technology at their locality and can supply to the victims during emergencies and to monitor that adequate materials are ready to prepare such water-purification technology.

Review the stock of life saving medicines at union level and evaluate its adequacy for supply among the victims during disaster.

Prepare a checklist of emergency works to-do during disaster and be sure that appropriate materials and people are available for use.

During Disaster

Organize emergency rescue work by using locally available facilities in times of need and if directed assist others in rescue work.

Prepare water purification technology (tablet) at local level with the help of trained students, youths, clubs and volunteers; and distribute those products at emergency among the people at risk before being caught by diarrhoea or other water borne diseases.

Coordinate all relief activities (GO-NGO) in the union in a manner that social justice (on the basis of who needs, what is needed and how much is needed) is ensured in relief distribution;

Protect people from upset creating rumor during hazard period by providing them correct and timely information.

During hazard ensure security of the local and outside relief workers.

Ensure the security of women, children and person with disability during hazard.

Take necessary actions to protect environmental degradation by quick funeral of corpses and burying the animal dead bodies.

Help people to transfer their essential resources (livestock, poultry, essential food, kerosene, candle, matches, fuel, radio, etc.) to safe places.

Post-Disaster Period

Collect statistics of loss incurred in disaster in the light of guidelines of DMB and Upazila DMC and send the same to Upazila DMC.

Take steps for distribution of articles for rehabilitation received locally or from Relief and Rehabilitation Directorate and from any other source following the guidelines from DMB and Upazila DMC.

Send accounts of materials received to UzDMC and donor agency (if the donor provided relief fund).

Ensure that due to hazard the people who were displaced can come back to their previous place; in this case, dispute (if any) regarding the land of the displaced people should not be an obstacle to come back to the place after disaster.

Counsel the psycho traumatic people due to hazard with the support of community and experts.

Ensure that the injured people are getting fair and just treatment from health service providers, if necessary; committee can recommend for Upazila and District level assistance.

Arrange a lesson learning session with the participation of concern institutions and individuals on learning from during hazard and after hazard.

In addition to normal duties, Union Parishad Members will perform the following responsibilities related to disaster issues:

Risk Reduction

a. Attend regularly in the UDMC meetings and workshops
b. Participate in the community vulnerability and risk assessment process, prioritize the risks and prepare the risk reduction action plans of their respective union
c. Ensure participation of different vulnerable groups in the vulnerability and risk assessment process
d. Assist the union chairman to mobilize resources for the implementation of risk reduction action plan prepared through community risk assessment
e. Facilitate work of NGOs to ensure coordination and synergies among different programs and activities undertaken locally.

Emergency Response

a. Maintain detailed particulars of trained volunteers for the purpose of instant necessity.

b. Earmark trained volunteers for various responsibilities for operation of emergency relief work.

c. Combat disaster situations in their own areas better and keep the people aware and ready for rehabilitation work.

Precautionary Stage

a. Announce in advance the warning/danger/great danger signals by megaphone, siren, warning notice, drums / beating empty kerosene cans. On receipt of instructions from Union Parishad Chairman or higher authority, announce danger signals without creating any panic.

b. Listen to weather forecasts from radio regularly.

c. Take quick steps after receipt of warning signals from the radio/Union Parishad Chairman or higher authority.

d. Keep the emergency volunteer team ready for performing specific responsibilities like evacuation, first aid, health care, food, repair of damaged room/house, security etc.

e. Cooperate and coordinate with CPP.

f. Ensure hoisting of warning signals in risky areas.

Disaster Stage

a. Perform any responsibility entrusted by the Union Parishad Chairman or higher authority and also other responsibilities related to rescue, relief and rehabilitation operations.

Rehabilitation Stage

a. Help the Union Parishad Chairman in relief and rehabilitation work.

General Instructions

Members of Union Parishad are assigned with the following functions:

Advise people to listen Special Weather Bulletins broadcast by Bangladesh Betar after formation of low pressure.

After hoisting of warning signals, advise all boats and trawlers to anchor near the coasts and to take shelter in safer places.

Exchange weather related information with others.

Advise packing of flattened rice, parched rice, treacle and drinking water, green coconut, utensils, safety match etc in their polyethylene bag and keep them under the earth three feet deep so that these could be used in times of need. Also advise for covering the mouth of tube-well with plastic cover so that saline/polluted water cannot enter into them.

Immediately after the announcement of evacuation advise people to take shelter in nearby cyclone shelter, fortified earthen mound, brick built building, community centre or any other
safer place. Advise for special attention to children, old and infirm people. Also advise for evacuation of livestock and other domestic animals, to high and safe lands.

Advise people not to propagate rumors and also not to listen to such rumours.

Advise for rescuing the affected people during and after disaster. If danger is apprehended for the loss of life of any human being or of property due to cyclone/flood or any other disaster, immediately advise for informing Union Parishad Chairman and Members.

Advise for assisting Union Parishad and voluntary organisation in all matters.
Advise for primary medical care to injured/drowned people.

Advise for removal of dead bodies and burial of the dead and for interment of carcasses.

Advise for house construction, after disaster, on cooperative basis.

Advise for complying with the instructions or request by the UDMC/Union Parishad Chairman and Member or any other higher authority regarding relief operations.

Advise for recovering the source of drinking water.

Ideally both UP Standing Committees and the Disaster Management can play a significant role in the overall planning and management of development projects and disaster management at the UP level. Because of poor resource base, lack of technical knowhow and management skills of the UP, the both the Standing Committees and the Disaster Management Committee are generally not fund to be functional. In many cases such committees have not been formed at all. However in order to meet the legal provision, UPs generally constitute the Standing Committees and Disaster Management Committee as a ritual but in reality in almost all the cases the Committee does not meet nor does prepares a realistic and doable disaster management plan. Field observations do not provide any evidences that that the UP Members and even the UP chair us fully aware of the role and responsibilities of the UPDMC.

The UDMCs have numerous designated responsibilities related to risk reduction, emergency response, and post-disaster recovery. A case study of CDMP's efforts at the local level explains, that "the key lesson learned is that the decentralization of authority to local governments is vital to ensure local ownership of disaster risk reduction. The local planning process under the CDMP has clear benefits, in particular its focus on community-level approaches to risk reduction and disaster management. Nonetheless, the process could be improved upon as the process does not deeply and effectively involve the UP as the driver seat is driven primarily by an outside facilitator (Christensen, 2012)

Union Disaster Management Plan (UDMP)

There is a Disaster Management Committee at the Union level which is chaired by the elected Chairman of the respective Union Parishad. The Union Disaster Management Committee consists of the Union Parishad Chairman as the Chairperson and members comprising all the Government department head at Union level, members of Union Parishad, NGO leaders working in respective union and civil society members. Secretary of the respective Union Parishad acts as the member Secretary of the Committee. The Committee is required to meet bimonthly during normal period and as and when necessary during emergency situation. The Union Disaster Management Plan comprises both disaster risk reduction and emergency response to be prepared by the Union Disaster Management Committee following a proper community risk assessment procedure provided by M&RD.

As per the SOD the UDMP is suppose to develop recovery plans and procedures delineating damage assessment procedure, restoration of damaged public infrastructure, resumption of educational institutions, restoration of livelihood, rehabilitation of affected people, especially the disabled, and elderly women and children.

Furthermore, the UDMP highlights among others, the following: a. Defining and redefining community risks to hazards utilizing both traditional and scientific knowledge. b. Total resource requirements and the planned action for the District. c. Take measures for prevention and mitigation of disasters by government agencies, NGOs, CBOs and the private sector within the Union. d. Capacity building and preparedness measures to be taken by government agencies, NGOs, CBOs and the private sector. e. Strengthening emergency response management system plans and procedures in the event of a disaster.

Union Parishad (UP) is the frontline local government organization closest to rural people. However the scope and quality of service delivery is one of the most critical areas that have significantly tinted the "credibility" and "institutional image" of the institution (Aminuzzaman, 2008). Failure of the UPs to respond to the dire need of the rural people, particularly the poor and disadvantaged in particular, often tend to seek services from alternative sources like the NGOs and private providers.

Potentially the UP Standing committees can play a significant role in the overall planning and management of development projects and service delivery at the UP level. However UP because of low resource base, lack of technical knowhow and management skills, the Standing Committee on Disaster Management has not been found to be functionally effective. In order to meet the legal provision UPs generally constitute the Disaster Management Committee as a ritual but in reality almost in all the cases the Committee does not meet nor does prepare a realistic and doable disaster management plan.

The reasons behind the sluggish performance of Standing Committees may be attributed to a number of factors such as lack of initiatives of UP members, lack of community pressure and or interest, lack of political pressure, lack of skills required for planning and implementing development programs at the local level, unwillingness on the part of UP Chairman to delegate authority to the Committee. Furthermore UP regulatory framework including the UP Act 2009 does not provide any specific reference to such committees. Thus in most UPs, the Standing Committees exist only on paper and not found to be in any action.

Field observations reveal that critical service areas like education, health, nutrition, family planning, irrigation, agricultural services, and the feeder / secondary roads are all managed directly by the central government officials and their field functionaries without any involvement of the UPs either in design or implementation process. Thus institutional "isolation' and 'incapacity' has made UP a non-responsive body to provide critical services to the rural poor, more so to the marginalized ones.

It is no doubt that considering the work load and responsibilities, the UPs are understaffed[43]. UP also lacks logistic supports like computer, transport support like motorbike etc. Although the UP has a relatively large tax base, political reality and overall socio-cultural and economic conditions do not permit the UP to collect tax up to the potential target. UPs therefore become more dependent on central government grant. UPs in general lack managerial capability and resources to design and run innovative service delivery in areas like employment generation, health and education and disaster management. Delayed release of Government development grants also hampers the timely completion and quality of UP projects. There are reports that such delays also open the window of opportunity for corruption and leakages of public resources and subsequently hamper the quality of the service delivery projects.

There is a lack of coordination between UP and extension service delivery workers of the government at the field level. In fact there is no formal links even between the Standing Committees of the UP with the extension workers of the corresponding line agencies of the Government. Such isolation makes lots of the UP services dysfunctional and ineffective. This

[43]There is only one Office Secretary who is mostly paid by government with 25% contribution of the UP. The Secretary is appointed and monitored by the Government.

also deprives the UP of getting technical assistance and other professional support from the GOB line agencies. UP members in particular noted that they have not enough authority to oversee / monitor the activities of the extension workers of the Government. They also complain that there is no regulatory / legal framework through which UP can insist the Government Officials to be accountable to the local elected bodies.

The local level institutional set-up is further complicated by the lack of clear leadership. At upazila level, the Upazila Chairman, a locally elected politician, and the Upazila Nirbahi Officer, a civil servant, are responsible for coordination (Sarkar, 2014) . There are several accounts of conflict between these two posts and contrary opinions about who ranks higher than whom. To complicate matters further, there are also accounts of Members of Parliament meddling in local affairs and considering themselves the chief coordinators of local development. At union level, responsibility for coordination rests solely with the Union Chairman. Many local government officials noted their frustrations about the lack of coordination. An Upazila Nirbahi Officer illustrates:

> "In addition to *government departments, number of NGOs working both national and international are working at the Upazila and Union level during major disaster But there is hardly any effective coordination. We all tend act like fire fighter without a strategic approach. Though the SOD categorically demands high degree of coordination and integration of pre and post disaster coordination, we are hardly pay any attention to that.*"

Most of the UPs tend to practice a 'pseudo participatory" planning system where only handpicked persons are involved and even that is done without the knowledge of the community members at large. Such practices keep the members of community specially the marginal poor, women and destitute in complete dark about the projects undertaken by the UP. During field observation visits the local civil society members noted that there was no formal mechanism for the UP to work closely with NGOs. Ups are not aware what activities are being carried out by number of NGOs in their respective areas. The NGOs also being a service provider to the rural communities tend to work in isolation. These result in a lack of coordination and thus the actual needs of the community are not appropriately served and accountability and transparency to the community as well as to the UP is absent. Such lack of transparency and accountability has some bearing on the service delivery specially to the poor and disadvantaged community.

Local political elite especially of the ruling party in coalition with UP Chairman/ members tend to manipulate the service delivery process of the UP. Thus in some cases UP services are delivered on "political" criteria than "objective" assessment. This is especially true for safety net programs and disaster relief distribution. A section of UP Chairmen noted that some UP projects are determined not by "development need of the area but on the political priority of the influencing political elite". Such elite generally refers to the ruling party local

chapter and in many cases the Member of the Parliament of the constituency. It is also alleged that a new nexus has been formed between Upazila based GOB officials and MPs to dictate the UP in determining and prioritizing the projects.

Lack of cooperation and coordination from central govt. functionaries is also a critical factor that affects the quality and process of disaster management and other service delivery of the UP. There appears to be a low trust relations between UP and Upazila Administration. A section of UP Chairmen complains that, on various occasions, they are treated as subordinate institutions by the Upazila administration/ or a section of Upazila officials.

In fact, for adaptation processes to succeed, much depends on the capacity and will of local government and public service institutions to act on disaster management and local adaptation process including climate change adaptation[44]. However for UP, institutional image, credibility, capacity, management and technical skill are the critical factors that make it weak and non-responsive. During the field observation visits the Local UP leaders acknowledged that UP needed technical support, resources and adequate training and skill to deliver the critical services that are demanded by the resident of the UP.

Conclusions

Much of the recent policy documents acknowledged that local government has a significant role in pre-post disaster management and can also act as an active partner in climate change adaptation process. But in reality there is a gross lack of clarity and understanding of what LGIs can actually do.

Local governments have three main ways of implementing public policy interventions: regulatory mechanisms, financial incentives, and local relationships. In Bangladesh context all three aspects appears be to weak- LG Acts and law as such do not give adequate authority to the LG bodies to work and regulate other agencies at its jurisdictions, central grant to local government is far less than the actual demands/needs and local governments are weak in developing local relations.

One of the most critical and striking issue that halted the pace and process of decentralization in Bangladesh is that of rigid central control. The means of control being exercised by the Central Government cover three areas: institutional, financial, and administrative. Although the Central Government is under statutory obligation to provide grants in aid, it can exercise a considerable degree of control by varying the amount or by making their release subject to fulfillment of conditionalities. The core issues that affect the role and performance of local government at the grass roots are: lack of comprehensive policy and planning framework on decentralization, inadequate legal and regulatory

[44] M Sajid Raihan, M Jahedul Huq, Nana Gerstrøm Alsted, Manja Hoppe Andreasen, *Understanding climate change from below, addressing barriers from above : Practical experience and learning from a community-based adaptation project in Bangladesh*, Dhaka: ActionAid Bangladesh (AAB), 2010

framework for decentralization, absence of a transparent process of inter-governmental-fiscal transfer, lack of integration of local plans with regional and national plan, weak public consultation and participation processes, continued bureaucratic dominance, administrative, and political control of the MPs.

In the context of Bangladesh, the process and quality of local governance is significantly affected by the conflicting political culture and the mindset of public bureaucracy. Local governance institutions, in effect, turn out to be the "means of exercising and abusing power by successive regimes and civil servants instead of becoming avenues of democratic and decentralized local governance. The space for democratic participation in the UP is strongly resisted by the dominant local political actors. Also, the capacity of the local actors, especially, the UP-elected representative is extremely low. All such features, therefore, indicate the poor and passive picture of governance of the grassroots-based institution.

Bangladesh pilot experiences however reveal that rural local governments could utilize the resourcefulness of the rural poor and create the conditions for them to improve upon their conditions through an enabling environment. However, it is also true that, without a real devolution of authority, local governments will find it hard to be effective in addressing the developmental needs, poverty, and the cry for good governance at the grassroots.

Compared to international best practices it appears that Bangladesh local government system particularly at the grassroots level (Union Parishads) in spite of all practical necessity and institutional potential have not been able to play a central role in coordinating and sustaining a multi-level, multi-stakeholder platform to promote disaster risk reduction.

Unfortunately UPs and for that matter other Local Government bodies have not been able to effectively engage local communities and citizens with disaster risk reduction activities and link their concerns with government priorities. Furthermore it is also observed that the UP as a local government unit being the lowest and closed to people still lack institutional capacities and resources to plan and implement practical disaster risk reduction actions by themselves.

Nevertheless, Bangladesh, with its combination of high vulnerability to climate change, strong policy regime on disaster management and climate adaptation issues, and recent attempts to improve the capacity and functioning of local government institutions, offers an ideal opportunity to explore potential approaches to providing climate adaptation and disaster management at the local level.

7. Disaster Management at Local Level – Role and Experiences of NGOs and Civil Society Organizations

During last three decades NGOs have been playing a significant role in development management in Bangladesh (Begum, 2008). Soon after independence NGOs operations were primarily geared to relief and rehabilitation operations, which eventually turned into micro credit, social mobilization, people empowerment, policy advocacy and addressing governance issues. During recent years Civil society and NGOs in Bangladesh are getting deeply engaged in promotion of human rights by mobilizing socially disadvantaged. A number of CSOs/NGOs have been using right based approach in designing social development program and policy advocacy initiatives to make the government responsive and accountable. (OHCHR (2005).

NGOs in Bangladesh have a good track record in responding to the disaster and natural calamities since early 1970s when the NGOs successfully handled major relief operation after flood, cyclone and other natural disasters. In all such operations the NGO/CSOs share the common goal: reducing vulnerability and protecting and supporting affected people (Begum, 2008, Aminuzzaman, 1998).

The Disaster Management Bureau has been assigned the role of coordinating the NGO activities. NGOs make up a vibrant sector in Bangladesh, which has been acclaimed worldwide. NGOs and CBOs are actively involved, among others, in disaster management, micro-credits, family planning, human rights, etc.

NGOs such as CARE-Bangladesh, OXFAM-Bangladesh, ActionAid, Intermediate Technology Development Group-Bangladesh, Bangladesh Disaster Preparedness Center (BDPC), and Disaster Forum are particularly involved in various activities in pre-, during-, and post-disaster activities. The former includes advocacy, public education campaigns, and training programs for personnel involved in disaster management from the national down to the union or community level. NGOs also are active in emergency evacuation and sheltering of the victims. The post-disaster activities include offering new micro-credits or rescheduling their payment programs for rehabilitation.

For disaster management there is an Emergency Capacity Building (ECB) project initiated by six humanitarian and development NGOs in Bangladesh (CARE, Catholic Relief Services, Mercy Corps, Oxfam, Save the Children and World Vision). This consortium plans and implements long term capacity building program focused on disaster risk reduction, staff capacity, and accountability and impact measurement. The ECB consortium primarily attempts to strengthen the capacity of local Disaster Management Committee and work

closely in partnership with the Comprehensive Disaster Management Program (CDMP) of the Government of Bangladesh. Under the legal framework (Disaster Management Law), the Consortium NGOs assist the formation, training and capacity building local Disaster Management Committees (DMCs). (Bannerman, Rashid and Rejve, 2011).

Some leading NGOs and INGOS are engaged in disaster management programs. Disaster Management activities of some of the NGOs are as follows:

BRAC is the largest NGO in the world scale and has a long history and experience in disaster management by working for the victims especially the poor people living in rural and slum areas of Bangladesh. Primarily BRAC is engaged in providing immediate assistance for the victims of other natural calamities like cyclone, flood and drought. BRAC provides assistance to repair the damage caused by the flood and cyclones and help the poor rebuild their livelihood opportunities. It also carries out awareness programs for the community on climate change, disaster management and other governance related issues of disaster at the local level. (Akhter, N 2004).

BRAC's disaster management is generally focused to response, recovery and rehabilitation. Soon after any major disaster, BRAC undertakes relief and rehabilitation program primarily in its program covered areas. It follows some selected phases: a. needs assessment of the beneficiaries; b. relief and recovery, c. Rehabilitation - agriculture based livelihood rehabilitation, non-agriculture based livelihood rehabilitation; and d. undertake structural measures like rebuilding house and cyclone shelters.

Action Aid Bangladesh (AAB) over the past several years has been pursuing projects at several sites across Bangladesh with the goal of piloting a model for participatory, community based planning for climate change adaptation and disaster management. AAB works on climate change adaptation and disaster management with the local government on the notion that "local government institutions are central in facilitating adaptation locally (Christensen, 2012**)** . As part of its approach,

AAB has undertaken efforts to increase local government capacity and accountability to citizens by facilitating participatory planning and budgeting at the UP level. AAB provides various training on issues including climate change, financial management, and relevant laws and regulations to the UP officials. In its operational areas, AAB also assists the UPs in preparing transparent budget books detailing revenues and expenditures, which are published and made available to community members.

One of the unique projects of AAIB is the *Disaster Risk Reduction through Schools* (DRRS) project. This project is exclusively funded the UK's Department for International Development. The project aims to 'reduce peoples vulnerability to natural disaster by contributing to the implementation of the Hyogo Framework for Action (HFA)' and its

purpose is to 'make schools in high disaster risks areas safer, to enable them to act as a locus for disaster risks reduction (DRR), and to engage the education sector in the HFA'

ActionAid's disaster management and risk reduction policies and interventions are based upon the need to bring about sustainable change to the power base at all levels, through community action. Communities identify their own threats and hazards and, as rights holders, work with duty bearers to identify solutions to reduce their vulnerability and respond to the occurrence of any disasters.

Working directly with communities, DRR interventions attempt to derive positive outcomes in three clear ways, namely: i. strengthening local capacities to plan and mitigate vulnerability to known hazards; ii. altering physical development to increase resilience; iii. integrating bottom-up participation in policy/decision-making and resource allocation processes.

ActionAid's DRR interventions are carried through schools as which is considered as the catalytic factor for change. The rationale behind this adopted methodology is clear: a school can be a locus for change, not only in increasing institutional capacity in building resilience itself, but also in mobilizing the community in delivering an authentic DRR message at an operational level, with an ability to bring together rights holders and duty bearers at local, regional and national levels.

The theory of change and conceptualization DRR through schools is built on the following premise:

- Building upon schools' space at the heart of communities that are predominantly rural surrounded by weak civil society structures and public services thus providing the opportunity to build physical and social capital.
- Harnessing space to promote learning and understanding, schools being fora for developing knowledge amongst pupils and their teachers, promoting child-to-child learning and child-to-parent learning.
- Creating a powerbase to mobilize the wider community, particularly supporting schoolchildren to

  serve as important agents of change (as providing DRR knowledge to them results in the speedy dissemination of that information), whom can transfer information about DRR to their parents and guardians, who in turn circulate it throughout the community.
- Strengthening educational networks, working with partners and governments, whom have strong education networks through the community to national level to bring about structural change, for instance in education policy, and curricula.

- Facilitation of a wider agenda for change, through broad information dissemination working at various levels (national, regional and international).

In designing the project AAI is guided by the Hyogo Declaration, specifically in terms of priority 3, "use knowledge, innovation and education" to build a culture of safety and resilience at all levels, namely to:

- Promote the implementation of local risk assessment and disaster preparedness programs in schools and institutions of higher education.
- Promote the implementation of programs and activities in schools for learning how to minimize the effects of hazards.
- Develop training and learning programs in disaster risk reduction targeted at specific sectors (development planners, emergency managers, local government officials, etc.).
- Promote community-based training initiatives, considering the role of volunteers, as appropriate, to enhance local capacities to mitigate and cope with disasters.
- Ensure equal access to appropriate training and educational opportunities for women and vulnerable constituencies; promote gender and cultural sensitivity training as integral components of education and training for disaster risk reduction.

This approach has uniqueness in the sense that it reached out to the larger communities in remotest and most marginalized areas through its initiatives to make school safer places for children and wider use of greater social cause.

CARE Bangladesh supports exercises to map vulnerabilities at the village, ward, and union levels. CARE works with UPs to make the planning and budgeting process more transparent and participatory. CARE utilizes the Community Vulnerability and Capacity Analysis (CVCA) tool to help groups create a Community Action Plan, which prioritizes all the problems of the community including climate change and disasters.

SHOUHARDO has been one of the flagship project of CARE. It has been developed in close working relationship with the Disaster Management Bureau (DMB)[45] under the Ministry of Disaster Management & Relief (MoDMR) of the Government of Bangladesh. CARE is also an active member in the Disaster Emergency Response (DER) Group, the key national forum lead by Department of Disaster Management to bringing together the GoB, NGOs, donors and UN Agencies concerned with improving the effectiveness and efficiency of emergency response and disaster management.

CARE has signed a Memorandum of Understanding with the CDMP of Government of

[45] Now known as Department of Disaster Management

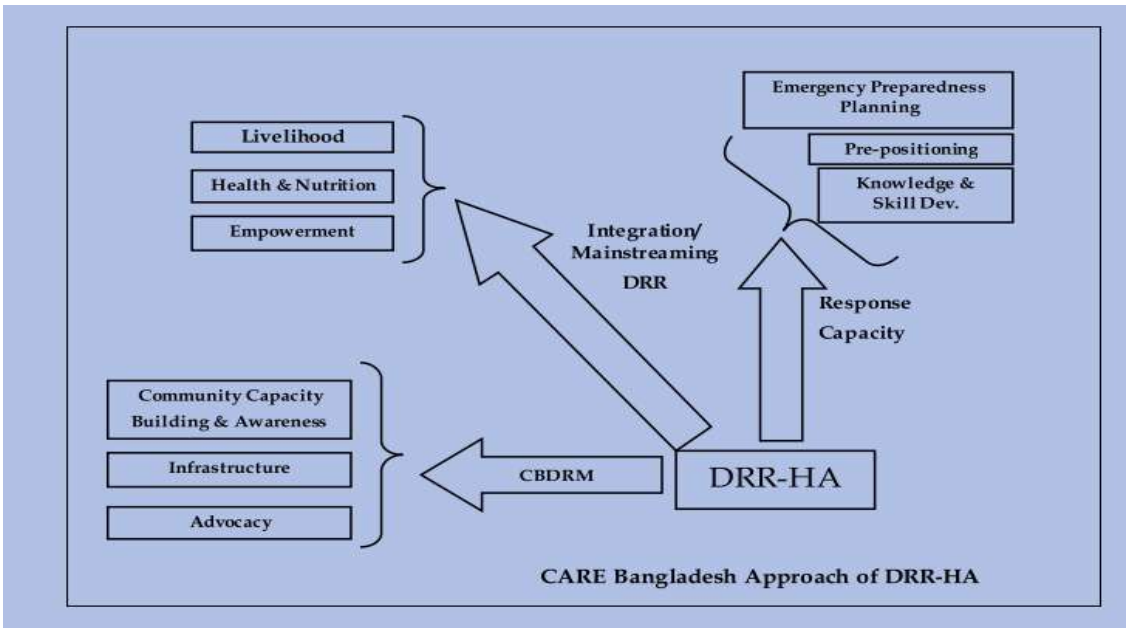
Bangladesh and both the parties in principally agreed to implement the following:

- Utilization of the resources, capacities and Disaster Risk Reduction (DRR) expertise of CARE Bangladesh to further national priorities and community risk reduction programming needs and to contribute to the national disaster management priorities as a development organization
- To achieve the national disaster management objectives, follow the national framework for disaster management and complement existing government systems
- To identify successful community-based practices and further support for replication, partnership with agencies that have 'hands on' experience supporting the national priorities, and share lesson learnt and documents so that community-based evidence can support future policies and practices by developing 'micro-macro' linkages
- Ensure that efforts are not duplicated and resources allocated results the optimal benefits for the poor, marginalized and vulnerable people in Bangladesh.

'Disaster Risk Reduction & Humanitarian Assistance (DRR-HA) project of CARE has three implementation strategies sets which are: i. Integration/mainstreaming disaster risk reduction & humanitarian assistance, ii. Community based disaster risk management, and iii. Response capacity building.

To these ends SHOUHARDO's principle activities comprises the following: i. Disaster Management Training to DMC members of UDMCs; ii. Disaster Management Training to Community Disaster Volunteers (CDVs)

The 'Disaster Risk Reduction & Humanitarian Assistance project follows the following strategic model:



Islamic Relief Worldwide (IRW), Bangladesh has been working on projects at the intersection of risk reduction and local governance in rural areas. IRW emphasizes on climate change adaptation and disaster management activities in line with the existing Disaster Risk Reduction (DRR) efforts. It works in building the capacity of the DMCs at different tiers, with a particular focus on the UDMCs. IRW helps to train and build capacity of various community based organizations to undertake risk reduction planning.(IRB,2012).

Oxfam, Bangladesh: As part of its Resilience through Economic Empowerment, Climate Adaptation, Leadership and Learning (REE-CALL) program, Oxfam undertakes community based efforts at the local level. Oxfam approach involves the formation of large, inclusive village CBOs that brings together all households. UP members serve as advisors to the CBOs. These CBOs work to address all issues faced by the community, with a focus on community mobilization, building capacity to address climate uncertainty, skill development, resilient livelihoods, building women's economic leadership, and local resource mobilization.

There are other local regional and NGOs working on disaster management and climate in partnership with larger national NGOs and different donor supported projects and also with CDMP.

Observations on the strengths and weakness of NGO programs

NGOs, are playing an important role in various capacity building efforts around local governance and climate change and disaster planning. Community people recognized that in absence of any significant support from their local government specially during the disaster, they have received some assistance from NGOs, primarily in the form of labor opportunities and relief following disasters. Other studies study also found that people had much better experiences receiving benefits from NGOs than from local government institutions (Ahmed, Ahmed and Mohammed,2010)

The Emergency Capacity Building (ECB) consortium identifies the key lesson that collaboration between Governments and NGOs can increase the impact of the work of both partners. It has noted that effective partnership with CDMP has resulted in avoiding duplication, better targeting of scarce resources and improved sharing of information. Furthermore the partnership has opened up the critical tier of local government, where capacity-building has great potential to enhance the quality and effectiveness of humanitarian preparedness and response (Bannerman, Rashid and Rejve, 2011).

Christensen (2012) makes a stock taking of NGO administered disaster management and climate change adaptation initiatives in rural Bangladesh. His study notes that:

- Some adaptation needs and solutions identified by communities are at a small scale and could potentially be carried out at the local level.

- UPs face major challenges in raising revenues, indicating that support for adaptation efforts may be needed from external sources.
- Significant risk reduction efforts are being undertaken at the local level by the CDMP in collaboration with local NGOs that has provided an opportunity for disaster management and climate change adaptation efforts to build upon and integrate with existing activities of the NGOs.
- Local Disaster Management Committees (DMCs) could play a role in climate adaptation planning but would likely need additional capacity building and resources to be effective.
- NGOs have played important roles in improving participatory planning and budgeting and supporting communities in climate change adaptation planning, but care must be taken to ensure that they support rather than undermine local government institutions.

However, there are also concerns about the role of NGO is such development. NGOs may have some potential advantages over the Government, including greater flexibility and closer interaction with people at the grassroots level. On the other hand, NGOs work may be unsustainable and create a "perpetual dependency" on the benefits and services NGOs provide, without truly creating a way out for sustainable model. In addition, NGOs sometimes fail to adequately coordinate with local government institutions and their activities may run parallel to those of the Government, potentially undermining public institutions. Thus there is a strong need for greater coordination and cooperation between the Government and NGOs. (Aminuzzaman, 2008)

It has been observed that there is a gross lack of coordination between and among the NGOs and also with the government functionaries (Sarkar, 2009). The NGOs seem to avoid the local government and field level bureaucracy of the Government line agencies. Government Officials seem to have low trust on the mode and method of the operation of the NGOs (Sarkar, 2009).

Some evidence (M Sajid Raihan and others2010) suggest that Local government can play effective role in managing pre-post disasters and subsequent adaptation process once the UP get involved with NGOs/CSOs. Thus it is important and imperative to develop an effective partnership framework to work with the CSOs/NGOs to indentify and understand the collective choices of the community and providing a framework for local adaptation strategies with particular focus to the management of fresh water resources, protection from floods, cyclones and erosion, and distribution government services, post disaster rehabilitation and settlement process.

8. Disaster Management at the Grassroots level of Government – Case Studies of Three Union Parishads in Disaster-prone Arias

Profile of the Study Areas

For empirical assessment of the role of grass roots based local government this study picked up three Union Parishads (UP) namely: Atulia Union located in Shyamnagar Upazila of Satkhira District, Kutubjom Union in Maheshkhali Upazila of Cox's Bazar District, and Decreerchar Union positioned in Faridpur Sadar Upazila of Faridpur District. All these three Union Parishads were drawn from the disaster-prone areas having distinct features of disaster.

The prime purpose of the case studies is to tap the role and responsibilities of the UP in disaster management. It also explores the perception of the community members as regards the operational responsibilities of the UP and record their personal experiences of and expectations from the UP during and after disasters.

Profile of the Union Parishads

Following Section provides a narrative of the demographic, social, structural and climate profile of the surveyed Union Parishads:

Atulia Union is located in Shyamnagar Upazila of Satkhira District, with an area of 42.44 Sq.km . The Union is surrounded by Kashimari, Shyamnagar, Ishwaripur, Buri Goalini and Padmapur Unions.

Elevation	:	The elevation of the Union varies from 0.71.3 m above the Mean Sea Level.
Demography	:	The total population of the Union is 30152. Out of this total, 15190 are men and 14962 are women with 13.7 % in the age group of 04 yr, 27.3 % in the age group of 5-9 yr, 11.7 % in the age group of 10-14 yr, 4.97 % in the age group of 15-17 yr, 29.1 % in the age group of 18-34 yr, 20.1 % in the age group of 35 -59 yr and 6.61 % in the age group of 60+yr.
Religion	:	The Union population is distributed among Muslims (77.5 %), Hindus (22.3%)and other (0.18%).
Literacy rate	:	The literacy rate in this Union is 44.59 %. Male literacy is 54.20% and female literacy is 34.93%.
Poverty incidence: The population living below the poverty line is 34.23%.		
Major livelihood groups: Out of the total household, 35.8 % are laborers, 31.8 % are farmers, 15 % are businessman and 2.86 % are service holders.		

Households : There are 5621 households in the Union.
Housing pattern: In terms of structure, 2.40% of the houses are jhupri 91.1% are kutcha, 2.92% are semipucka and 3.57 % are pucka.
Holds with electricity: Only 8.91 % households are connected with electricity.

Climate

- Mean annual rainfall is 1632 mm. The average dry and wet seasonal rainfall is 193 mm and 1517 mm respectively.
- The mean annual maximum temperature is 31.32 C and the minimum is 21.40 C.
- In dry season the mean maximum temperature is 30.62 C and in wet season the mean maximum temperature is 32.28 C.
- In dry season the mean minimum temperature is 18.49 C and in wet season the mean minimum temperature is 25.48 C.
- The annual average wind speed is 174.57 km/day. The average dry and wet seasonal wind speed is 177.41 km/day and 170.75 km/day respectively.
- The annual average sunshine hour is 6.79. The dry and wet seasonal average sunshine hour is 8.04 and 4.97 respectively.
- The average annual humidity is 74.70 %. The dry and wet seasonal average humidity is 68.97 % and 82.78 % respectively

Kutubjom Union is located in Maheshkhali Upazila of Cox's Bazar District, with an area of 30.51 Sq. Km. The Union is surrounded by Hoanakand, Bara and Maheskhali Unions.

Elevation : The elevation of the Union varies from 1.82.8 m above the Mean Sea Level.
Demography : The total population of the Union is 20563. Out of the total, 10715 are men and 9848 are women with 17.44% in the age group of 04 yr, 19.26 % in the age group of 59yr, 15.63% in the age group of 10-14 yr, 6.30% in the age group of 15-17 yr, 23.44 % in the age group of 18-34yr, 14.55% in the age group of 35-59yr and 3.37% in the age group of 60+ yr.
Religion : The Union population is distributed among Muslims(99. 96%)and Hindus(0.3%).
Literacy rate: The literacy rate in this Union is 17.97 %. Male literacy is 20.38 % and female literacy is 15.40%.
Poverty incidence: The population living below the poverty line is 39.67%.
Major livelihood groups : Out of the total hous ehold , 54.24 % are fisherman , 14.51% are labourer s, 9.97 % are farmer s, 14.51% are businessman and 1.25 % are services holders.
Households : There are 3453 households in the Union.

Housing pattern: In terms of structur e, 15.80 % of the houses are jhupri, 79.36 % are kutcha, 3.34 % are semi pucka and 1.51% are pucka.
Households with electricity: Only 10.12 % households are connected with electricity.

Climate

- Mean *annual rainfall* is 3,623 mm. The average dry and wet seasonal rainfall is 245 mm and 3,378 mm respectively.
- *The mean annual maximum temperature* is 29.92 C and the minimum is 21.93 C. In dry season the mean maximum temperature is 29.56 C and in wet season the mean maximum temperature is 30.43 C.
- *In dry season the mean minimum temperature* is 19.83 C and in wet season the mean minimum temperature is 24.83 C.
- *The annual average wind speed* is 268.47 km/day. The average dry and wet seasonal wind speed is 255.99 km/day and 285.71 km/day respectively.
- *The annual average sunshine hour* is 7.33. The dry and wet seasonal average sunshine hour is 8.84 and 5.19 respectively.
- *The average annual humidity* is 77.26 %. The dry and wet seasonal average humidity is 72.08 % and 84.45 % respectively.

*Decreerchar*Union is located in Faridpur Sadar Upazila of Faridpur District, with an area of 22.05 Sq. Km. The Union is surrounded by Uttar Channel, Ambikapur, Faridpur Paurashava, Aliabad, Gazirtek and Char Harirampur Unions.

Elevation : The elevation of the Union varies from 5.5-7.1 m above the Mean Sea Level.
Demography : The Total population of the Union is 25,579. Out of this total, 13,239 are men and 12,340are women with 12.42% in the age group of 0-4 yr, 13.23% in the age group of 5-9yr, 12.54%in the age group of 10-14yr, 5.50% in the age group of 15-17yr, 28.55% In the age group of 18-34yr, 21.13% in the age group of 35-59yr and 6.62% in the age group of 60+ yr.
Religion : The Union population is distributed among Muslims (94.25%), Hindus(5.73%), Buddhists (0.01%)and others(0.01%).
Literacy rate : The literacy rate in this Union is 36.91%. Male literacy is 40.96% and female literacy is 32.61%.
Poverty incidence: The population living below poverty line is 34. 02%.
Major livelihood groups: Out of the total households 27.08% are laborers, 19.50% are farmers, 12.75% are Businessmen and 7.56% are service holders,
Households : There are 5091 households in the Union.
Housing pattern: In terms of structure 11.80% of the houses are *jhupri*, 79.94% are kutcha, 7.19% are semi-pucka and 10.8% is pucka.

Households with electricity: 22.80% households are connected with electricity.

Climate

- *Mean annual rainfall* is 1823 mm. The average dry and wet seasonal rainfall is 2 33 mm and 1590 mm respectively.
- *Mean annual maximum temperature* is 30.27 C and the minimum is 20.89 C.
- *In dry season the mean maximum temperature* is 29.40 C and in wet season the m ean maximum temperature is 31.47 C.
- *In dry season the mean minimum temperature* is 17.82 C and in wet season the m ean minimum temperature is 25.28 C.
- *The annual average wind speed* is 146.50 km/day. The average dry and wet seas onal wind speed is 140.88 km/day and 153.83 km/day respectively.
- *The annual average sunshine hour* is 6.75. The dry and wet seasonal average sun shine hour is 7.74 and 5.34 respectively.
- *The average annual humidity* is 74.42 %. The dry and wet seasonal average humi dity is 68.59 % and 82.55% respectively.

For household data, the study covered 150 units from the sampled UPs. The Household heads either male of female have been chosen as respondents. However when the household head was not found, the eldest adult member of the family was chosen as the respondent for the household. As Table 1 reveals that out of 150 household about 73 percent were headed by male members while 27.3% were female headed household. Of the total respondent overwhelmingly male respondents were more forthcoming in making answers for the questionnaires. Apart from such observation, women folk in rural Bangladesh do bar themselves from the outsider, especially if the person is out of their known periphery. In such case the eldest son is nominated by the female household heads.

Table 1: Gender distribution of Respondent Household heads

Respondent	***f***	**%**
Male	109	72.7
Female	41	27.3
Total	150	100.0

Table 2 indicates that overwhelmingly (92%) single or separated family is the typical formation in the study area. Perhaps, the situation is quite common in the coastal region. Indicating single family can be more easily tuned to any kind of emergency, especially cyclone.

Table 2: Types of Dwelling (family type)

Family type	***f***	**%**
Joint family	12	8.0
Separate /single family	138	92.0
Others	0	0
Total	150	100.0

Table 3 reveals that almost 71 percent of the respondent household heads are married and about 26.6 percent widow/widower. Vey insignificant percentage are either divorced or separated.

Table 3: Marital status of the Household head

Marital status	***F***	***%***
Married	106	70.7
Widower	26	17.3
Widowed	14	9.3
Divorced	4	2.7
Separated	0	0.0
	150	100.0

It is quite obvious that the average monthly income in the study area is low compared to other areas of Bangladesh. With one or two earning members in the family almost half (20.7+19.3+12.7=52.7) of the families fall between Tk. 10,000 to 16,000 only of monthly income. For the whole sample households the average income is (male and female headed) Tk. 13,320 per month (mean monthly for the female headed is Tk. 10,170 and for the male headed household is Tk. 14,302). However, female headed household gets one-third less of their male counterpart.

Table 4: Monthly Income of the Household Heads

Monthly Income (in Tk)	***Female***	***Male***	***Total***	***%***
4000- 6000	3	0	0	2.0
6000 - 8000	9	3	9	6.0
8000 - 10000	10	10	17	11.3
10000-12000	7	20	31	20.7
12000 - 14000	6	21	29	19.3
14000-16000	4	15	19	12.7
16000 -18000	2	20	22	14.7
18000 - 20000	0	15	15	10.0
20000 -22000	0	5	5	3.3
	41	109	150	100.9

Average Household head Male = Tk. 14302
Average Household head Female = Tk. 10170
Average Household head (Male & Female) = Tk. 13320

Table 5: Literacy level of the Household Heads

Literacy level	***f***	***%***
Can't read or write	12	8.0
Primary drop out	53	35.3
Primary	45	30.0
High School	26	17.3
HSC	11	7.3
Bachelor & above	3	2.0
	150	100.0

Table 5 indicates that a little over one-third of the head of the households are primary drop out, assuming they got some basic understanding of reading and writing. While a significant percentage of the heads are literate of different scale and a very marginal case (2 percent) heads are being reported as college graduates.

Table 6: Occupation *level* of the Household Heads

Occupation Group	***f***	***%***
Small/Medium business	16	10.7
Farm worker	30	20.0
Agriculture	34	22.7
Fisheries	30	20.0
Mechanics/Technicians	6	4.0
Rikshaw puller	17	11.3
Small Shop owner	14	9.3
Other Occupations	3	2.0
	150	100.0

Of all the respondents over 60 percent are involved in agriculture sector and fisheries, indicating that any incidence related to climate these people are at stake at the very onset.

Table 7: Disaster faced during last 5 years +

Types of disaster	***f***	***%***
Cyclone/ Tornado	121	80.7
River erosion	31	20.6
Storm surges/Tidal wave/ flash flood	118	78.7
Fire	11	7.3
Earth quake	0	0.0

In the last 5 years local people experienced either cyclone along with storm surges (Table 7). Other incidences like riverbank erosion is also said to be frequent occurrence. Such

damages incurred financial losses to the families. For example, in the last cyclonic havoc incurred losses mostly in dwelling structure, standing crops, livestock and fisheries (in pond and projects). In fact, it is in the fishery section where they lost mostly. At times such losses caused out migration from their villages (see Table 10).

Although the data do not entail about their destinations and distance. However, field experience suggests that a majority of them do move out in their in-laws destinations and some leave for major urban centers in the region (see Table 10).

Table 8: Damage of Property/assets during last incidences(n=133)

Types of property	***Average cost of damage (Tk)***
House	12000
Farm product	22000
Poultry	2500
Cows/Buffalo/ livestock	15000
Food	3500
Tubewell/ Well	6500
Pond	15000
Fisheries/hatcheries	43000

Table 9: Migration due to disaster affect

Response	***f***	***%***
Yes	44	29.3
No	106	70.7
Total	150	100

Table 10: Direction of Migration (n=44)

Direction of migration	***f***	***%***
Rural to rural	14	31.8
Rural to Urban	24	54.5
External migration	6	13.6
Total	44	100.0

Table 11: Access to Communication media (N=150)

Media	***Never/Rarely***	***Occasionally***	***Regular/Very Regular***
Newspaper	76.0	18.7	5.3
Radio	15.3	21.3	63.3
TV	58.0	19.3	22.7
Public Announcement	11.3	23.3	65.3
Internet	100.0	0	0

Like any other rural places of Bangladesh the areas under survey are widely (22 percent) reached by TV media. Another 63 percent do have access to Radio on a regular basis. In fact, the coastal regions of Bangladesh in recent years are well covered by the national radio and also community based radio, especially when weather turns bad.

Table 12: Sources of community information/ Public announcements on disaster/ cyclone etc

Sources	***Never/Rarely***	***Occasionally***	***Regular/Very Regular***
Neighbors	24.0	30.0	46.0
UP Announcements	19.3	38.7	42.0
Red Crescent	40.0	30.0	30.0
NGO workers	28.7	37.3	34.0
Government Radio	0.0	0.0	100.0
Television	47.3	18.7	34.0
Announcement of Volunteers	76.0	17.3	6.7

Table 12 illustrates the variety of the fields from where the villagers being informed during cyclones. Cheap and easy access to radio appeared to be most effective media through which the poor people do receive any incoming warning of cyclone. It is also reported that other sources become active when threat is eminent and people receive news update from sources like; neighbors, UP announcements and other sources. More over as high as 83% of the household heads observed that early warning system has always been helpful for them to take evacuation decision and taking care of assets and resources (Table 13).

Table 13: Has the early warning system helped?

Response	***%***
Yes	82.7
No	11.3
Not always	6.0

Such warnings invariably help the people to look for help and shelter. But some of the respondents (17.3%) however noted that such early warnings were not useful as : such forecasting were not timely; inaccurate, misleading / wrong information, vague and generalized information, and sometimes too late in disseminating such information.

Table 14: Services and support received from various sources during the immediate past disaster

Services Sources	***Cash***	***Agricultural input***	***Food***	***Construction Materials***	***Loan***	***Drinking Water***	***Candle light/ Kerosene***
Central Government	30.0	37.3	53.3	20.7	0	26.0	15.3
Union Parishad	14.0	0	15.3	14.7	0	23.3	
Armed forces		15.3	44.7	19.3		44.0	29.3
NGOs/CSOs	8.0	16.7	39.3	19.3	44.0	50.7	
Community Members	5.3	3.3	8	0	23.3	7.3	
Political Leaders	3.3	0	4.7	0	0	0	
External Rescue Workers	8.0	15.3	44.7	14.7	0	59.3	15.3
Others	5.3	0	7.3	0	23.3	2	

Post disaster assistance overwhelmingly comes from the central government and the armed forces and it comes both in cash and in kind. Immediate helps come in the form of dry food and drinking water followed by agricultural input. It is only NGOs who offer loan to the people to reinstate in economic activities. It also reveals that that community level leaders and political leaders are not visible in offering post disaster support.

Table 15: Did the UP Officials (Chairman/ Members or Secretary) offer any support to you prior / during and after the disaster? (n=150)

Response	***Prior***	***During***	***After***	***Average***
No support at all	43.3	68	37.3	49.5
Indifferent	16.7	20	14.7	17.1
Very Little Support	32	6.7	28	22.2
Good support	8	5.3	13.3	8.8
Excellent Support	2.0.	0	6.7	2.2
	100	100	100	

About 50 percent of the household respondents noted that they had not received any effective emergency before, during and after the disaster. Community members at large tend to believe that such services are provided on the basis of social connectivity and patronage system.

UP Disaster Management committee is supposed to play a significant role in managing the pre and post disaster challenges. However about 93 percent of the respondents are not at all aware of the existence of such committee.

Table 16: Community awareness about theUP Disaster Management Committee (n=150)

Response	***%***
Yes	7.3
No	92.7
Total	100.0

However those who are aware (just 7.3%) about the UP disaster Management Committee noted that such committee had provided them information, guidance on what to do during disaster, prepare list of victims, Help GOB/NGOs distribute relief, maintained liaison with Upazila officers and relief NGOs.

Table 17a: Expected Role of the UP prior to disaster: Community Perspective

Expected Role (Prior to disaster)	***5***	***4***	***3***	***2***	***1***
Proper public announcement and early warning	81.3	12.0	4.7	2.0	0.0
Help building/maintaining community level shelters	45.3	30.0	14.7	10.0	0.0
Mobilizing the community members	51.3	36.7	8.7	2.7	0.7
Door to door awareness campaign	53.3	27.3	8.7	7.3	3.3
Effective use of the community radio	23.3	25.3	42.7	5.3	3.3
Support the old and people with disability	50.0	47.3	2.7	0.0	0.0
Support community based preparedness program	23.3	36.7	30.0	10.0	0.0
Develop more infrastructures for resilience	78.7	21.3	0.0	0.0	0.0
Arrange local transport to and from Shelters for the children, disabled and old people	51.3	34.7	14.0	0.0	0.0

5= Very high priority, 4= high priority, 3= priority, 2= Some priority, 1= Low priority

The respondents were asked about the expected role of the UP in the pre-disaster period. Their expectation is very high to the local UP (Table 17a). Especially in making "proper public announcement and early warning" and "develop more infrastructures for resilience". In a post disaster condition the members of the community expect that the UP should provide emergency relief like water/ food / medicine, build community infrastructures (Road/ culverts/bridges), and put their energy and efforts to generate resources from outside to rebuild the community infrastructures.(Table 17b).

Table 17b: Expected Role of the UP after disaster: Community Perspective

Expected Role (after the disaster)	***5***	***4***	***3***	***2***	***1***
Help to rebuild homestead	49.3	27.3	12.7	9.3	1.3
Provide emergency relief like water/ medicine	83.3	16.7	0.0	0.0	0.0
Cash relief	30.0	34.0	23.3	10.7	2.0

Expected Role (after the disaster)	***5***	***4***	***3***	***2***	***1***
Provide agricultural inputs/ livestock	22.0	26.0	36.7	12.7	2.7
Build community infrastructures (Road/ culverts/bridges)	60.7	35.3	3.3	0.7	0.0
Solve the water logging problems	28.7	25.3	19.3	19.3	7.3
Reconstruct irrigation system	52.7	37.3	10.0	0.0	0.0
Generate resources from within	15.3	14.0	49.3	7.3	14.0
Generate resources from outside	70.0	30.0	0.0	0.0	0.0
Provide building materials	74.7	25.3	0.0	0.0	0.0
Emergency support (Water/ Food/ Medicine/ Candles)	90.0	10.0	0.0	0.0	0.0

5= Very high priority, 4= high priority, 3= priority, 2= Some priority, 1= Low priority

It is observed that the lower the income brackets of the household the higher the expectation from the UP. It is also observed that the extent of damage and loss of house hold is relatively high for the female headed households. The study underlined the fact that female headed household do suffer the most in inapt situation.

Table 18: Community Expectation of disaster related services of the UP based on Family income.

Income level	***Level of Expectation of UP Services***		
	High	***Mid***	***Low***
Low	*94.7*	*5.3*	*0.0*
Medium	*49.0*	*33.0*	*18.0*
High	*25.0*	*55.0*	*20.0*

Table 19: Extent of Loss by Gender of Household head

Gender	***High***	***Low***
Male (n=109)	*63.3*	*36.7*
Female (n=41)	*78.0*	*22.0*

Table 20: Community Assessment of the preparedness of the UP in facing the disasters (n=150)

No preparation at all (1)	***2***	***3***	***4***	***High preparation (5)***
41.3%	37.3%	16.0%	4.0%	1.3%

Table 20 exemplify the situation that being repeatedly exposed to disaster, the personnel of the UP under study do not have any preparedness planning for any incoming threat. The respondents assess the UP very poorly in terms of its institutional competences (Table 20). Corruption being the prime issue (92%) followed by lacks of appropriate management and

use of resources. In fact, the UP personnel in most cases are not properly trained and as a result they are not in a position to put up things in right approach. UP elected officials grossly lack overall management skills and in particular planning skills. Community perception about the technical and professional capabilities of the UP office bearers to undertake basic maintenance duties of the community infrastructure is also very low.

Table 21: Factors that affect the preparedness of the UP : Community Assessment (n=150)

Factors	***%***
Willingness of the Leaders	60.7
Mobilization of resources	67.3
Management of resources	83.3
Corruption	92.7
Proper planning	72.7
Community mobilization	34.7
Technical know how	47.3
Capability of maintenance of the infrastructure	63.3
Management skill	64.7
Others	42.7

Table 22: Post disaster visit of the UP Members or Officials to the affected households (n=150)

Response	***%***
Yes	19.3
No	80.7
Total	100.0

UP members usually do not visit the devastated people (80%). It can be explained that these UP members do not have resources at hand and that makes no sense of visiting people at the post disaster sufferings. Study reveals that quite often (42%) the UP members undertake assessment of damages in their locality and about one-fifth of the respondents are not aware of such efforts (22%, Table 23).

Table 23: Survey / Assessment of loss/ damage of the disaster undertaken by UP (n=150)

Response	***%***
Yes	**42.7**
No	35.3
Don't know	22.0
Total	100.0

Quite a large number of household heads reported (67%, Table 23a) that in the post disaster period they do receive some kind of relief through UP. However as many as 22 percent of

respondents observed that they were not sure whether they had received such compensation from the UP or not.

Table 23a: Those who say Yes,Did you get any support from the UP to compensate your losses/damages?

Response	***%***
Yes	67.2
No	14.1
Do not know whether it is UP or not	18.8
Total	100.0

However any such compensation is found to be too little/ not at all adequate for about 84 percent of the households. Table 24 indicates that a little over 45 percent of the distresses people are not being reached by the UP and close to 40 percent indicated that they came in contact with little assistance. This picture becomes more grim when they indicated that the UP representatives were not transparent in their post disaster relief distribution activities (Table 25).

Table 24: Was UP to compensation adequate enough for the damage/ loss?

Not at all	**too little**	**barely enough**	**Somehow**	**Adequate**
45.3	39.1	10.9	4.7	0

Table 25: UP's practice of transparency in post disaster relief distribution

Response	***%***
Yes	24.7
No	75.3
Total	100.0

Respondents noted that class interest, patronage distribution, political preferences and extended family influenced the distribution of post disaster relief and support of the UP. (Table 25)

Table 25: If no, what are the factors that influence the distribution of post disaster relief and support of UP? (n=113)

Factors	***%***
Class interest	**30.1**
Patronage distribution	40.7
Political preferences	45.1
Extended family	20.4

When people were asked about the factors that led them to be away from getting some kind of support from the UP, the respondents noted that class interest, patronage distribution, political preferences and extended family influenced the distribution of post disaster relief and support of the UP.

While assessing the capacity of UP to provide appropriate of pre/ post disaster relief and support to the community, as many as 68.3 % noted that UP had a "very low/ or low" capacity in managing the disaster relief distribution. (Table 26). This entails that at times of need local UP do not receive enough resources to address the need of the poor members of the community. .

Table 26: Assessment of the capacity of UP to provide appropriate of pre/ post disaster relief and support to the community (n=150)

1	2	3	4	5
29.3	39.3	20.0	7.3	4.0

1=Very low, 2= low, 3= moderate, 4= High

Table 27: Community Awareness of any development plans of UP for disaster risk reduction and management (n=150)

Response	***%***
Yes	12.7
No	87.3
Total	100.0

Community awareness is another dimension where people clearly indicated they were very little aware (only 12.7%) of any development plans of the UP as regards disaster reduction and management. These respondent groups are aware of the reconstruction of embankments, reinstallation/rebuilding of tube well and roads/ culverts. Our field observations and secondary information however confirmed that most of these respondents were close associates and beneficiaries of some form of patronage of the UP officials.

By law UPs (UP Act 2009) are supposed to have an open budget session to ensure accountability and transparency. But it is observed from the field survey data that local people are little aware (only 14%) of the open budget sessions of the UP. It cannot be ruled out that UP personnel purposely are not interested to make their budget process open and transparent. Subsequent question (Table 29) to the people suggests that about half of the respondents do know about the budgetary provision on disaster management.

Table 28: Community participation in the Open budget session of the UP (n=150)

Response	***%***
Yes	14.7
No	85.3
Total	100.0

Table 29: Community awareness about UP budgetary provisions on Disaster management ***(n=22)***

Response	***%***
Yes	50.0
No	13.6
Don't know	36.4
Total	100.0

Table 30: Community Participation in UP Ward level UP planning meeting (n=150)

Response	***%***
Yes	27.3
No	72.7
Total	100.0

Table 31: Did the Community suggest any project to address disaster/ or mitigate disaster (n=41)

Response	***%***
Yes	73.2
No	22.0
Don't remember	4.9
Total	100.0

Only 27 % of the household heads had ever attended the UP planning meeting (Table 30) and those who attended of which 73% noted that community members did suggest specific project aimed to mitigate future disaster (Table 31). About 51.2% of respondents those who attended the planning meeting, also observed that the suggested plans had been ultimately included in to the UP Plan (Table 32).

Table 32: Has it been included in the Union Plan? (n=30)

Response	***%***
Yes	51.2
No	17.1
Don't know	4.9
Total	100.0

However the overall level of satisfaction on the performance of UP is unfortunately very low (92% of which 79.3 are not satisfied at all, while 12.75 are somehow satisfied). The data clearly indicate that the respondents at times reported to be well aware of the UP activities but they are not satisfied of their performance and roles.

Table 33: Overall satisfaction on the performance of the UP (n=150)

Not satisfied at all	***Somehow satisfied***	***Neither satisfied/ nor dissatisfied***	***Satisfied***	***Highly satisfied***
79.3	12.7	4.0	2.7	1.3

Almost similar picture is revealed in table 34 which also clearly indicated that the Community assessment on overall satisfaction on the performance of the UP in disaster management / mitigation not satisfactory. Only 6.6 percent of the are satisfied / highly satisfied while 74 percent are not satisfied at all on UPs role in disaster management / mitigation and planning

Table 34: Community assessment on overall satisfaction on the performance of the UP as regards disaster management / mitigation

Not satisfied at all	***Somehow satisfied***	***Neither satisfied/ nor dissatisfied***	***Satisfied***	***Highly satisfied***
74.0	7.3	12.0	3.3	3.3

66% household heads note that they feel that as community member they are under high/very high level of risk and uncertainly during various disasters.The community self assessed their vulnerability as high (30%) to very high (36%). This simply reflects their frustration in the face of risk. (Table 35).

Table 35: Community self assessment of their risk and vulnerability during various disasters (n=150)

Minimal	***Low***	***Medium***	***High***	***Very High***
4.7	7.3	22.0	30.0	36.0

The only sector where the UP can take some degree of credit is disseminating warnings in the event of disaster. People expressed their satisfaction to a higher level (25.3+36.0=61.3%, Table 36).

Table 36: Satisfaction as regards adequate advance warning or notification from the UP (n=150)

Not satisfied at all	***Somehow satisfied***	***Neither satisfied/ nor dissatisfied***	***Satisfied***	***Highly satisfied***
2.7	9.3	26.7	25.3	36.0

Community members also noted during the major disasters that they generally move to take safe places mostly to relatives' houses or stay at home which they consider "safe". But about 46% noted that they tend to move to the Cyclone Shelter(CS)/ or flood relief camp.

Table 37: Distance from the Cyclone centre/ Safe centre from your house? (in km)

Distance	***%***
Below half km	12.7
Half km	24.0
Less than 1 KM	19.3
1 Km plus	28.0
No such designated centre	16.0
Total Response	100

79 percent of the respondents reported that they had been to the CS at times of major cyclone or flood. However a good percentage (43%) of residents indicated that their CSs were not located in a right place The situation becomes more apparent when data were anlysed of the Table 37. At times of disaster usually people leave their home late and find difficult to travel between half (24%, Table 37) to 1 km.

Table 38: Assessment of the Cyclone centers

If yes - those say yes and has gone to CC (n=79)	***Yes***	***No***
Do you consider		
the Cyclone Shelter safe	79	21
Space of the Shelter adequate to accommodate all members of Community	52	48
the Shelter is gender friendly	41	59
have adequate supply of water in the Shelter	21	79
have provisions of emergency medical supply in the Shelter	0	100

If yes - those say yes and has gone to CC (n=79)	*Yes*	*No*
appropriate toilet facilities in the Shelter	9	91
appropriate space for the livestock	12	88

Our field observations from two Union where Cyclone shelters are located reveal the following picture of the state of the present conditions of the facilities:

Table 39: Features and facilities of Cyclone Centers

Features and facilities	*Atulia, Satkhira Sadar Upazila*	*Kutubjom, Maheshkhai Upazila*
No of Cyclone Center	1	13
Capacity	450	13,575
No of Toilet	2	43 (1 Centre does not have any)
Water Supply	No	4 out of 13
Women Space	None	None
Facilities for Disable	None	None

Those who took refuge in the CS in general found the CS as safe, although quite many of them had reservation regarding space being allotted. However, they found the space as friendly (59%). The CS couldn't make them happy when the question of water supply was asked. However all the respondents expressed their dissatisfaction when it comes about the emergency medical supply. Not all CS have got enough toilet facilities and enough space for livestock.

Table 40: Overall assessment of the institutional features of UP

Overall assessment	Very low/ low	Medium	Very high/ High	Don't know
Corruption	6.7	12.0	80.0	1.3
Quality of service delivery	74.7	14.0	9.3	2.0
Politicization of service delivery	3.3	21.3	70.0	5.3
Resource mobilization capacity	76.0	14.0	8.0	2.0
Resource management capacity	68.7	23.3	6.7	1.3
Capacity to plan	55.3	29.3	13.3	2.0
Adequacy of manpower	86.6	10.0	3.3	0.0
Transparency of its activities	74.0	18.7	6.0	1.3
Level of accountability	70.0	20.7	8.0	1.3
Community participation	48.7	28.7	21.3	1.3
Level of trust by community members	81.3	12.0	6.0	0.7

Overall assessment	**Very low/ low**	**Medium**	**Very high/ High**	**Don't know**
Gender sensitivity	58.7	16.0	20.6	4.7
Responsiveness to special need of marginalized groups	83.3	12.0	2.0	2.7
Overall Image	78	7.3	9.3	5.3

The institutional features of the UP appeared to be frustrating (Table 40). The UP image highly tinted in the negative aspects like corruption, politicization of service delivery etc. The situation is so deem that of the 11 indicators of assessment, 9 indicators scored very low rank. As a whole 78 % the household heads rated the overall image of the UP as an institution in the combined category of "very low/low".

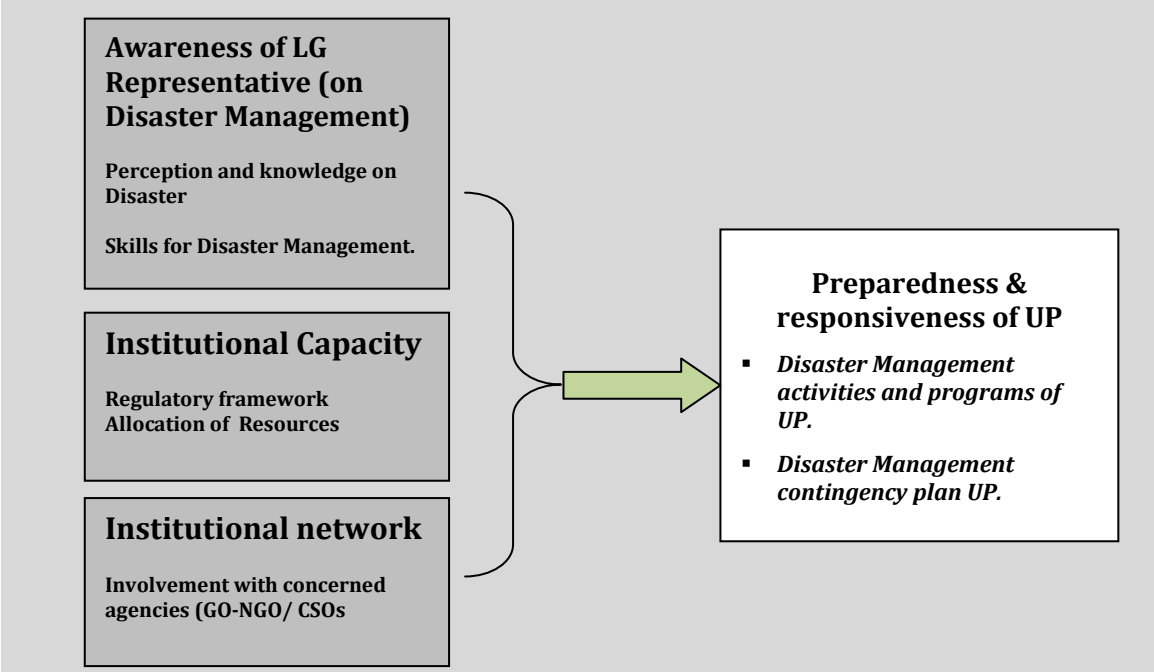
Table 40 compiled the responsiveness and preparedness indices of the UP. It clearly demonstrates that UP has been rated very poorly by the members of the community. All good practices scored very low, reflecting their frustrations. None of the 14 indicators of expectation or standard practices of disaster management of the UP could match the expectation of the disaster prone coastal areas. It is also remarkable that matters related to community participation and concern for the special needs of the vulnerable and marginalized groups in disaster prevention, management and implementation are completely ignored by the UP. This reflects a gross insensitivity of the disaster management and planning system of the grass roots level governments. In fact almost all institutional practices of the UP have been very poorly ranked and labeled with discredit by the community members.

Table 40: Responsiveness and preparedness of the UP: Community assessment (N=150)

Community assessment	**Very Low/ Low/None**	**Moderate**	**High / Very High**	**Don't know**
Having any process or mechanism to involve all people, especially vulnerable and marginalized groups in disaster prevention decision-making and implementation.	89.3	3.3	0	
Ensuring equal participation of women and men in disaster prevention decision-making and implementation	86.0	4	1.3	
Specific needs of children and young people are taken care disaster prevention practices.	61.3	6	31.3	1.3

Community assessment	**Very Low/ Low/None**	**Moderate**	**High / Very High**	**Don't know**
Provisions to draw support the participation of local volunteers in disaster prevention measures	34.7	23.3	37.3	4.7
Regularly review disaster prevention policies to protect vulnerable people from disasters	98.0	0	0	2
local (indigenous) knowledge, skills and resources are considered in taking disaster prevention practices	21.3	23.3	52.7	2.7
UP has adequate budget for disaster prevention	73.3	12.7	0	14
UP Officials have clear roles and responsibilities to carry out disaster prevention	71.3	14	13.3	1.3
UP officials have sufficient expertise to carry out disaster prevention	72.0	14	14	0
UP regularly monitors and reports on progress on disaster prevention	100.0		0	
UP involve Communities and Civil Society in monitoring of disaster prevention	91.4	8.7	0	0
UP provide a mechanism for vulnerable people to make complaints and get a response on any in disaster prevention measures.	100.0		0	
Regularly collect, review and map information on disasters risks and climate change	92.7	4	0	3.3
Provide vulnerable people with updated, easily understandable information on disaster risks and disaster prevention measures.	78.0	5.3	12.7	4

What matters Disaster management at UP/ local level?



In summary, the survey findings reveal that from community perspective the responsiveness of the UP in terms of its disaster management programs, activities and management contingency plan depends on three sets of explanatory factors. These are: a. awareness of LG Representative on Disaster Management, b. institutional capacity, c. institutional network

Institutional assessment of UP with particular focus to disaster management: Perception of CSO leaders/ NGO officials and other stakeholders

As part of this study the research team held 3 Focused Group discussion[46] sessions in three sampled Unions. Following are the broad observations drawn by the participants:

> The members of the UP in general grossly lack technical knowhow and preparation to address and manage pre and post disaster situation.
>
> The UPs have a very limited degree of decentralized authority, power, responsibilities and resources. The local level resource mobilization of local government is limited and the potential resource bases are not exploited by the UP

[46] *FGD sessions were participated by Local political leaders, UP Officials, Media representatives, School teachers, Community leaders, NGO/CSO representatives, Field Workers of different service delivery agencies of the central government*

on political grounds and considerations. As a result UP cannot take innovative and proactive programs.

A number of workshops and field based training and orientation have been organized by the District Administration, local and international NGOs, Disaster Management Programs of the Government. However there appears to be a limited impact of such training and orientation due to lack of appropriate follow up action. Most UP officials noted that due to poor resources and lack of management skill and manpower, it was almost impossible for them to respond to the pre and post disaster management interventions.

Lack of resources, extremely politicized allocation of resources, poor planning and implementation capacity, lack of adequate staff and weak physical infrastructure are the main institutional and structural limitations of the UP to get engaged in any development management activities.

There is hardly any formal institutional interaction with UP work with CSOs/ NGOs. However the CSOs/ NGOs do provide immediate and emergency relief after the disaster, especially after cyclone and flood.

There is no institutional mechanism in practice which allows the community to get engaged in disaster management activities (before and after the disaster). In fact there is no difference between the role of the elite member and the marginalized members of the community in disaster management. In other words effective community engagement in disaster management is largely missing.

There are two parallel committees on disaster management at the UP level. One is the UP Disaster Management Committee constituted by the MoDMR field functionaries and the other one is the UP Standing Committee on Social Welfare & Disaster Management constituted under the UP Act 2009.

The UP Standing Committee on Social Welfare & Disaster Management is symbolically constituted. None of the members of the Committee is aware of the role and function of the Committee. A number of members of such committees are not even aware that they are members of those Committees[47].

Similarly UP Disaster Management Committee is also constituted as ritual and upon the instruction of the Upazila Nirbahi Officer[48]. In reality UP Disaster Management Committee is not visible in action at least at the UP level.

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[47] The research team could not find the terms of reference and or the proceedings of Social Welfare & Disaster Management Committee meetings.

[48] Out three UPs, in one UP the research team could find the proceedings of only one of the meetings of UPDMC

The Local Governance Support Program (LGSP) – a fiscal transfer program of the central government has given sufficient amount of flexibility in the use of UP fund but in reality, in all three UPs there was hardly any evidence that LGSP funds have been used for disaster related / focused interventions and or initiatives.

The overall regulatory frameworks of the UPs as regards budgeting, community based planning, and social monitoring, are to a great extent, elaborate but not found to be in practice.

UPs seem to be reluctant to engage the community members in disaster mitigation, mobilization of resources, people's participation at local level program design and implementation.

Perception and assessment of the Upazila Nirbahi Officer[49] (Sub-District Executive Officer)

To assess the role and function of the UP, a questionnaire survey was carried amongst the UNO, the immediate reporting central government representative at the local level. As many as 43 Upazila Nirbahi Officers preferably from the disaster prone belt were covered under the survey. The prime objectives of the survey was to tap the opinion and observations of the UNOs as regards the operational as well as institutional challenges of the UP in undertaking and managing programs related to disaster mitigation and climate changes.

The UNOs were asked to assess the degree of decentralization in terms of powers, responsibilities and resources mobilization of UP. The UNOs observed that in general UPs had considerable decentralized power and authority. 45 percent of the UNOs note that UP as an institution has considerable amount of delegated and decentralized authority to undertake various developmental functions. Furthermore the UP Act has given the UP an extended list of as many as 39 roles and functions. However the UNOs also note that the UP as an institution enjoy relatively less decentralized authority in human resource, planning and financial management. As against the conventional criticism, UNOs observe that UP enjoys considerable autonomy and decentralized power in operationalizing their roles and responsibilities. UNOs however agree that there is relatively low level of decentralized authority of UP in terms of resource and financial management and hiring of human resources.

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[49][49]Upazila Nirbahi Officer is the executive head of the office of Upazila - the lowest tier of public administration system administration in Bangladesh. The UNO represents the Central Government and also act as the Member Secretary of the Upazila Parishad – second tier of Local Government. UNO acts as the Development Coordinator for the UPs. He is also directly involved in the monitoring of the activities of UP and the major central government funded projects being implemented by the UP.

How do you assess the degree of decentralization in terms of powers, responsibilities and resources mobilization of UP?

Dimensions	**Degree of decentralization**		
	Very low/low	Moderate	High/Very high
Power/ authority	23.8	31	45.24
Roles and responsibilities	4.8	7.1	88.1
Resources mobilization	59.5	33.3	7.14
Human resources	47.6	52.4	0
Planning	33.3	66.7	0
Financial management	47.6	52.4	0

One of the UNOs during the interview summarized the issue of degree of decentralization of authority and power of the UP. He opined:

> *In fact by law the UPs are highly empowered, especially after the UP Act 2009. Lots of roles and responsibilities are being delegated to them. Some degrees of financial authority have been transferred to them. There are provisions of direct financial grants to the UP – upon which they have absolute control. However the quality of leadership, inadequate understanding and clarity of the UP laws and procedures, lack of training and professional competence is costing their performance and quality of governance at the UP level.*

Committee system[50] is one of the core institutional features to make the UP management open, transparent and participative. However empirical evidences reveal a very passive picture of the performance of the UP Committee system. Among the 13 UP Standing Committees, there are gross sector or theme based overlapping of functional and of the responsibilities of the UP Standing Committees.

73.8 percent of the UNOs under the survey noted that the degree of effectiveness of UP committee system was "very poor". One of the UNO during interview further observed that:

> *"UP Committee system was ritualistic and constituted only on paper. Even the members of the so-called committees were not aware of their inclusion in any of such committee memberships. Even when the committee were formed UPs deliberately avoided the inclusion of enlightened community members, CSOs/NGOs representatives or even extension workers of the different line agencies as non-voting members"*

Degree of effectiveness of the UP Committee system

[50] There are 13 Standing Committees of the UP for various operational and planning processes. One of such Committees is Social welfare and Disaster management. It is to be noted that there is also a UP based Disaster Management Committee which is technically supported by the *Upazila* Administration. The role of the UPs in most cases is marginal in the activities of UPDMC.

Degree of effectiveness				
1 (very poor)	2	3	4	5 (Highly effective)
73.8	26.2	0	0	0

The UNO have assessed some of the critical institutional strengths of the UP. Table below shows the distribution of their assessment in scale of 1-5. Based on the assessment of the UNOs – it appears that in general the overall capacity of the UP elected officials is weak/very weak in all there critical areas of management. This observation is also supplemented by other studies (Aminuzzaman, 2013).

How would you assess the institutional strengths of the UP?

	Degree of management capacity, knowhow and resources				
	1 (Very Poor/weak)	***2 (Poor/weak)***	***3 (Moderate)***	***4 (High)***	***5 (Very High)***
Management Capacity	33.3	16.7	42.9	7.1	-
Technical knowhow	50	42.9	7.1	-	-
Resources management	33.3	26.2	28.3	12.1	-

The UNO further emphasized that that existing regulatory frameworks / laws are fairly supportive for adequate community engagement in local level program design and implementation. While asked "Do you think the regulatory frameworks / laws are effective / adequate for community engagement in local level program design and implementation?" as high as 83% of the UNOs opined that the present regulatory framework was "highly supportive" of community engagement in the overall decision making, monitoring of the development projects. One UNO observe that "*it is the mindset of the UP leadership not the regulatory process or rules that hinders the community engagement in development projects*".

The UNOs while assessing the performance and effectiveness of UP Disaster management team acknowledged that in most cases UP Disaster Management Committees had not even formed. As many as 76 percent of the respondent UNOs found the UDMCs were "not effective at all/ not effective" . During interview they noted that even when UDMC was formed the Committee's role and performance was not distinctly visible and effective. In reality the Project Implementation Officer (PIO[51]) prepares a list of names who could by default be in the UDMP and get it endorsed by the UNO and other relevant authorities. One

[51] A field based officer of the Ministry of Disaster Management and Relief.

UNO noted that "*in reality during the disaster the UP as a whole work together and get the decisions subsequently those get approved by the relevant committee when it is at all needed".*

Degree of effectiveness of the UP Disaster Management Committee

Level of Effectiveness				
1 (not effective at all)	*2 (Not effective)*	*3 (Moderately effective)*	*4 (Effective)*	*5 (Highly effective)*
50	26.29	14.3	4.7	4.7

Based on the community level survey, FGD sessions with the CSOs/NGOs and UP officials and the assessment made by the UNO, the matrix below presents the key findings / observations on various institutional and managerial features of UP having direct implications on disaster management at the local level.

Extent of Capabilities	***Findings***
Institutional	UPs in general are not capable. Though UPs have a clear structure, role, and responsibilities for Disaster Management but the elected officials are not fully conversant with basic information as well as lack skill and preparation. Moreover managing disaster is not one of its major performance indicators in getting block grant from the Central government. There are no institutional indicators for assessing its capacity. Structure as well as manpower of UP are simply not adequate to carry out its roles and responsibilities and UP's relationship with extension agencies of the government is also unclear.
Human Resources	Secretary is only a full time staff for the UP. The elected members have very limited understanding of the detail disaster management approaches and skills. Only small percentage has got orientation training on disaster management under CDMP project. UPs human resources are grossly insufficient considering the wide range of listed works in the UP Act. There is no technical staff at UP.
Policy for effective implementation	There are number of strict and control oriented policies, rules and implementation regulations for making decision, mobilizing resources and engaging relevant public/private organizations. Relationship with line agencies of the extension agencies of the

Extent of Capabilities	*Findings*
	government is not clear. Moreover the 9 to 11 assigned staff of the line agencies of the central government have not yet been placed under the UP.
Financial	There is no ear marked budget for disaster management, UP always depend on the central government grant and relief support. However such grants are not always channeled through the UP. In reality UP does not have any effective and direct control over the resources. Overall the financial capacity of the UP is very weak. Central government grant is also limited and unpredictable. There is no dedicated financial resources to support disaster management interventions.
Technical	There is no effective logistic system as well comprehensive data base on disaster at the UP level. UP's technological competence in disaster management is very shallow if not nonexistent. Both the elected members and the full time staff of the UP lack social mobilization, financial, planning and management skills. Networking with CSOs/ and NGOs are week and in most cases missing.
Leadership	UP leadership plays a motivational role during and after disaster. But due to the overall poor image of the UP leadership, the degree of participation and trust of the community members is very low. Elected leaders are not accountable in practice. As such there is a very low level of community trust in UP leadership.

UP's role in disaster management and planning – Recommendations from field

UP officials, members of the local civil society and opinion leaders have observed that UP should not have an over ambitious disaster management plan. Given its institutional and capacity limits UP should adopt pragmatic and achievable disaster management plans with community engagement. The community members emphasized more on committed leadership, community mobilization and engagement with government machinery and NGOs for an effective disaster management strategy of the UP.

Community members suggested that UP should develop its technical skill to prepare a community based plan for disaster management and mitigation strategy and mobilize external resources specially from the line agencies of the government for disaster preparedness planning, food and water security, and immediate relief during and after disaster.

In order to involve the community in disaster management activities, UP needs to encourage and create public awareness on disaster mitigation, intervention and management. This can be done in collaboration with local NGOs and the line agencies of the government.

A section of local experts and senior citizens opined that UP might also consider utilizing indigenous knowledge to address pre and post disaster preparations and adaptation and encourage local innovations.

Some UP officials also emphasized the need for *horizontal learning from the best practices of disaster management* in the country and some regional countries. Ministry of Disaster Management and Ministry of Local Government should organize visits to get the first hand experiences of best practices of disaster management. They also suggested developing a resource pool of local leaders, school teachers, religious leaders to support the mobilization work of the UP during the disaster period and aftermath.

Local NGO officials strongly opined that LG should have dedicated resource allocation and *access to different disaster mitigation and climate change funds* of the central government. UPs needs to *develop a formal and meaningful partnership with NGOs* for developing a project proposal to apply for such funds. UP should also use the expertise and institutional support of local NGOs in designing and implementing disaster management projects.

NGO leaders and Upazila based Government Officials strongly suggested that *UP Disaster Management Committee (UPDMS) had to be activated*. The members of the UPDMC should be given *adequate training, orientation and incentive to work as a member of the committee*. The UP with the help of the UPDMC should *occasionally organize mock disaster management exercise for the community members*.

There is also a need to align the role and function of the UPDMC and UP Standing Committee on Social Welfare and Disaster.

9. Lessons Learned and Policy Implications

As a concept and practice, decentralization has been perceived more as a process of deconcentration where power and functions of central government is deceoncentrated, delegated or devolve to respective field agencies and to some extent elected local government. However over the years the concept of decentralization has been broadened and is perceived as a component of "good governance" addressing the agenda of accountability, transparency, participation and decision making (Chema and Rondinelli, 2007:2).

Scholars have applied several theories and principles, including the "decentralization theorem" which argues that local governments are best suited to meet the specific needs of citizens in a particular locality, and the "subsidiarity principle," which holds that "taxing, spending, and regulatory functions should be exercised by lower levels of government unless a convincing case can be made for assigning them to higher levels of government."(Shah and Shah, Rondinelli (1981). It is argued that the benefits include more efficient use of resources and greater access to decision-making for the poor. Ahmad et al. (2005) further argue in favor of decentralization that more localized government means citizens will find it easier to hold government accountable.

A review of literature by As-Saber and Rabbi (2009) however finds mixed evidence on the question of whether decentralization improves government accountability (As Saber and Rabbi, 2009). While Huther and Shah (1998) find positive correlations between decentralization and measures of good governance, including human development indicators, income equality, and citizen participation. More interestingly Fisman and Gatti (2000) find a positive correlation between fiscal decentralization and reduced corruption. As Ahmad et. Al (2005) explain, however, problems with decentralization that have arisen in some cases include weak capacity of local institutions, a lack of sufficient authority for local institutions to carry out their responsibilities, and the potential for the politically powerful to dominate decision making at local levels (Ahmed, et.al 2005)

In addition to these discussions, Shah and Thompson (2004) note that the process of decentralization can occur in different ways, which may affect the outcomes. Furthermore, decentralization is a complicated long--term process, and results may require many years to realize (Ahmed et.al, 2005).

Decentralization as an approach of devolution of power is built in the Constitution of the Republic (Article 59 and 60). The Constitutional provisions have clearly spelled out the extent of authority, power, roles and responsibilities of the local government system of the

Republic. There are five sets of Acts and plethora of rules that further elaborates the decentralization framework.

In view of the Constitutional commitment, Bangladesh is perhaps one of the leading countries in the developing world where a number of policy regimes, regulatory framework, and a comprehensive management and monitoring system have been developed for a decentralized disaster management and climate change appraoch. In addition to that various structural processes and institutional framework has also been developed. Such policy framework and institutional structure is indeed a shift of paradigm and created a platform for the national and local government to get engaged and work together for disaster management activities. It reaffirms that policy and management framework is the first step to develop a comprehensive intervention. The policy and management framework through duly recognized the role of rural local government but in reality the Local Government Institutions (LGIs) are still under-prepared and poorly resourced and under capacitated to play such critically important role.

Bangladesh has a relatively strong policy framework and intuitional mechanism for disaster management. Furthermore pronounced policies have strongly suggested the space and role of local government in all development activities at the grass roots level including disaster management and climate change. However at the operational level due to political and economic dynamics and power play LG still remain in the back seat. The local government institutes specially the UP is still under-utilized, under-capacitated and lack resources to play the desired role in the broader field of development management.

Bangladesh has framed an integrated disaster risk reduction and management approach which thematically complementary to policies like the Poverty Reduction Strategy Paper (PRSP), social safety net programs, and thereby contribute towards a holistic disaster management framework

Constitutional and policy framework of Bangladesh are in favor of a strong, effective local government system. Unfortunately the laws, Acts and rules are not truly reflective of the core principles of the decentralization rather reflect the pattern of deconcentration. There are number of Acts and rules, however, in fact, Bangladesh does not have a declared decentralization policy as such. Thus disaster management policy framework and implementation process is bogged down due to absence of decentralization.

In order to manage the consequences of natural disasters, formal public policymaking institutions in Bangladesh have formulated a well-developed mechanism national and field levels. . At the national level, four high-profile bodies were established for the multi-sectoral coordination of emergencies associated with environmental disasters as well as disaster management in general: the National Disaster Management Council (NDMC), headed by the prime minister; the Inter-Ministerial Disaster Management Coordination Committee

(IMDMCC), led by the minister of food and disaster management; the National Disaster Management Advisory Committee (NDMAC), headed by a specialist nominated by the prime minister; and a Parliamentary Standing Committee on Disaster Management to supervise national policies and programs. The common missions of these bodies have been to provide policy and management guidance and the macro-coordination of activities, particularly relief and rehabilitation.

The factors that led to such a development can be explained as follows:

a. the severity of the consequent casualties has led to motivations at local, national and international levels to address the issue;

b. the recurrent disasters created serious development setbacks: loss in the production and infrastructure sectors set back the affected regions and the country; and

c. in order to attract external investment, the minimization of disaster risks and vulnerabilities warranted intervention at the policy level.

Bangladesh has developed a new strategic focus of Comprehensive Disaster Management Program (CDMP)[52]to lay the foundation for the shift in principle from a post-disaster relief and response strategy towards a comprehensive risk minimization culture that encouraged disaster-resilience initiatives. This approach is based on a series of interconnected strategic directives:

1. Raising the level of expertise of the disaster management systems,
2. Mainstreaming disaster risk management programming,
3. Strengthening community institutional mechanisms,
4. Expanding preparedness programs across a broad range of hazards, and
5. Putting the response systems into operation.

Under the Comprehensive Disaster Management Program (CDMP)it is recognized that a top-down management approach has gross limitation to reach the remote communities and the approach has been unsuccessful in addressing the needs of vulnerable communities. Under the CDMP program, in the pilot areas, *Community-Based Disaster Management (CBDM)* has introduced anew strategy that directly involves vulnerable people in the planning and implementation of mitigation, preparedness, response, and recovery measures.

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[52] Comprehensive Disaster Management Program (CDMP)emphasizes on five components: i. Capacity-building both at national and local level including grass roots level local government and civil society bodies, iii. Partnership Development with CSOs/ NGOs and local government, iii. Community empowerment through awareness and field based training, iv. Developed a comprehensive data base Information Management System, and v. designed a response management under p*artnership development* to achieve a multi-agency approach that encompassed the institutions of the government, NGOs and private sector in a collaborative strategy for the alleviation of disaster-induced poverty. This enhanced coordination and information-sharing among the various actors and thus maximized the efficacy of resource use for effective risk reduction.

The overall state of Local government and local governance appears to be frail and weak. Resource allocation for local government is meager and it is only around 2% percent of the total development allocation of the Government. Thus the LG system as such cannot take proactive development functions including addressing disaster related development interventions. There is no inter-governmental fiscal transfer policy in Bangladesh to ensure a prescribed mode and practice fiscal transfer to the local governments. Lack of such policy has made the Local Government highly dependent of the Central Government discourage the Local government, particularly the UP which is resource poor, to get involved in disaster management activities.

At present different climate change adaptation funds, in most cases remain uncoordinated and in spite of significant potential and acute need, have not directly addressed or catered the need of the grass roots based local government (i.e UP). Disaster management experts at the national level suggested that there should be a synergy in disaster management / disaster risk reduction and climate change adaptation strategies of Bangladesh. These experts suggested that Climate Change Adaptation finance be linked with disaster and should be a dedicated window of allocations for the Unions and Upazilas based on a formula incorporating climate vulnerability, poverty level, population, area and disaster profile.

There appears to be a "convergence of interest" among the bureaucracy, national political leaders and Members of Parliament to stall any proactive initiatives of the local government. Field bureaucracy of the Central Government is strong and tends to undermine the role of the UP and its leadership in development management in particular to disaster management.

Local government specially the UP is institutionally weak, lacks capacity and have limited human and financial resources. Field level empirical data reveals that LGs on a whole lack capacity, technology, manpower, resources and even management skill and competence to design and implement any disaster management scheme.

There is no system whereby the local government priorities and input are incorporated to the National Development Plans. National Development Plans are feed with data, information and priorities of the line agencies of the Central Government.

The conceptual understanding and preparedness of the UP leadership as regards disaster management is poor. The UP Disaster management Committee is casually constituted and hardly meets and UP does not have any strategic plan for disaster management.

Most alarmingly the high level of corruption, low level of integrity and lack of transparency have severely cost the institutional image of the UP. Thus the members of community

appear to have lost confidence in the performance of UP in particular to disaster management activities where the cash and transfer of resources are two important components.

On the positive side there are some experimental projects[53] on local governance demonstrating the potential and importance of UP as a driver of change in rural areas. A number of institutional collaboration models between the UP and NGO have been piloted and found to be effective. Such piloted models have shown that participatory planning and open budget system of the UP can bring significant improvement at the local governance and by enhancing transparency and accountability of the management of local development projects. Furthermore a good number of NGOs have been involved in the overall capacity building of the UP including disaster management and community mobilization.

The direct transfer of resources to UP through the Local Governance Support Program (LGSP) of the Ministry of LGRD & Cooperative has made some positive impact on the quality of development project management and local level accountability.

The UP Act 2009 has installed some specific provisions for community based participatory planning, preparation of UP budget though open forum consultative process and some mechanism of social accountability[54].

Demand side of good governance is also gradually increasing. The Civil society bodies are persistently advocating for more power, authority, autonomy and resources for the Local government bodies. The Bangladesh Union Parishad Association (BUPA), Municipal Association of Bangladesh (MAB) have been vocal and exerting collective pressure on the Government to make the local government "autonomous" and "free from bureaucratic control" of the Central Government. In a national seminar of the LG leaders they noted that "there was no alternative to strengthening local government bodies for proper implementation of plans and initiatives to reduce risks of natural disaster in the country" They therefore urged the Government to undertake effective initiatives to strengthen local government bodies to face upcoming challenges of natural disaster due to global climate change. The LG leaders emphasized that local government bodies especially the union parishads could play an effective role in implementing disaster management initiatives and suggested formation of a special fund to implement disaster risk initiatives identifying the most vulnerable areas (Daily Star, August 20, 2010).

Bangladesh has had significant successes in securing financial resources for climate change at the national level, in particular through two funds that accept project applications from Government agencies and civil society: the Bangladesh Climate Change Trust Fund (BCCTF),

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[53] LGSP-LIC, Union Parishad Governance Program, *Sharique*, *Shiree* etc

[54] However empirical evidences suggest that more than 65 percent UPs do not comply with such provisions of UP Act 2009.

Bangladesh Climate Change Resilience Fund (BCCRF). If local government institutions could access these funds, substantial new resources could be made available to local communities for climate change adaptation and addressing disaster management.

One of the most critical and striking issue that halted the pace and process of decentralization in Bangladesh is that of rigid central control. The means of control being exercised by the Central Government cover three areas: institutional, financial, and administrative. Although the Central Government is under statutory obligation to provide grants in aid, it can exercise a considerable degree of control by varying the amount or by making their release subject to fulfillment of conditionalities. The core issues that affect the role and performance of local government at the grass roots are: lack of comprehensive policy and planning framework on decentralization, inadequate legal and regulatory framework for decentralization, absence of a transparent process of inter-governmental-fiscal transfer, lack of integration of local plans with regional and national plan, weak public consultation and participation processes, continued bureaucratic dominance, administrative, and political control of the MPs.

In the context of Bangladesh, the process and quality of local governance is significantly affected by the conflicting political culture and the mindset of public bureaucracy. Local governance institutions, in effect, turn out to be the "means of exercising and abusing power by successive regimes and civil servants instead of becoming avenues of democratic and decentralized local governance. The space for democratic participation in the UP is strongly resisted by the dominant local political actors. Also, the capacity of the local actors, especially, the UP-elected representative is extremely low. All such features, therefore, indicate the poor and passive picture of governance of the grassroots-based institution.

Bangladesh pilot experiences however reveal that rural local governments could utilize the resourcefulness of the rural poor and create the conditions for them to improve upon their conditions through an enabling environment. However, it is also true that, without a real devolution of authority, local governments will find it hard to be effective in addressing the developmental needs, poverty, and the cry for good governance at the grassroots.

However, Bangladesh, with its combination of high vulnerability to climate change, strong policy regime on disaster management and climate adaptation issues, and recent attempts to improve the capacity and functioning of local government institutions, offers an ideal opportunity to explore potential approaches to providing climate adaptation and disaster management finance at the local level.

Some core concerns have to be addressed as preconditions to direct the integrated finance support to LG:

- Strong community participation is essential in all aspects of the planning, budgeting, implementation, monitoring, and evaluation processes.

- Local government institutions must be transparent and accountable, adhering to principles of participatory planning and budgeting and democratic processes.
- Safeguards should be put in place to prevent political influence from elites, pressure groups, and other tiers of Government.
- Local government institutions should receive finance through direct transfers that give them the authority and flexibility to use these funds at their own discretion.
- Local government institutions should create sound plans for disaster management and risk reduction with a multi-year perspective.
- UP level disaster management activities must be well coordinated between the union and Upazila tiers with each playing a clearly defined role in line with its jurisdiction, authority, and capacity.
- Capacity and knowledge building is vitally necessary at all levels and should be undertaken through a coordinated effort with the support of relevant Government agencies and NGOs.
- NGOs should play a supporting role that helps to strengthen local government institutions where needed but does not undermine the authority of UP as the primary centers for planning and decision-making.

Case studies seem to supplement the observation of Zakour that absence of capacity of the UP has caused *vulnerability of the institution as well as the community.* Vulnerability of the rural population specially the poor and disadvantaged thus appears to be a product of the relationship with their environment and political economy of the society and culture that shapes and conditions this relationship.(Zakour, 2007)

The role of the grass roots based LG in getting engaged in any development program including disaster management therefore needs to assessed in the broader framework of political economic analyses of local governance. Evidences presents the following political economic features of the UP level governance:

a. Culture of effective participation in formal community activities is still non-existent (Mohammed, N, 2010). Although NGOs have worked hard to develop some client based community groups (some form of "social capital") – still they are more concerned with their own group interest than visible community involvement.

b. There appears to be a continuity of patron -client relationship in the rural milieu[55].

[55]Findings of a study reveal that a powerful network termed as *Dalal Chokra(*mediators) play important role at the local governance in Bangladesh. They play intermediary role between the villagers and the ruling party leaders and the civil servants. The study confirmed three categories of Mediators. The first category includes the leaders of the ruling party and dominant opposition, student leaders and the UP Chairmen. The second category comprises local contractors, trade union leaders, and UP members. Lower ranked employees such as

c. There is a range of new and emerging leaders. They are relatively young. The power base of such young and new is grounded more on political linkage and support than social recognition. The new alternative leadership is sometime more powerful than the elected officials and do maintain alternative channels of privilege distribution bypassing the UP and even the GOB line agencies. In almost all cases they use the clout of the local MPs.

d. Confrontation and violence are other features that characterize the rural politics. Such confrontational conditions shy away the civil society, social elite and traditional leaders to get integrated with the local governance affairs. As a result the traditional practice and process of social accountability is fading out.

The governance context and the overall political environment and dynamics of rural Bangladesh do not appear to be thoroughly supportive or conducive for institutional development of Union Parishad which could ensure effective delivery of services and development management at the grass roots level. The practices of local governance and decentralization therefore are very difficult to establish under the above political and administrative milieu.

Union Parishad (UP) is the frontline local government organization closest to rural people. However the scope and quality of service delivery is one of the most critical areas that have significantly tinted the "credibility" and "institutional image" of the institution. Failure of the UPs to respond to the dire need of the rural people, particularly the poor and disadvantaged in particular, often tend to seek services from alternative sources like the NGOs and private providers.

Potentially the UP Standing committees can play a significant role in the overall planning and management of development projects and service delivery at the UP level. However UP because of low resource base, lack of technical knowhow and management skills, the Standing Committee on Disaster Management has not been found to be functionally effective.

The reasons behind the sluggish performance of Standing Committees may be attributed to a number of factors such as lack of initiatives of UP members, lack of community pressure and or interest, lack of political pressure, lack of skills required for planning and implementing development programs at the local level, unwillingness on the part of UP Chairman to delegate authority to the Committee. Furthermore UP regulatory framework including the UP Act 2009 does not provide any specific reference to such committees. Thus in most UPs, the Standing Committees exist only on paper and not found to be in any action.

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office assistants, clerks, the messengers of different offices have been identified as the third category. For detail see Aminuzzaman, 2008

Field observations reveal that critical service areas like education, health, nutrition, family planning, irrigation, agricultural services, and the feeder / secondary roads are all managed directly by the central government officials and their field functionaries without any involvement of the UPs either in design or implementation process. Thus institutional "isolation' and 'incapacity' has made UP a non-responsive body to provide critical services to the rural poor, more so to the marginalized ones.

It is no doubt that considering the work load and responsibilities, the UPs are understaffed[56]. UP also lacks logistic supports like computer, transport support like motorbike etc. Although the UP has a relatively large tax base, political reality and overall socio-cultural and economic conditions do not permit the UP to collect tax up to the potential target. UPs therefore become more dependent on central government grant. UPs in general lack managerial capability and resources to design and run innovative service delivery in areas like employment generation, health and education and disaster management. Delayed release of Government development grants also hampers the timely completion and quality of UP projects. There are reports that such delays also open the window of opportunity for corruption and leakages of public resources and subsequently hamper the quality of the service delivery projects.

There is a lack of coordination between UP and extension service delivery workers of the government at the field level. In fact there is no formal links even between the Standing Committees of the UP with the extension workers of the corresponding line agencies of the Government. Such isolation makes lots of the UP services dysfunctional and ineffective. This also deprives the UP of getting technical assistance and other professional support from the GOB line agencies. UP members in particular noted that they have not enough authority to oversee / monitor the activities of the extension workers of the Government. They also complain that there is no regulatory / legal framework through which UP can insist the Government Officials to be accountable to the local elected bodies.

Most of the UPs tend to practice a 'pseudo participatory" planning system where only handpicked persons are involved and even that is done without the knowledge of the community members at large. Such practices keep the members of community specially the marginal poor, women and destitute in complete dark about the projects undertaken by the UP. During field observation visits the local civil society members noted that there was no formal mechanism for the UP to work closely with NGOs. Ups are not aware what activities are being carried out by number of NGOs in their respective areas. The NGOs also being a service provider to the rural communities tend to work in isolation. These result in a lack of coordination and thus the actual needs of the community are not appropriately served and accountability and transparency to the community as well as to the UP is absent. Such lack

[56]There is only one Office Secretary who is mostly paid by government with 25% contribution of the UP. The Secretary is appointed and monitored by the Government.

of transparency and accountability has some bearing on the service delivery specially to the poor and disadvantaged community.

Local political elite especially of the ruling party play a critical role in manipulating the service delivery process of the UP. Field evidence suggests that UP projects are determined not by "development need of the area but on the political priority of the influencing political elite". An emerging nexus between the Upazila based GOB officials and MPs dictate the UP in determining and prioritizing the projects.

Lack of cooperation and coordination from central govt. functionaries is also a critical factor that affects the quality and process of disaster management and other service delivery of the UP. There appears to be a low trust relations between UP and Upazila Administration. A section of UP Chairmen complains that, on various occasions, they are treated as subordinate institutions by the Upazila administration/ or a section of Upazila officials.

In brief institutional image, credibility, capacity, management and technical skill are the critical factors that make the UP weak and non-responsive. During the field observation visits the Local UP leaders acknowledged that UP needed technical support, resources and adequate training and skill to deliver the critical services that are demanded by the resident of the UP.

Much debate on government institutions tends to focus on the national and international levels, missing the point that addressing and adaptation to disaster management has a significant bearing on the local process. In fact, for adaptation processes to succeed, much depends on the capacity and will of local government and public service institutions to act on disaster management and local adaptation process including climate change adaptation (M Sajid Raihan et al ,2010).

There are significant potential space for Local government to play effective role in managing pre-post disasters and subsequent adaptation process (M Sajid Raihan et.al 2010). It is therefore important and imperative to understand the role of local government and public service institutions in linking individual choices with collective choices, and in providing the framework for local adaptation strategies with particular focus to the management of fresh water resources, protection from floods, cyclones and erosion, and distribution government services, post disaster rehabilitation and settlement process.

We may highlight the importance of the capability of local government and preparedness needed to address broader issues rather than only immediate responses to the disaster. The physical and economic vulnerability of the community in disaster areas need to be adequately taken into consideration by the UPs. Due to a lack of disaster management capability, UP body with a vital role in disaster response has been forced to make

decisions based on piecemeal information that has also been inaccurate and incomplete with little or no resources.

In the final analysis this study concludes that addressing disaster management and disaster risk reduction through the grassroots level local government i.e. UP is just not a complex managerial issue, or a matter of delegation of authority, question of allocation of adequate resources or even human capacity but evidences indicate that it is more deeply rooted with the political economic context of country. Most of the issues that affect the quality and process of a responsive disaster management at grass roots, as this study observes, are closely linked with political economic element and context rather than technical and managerial components.

Opportunities for Synergies - Avoiding Parallel and Repetitive Systems

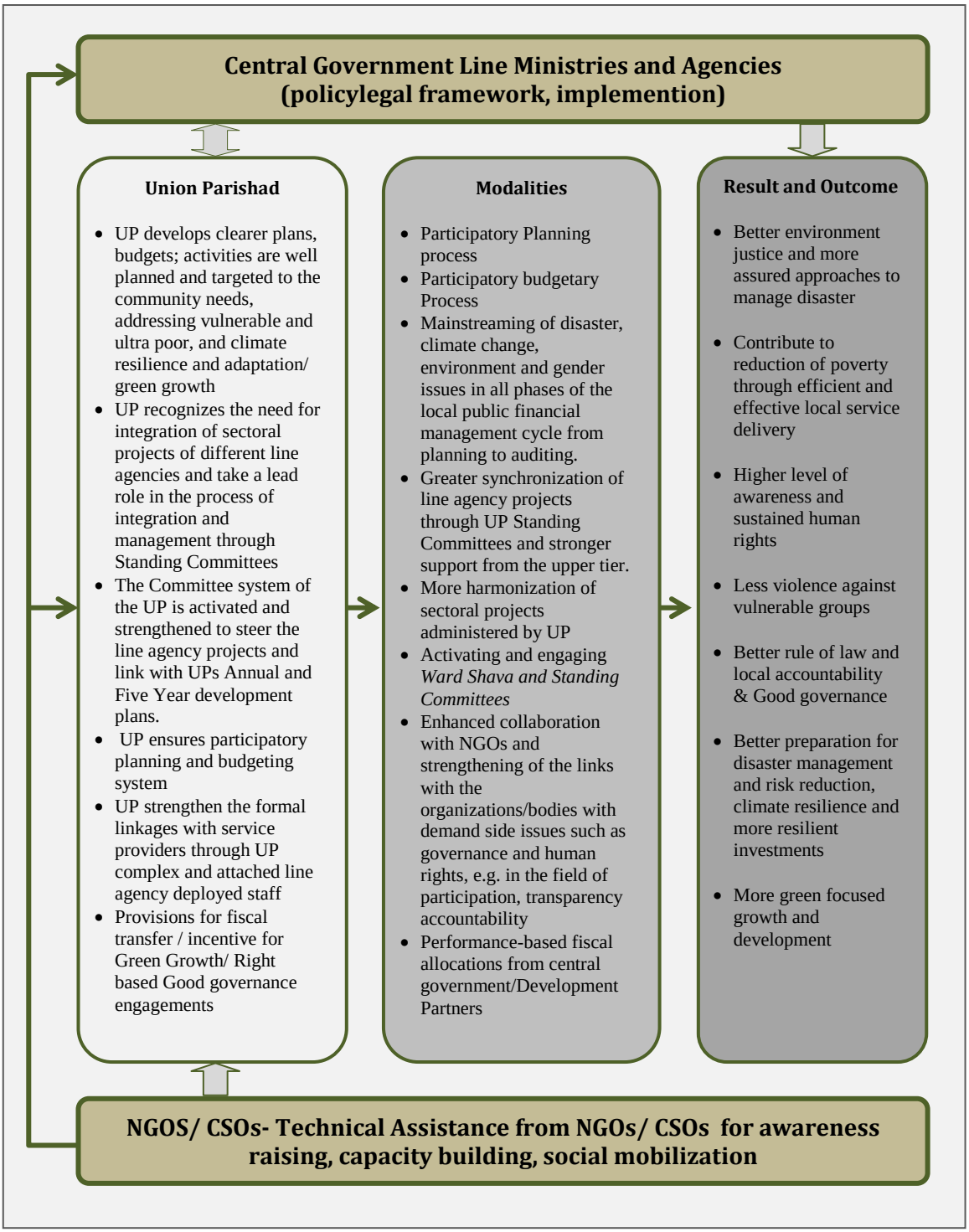
Mainstreaming and coordination are key goals in creating an effective mechanism for channeling adaptation and disaster management at the local level. However, a large number of initiatives are being undertaken in relation to local governance, climate change adaptation, and disaster risk reduction, often without sufficient coordination. Such funding in Bangladesh appears to be allocated in an uncoordinated fashion, which has also created a problem of parallel structures. Efficient and effective linking of local and national level activities would therefore require a more coordinated and integrated approach.

One of the core problems of the Local governance, in particular for the UP, is finance and potential and capacity to mobilize internal resources. There are many GOB projects and programs have elements related to the issues of disaster management and relief (DRR), however such projects work almost in isolations but have significant and important links to local adaptation finance (see Figure below). None of the funding arrangement has any dedicated window for the local governments in particular the UP. These funding processes remain uncoordinated, and a mainstreamed approach has not yet emerged. The key elements of a local level disaster management mechanism would therefore demand a common frameworks of the funding in this regard and developing an integration and synergies of the parallel systems. A successful mechanism in this regards would not only facilitate effective adaptation and DRR, but it would also strengthen the capacity and functioning of local government institutions.

Initiative	***Climate change***	***Disaster Reduction***	***Elements of Local Governance***
Local Governance support Project (LGSP)			Direct finance mechanism and capacity building of UPs
Union Parishad Governance Program (UPGP)			Good governance capacity building of UP
Upazila Governance Project (UZGP)			Good governance capacity building of Upazila
Bangladesh Climate Change Trust Fund (BCCTF)	Climate change finance available at national level	Potential for projects to support DRR	Potential involvement of Local Government institutions
Bangladesh Climate Change Resilience Fund (BCCRF)	Climate change finance available at national level	Potential for projects to support DRR	Potential involvement of Local Government institutions
Comprehensive Disaster Management Program (CDMP)	Objectives specially include climate change adaptation	Flagship national program for disaster management	Focus on local level planning through CRA and RPAPs

Annex 1: Schematic diagram: Way forward approach

Theory of Change – Synchronization and Inclusive governance for Disaster Management and Risk Reduction at the UP level.



Annex 2: Questionnaire of Household Survey

Questionnaire for Household[57] Survey

Democratic Local Governance Capacity and Natural Disasters: Building Community Resilience: Bangladesh Case

Instructions to the Interviewer

a. Describe objectives of the survey clearly in interviewees preferred language.

b. Assure anonymity and confidentially of interviewees personal identification.
c. Seek permission of the interviewee to obtain information.

Part I - Socioeconomic Information of the Household

1. Name (Optional) : .....

2. Gender of Household Head : ☐ Male ☐ Female

3. Total number of HH members : Male ☐ Female ☐

4. Monthly Income (in Taka) : .....

5. Type of Dwelling : ☐ Separate ☐ Joint ☐ Others (specify.....)

6. Marital Status : ☐ Marital Status ☐ Never married ☐ Married
☐ Widower ☐ Widowed ☐ Divorced
☐ Separated

7. Literacy of the HH head:
☐ Cannot read or write ☐ Primary drop out
☐ Primary ☐ High School
☐ HSC ☐ Bachelors and above

8. Occupation :
☐ Professional ☐ Managerial
☐ Clerical Support Workers ☐ Service & Sales Workers
☐ Craft and related Trade ☐ Unskilled farm Workers

[57] *For the survey household is defined according to Bangladesh Bureau of Statistics as "a group of persons, related or unrelated, living together and taking food from the same kitchen".*

☐ Skilled Agriculture ☐ Forestry & Fishery Workers
☐ Technicians & Associates ☐ Plant and Machine Operator
☐ Small Shop owner ☐ Other Occupations

Part II: Personal Experiences and Observations of Respondents

9. During last 5 years how many times have you faced following disasters?

Nature of disaster	**No. of times**
Cyclone	
River erosion	
Very high Tidal waves (Tsunami)	
Fire	
Earthquake	
Others	

10. Has there been any damage of your property and assets during the last incidences?

☐ Yes ☐ No

10a. If Yes

Types of Property and assets	**Amount loss (in Tk)**

11. Did you ever have to migrate elsewhere / and or have move from your household due to the impact or implications of a disaster? (number of times and reasons)

Direction of Migration	Reasons for Migration
Rural to Rural	
Rural to Urban	
International Migration	

12. Use of Communication media: Do you use any of the following:

1 = Never, 2= Rarely,3= Occasionally,4=Regularly 5=Very Regularly

Communication media	**1**	**2**	**3**	**4**	**5**
Newspaper					
Radio					

Television					
Internet					
Public announcements					

13. Sources of community information/ Public announcements on disaster/ cyclone etc

1 = Never, 2= Rarely, 3= Occasionally, 4= Regularly 5= Very Regularly

Sources	**1**	**2**	**3**	**4**	**5**
Neighbors					
Public announcements of UP					
Red Crescent					
NGO workers					
Government Radio					
Community Radio					
Television					
Announcement of Volunteers					

14. Has the prior announcement helped you?

☐ Yes ☐ No

14a. If not, why?

15. Did you receive any support from any of the following sources during the last disaster?

Sources of support	**Types of support**				
	Cash	**Agri input (seeds/ fertilizers etc)**	**Food**	**Construction materials**	**Others**
Central Government					
Union Parishad					
NGOs/CSOs					
Community Members					
Political Leaders					
External Rescue Workers					
Others					

16. Did the UP Officials (Chairman/ Members or Secretary) offer any support to you prior / during and after the disaster?

(1=no support at all, 2= very little support, 3- Indifferent 4- Good support 5- Excellent support)

Prior	During	After

17. Are you aware of the Union Parishad Disaster Management Committee (UPDMP?

☐ Yes ☐ No

19a. If yes, do you know what are the functions of the UPDMC ?

……
……
……
……

18. Are you or any one from your household is involved with UDMC in any capacity?

☐ Yes ☐ No

18a. If yes, how ?

……
……
……
……

19. In your opinion what is the expected role of the Union Parishad before and after any disaster? (Rank the boxes according to the priority)

1= low priority, 2= some priority, 3= priority, 4= high priority , 5-= very high priority

Before the disaster	Priority Rank
Proper public announcement and early warning	
Help building community level shelters	
Mobilizing the community members	
Door to door awareness campaign	
Use of community radio	
Support the old and people with disability	
Clean and maintain the Shelters	
Community based preparedness	
Develop more infrastructures for resilience	
Arrange local transport to move to Shelters	
Build appropriate infrastructure	
Others	

After the disaster	Priority Rank
Help to rebuild homestead	
Provide emergency relief like water/ medicine	
Cash relief	
Provide agricultural inputs/ livestock	
Build community infrastructures (Road/ culverts/bridges)	
Solve the water logging problems	
Reconstruct irrigation system	
Generate resources from within	
Generate resources from outside	
Provide building materials	
Emergency support (Water/ Food/ Medicine/ Candles)	
Others	

20. How would you rate the preparedness of the UP in facing the disasters?

1= not prepared at all, 2= poor preparation, 3= No Idea 4= Somehow prepared; 5=Satisfactorily Prepared

1	2	3	4	5

21. What in your opinion are the factors that affect the preparedness of the UP? (Tick the appropriate box or boxes)

Factors	**Response**
Willingness of the Leaders	
Mobilization of resources	
Management of resources	
Corruption	
Proper planning	
Community mobilization	
Technical know how	
Capability of maintenance of the infrastructure	
Management skill	
Others	

22. Do the UP Members or Officials visit your household immediately after the disaster?

☐ Yes ☐ No

23. Did the UP undertake any survey on loss/ damage of the disaster?

☐ Yes ☐ No

25a. If yes, did you get any support from the UP to compensate your losses/ damages?

☐ Yes ☐ No

24. Was that enough to compensate your damages? (Tick the right box)

1=Not at all, 2= too little, 3= barely enough , 4= somehow 5= Adequate enough

1	2	3	4	5

25. Do you agree that the UP provides the post disaster relief and support to the community members in a fair and transparent manner?

☐ Yes ☐ No

25a. If No, what are the factors that influence the distribution of post disaster relief and support of UP?

……

……

……

……

26. How do you assess the capacity of UP to provide appropriate of pre/ post disaster relief and support to the community?

1=Very low, 2= low, 3= moderate, 4= High 5= very High

27. Are you aware of any development plans of UP that in meant for disaster risk reduction and management?

☐ Yes ☐ No

27a. If yes, what are the projects/ program?

……

……

……

……

28. Have you participated in any of the Open budget session of the UP?

☐ Yes ☐ No

28a. If yes, did the UP make any allocations for Disaster management?

……

……

……

……

29. Did you take part in any of the Ward level UP planning Committee meeting?

☐ Yes ☐ No

30a. If Yes, did your community propose any project to address disaster/ or mitigate disaster effects?

☐ Yes ☐ No

30b. If Yes, what ….

……

……

……

……

30c. Has it been included in the Union Plan?

☐ Yes ☐ No

31. Perception of the threat of disasters in your location:

How do you find the location of your place of living in terms of threat of disasters?

1 Minimal, 2 Low , 3 Medium , 4 High, 5 Very High

1	2	3	4	5

32. Did you have the experiences of loss due to disaster during the last 5 years ?

(*1 Substantial increase in losses, 2 Slight increase, 3 No change 4 Slight decrease, 5 Substantial decrease)*

Loss of	**1**	**2**	**3**	**4**	**5**
Lives					
Livelihood					
Homestead					
Crops & agriculture product					
Fisheries/ livestock					
Assets and moveable properties					
Others					

33. Please respond to the following questions on the basis of the following scale

1- No, 2- To a very limited extent,
3- Some activity but significant scope for improvement,
4- Yes, but with some limitations in capacities and resources.
5 - Yes, with satisfactory, sustainable and effective measures in place,
X - Don't know

Questions	**Response**
a. Does the UP have any process or mechanism to involve all people, especially vulnerable and marginalized groups in disaster prevention decision-making and implementation?	
b. Does the UP ensure that women and men participate equally in disaster prevention decision-making and implementation?	
c. Does UP disaster prevention practices take into account the specific needs of children and young people?	
d. Does the UP support the participation of local volunteers in disaster prevention measures?	
e. Does the UP regularly review disaster prevention policies to protect	

Questions	Response
vulnerable people from disasters (elderly, ethnic minorities, children & youth, people with disability, migrants)?	
f. Does the UP disaster prevention practices take into account local (indigenous) knowledge, skills and resources?	
g. Does the UP have a plan of action to turn disaster prevention policies into practice?	
h. Does the UP have an adequate budget for disaster prevention?	
i. Does UP Officials have clear roles and responsibilities to carry out disaster prevention?	
j. Does the UP have sufficient expertise to carry out disaster prevention?	
k. Does the UP provide disaster prevention training for Government Officials, the Community and Civil Society Leaders?	
l. Does the UP regularly monitor and report on progress on disaster prevention?	
m. Does the UP involve Communities and Civil Society in monitoring of disaster prevention?	
n. Does the UP provide a mechanism for vulnerable people to make complaints and get a response for lack of progress in disaster prevention measures?	
o. Does UP regularly collect, review and map information on disasters risks and climate change?	
p. Does the UP provide vulnerable people with updated, easily understandable information on disaster risks and disaster prevention measures?	

34. Overall satisfaction on the performance of the UP

1= not satisfied at all, 2= somehow satisfied
3= Neither satisfied/nor dissatisfied 4= Satisfied; 5=highly satisfied

1	2	3	4	5

35. Overall satisfaction on the performance of the UP as regards disaster management / mitigation

1= not satisfied at all, 2= somehow satisfied
3= Neither satisfied/nor dissatisfied 4= Satisfied; 5=highly satisfied

1	2	3	4	5

36. Do you feel risky and vulnerable during various disasters?

1- Minimal., 2= Low -, 3- Medium, 4- High -4, 5- Very High

1	2	3	4	5

37. Are you satisfied in getting adequate advance warning or notification from the UP? Please respond to the following questions.

(1= not satisfied at all, 2= somehow satisfied 3= Neither satisfied/nor dissatisfied 4= Satisfied; 5=highly satisfied)

Questions	Response
a. Are the planning and coordination activities of UP satisfactory?	
b. Are you satisfied with the quality of the services of the UP before the major disaster?	
c. Are you satisfied with the quality of the services of the UP during the major disaster?	
d. Are you satisfied with the services of the UP after the major disaster?	
e. Are you happy with the overall role of the UP in managing the disaster operations?	

38. Where do you take shelter during the major disasters like cyclone, high tide or storm?

☐ Generally stay at home as it is safe ☐ Move to relatives' houses at a safe place
☐ Go to the Cyclone Shelter ☐ Others (specify)……..

39. How far is the Cyclone centre from your house? (in km)

☐ Below half km ☐ Half km ☐ Less than 1 km ☐ I km above

40.Do you think the Cyclone Shelter is located in the right place?

☐ Yes ☐ No ☐ Don't know

41.Have you ever been to a Cyclone Centre?

☐ Yes ☐ No

41a. If Yes,

Reasons	Yes	No
a. Did find the Cyclone Shelter safe?		
b. Did you find the space of the Shelter adequate to accommodate all members of Community?		
c. Did you find the Shelter gender friendly?		
d. Did you get adequate supply of water in the Shelter?		
e. Did you get needed emergency medical supply in the Shelter?		
f. Did you find appropriate toilet facilities in the Shelter?		
g. Did you find appropriate space for the livestock in the Shelter?		

42. Overall assessment of the institutional features of UP.

(Very low -1, Low -2, Medium – 3, High -4, Very High 5)

Institutional features	1	2	3	4	5
Corruption					
Quality of service delivery					

Politicization of service delivery					
Resource mobilization capacity					
Resource management capacity					
Capacity to plan					
Adequacy of manpower					
Transparency of its activities					
Level of accountability					
Community participation					
Level of trust by community members					
Gender sensitivity					
Responsiveness to special need of marginalized groups					
Overall Image					

--- End of Questionnaire ---

Data Quality Assurance (DQA) **For Official Use only**

DQA Tasks	Name	Date	Initial
a. Interview			
b. Data Cleaning			
c. Data Entry			
d. Data Entry Check			
e. Supervision			

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