adpc
Asian Disaster Preparedness Center

Community-based disaster management Bangladesh
Program for Hydro-meteorological Disaster Mitigation in Secondary Cities in Asia

Safer Cities 28

Case studies on mitigating disasters in Asia and the Pacific

Building a Community-Centered Disaster-Resilient City

Jamalpur, Bangladesh

"Torrential rains coupled with the onrush of waters from up-stream Assam in India have worsened the flood situation in the country. Most low-lying areas of the capital city Dhaka……., Sirajganj, …… Jamalpur, …. Districts are flooded. The water levels in major rivers including the Brahmaputra and the Meghna continue to rise …… According to media reports, there have been about 27cm of rainfall over the past three days, about 20% of the field crops have been damaged…….The Meteorological Department and Bangladesh Water Development Board experts predict that the flooding will worsen due to heavy rainfall expected in July in Ganges, Brahmaputra and the Meghna river basins ……"

Action by Churches Together International (ACT) Alert 1/2002.

Another flood was on the way and Jamalpur citizens were on alert. Those who lived in the floodplain and char lands of Nawbhanga and Compopur were packing to spend a few days or even weeks wherever they can find shelter. Insecurity, food and water scarcity, disease, and the loss of daily earnings, harvest and animals hovered in their minds. This was a typical situation a few years back until the systematic project intervention of Strengthening Household Ability to Respond Development Opportunities and the Program for Hydro-Meteorological Disaster Mitigation in Secondary Cities in Asia reached. Jamalpur Pourashava worked with the Asian Disaster Preparedness Center to implement these projects in an effort to continue and enhance its mitigation, preparedness and emergency response measures for floods occurring in char settlements.

Jamalpur in the Tangail region is one of the major cities on the riverbanks of the Brahmaputra. For the surrounding agricultural areas, floods play a major role in replenishing fresh water resources, recharging ground water and supporting crop cultivation, allowing livelihoods to remain relatively stable. However, the transition of flood water from an essential, life-giving element to a destructive force has become increasingly evident over the past few decades.

Abstract

Jamalpur pouroshava was a site for a project on reducing food insecurity in the poor urban settlements. Later on, its urban poor communities would tackle the challenge of forming resilience to flood disasters. This case study documents the participatory process and the growing contribution of disaster risk reduction to local development planning.

What's inside

November 2010

Beginning well upstream of Jamalpur, a continuous embankment runs along the Brahmaputra. In addition, the Bangladesh Water Development Board (WDB) constructed embankments along the Jhinai and Nowbhanga rivers (branches of the Brahmaputra). These branches divide the city into three areas or polders corresponding to the foremost floodplains in the city. However, the embankments were not adequate, and the WDB had to elevate them.

left to right: Brahmaputra flowing through Jamalpur; Livelihood – animal rearing and paddy cultivation

Original Disaster Management Practice

Prior to 1998, the focus on flooding was traditionally on reactive practices. The general approach was to wait for outsiders to recognize the need for relief and subsequently provide the necessary items and support. Flood disaster reduction was largely viewed in terms of structural measures, with an occasional spattering of non-structural measures in the form of administrative and legal interventions.

Beneficiary and stakeholder views were rarely considered. The "top-to-bottom" approach to decision-making was found to be ineffective in most cases, often failing to generate productive results.

Furthermore, the city was not capable of handling major flood situations. There was no mechanism for early warning and emergency response in place. Stark gaps existed in preparedness and mitigation measures, and weak coordination mechanisms with external bodies was widespread.

It was under these circumstances that Jamalpur acknowledged the significance of the existence of flood plains and the need to drastically reduce flood risks and vulnerabilities. The city also recognized the necessity of technical assistance to build their capacity to address disaster risk reduction (DRR) and mitigate the social and economic constraints of "living with disasters".

Policies in Place

Community Based Disaster Risk Reduction (CBDRR) has been recognized as a priority component by the Government of Bangladesh. The Bangladesh National Action Plan for Disaster Management (2007- 2015) was formulated by the Ministry of Flood and Disaster Management. It promotes the use of community driven risk assessment tools and encourages the creation of top-down policy decisions based on bottom-up community based risk assessments (see Box 1).

As the primary authority for disaster management in Bangladesh, the Disaster Management Bureau recognizes preparedness and mitigation as priorities for long-term risk reduction with an emphasis on the community component of the DRR process. At the Union Parishad (ward) level, the areas of empowerment stretch across elements in:

- Establishing and building the capacity of local disaster risk management committees
- Developing a community Early Warning System (EWS)
- Community risk assessment at the ward level
- Mainstreaming DRR into local development plans
- Setting up a local DRR funding mechanism for implementation of community DRR actions

Excerpt from Community Risk Assessment (CRA) and Risk Reduction Action Plan (RRAP) Guidelines – Bangladesh **Box 1**

1. Scoping the community: Involves identification of community elements, resources and general aspects of social life through PRA methods like social mapping, transects, Focus Group Discussions (FGD).
2. Identification of hazards, vulnerability sectors, elements and locations: Entails the identification of various levels, of hazard exposure on community elements, on the area's spatial landscape, and sectors using hazard and risk mapping, interviews, FGDs.
3. Risk assessment, analysis and evaluation: Identification and articulation of specific risks, determining likelihoods and consequences, ranking risks, and evaluating the acceptability of risks.
4. Specific risk reduction options and action planning: Conduct casual analysis of risks, identification of specific key and alternative options to reduce risks.
5. Consensus of options: Come to an agreement of options and strategies to reduce risks. This process involves validation, consultation, analysis of secondary data, and review of lessons learnt.

End Product:	RRAP
CRA	A consensual Community Risk Assessment and a set of risk reduction actions.
RRAP	A detailed risk reduction action plan which will be implemented through existing or newly formed local community institutions and local governments bodies.

Ward boundary map of Jamalpur **Figure 1**

Profile of Jamalpur

Jamalpur is an easily accessible five-hour journey from the crowded city of Dhaka. The elevated highway runs under the shade of arched trees planted along the road sides, through busy industrial zones full of garment factories, massive fields of brick industry, green meadows of paddy and small hamlets of poor, rural Bangladeshis. The beauty of the countryside close to Jamalpur can be seen all around.

Historical background

The history of Jamalpur dates back to the late 1500s during the Moghul regime of the emperor Akbar the Great. During that time, the area surrounding present-day Jamalpur was known as "Shing Jani," which translates to "lion's men". One of the Emperor's followers, Hazarat Shajamal, came from Yemen and settled in Shing Jani to spread the Islamic religion. He was a well respected and popular scholar among the local people. As a tribute for his great services, "Shing Jani" on the Brahmaputra later became Jamalpur, meaning "Jamal's land".

Inland river navigation was already in use before the 14th century. Bateaux (rafts), canoes and rafts transported passengers and agricultural products. There were considerable trade exchange and travel needs between settlements along the river. Shing Jani / Jamalpur was a place for rest as well as a goods transfer station for river navigators. In 1869, at the time of British India, Jamalpur was established as a small township on the river due to its strategic importance.

Socio-economic profile of Jamalpur	Table 1
Demographic profile	
Total population	132,727
Male	67,664
Female	65,063
Total land area	53.28 km^2
Total no. of wards	12
Total no. of slums	30
No. of households	18,778
Land Use	
Housing	27.36
Agriculture	56.37
Others	11.06
Commercial	5.21
Road Types	
Total Length	165.65 km
Bituminous concrete	50%
Kachha road	21.34%
Brick soling	17.73%
Others	10.93%

Source: Jamalpur Pouroshava, 2008.

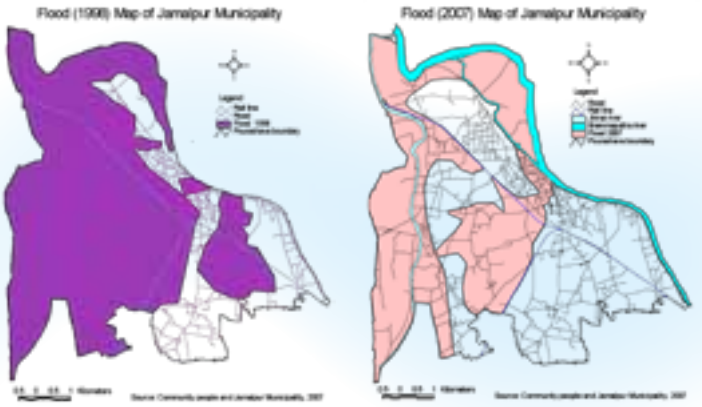
Socio-economic profile

In 2008, Jamalpur Pouroshava (city) had a population of 132,700 and an area of 53.28 km^2 with 56% of the land devoted to agriculture. There are 18,778 households in 12 wards with 30 slum areas. There are parts without electricity; some houses are made of mud and corrugated tin or galvanized sheets; some roofs are covered with hay and dry palm leaves; footpaths still exist instead of access roads.

Hazard profile

In Bangladesh, the Brahmaputra flows through the flood plains of the districts of Myamnsingh and Jamalpur providing invaluable water and soil fertility. Brahmaputra is one of the larger rivers in South Asia with an average depth of 38 m. It begins its 2900 km-long journey from the snow-covered southwestern mountain range of Mount Kailash in the Himalayas, then forms the Yarlung Tsango canyon (the deepest in the world) and crosses the foothills

Inundation maps of the 1998 flood and the 2007 flood — **Figure 2**



of Tibet and green valleys of Assam in India. When the river finally enters Bangladesh, it has already split into two rivers, both of which flow in the same direction: the Jamuna and the Brahmaputra. After joining their sister river Ganges, the three together become known as the Padma River.

Nourished with millions of cubic meters of bubbling water from melting snow and glaciers of the Himalayas, the Brahmaputra serves millions of people throughout Tibet, India and Bangladesh. Its waters are used for irrigation, farming, hydropower, household consumption and navigation. Brahmaputra translates as "Son of Brahma" (a Hindu God), and is considered nature's precious gift to Bangladesh. Periodic flooding is a natural phenomenon that helps to maintain ecological balance and deposit fresh alluvium that fertilizes the valley. This allows people to grow paddy, vegetables, fruits and other subsidiary plants to support themselves and their families. For those benefitting, the Brahmaputra is truly their lifeline.

Defining the problem

The city itself is surrounded by the Brahmaputra River. In addition, the Jamuna River is located to the west of the city. As a result, Jamalpur lies within the floodplains of both rivers and is therefore prone to floods, soil and riverbank erosion, and water logging during heavy monsoon season. It is also exposed to cyclones.

In 1998 and 2007 the city was badly affected by floods; the inundation maps from 1998 and 2007 are shown in Fig. 2. The floods were due to torrential rainfall, inundation by the Brahmaputra and Jamuna rivers, an inadequate embankment, a malfunctioning drainage system, and settlement on the flood-prone *char* lands. Char lands are formed as a river gradually erodes the lands and changes its path to make a complete diversion from the original track, leaving only a trace of the original river in the form of a stream or creek. The land left between the old and new traces is called "char land" or "char island". It is quite fertile, and is usually reserved for agricultural purposes.

Unfortunately, char lands are sometimes the residential areas for people too poor to buy land in the city. Jamalpur has two char lands named Nawbhanga and Compopur. Char Nawbhanga lies in ward No. 1 of Jamalpur; it is primarily agricultural land, and its settlement is highly vulnerable to floods. As such it is one of the sites for the intervention by PROMISE.

SHOUHARDO: The origins of PROMISE

A project named Strengthening Household Ability to Respond Development Opportunities (SHOUHARDO) by CARE-Bangladesh with financial assistance by USAID was launched in 2005. One of the major objectives of the SHOUHARDO program was to build the capacity of targeted communities and institutions to prepare for, mitigate and respond to disasters. With this objective, interventions at the city and community levels were initiated by building self sustaining institutions on disaster management such as the Pouroshava Disaster Management Committee (PDMC) at the city level, volunteers and disaster committees at the community level. Technical assistance was provided by the Asian Disaster Preparedness Center (ADPC). Under the leadership of the Pouroshava chairperson, the city facilitated a multi-hazard vulnerability assessment, a floods contingency plan, and integrated a DRR budget into the annual development plan of the city.

Left to right: Community meeting; Community working on risk mapping; Community members in discussion over their map

However, due to funding limitations faced by CARE, the set objectives of the city could only be partially fulfilled by SHOUHARDO. Consequently, SHOUHARDO transformed to the Program for Hydro-Meteorological Disaster Mitigation in Secondary Cities in Asia (PROMISE), a project implemented in Jamalpur from November 2009 to September 2010.

PROMISE in Jamalpur

The objective of PROMISE was to identify the most vulnerable communities in Jamalpur and subsequently reduce their vulnerability through community driven disaster risk reduction strategies. Activities included participatory planning, community-based mitigation activities, capacity development and mainstreaming DRR into city development planning. As per the assessment records of SHOUHARDO, wards 1, 10 and 12 (out of 12 wards of Jamalpur) were found to be the most vulnerable. Ward 1 in char Nowbhanga lies between old Brahmaputra and new Brahmaputra. Wards 10 and 12 are located on the right bank of Jhinai river. The mitigation and preparedness activities of PROMISE were concentrated in these three wards. However, action planning and the integration of DRR into city development plans covered all 12 wards.

In the process of "Building Jamalpur as a disaster-resilient city", the pillars shouldering the task were the Mayor, the Pouroshava Disaster Management Committee (PDMC), Water Development Board (WDB), District Disaster Management Committee (DDMC), District Relief and Rehabilitation Organisation, Ahsania Mission, CARE Bangladesh and the community. ADPC provided the necessary technical guidance, resources and inputs.

The formation of a Technical Working Group (TWG) was the initial step taken to ensure that activities were scrutinized, coordinated with national policies, and informed by technical inputs along with bottom-up risk analysis. The TWG comprised of the Mayor as the Chairman, elected members, community leaders, representatives of WDB, Local Government Engineering Department, and the Public Works departments of the district and *upazila* (sub-district). Through the TWG, the city was able to build up a culture of view-sharing. DRR activities carried out at the district level were coordinated, involved organizations and supported each other.

The community-based disaster risk management (CBDRM) approach - a priority in DRR

One of the best tools for disaster mitigation and preparedness in a disaster-prone community is the participatory approach for risk management. People know their risks, what has been experienced by their ancestors, and what indigenous methods are used. However, they lack the confidence to convince others of their knowledge and their views are very often overruled by decision-makers. Over time, this practice was changing in the city as Jamalpur followed the guidance from the Bangladesh National Action Plan on CBDRM and worked closely with community to bridge the gaps between technical and indigenous knowledge and practice. The community's voice gradually began finding a place in the decision-making process.

Ward members helped cluster different communities for preliminary identification of risks in terms of geographic locations and vulnerability, and wards 1, 10 and 12 were also given priority. With support from PROMISE, communities in Jamalpur assessed elements at risk, identified community resources, determined the most vulnerable areas exposed to hazards and gauged their vulnerability. Support from ward members in structuring community workshops has aided in the successful completion of these activities. The participatory risk management activities included:

- Participatory risk assessment and action planning development
- Community-based mitigation activities
- Capacity development of community based emergency response

Baseline information was applied to assess the community's vulnerability in terms of living standards, livelihoods and income in order to gain a comprehensive profile of loss and vulnerability within the community with regards to floods. This approach was utilized to better understand the community's socio-economic conditions, risk perceptions, knowledge of disasters and preparedness measures. It aided in identifying problems and losses.

Developing a common dialogue on flood disaster risks

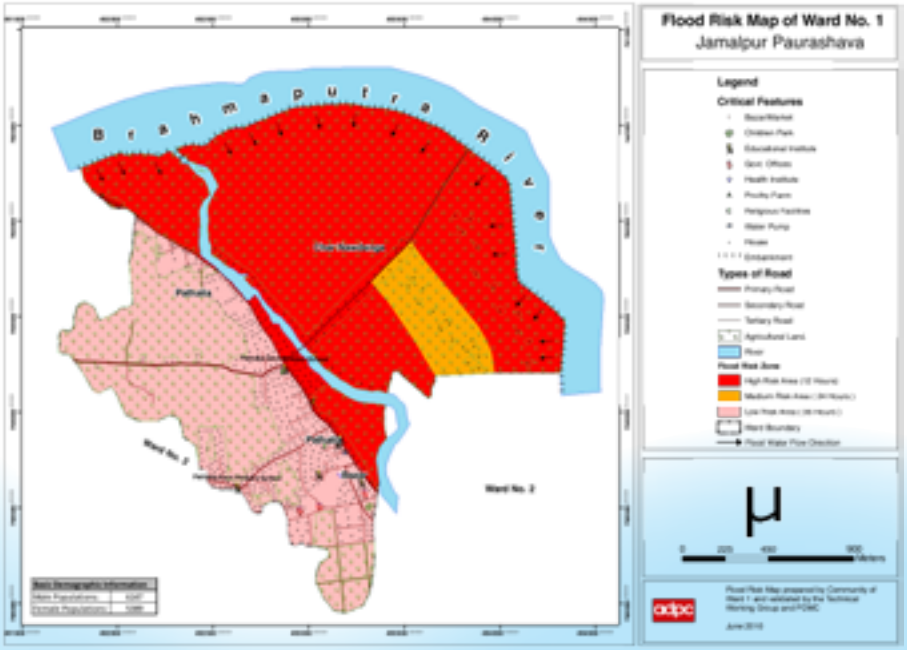
SHOUHARO had successfully developed a common dialogue between the community and the city and was thus able to map hazards and build capacity. The data and information from the SHOUHARDO project were used at the start of the implementation of PROMISE. When developing the maps, women's participation was particularly encouraged despite their literacy rate typically being below that of men (in Bangladesh the literacy rate is 43%).

PROMISE conducted three separate workshops on community-based risk mapping and action planning in April 2010 in covering all 12 wards. Community members, ward members, representatives from WDB, Ahsania mission, Care Bangladesh and other relevant stakeholders participated. Workshop participants identified high-, medium- and low-risk areas, available critical facilities, their locations and the degree of vulnerability. Police stations, hospitals, mosques, schools (for evacuation centers), roads and bridges were among the identified critical facilities.

As a predominantly farming population, the communities were concerned with the level of vulnerability of the agricultural lands located on the banks of the river. One portion of the exercise was to identify the resources available to the community that can be used in disaster risk management. Through a participatory approach, the Jamalpur stakeholders were able to work together to meet the joint objectives, actions and planning on DRR. This is one of the most cost-effective methods for achieving disaster risk reduction. The result was a systematic assessment of the vulnerability of critical lifelines to floods (see example in Fig. 3).

The risk maps formulated for each ward indicated the hazards, potential measures, local level mediation and strategies necessary to overcome DRR issues within short-, medium- and long-term planning periods. The primary hazard identified was flooding. Water logging, river erosion and inadequate drainage facilities were the other problems identified, all of which are directly and indirectly connected with floods and torrential rains. The hazard analysis was focused on determining where risk consideration areas were and how they should be prioritized. Historical information and community experience were used to identify potentially high-impact areas.

Digitized map of Ward No. 1 **Figure 3**

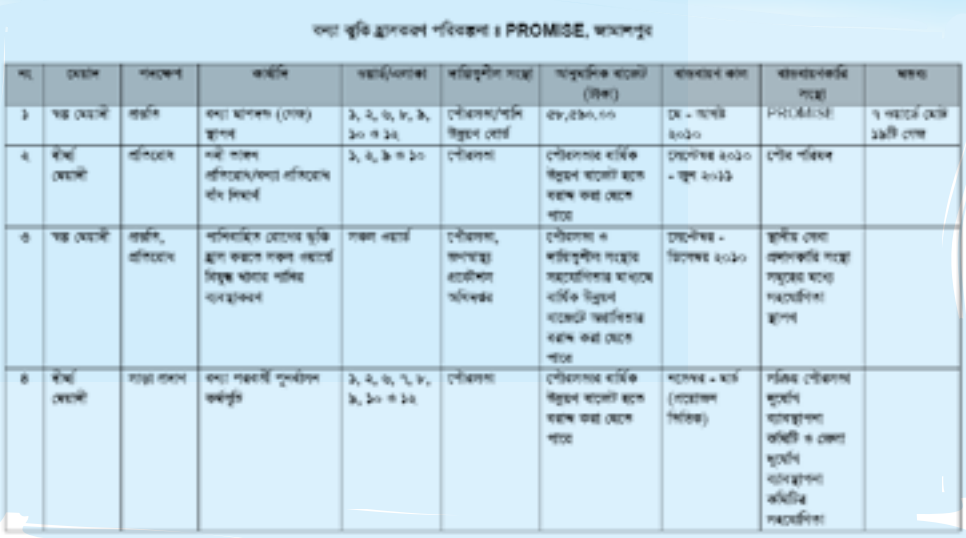


Action planning for disaster mitigation

Understanding people's previous experiences with hazards is a useful tool in developing coping strategies. However, pure dependence on indigenous knowledge and practice is insufficient to combat the increasing trends of floods and deteriorating sanitation standards. Poverty, low risk awareness and poor disaster preparedness are some constraints that had to be overcome in Jamalpur.

Community members held meetings to explore mitigation opportunities that could potentially lower vulnerability and reduce disaster impacts. They identified and evaluated their existing capacity in terms of available resources, knowledge, skills and strengths. Government and non-governmental organizations were considered in terms of the areas where they may assist poor communities in disaster mitigation and ensure that measures taken are easily maintained.

Part of Jamalpur Action Plan **Box 2**



During the action planning workshop, participants generated an innovative mix of old and new suggestions. The workshop helped to determine what people do and need with regards to disaster preparedness, mitigation, response, recovery and rehabilitation in order to reduce the damaging effects of the hazard, protect themselves and secure livelihoods and community services (see example in Box 2).

Inputs from ward-level workshops were compiled in action plans and then validated by TWG, ward representatives and community members at the city consultation workshop held in September 2010. Several recommendations developed from workshop discussions about how to include a DRR section within the municipality development plan. Recommendations included the

activation of the PDMC in line with DRR activities, the allocation of a DRR fund under the annual budget, and fund-raising for DRR. The action plan now serves as a guide for the city council on making decisions regarding allocating funds and prioritizing DRR activities.

Small-scale structural mitigation for the needs within reach

Father and son enjoying water

During the development of the community action plan, the people of wards 1, 10 and 12 proposed large-, medium- and small-scale mitigation activities. Under PROMISE a small grant was made available to the most needy communities for small-scale mitigation items, and funded the evacuation access roads and water supply facilities for the three wards. The large-scale, high-impact items were forwarded by TWG to the district or the central government via the TWG members from LGED, PWD and WDB.

Thus, two dirt access roads were constructed for two settlements. One access road connected the main Rashidpur Road to Madrasha Road, and the second connected the main Rashidpur Road to Tangorpara Road. Later, the Pouroshava will have to strengthen the access roads structurally to ensure that they will be resilient against high-impact flooding should it occur.

Bangladesh has 230 rivers and 10% of its land mass covered by lakes, rivers and other bodies of water. This results in the ground water table being very high and in the inability of water to percolate naturally for filtration, a step necessary in reaching an acceptable level for drinking purposes. Thus, many people are faced with a severe shortage of potable water. For Jamalpur, five deep wells were drilled and supported with concrete platforms for washing and bathing purposes, all with proper wastewater drainage outlets. About 20 – 30 people benefit from each tube well.

These small-scale mitigation priorities were agreed upon by all and implemented by both the municipality and community. Accountability and leadership roles fell to the Mayor, ward councilors and community leaders. Good governance practices were utilized. CBDRM is a systematic approach used to influence governance functions. PROMISE Jamalpur has shown how it can contribute to building the resilience of a people and to the good governance of a city.

Community members working on an access road; the real owners of the road

Scaling DRR up to the City

Integrating DRR in Development Planning

The importance of mainstreaming DRR has been recognized at the World Conference of DRR and adopted as a priority by the Hyogo Framework in Action (HFA). Development planning and local governance are two sectors where mainstreaming can be incorporated.

Distressing experiences of floods allowed Jamalpur authorities to acknowledge the significance of incorporating DRR into development activities, policy-making and project planning and implementation. The same hazard has the ability to affect urban development positively or negatively depending development and DRR initiatives in the city. The physical development plan of the city determines the relationships between and growth of the building control, housing, land use development, public utility needs, infrastructure, water, drainage, power, communication and agricultural sectors. A five-year development plan incorporating DRR strategies was produced for Jamalpur. The draft development plan is now awaiting formal approval.

A wake up call - Flood early warning mechanism in Jamalpur

Flood forecasting warning was not previously available to Jamalpur to provide the lead-time necessary for evacuation and communicate need-based information to the affected. Flood-related early warning technology had yet to involve the community. Organizations

"A long felt need is now accomplished. We can work very much close to our people when they are troubled by floods. We will work with WDB, we can assure to safe guard people's lives, to provide emergency needs, given emergency response."
said the Mayor at the opening of the EOC at the Jamalpur pourashava

such as the Flood Forecasting Warning Center (FFWC) operate to produce daily monsoon bulletins, river situation reports, river level forecasts for 24, 48 and 72 hours and other consistently updated information. Still, developing flood forecasting and early warning for the communities who live in the flood plain areas of Bangladesh was a distant dream.

Jamalpur Mayor Shah Md. Wares Ali at the EOC opening; Equipment in EOC

Under the existing institutional mechanism for flood control, drainage and irrigation, the WDB plays a key role guided by National Water Policy and National Water Management Plan. The institutional analysis shows that at the national level the flood forecasting warning system produces forecasts by recording daily rainfall data, and FFWC produces inundation maps. However, this information is only shared with institutions for planning for large-scale or long-term mitigation needs; it fails to adequately reach the community. Forecasting does not involve communities, thus preventing them from benefiting from possible lead-time for evacuation.

An Emergency Operations Center (EOC) was established and equipped with basic tools including life-jackets, ropes, helmets and first aid kits. Apart from the equipment, awareness-raising and education of the elected members was crucial. Excellent results were achieved by identifying members of the PDMC, defining their roles and holding them accountable so as to not forget their responsibilities. PROMISE fulfilled another pledge for resilience.

PROMISE-Bangladesh realized that if the WDB assisted municipalities by providing simplified area-specific data on rainfall, river levels and water depths, the community would benefit immensely if the Pouroshava reflected these as information on the community inundation maps. This was how PROMISE intervened to bring science and society together for community-based flood early warning.

Top to bottom: Community volunteers at an awareness meeting on EWS; A flood gauge; Ms. Nilufer Aktar Shipa- presiding over a community meeting in her ward; Skill session during the community-based emergency response course

At present there are 19 community level flood gauge stations, installed under PROMISE and monitored by both the WDB and community. Using the indicators developed by the WDB on danger levels on flood gauges, selected members residing close to flood gauge stations are trained to monitor them. They will read the levels, code and decode the message, and disseminate information to the EOC established at the city hall. In turn, the EOC coordinates with the WDB and community readers to spread information on warning signals released by the WDB.

Community-based emergency response is no longer new to Jamalpur. Thirty (30) selected community volunteers received training on emergency response and first aid. CBDRM ensured the inclusion of women in disasters preparedness and response as they are generally more vulnerable than men in the male-dominated society of Jamalpur.

"My ward is the most flood-prone ward. My people are now trained to understand flood early warning simply. They are trained for basic emergency response and first aid as well. I am sure that they are now better prepared. But there are things still beyond their reach. We need to protect our livelihood: mainly the cultivation. I wish that the Water Development Board will help us building structures…" said Ms. Nilufer Aktar Shipa, the ward member who was leading her community and voiced strongly during formal and informal gatherings.

Lessons Learned and Recommendations

- The city established several community-level clusters with city officials to initiate a community based risk assessment. Ward level land-use maps were produced and integrated with community risk assessments. The city can now base its annual development plan on these maps and assessments.
- The people of Jamalpur can mainly be categorized as middle- and low-income families, with the majority being poor and living in under-served settlements. However, educational background, literacy, gender and social environment of the family were never found to be obstacles to developing the participatory action plans and risk maps.
- Disaster risk reduction actions or any development activity will be sustainable once the political commitment is in place. In an environment where those in leadership positions have a high turnover, sustainability lies in the hands of a leader who is dedicated and capable of maintaining the support of others. Such proven political leadership was seen in Jamalpur, ensuring the continued growth of Jamalpur towards building into a safer city in the future.
- A flood drill based on a simple scenario was planned during early September 2010 to assess the preparedness of the community in a real time situation. The WDB, EOC and the city council collaborated to ensure effective coordination in response drills. The response time for different alert levels, the participation stakeholders, the use of community level response, first aid and relief were monitored and measured. Although the pre-rehearsal meeting was attended by over 60 people turn-out for the rehearsal was only ten. A "happy ending" or "zero defect" outcome cannot be predicted unless it is well-rehearsed.
- If a city wishes to engage the local stakeholders in DRR activities, it should consider tapping local agencies such as the WDB for collaboration on major flood protection mitigation.
- Any city can strengthen its own institutional capacities and implement practical DRR actions by themselves. The key is to include DRR into mandated routine operations such as the provision of basic services, land-use planning and development control.

"The rivers of Brahmaputra and Jamuna bring prosperity to Jamalpur with their waters for agriculture, which covers 56% of the area. The same rivers take the wealth back within a day or two by flooding. The situation in many areas on the rivers in Bangladesh is similar. As for my experience, the best approach in DRR is to learn from the past, listen to local people, improve indigenous methods and strategies with new technology and to take collective decisions at local level. To reinforce the application of DRR, provisions of legal and administrative mandates are necessary. With combination of both, we envision to build our city to be a safe haven for all."

Shah Md. Wares Ali, Mayor

References

ADPC, "Implementing national programs on community-based disaster risk reduction in high-risk communities," working paper, February 2010.

UN, *Global Assessment Report on DRR*, 2009.

Ministry of Food and Disaster Management Bangladesh, Bangladesh National Action Plan for Disaster Management 2007- 2015.

Other Safer cities case studies

SC2: *Coping with Flood in Cambodian Communities*
SC3: *Mitigating Flood Risk in Cambodian Communities*
SC7: *Can small be beautiful? Community based flood mitigation in Bangladesh*
SC16: *Cooperation between Local Authority and Communities*
SC21: *Community Empowerment and Disaster Risk Reduction in Chittagong City*
SC23: *Urban Flood Risk Mitigation in Kalutara City, Sri Lanka*
SC24: *Learning to Act Together: Disaster Mitigation in Hyderabad, Pakistan through Collaborative Initiatives*
SC27: *Flood preparedness initiatives of high-risk communities of Jakarta*

About the Project

Strengthening Household Abilities for Responding to Development Opportunities (SHOUHARDO)

The program goal was to reduce chronic and transitory food insecurity of vulnerable households. It targeted the most vulnerable households in the poorest *chars*, *haors*, coastal villages and urban slums. The program covered 2000 villages and 130 urban slums in the North Chars region, Middle Chars region, Haor region and Coastal region.

Program for Hydro-Meteorological Disaster Mitigation in Secondary Cities in Asia (PROMISE)

The program goal was to reduce the vulnerability of urban communities in Bangladesh through enhanced preparedness and mitigation of hydro-meteorological disasters. It was implemented in Jamalpur from September 2009 to August 2010. Activities included:

- Community-based hazard, vulnerability, capacity and risk assessment
- Developing action plans for flood DRR
- Community-based flood early warning in coordination with the Water Development Board
- Small-scale structural flood mitigation
- Community-based emergency response
- Community-based disaster risk management
- Integrating DRR in the city development plan

Editorial Board

Safer Cities 28 has been reviewed by:
Dr. Bhichit Rattakul, ADPC
Mr. Aloysius Rego, ADPC
Mr. N.M.S.I. Arambepola, ADPC
Mr. Boon Tiong Tay, ADPC
Ms. Gabrielle Iglesias, ADPC

Author: **Ms. Padma Karunaratne**
Designer: **Lowil Fred Espada**

Acknowledgments:

Jamalpur Mayor Shah Md. Wares Ali
Jamalpur Pourashava
Residents of all wards
Jamalpur District Disaster Management Council
Jamalpur District Water Development Board
Public Works Department
Local Government Engineering Department
CARE-Bangladesh

Safer Cities is a series of case studies that illustrate how people, communities, cities, governments and businesses have been able to make cities safer before disasters strike. The series presents strategies and approaches to urban disaster mitigation derived from analyses of real-life experiences, good practices and lessons learned in Asia and the Pacific. This user-friendly resource is designed to provide decision-makers, planners, city and community leaders and trainers with an array of proven ideas, tools, policy options and strategies for urban disaster mitigation. The key principles emphasized throughout Safer Cities are broad-based participation, partnerships, sustainability and replication of success stories.

The contents here may be freely quoted with credit given to the implementing institution, Asian Disaster Preparedness Center (ADPC), and to the Office of Foreign Disaster Assistance (OFDA) of the U.S. Agency for International Development (USAID). The opinions expressed herein are those of the author(s) and do not necessarily reflect the views of ADPC or USAID. The information in this series is provided for purposes of dissemination. For more details, please refer to contacts listed at the end of this material.

Publication of this case study was made possible through the support provided by the OFDA, USAID, under the terms of Cooperative Agreement No. DFD-G-00-05-00232-00.

PROMISE

During the implementation of the Asian Urban Disaster Mitigation Program (AUDMP), ADPC recognized the importance of interventions in urban areas and accordingly identified Urban Disaster Risk Management as one of its core thematic areas of work, experiences from which have also guided the selection of the target secondary cities. ADPC has developed 'Strategy 2020 for Urban Disaster Risk Mitigation in Asia' which aims to reach 200 cities by the year 2020.

The need to minimize the destructive impacts of these hydro-meteorological events on the vulnerable communities, particularly the urban communities and the economic infrastructure through enhanced preparedness and Mitigation is therefore the main trust of the present intervention in implementation of the Program for Hydro-Meteorological Disaster Mitigation in Secondary Cities in Asia (PROMISE).

ADPC considers PROMISE program as an opportunity to associate with many communities living in Asian cities vulnerable to hydro-meteorological hazards with the aim of reducing the impacts of such events and demonstrate innovative applications for community preparedness and mitigation.

This case study documents the efforts under a specific program objective to *increase stakeholder involvement and further enhancement of strategies, tools and methodologies related to community preparedness and mitigation of hydro-meteorological disasters in urban communities.*

USAID FROM THE AMERICAN PEOPLE

The Asian Disaster Preparedness Center (ADPC) is a regional resource center dedicated to safer communities and sustainable development through disaster risk reduction in Asia and the Pacific. Established in 1986 in Bangkok, Thailand, ADPC is recognized as an important focal point for promoting disaster awareness and developing capabilities to foster institutionalized disaster management and mitigation policies.

For more information, please get in touch with us at:

Asian Disaster Preparedness Center
979/69, 24th Floor
SM Tower, Paholyothin Road
Samsen Nai, Phayathai
Bangkok, 10400

Tel: (66-2) 2980681-92
Fax: (66-2) 2980012-13
E-mail: adpc@adpc.net
URL: http://www.adpc.net