# Community Preparedness in Bangladesh

Learning from Gaibandha, Bogra, Sirajganj districts following the floods of 2007





### COMMUNITY PREPAREDNESS IN BANGLADESH

Almost every year millions of people are affected and lives and properties are lost to floods and river bank erosion, especially in the northern part of Bangladesh. Forty four percent of rural people live below the poverty line and 5.27% have no land at all.

"Mainstreaming livelihood-centred The to disaster approaches management" (DRR) project is working with communities exposed to floods and river erosion in five Unions (smallest local government unit) of Gaibandha Sadar Upazila (Kamarjani Union) in Gaibandha District, Sariakandi Upazila (Sadar and Narshi Unions) in Bogra District and Kazipur Upazila (Sadar and Maizbari Unions) in Sirajganj District. All three Upazilas (lowest administrative unit in Bangladesh) are on the floodplain and situated on the western bank of the mighty Brahmaputra-Jamuna River.

These three districts are among the most disaster-prone areas in Bangladesh. Vulnerable people living along the riverbank regularly face devastating floods and severe river erosion. Inhabitants of these frequently flooded zones suffer from extreme poverty, poor health, nutrition and little education. They have little access to government services and information and their lack of economic opportunity, poor infrastructure and absence of



Flooded settlement

organizational capacity further handicap their efforts to effectively deal with the impacts of recurrent disasters. The negative impact of natural disasters exacerbates their poverty and vulnerability.

But it is not only "big" disasters that destroy lives and livelihoods; accumulated losses from a succession of small floods, droughts and gradual riverbank erosion can exceed the losses from big disasters and contribute significantly to increased vulnerability at the local level. These disasters attract little media attention and communities are often left on their own to cope with their aftermath.

The annual monsoon floods of July and August have impact on everyone in the area. Even those who are able to cope and recover suffer damage to their few assets, including their crops and their means of earning a living. They struggle to regain control of their livelihoods. The poorest, with very few assets, are worst affected, each shock driving them further into poverty.



A woman sitting outside her flooded house

Poor people living in exposed situations are not helpless victims waiting for inevitable disaster to strike. Flooding and erosion are annual on-going events for which people have evolved strategies to cope and recover. Avoiding disaster is part of their livelihood strategy. However all too often their coping strategies are inadequate and their livelihoods are overwhelmed by the strength and severity of floods or the extent of erosion. Community based disaster Preparedness (CBDP) must therefore take account of how people make their living and must

involve the people themselves in identifying the constraints under which they live and the measures which can be implemented to reduce their vulnerability.

### Traditional coping with crises – before project interventions

Rural households in Bangladesh especially in Gaibandha, Sirajganj and Bogra districts routinely plan for and manage the uncertainty associated with periodic floods, river erosion, storms, and drought related crises. Flood related activities take place every year. From April to December livelihood activities such as growing crops or fodder are severely disrupted by the floods as people prepare for, cope with and then rebuild their lives.

Uncertainties pose particular hardships for the poor who are chronically vulnerable in terms of their access to resources. Rural households have developed a range of strategies and livelihood choices to deal with local seasonal stresses that are endemic, even in "normal" years. These strategies include various methods of income generation, food consumption habits, savings and social or kinship relations which help them to ride out and recover from shocks and stresses.

Generally the floods cause havoc. People resort to desperate strategies in order to cope, selling their limited assets including cows, goats, chickens, tools and utensils, ornaments and even their clothing and food reserves. Houses are damaged and crops and agricultural land are often swept away. People are unable to engage in economic activities, mobility is restricted confining people to their immediate locality. The poor are exploited by money lenders providing loans at exorbitant rates of interest. Cattle which have been reared for sale, at times of hardship decline in value, often by as much as 40% due to supply outstripping demand. People commonly have to move from their homes and take refuge on the embankments, on hillocks, in school buildings, pucca houses and in Union buildings.

During the baseline study, conducted in July 2006, community members were

asked "Did your household experience any crises during the last twelve months?" All the respondents answered that they had. 92% named flood, 4.1% identified river erosion, illness had affected 2.1% and 1% reported crop loss as having disrupted their lives.

In order to cope with these crises, a range of strategies were employed. Migration in search of work was a commonly chosen option. Other options included distress sale of labour (22.7%), borrowing from family or friends (22%), borrowing from an NGO (31%), borrowing from a traditional money lender (9.3%), distress sale of crops (4.1%), depleting household savings (36.8%), selling animals (1%) and selling household items (1%).

87% of respondents stated that during and after times of stress, women are often worst affected and have to carry many extra responsibilities in addition to their normal roles of cooking and caring for children and animals. Despite their difficulties, women come up with ingenious solutions for obtaining water, animal fodder and whatever food they could manage to acquire for their families.

During times of stress citizens tend to cling together and provide support to one another. Some better-off families distribute cooked food and other materials to poor neighbours. Feelings of community and fraternity are strengthened. Those who have access to a boat share it with neighbours for transporting them to a safe place. These behaviours reinforce community solidarity; differences are repressed and similarities are accentuated. According to the respondents, this helps people cope with crises.



Volunteers moving household assets to safety

#### Humanitarian assistance

Sometimes the extent and severity of the floods completely overwhelms the ability of communities to cope on their own. In emergency situations such as these, access to humanitarian assistance is essential. Emergency relief is the aid and action needed to save lives and alleviate suffering that is provided by agencies outside of the community. Sources of emergency aid include NGOs, international NGOs and government agencies. Food is often the major requirement of affected communities, followed by clean drinking water, access to medical services, shelter and clothing. During widespread or complex emergencies, humanitarian aid is often not readily available. The establishment of linkages between communities and local service providers and external humanitarian agencies in advance of the onset of disasters can influence the speed at which emergency aid is delivered thereby reducing suffering.

### DRR project interventions

The practical application of a livelihoods approach to risk reduction work helps to identify the extent and nature of the full range of peoples' livelihood assets and their vulnerability to hazards and other external forces. This makes it possible to identify entry points to protect the assets that are most at risk or most valuable in times of crisis. It gives insights into peoples' choice of strategies - why they live in fragile and potentially risky situations and how they cope in "normal" circumstances. Activities which strengthen livelihoods and increase resilience can help reduce their vulnerability.

The situation existing in the target communities was assessed using participatory vulnerability and capacity analysis (VCA or V2R). Communities were facilitated to identify local hazards, their assets and deficiencies as well as activities which build on their existing coping strategies, resources and skills. Based on the VCA findings, local development plans which incorporate risk reduction, increase resilience the and diversity sustainability of livelihood strategies were formulated.



Community VCA Meeting

Community participation is arguably the most important component of the project, ensuring commitment, ownership and sustainability of the activities undertaken. It is vital to ensure "buy-in" from all sections of communities, local authorities and service providers. The implementation of the project in partnership with local NGOs goes some way to ensure that impacts are sustained beyond the life-time of the project and that a reservoir of expertise is locally available. In all the targeted communities, people have come together voluntarily to form Community Based Organisations (CBOs) who provide a for the identification implementation of local development activities.

The project interventions focus on both strengthening individual livelihoods and increasing their preparedness for dealing with hazards. The over-arching goal of this project is a reduction in disaster risks (DRR) which contribute towards sustainable development and poverty reduction.

## Community based disaster preparedness

Disaster preparedness refers to measures taken in advance to prepare for and reduce the effects of hazardous events which threaten to become a disaster. Preparedness activities are designed to, where possible, reduce social disruption and losses to existing assets while helping affected populations to respond to and cope

with the consequences of a disaster. Although these activities can serve, in the absence of more permanent mitigation measures, to reduce the threat to loss of life and property, they are most effective when employed as a component of a comprehensive, overall disaster risk reduction plan.

Community Based Disaster Preparedness (CBDP) recognizes that people in high risk areas, have used local knowledge to develop their own coping mechanisms and strategies to reduce the impacts of disasters. This knowledge should not be ignored but rather strengthened. The inhabitants of exposed communities are always the first to respond to a disaster. They are usually involved in search and rescue activities as well as providing treatment and relief to their families, friends and neighbours. CBDP seeks to augment and improve these skills through training in preparedness measures, rescue techniques and first aid.

Preparedness includes mitigation activities designed to reduce the damaging impact of floods. Raising the plinths of houses above previously recorded flood levels has been promoted, low cost cluster housing has developed, flood-proof sanitation and elevated hand pumps for clean drinking water have been installed. Floating seed beds and vegetable gardens enable crops to be grown during periods of inundation. Fodder production and preservation for feeding livestock during floods has been promoted, while seed banks provide a vital post-flood resource. Households have been encouraged to store valuables and food stocks above flood levels and to use portable ovens.



A hand pump raised above flood waters

Capacity building and training on DRR issues, including preparedness has been provided to Community based organizations (CBOs), community and youth volunteers, school students and teachers, religious leaders and Union and Upazila Disaster Management Committees in all the target areas. 300 community members and 300 vouths children), half of whom are women, were motivated to volunteer for training on disaster risk reduction strategies at family and community level. Training included search and rescue, first aid and the dissemination of early warning messages. The volunteers were trained to carry out specific roles before and during disasters. They also took part in public dramas, folk songs, rallies and school-based campaigns to raise DRR awareness throughout the year. They have organized community meetings to demonstrate mitigation works (such as raising house plinths and planting trees) and carried out simulations on what to do at the onset of floods. Examples of two preparedness plans designed by CBOs and volunteers as well as a UDMC are provided at the end of the report.



UDMC creating a disaster preparedness plan

volunteers Community have also conducted courtyard meetings. These community meetings have been shown to be an effective tool for building a culture of safety; raising awareness and providing appropriate information on how to reduce individual and community vulnerability to locally prevalent disasters. The volunteers also perform social welfare activities with the help of the local administrations, Union Disaster NGOs. Management Committees, educational and religious institutions and other agencies.

Information, education and communication (IEC) materials such as posters, leaflets. brochures, rickshaw tinplates, festoons and bill boards have been produced in Bengali. These convey vital life-saving messages on how to prepare for and survive natural hazards. Together with the community risk and resources map, the seasonal calendar, contingency plan and community based disaster preparedness plan developed through the vulnerability and capacity assessment (VCA) with community and stakeholder participation, the knowledge and confidence of communities to respond appropriately to disasters has been enhanced.

The project has facilitated the formation of Community Based Organizations (CBOs) in the targeted communities. The mobilization communities around disaster preparedness activities has reinforced community cohesion and stressed the value of collective action during times of adversity. Training, together equipment such as rescue boats, life-belts and other necessary aids has been provided to the CBO members. Megaphones have been provided for the dissemination of early warning messages. The community capacity and awareness building activities mobilize all sections of the community in working together towards the long-term well being of the community.

Union Committee members and Upazila officials have been involved in the project from its inception. Their support and interest in the process and outcomes of the community-based activities has influenced the course and impact of the project. Through exposure to the community based planning process and other activities, the local government disaster management committees (UDMC) have been motivated to move from focusing on relief to a preparedness approach. Capacity building has resulted in their adoption of a comprehensive DRR plan which includes specific measures including provisions to evacuate the most vulnerable such as children, the elderly, people with disabilities and pregnant women during disasters, and the promotion of floodresistant WATSAN facilities in the flood and erosion-prone river bank areas.

### Floods of 2007

During July and August 2007, extensive flooding inundated large tracts of Bangladesh, including the three project locations. This provided an opportunity to assess the effectiveness of the community-based disaster preparedness plans developed over the previous year. A survey was designed to answer the question "Were communities that had preparedness plans and more diversified livelihoods better able to cope with and recover from the extreme floods they experienced?"

A random selection of 102 households was selected for individual interview (representing one interview for every 14 households) over a period of 12 days at the three project locations at the end of 2007. Nine focus group discussions involving 72 household heads, (including 26 female headed households) were also held. In addition eight key informants, (including local government officials, Union Parishad members and local opinion leaders) were interviewed.

The interviewees represented a cross-section of the communities, were mostly poor and included house-wives (41.4%), day labourers (6.1%), agricultural labourers (25.3%), rickshaw pullers (5.1%), small traders (6.1%), boatmen (1.5%) and other professional groups (15%). More than half the respondents were women.

### Project impacts in the light of the 2007 floods

Preparedness encompasses the ability to predict and, wherever possible, prevent disasters, lessen their impact as well as facilitate response and handling of their consequences. In the project working area, the project had increased the preparedness of the communities through the activities described above.

81% of the respondents reported that they were prepared for future disasters, because they had a disaster preparedness plan and as a result of the training that they had received, they were able to follow the plan. Questioned on their ability to prepare food during floods, 82% of respondents said

that they had arranged portable cooking stoves, while additionally, 38% said that had specially preserved rice and other dry foods.



A woman with a portable cooking stove is able to cook after a flood

However, only 48% of those interviewed had thought it necessary to move their livestock from their homes to the embankment.

89% of individual respondents reported that they felt better informed about then the preparedness unprepared communities. The question, "Are the communities with disaster management committees and preparedness plans better tο cope than unprepared communities?" received unanimous agreement from focus group members.

Specific components of preparedness which were identified as being of particular significance to them included:-

- Beneficiaries of prepared communities have themselves identified and prioritized the problems of the area. Community based disaster preparedness plans were then formulated to address these problems.
- Beneficiaries of prepared communities received training to create mass awareness and develop understanding of disaster risk reduction.
- Beneficiaries of prepared communities are more aware about the basic concepts of disasters, causes of disasters, preparedness, risk management, family level coping strategies, roles and responsibilities of

- the participants, and preparation of an action plan
- Following the trainings, the community volunteers and youth volunteers prepared an action plan for disseminating messages on disaster risk reduction to households in their respective communities.
- Stakeholders of prepared communities have higher level of awareness on disaster issues than the unprepared communities
- Stakeholders of prepared communities are well trained in terms of community disaster management.
- They have more knowledge about coping strategies and are able to put into practice appropriate coping strategies.
- They are able to recover quickly
- They are moving toward secure livelihoods
- Hardcore poor, especially the female headed household members, know about preparedness, including family level coping strategies and their roles and responsibilities before, during and after disasters.

Unprepared communities were described as:-

- · Not aware about disaster management.
- Not having received any training on disaster management.
- Not knowing about strategies for coping with disaster
- · Recovering slowly

### Early Warning

Given sufficient warning people are more likely to be able to respond appropriately to the imminent onslaught of a hazard. The greater the time communities have to prepare, the greater the savings in human life, household assets, livestock and stored provisions. An appropriate Early Warning System (EWS) is therefore an essential component of any preparedness plan.

To be effective the EWS must reach to and be understood by those most at risk. Equally important, they must know what to do when the message reaches them. To reinforce the flood warning messages carried on national and local TV and radio networks and to ensure the warning reaches local communities, the mosque loud-speakers broadcast warnings of rising river levels. The community and youth volunteers are each responsible for ensuring that 10 households are informed. Based on the predicted severity of the approaching hazard, the preparedness and contingency plan specifies what action needs to be taken. People have time to move their assets and valuable belongings above flood levels and if thought necessary, to evacuate themselves and their livestock to predesignated safe places.



A volunteer search and rescue team

### Contingency plan

The contingency plan details steps to be taken following the onset of flooding. Search and rescue and evacuation procedures have been taught to members of community disaster management committees and CBOs. Boats, lifejackets and other equipment have been supplied. The community is aware of the plan and has implemented many of its elements.

The rescue and evacuation plan proved very useful to the community as it provided operational guidelines and clarified roles and responsibilities before, during and after the flood. The plan helped community members to identify activities to be undertaken to address vulnerabilities before, during and after the disaster. The community leaders were able to identify available local resources and to mobilize resources from outside the community (fishing boats, communication equipment, evacuation site and volunteers).

The table below illustrates how community members feel they have benefitted from the plan.

How they benefitted by the rescue and Evacuation plan	Percentage of respondents %*						
Save their assets and houses	32						
Migrated safely	19.4						
Using boat for migration during flood	19.4						
Saving life and livestock	67.4						
Disseminate ideas to others	54.9						

<sup>\*</sup> Multiple responses considered.

According to the respondents, the contingency plan was very useful to them. 69% of respondents had carried out mitigation activities as specified in the plan, such as planting trees and herbs around their homesteads, raising their homestead plinths, raising tube well platforms and preparing boats. 82% of the respondents thought that the disaster preparedness plan and contingency plan were implemented well.

When asked how they had benefitted from the plan, one person replied

"Without preparedness it was not possible to save our livestock, lives and utensils. We moved from one place to another place easily. The preparedness plan guided us to safe sheltering".

#### Recovery

In order to survive interruptions in income, reduce losses to their homes or businesses, evacuate or relocate, rebuild homes and businesses, and replace needed work space, tools, livestock, or equipment, people living in hazard-prone regions identified several key resources. These included secure sources of income, access to savings or credit, employment with social protection, marketable job skills, education and training, and control over productive resources. Other key resources include mobility, health, social support systems, and safe and secure housing.

When asked "What did you do to recover from the floods?", beneficiaries of the project interventions described how they initiated various agricultural activities such as vegetable cultivation (44%), nursery development (21.6%), preparing fodder (5.6%), tree plantation (56%), livestock rearing and fish cultivation (14.4%). Other strategies included small enterprise development (19.9%), loans from NGOs (65%), loans from landlords (2.6%) and friends and relatives (17.9%) (multiple responses considered). Others had sold their livestock (5.4%), were involved in daily labour (67%) or had sold their labour in advance to their land lord (5.4%).

In general the interviewees felt that they were now capable of facing the challenges of disasters. According to them they are now much more aware about disaster preparedness, disaster management and recovery. They are now capable of restoring their livelihoods by initiating floating gardens and nurseries, fisheries in flood water and small enterprises as alternative income generating activities. Most of them reckoned it took 6 to 12 months to recover after severe floods. It was acknowledged that people with disabilities, widows and single parent households were often unable to recover at all. Wealthier people with access to more money or assets were able to recover quickest.

It was widely recognised that flood affected people who had not received training on disaster preparedness, mitigation and alternative options of livelihoods were not able to overcome the distress situations. Linkages established between CBOs, NGOs and the Union and Upazila Parishads facilitated an effective and coordinated

recovery that included access to appropriate external support. The value of a comprehensive plan that has been formulated and is understood by the community and local service providers is clearly advantageous.

### Conclusions

Working at the individual, household and community level, the Practical Action DRR project in Bangladesh has demonstrated that more secure and sustainable livelihood strategies, coupled with preparedness and contingency planning has enabled communities to efficiently hazardous situations and recover more quickly. Losses of lives and livelihoods have been reduced. While the comprehensive control of water-related natural hazards is not entirely possible and vulnerable populations will have to continue to live with the associated disasters which they bring, continuing effort is required in the development of a national management plan that takes account of the needs of exposed rural communities.

While the preparedness and response capacity of local communities has been stressed, not all disasters can be managed at local level; sometimes the extent of the devastation is just too great. This is when a national disaster response system, backed up, if necessary, by regional international support, comes into play. Community preparedness and contingency should include linkages appropriate humanitarian agencies to which they can appeal for assistance when necessary.



DRR Volunteers preparing their action plan

Example-1: Preparedness plan by CBO and Volunteers (Yearly Action Plan: April 2008-March 2009)

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cular of Activities Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Thly Coordination Meeting the Flood early warning message to the com- ity de Flood early warning message to the com- ity and meeting with community on flood pre- dness dnes	As per responsible plan by volu												Ensure water and sanitation situation during disaster
Meeting Meetin	All volunteers												Day observance (Rally, cultural show and discussion)
Meeting Meeting Meeting Meeting Mor. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.  In community on flood pre- flood affected people by Cition & distribution by  Cition & distribution for	As per responsible plan												Minor renovation of village road through volun- teerism (after flood)
Meeting  Meeting  Meeting  Mor. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.  In community on flood pre-  flood affected people by  Ction & distribution by	Lal miah. Tapon, Saddam												slogan
Meeting Meetin	All CBO members & volunteers												Emergency relief collection & distribution by CBOs & volunteers
Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.  Meeting  Improvement of the com-  In community on flood pre-  Improvement of the com-  Improvement of the com-	Sabu, Amirul, Chan , Raju												Rescue, evacuation of flood affected people by rescue volunteers
Meeting May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.  Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.  All membe Raju, Yesm	Community volunteers												Courtyard meeting with community on flood preparedness
Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.  Meeting	Raju, Yesmin, Saddam												Provide Flood early warning message to the com- munity
Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar.	All members												Monthly Coordination Meeting
	Persons responsible	Mar.	Feb.	Jan.	Dec.	Nov.	Oct.	Sept.	Aug.	ÁINĆ	June		Particular of Activities

Example-2: Preparedness plan of Union Disaster Management Committee (UDMC), (Period January 2009 to December

Ensure heath services during post flood period by arrang- ing health camp medicine distribution etc	Keep pollution free environment through cleaning of debris, dead animals and other contaminants	Arrange transport of dead bodies and inform relatives of death	Arrange vaccination camp, medicinal treatment for livestock	Taken initiatives for rehabilitation of agriculture activities	Special attention for disabled and handicapped people during sheltering	Arrange rescue boat for evacuation and rescue work	Coordination with Upazilla Disaster Management Committee for better services	Conduct awareness session about disaster	Provide better services for women, elders and pregnant mothers during sheltering	Preparing a list of losing households	Repair/maintenance road communications after flooding	Arrange dry food and saline for victims	Ensure security of shelter camp	Arrange safe water and sanitation for sheltering people	Rescue and evacuation of flood affected people from char lands and distress places	Flood early warning dissemination among the community people	Monthly coordination meeting	Activities Ja
																		Jan. I
																		Feb.
																		Mar.
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																		May
																		June
																		July
																		Aug.
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																		Oct.
																		Nov.
																		Dec
															*			* Note:

Union Parishad secretary is responsible for organizing monthly coordination meeting and special meetings as and when required.

Female members of UDMC are responsible for taking special care of elderly, disabled, children and pregnant mothers.

### Case Study

A snapshot of a CBO's activities: Responding to the Floods of 2007

To help address community vulnerability to floods in Kamargani Union of Gaibandha District Bangladesh, a group of 17 people (11 male and 6 female) came together voluntarily to form a Community-Based Organisation (CBO) to serve their community. Members of "Ashar Alo Unnayan Sangstha" were trained in group management and other skills encouraged to actively take the lead in several community activities, including a Vulnerability and Capacity Assessment, the creation of awareness in the community regarding disaster preparedness, preparation of a community-based risk reduction plan and the solution of various social conflicts.

The CBO has since arranged vaccination campaigns for livestock, motivated the community to carry out work to improve their water and sanitation facilities, repair culverts, bridges and the embankment and assisted government service providers to organize meetings and training workshops in the community.

In the recent floods the CBO members performed several vital roles; monitoring the flood situation, raising community awareness, disseminating early warning messages using early warning equipment supplied by Practical Action and rescuing flood marooned families.

"Our CBO members rescued flood-stranded people, shifted 23 lots of housing materials damaged by river erosion and constructed temporary cattle shelters for 75 cattle. We installed 6 temporary sanitary latrines and 3 elevated tube wells for people marooned in the flood shelters, maintained 4 flood shelters, repaired 3 and organized 2 vaccination culverts camps for the cattle" said the Secretary of the CBO, Mohammad Sabu Mia". "This year's flood gave us an opportunity to test our plan and what we had learned from our training. "We know how to rescue people and to how to shift them to the shelter during flood. I think we have passed the

test", said a confident Sabu Mia.

The CBO members felt that by performing these activities in the community their social standing (dignity) had improved. They are now confident enough to communicate with external service providers for their needs. "The Upazila Executive Officer visited our community and observed our activities. He has assured us of his support for our further development", said Md. Chan Mia.

"We will soon be able to involve other agencies in development activities in our community" confidently said the Chairman of the CBO.



 $\ensuremath{\mathsf{CBO}}$  members preparing temporary latrines following a flood.

#### *Further reading* on the project:

Practical Action Bangladesh 2010. "Elements of disaster resilience: lessons from Bangladesh". Practical Action, Dhaka, Bangladesh. Available on world wide web <a href="http://www.practicalaction.org/bangladesh/docs/region\_bangladesh/elements-of-disaster-resilience-2010.pdf">http://www.practicalaction.org/bangladesh/elements-of-disaster-resilience-2010.pdf</a>>.

Practical Action Bangladesh 2009. "Good Practices for Community Resilience". Practical Action, Dhaka, Bangladesh. Available on the world wide web <a href="http://practicalaction.org/energy/bangladesh/docs/ia1/good-practices-community-resiliance-052009.pdf">http://practicalaction.org/energy/bangladesh/docs/ia1/good-practices-community-resiliance-052009.pdf</a>

Kazi A. Mohib. 2008. Report on flood emergency response, preparedness and risk management survey 2007.

Practical Action 2010. "Community Preparedness in Bangladesh: Learning from Gaibandha, Bogra, Sirajganj districts following the floods of 2007". Practical Action UK