



# DOCUMENTING GOOD PRACTICES AND CAPTURING LEARNING OF THE LDRRF PROJECTS



Ensuring safe water



Disaster Resilient Habitat



Agricultural Adaptation



Sustainable Energy

March 2010

Comprehensive Disaster Management Programme (CDMP II)  
Ministry of Disaster Management and Relief



# **Documenting Good Practices and Capturing Learning of the LDRRF Projects**

## **Comprehensive Disaster Management Programme (CDMP)**



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## LIST OF ABBREVIATIONS

BDPC	Bangladesh Disaster Preparedness Centre
BNM	Bhagni Nivedita Manchya
BWDB	Bangladesh Water Development Board
CBO	Community Based Organization
CDMP	Comprehensive Disaster Management Program
CNRS	Centre for Natural Resource Studies
CODEC	Community development Center
CRA	Community Risk Assessment
DAM	Dhaka Ahsania Mission
DDMC	District Disaster Management Committee
DIC	Disaster Information Centre
DMC	Disaster Management Committee
DNP	Daridrya Nirashan Prochesta
DRR	Disaster Risk Reduction
EWDS	Early Warning Dissemination System
EWS	Early Warning System
FAO	Food and Agricultural Organization
FDA	Faridpur Development Agency
FHD	Foundation for Human Development
FIVDB	Friends In Village Development, Bangladesh
GHARONI	Grass roots Health And Rural Organization for Nutrition Initiative
GJKS	Grameen Jono Kallyan Sangsad
GoB	Government of Bangladesh
IDEA	Institute of Development Affairs
IDO	Integrated Development Organization
IED	Institute for Environment and Development
IGA	Income Generating Activities
IP	Implementing Partners
IR	Islamic Relief
LDRRAP	Local Disaster Risk Reduction Action Plan
LDRRF	Local Disaster Risk Reduction Fund
LGED	Local Government Engineering Department
MMS	Manab Mukti Sangstha
NCDS	North Char Development Society
NDP	National Development Programme
OMI	Organization for Mother and Infants
PIC	Project Implementation Committee
PIO	Project Implementation Officer
PNGO	Partner Non-governmental Organization
POPI	Peoples Oriented Program Implementation
PRA	Participatory Rural Assessment
PwD	Persons with Disabilities
RDF	Rakhaing Development Foundation
RIC	Resource Integration Centre
RRAP	Risk Reduction Action Plan
SDG	Socially Disadvantaged Groups
SDS	Shariatpur Development Society
SGS	Southern Gonounnayan Samity (SGS)
UDMC	Union Disaster Management Committee
UNO	Upazilla Nirbahi Officer
UP	Union Parishad
UzDMC	Upazilla Disaster Management Committee
VERC	Village Education Resource Center
VOSD	Voluntary Organization for Social Development

## **EXECUTIVE SUMMARY**

The CDMP is a collaborative effort by the Government of Bangladesh (GoB), United Nations Development Programme (UNDP), Department for International Development (DFID) and a host of disaster management stakeholders. The programme is designed to build upon critical lessons learned over the past decade. Following the devastating flood of 1988 and the most destructive cyclone associated with very high sea surges in 1991, Bangladesh decided to set up more elaborate and institutional arrangements for disaster management in a more coordinated manner at apex, regional and local level. To date, the activities of the Ministry of Food and Disaster Management (MoFDM) have been focused on short-term preparedness, public awareness, response, and recovery. These activities are valuable in responding to the immediate crisis needs of the population. But it is now being acknowledged that these initiatives are not able to satisfy demands for reducing vulnerability. What is needed in Bangladesh is a more holistic and comprehensive approach, wherein the processes of hazards identification, vulnerability analysis, prevention, mitigation, preparedness, coordinated response and recovery efforts are planned and undertaken contiguously within a risk management context to address the underlying causes of vulnerability. The approach also requires considering the importance of disaster risk management in poverty reduction, particularly the most vulnerable sector among women, and others who have limited access to productive resources. The CDMP adopts a programme approach that encompasses all aspects of risk management that aims to build upon the ongoing trend in Bangladesh, which is shifting away from a response and relief oriented system to a broad multi-sectoral strategy.

### **Background of LDRRF**

The Local Disaster Risk Reduction Fund (LDRRF) under the Community Empowerment Component 3c of CDMP aims to broaden and strengthen the coping capacities of communities to the impacts of natural and human induced hazards. In order to build the technical and institutional capacity of the most vulnerable to resist and cope with disaster threat, increase resilience and more sustainable livelihoods, this component has been designed to support small-scale innovative and strategic interventions that attempts to foster policy development and capacity building at grassroots level. The Local Disaster Risk Reduction Fund (LDRRF) is a funding mechanism for local demonstration projects in high-risk zones, research, dissemination, advocacy and capacity building programmes. The LDRRF was implemented by UNOPS and managed by a small team of project personnel with active support and guidance from PPPDU.

The LDRRF was designed to provide access to micro capital grants for pilot projects with innovative ideas for empowering local communities with a view to reducing the devastating impacts of natural and human induced hazards. LDRRF aimed at forging strategic partnership with NGOs and CBOs, and ensuring that all risks at the local level are addressed resulting to reduced vulnerability to a greater range of hazards, increased resilience and more sustainable livelihoods. It was also an intension that Intervention of LDRRF shall strengthen the institutional capacity of NGOs/CBOs making significant contribution to leadership building qualities and encourage their involvement in community risk reduction initiatives and ensure community participation in high-risk zones with demonstrable and sustainable positive impact on vulnerability reduction and capacity building. The geographic focus of the LDRRF was limited to the pilot areas selected on the basis of vulnerability. However, the ultimate objective of LDRRF



intervention was to replicate best experiences in other disaster prone areas all over the country.

Initially 44 entities from a range of diversified agencies including international organizations (FAO), academic institutions (Dhaka University, Khulna University, BUET), research and technical agencies (like ICDDR,B, CEGIS, CNRS) and national and local level NGOs received funding from LDRRF. The projects were implemented in 355 Unions, 23 paurashavas of the seven CDMP pilot districts (Sirajgonj, Faridpur, Lalmonirhat, Shatkhira, Sunamgonj, Rajshahi and Cox's bazaar). After completion of implementation of the LDRRF projects, CDMP launched an evaluation study which aimed to achieve the following objectives:

- A. Documenting the good practices with regard to their programmatic approaches and alternative options under each thematic area (early warning, livelihood support, community/social mobilization, community preparedness, risk mitigations and so on).
- B. Capturing the organizational, management and programmatic lessons learnt (both positive and negative) in the process of implementation of the projects funded under LDRRF and
- C. Looking at sustainability issues of the interventions implemented under the LDRRF support

Consequently, the present study is conducted in the areas wherein CDMP has operated its pilot interventions. A total of 14 upazillas (sub-districts) are selected to carry out the research from seven pilot districts – Cox's Bazar, Faridpur, Sirajgonj, Satkhira, Rajshahi, Lalmonirhat and Sunamgonj. The summary of findings of the study is in order.

### **Thematic Areas Identified**

Through a careful examination of LDRRF interventions, the present study identifies seven thematic areas instead of initially conceived three thematic areas. In future interventions, these seven thematic areas may be pursued:

- Risk Management Framework and RRAP
- Structural Risk Reduction Intervention
- Early Warning Dissemination System
- Community Mobilization through Awareness Raising and Capacity Building
- Promoting Gender Equity and the Needs of Socially Disadvantaged Groups
- Promoting Livelihood Security
- Reducing Health Risks

### **Key Managerial Lessons Learned**

- There was little or no monitoring mechanism in place to check whether the materials provided during training are being used or not.
- Project duration was very short to ensure long term sustainability of the benefits it produced.
- Assistance from GoB Officials was most essential to accomplish the targeted activities, but it was difficult to get the assistance.

- Field level presence of the implementing agency is very much essential for understanding the on the ground situation, insuring reliability and acceptability by the community the warning messages.
- Frequent changes in local administration and slow decision making process influenced the pace of the project and for that project had to concede time overrun for 6 months.
- Guidance provided from CDMP for work progress and financial progress monitoring was same for all LDRRF projects, but the nature and activities of different projects required different strategy
- Project design was faulty. It happened because of rush in preparation of the project proposal.
- No mechanism was planned for to retain and utilize the trained staff after completion of the interventions.
- More involvement of local influential persons will facilitate the interventions.
- A better coordination of GO-NGOs and UDMCs is important to complete for effective emergency such as this year happened.
- School going students can play important and active role in family preparedness if they are made aware of DRR.
- Livelihood support to the vulnerable women and their families needs to be followed up further for maintaining their economic growth and reducing vulnerable situation.

### **Key Programmatic Lessons Learned**

- Community Risk Assessment (CRA) is the key process of community mobilization to pre disaster management activities.
- It is an effective way to assess the community risks. CRA can also be treated as a good tool for community awareness on their risks and vulnerabilities. Through involvement in CRA process the community people, especially the poor and the at-risk communities were aware about their rights. They are now able to take their decisions themselves.
- This has also been realized that proper awareness, specific skills and prompt steps in time can reduce the losses in human and other assets during any disaster.
- Attitude and concept of UDMC members on their roles and responsibilities have been changed in positive manner. The people of the project area are now more aware about disaster preparedness. NGO staffs become more aware and capable on disaster management.
- GO, NGOs and local government institutions' collaboration is essential for effective management of risk reduction activities.
- Hazard map is the base for information management in the selected areas for mitigation of disaster risk reduction
- Confidence building among the members of the community is essential for involving them to get community work done through participatory manner.
- The project for the first time focused on community people's livelihood protection as a way of Disaster Risk Reduction.
- Involvement of journalist, NGO representatives and other representatives of different stakeholders make the program more effective.
- Proper orientation smoothens and makes UDMC & UzDMC members more responsive.
- The various government specialized agencies did not have detailed sectoral information. The sectoral officers did not provide sufficient time and their expert opinion.

- UP Chairmen and members sometimes wanted to suppress the local professional personnel. Even they wanted to take leadership during discussions.
- Local influential people tried to disrupt the sessions like rich people did not allow poor people to take part in discussion and decision making process.
- For quick and efficient dissemination of disaster warning, community based network of people was found very effective. This network should include UzDMC, UDMCs and local volunteers.
- Disaster Information Committees (DIC) established in each of the unions of the project area had been found very effective in coordinating warning dissemination activities.
- Local government institutions were found most effective agency for disaster warning dissemination. However, their effectiveness was found reduced due to resource constraints that they face.
- For disasters like arsenic contamination, salinity increase awareness building is synonymous to 'early warning'.
- Priorities of local elite and that of people at risk are different. At the end of the day, it is the priority of the elite, not of masses, that prevails. Most members of the elite such as UP members, Chairmen and local government officials preferred their own interest and they do not consider mass peoples' necessities.
- Cooperation and support from all UDMCs were not equal but majority were in positive.
- UDMC members are less interested on risk reduction rather they are interested to support relief.
- Most structural interventions were poorly designed and poorly implemented. For example, pillars for houses were not strong enough. Constructed Killas, embankments and raised grounds were not compacted. Consequently, these are easily washable during floods. Bridges and culverts are not adequate in terms of length and width. There were no provisions for either approach road or railings for the bridges.
- It was felt necessary to introduce community management of public dug well, tube well, pond sand filters, etc. Stealing of parts of the filters and tube wells was a big problem.
- Cattle heads are one of the principal sources of livelihood of the people in the project area. During the onslaught of flood these cattle heads have to starve owing to lack of feed. The technology of processing and storage of grass under ground was unknown to the people.
- Alternative IGA activity can reduce risk from disaster through improving livelihood especially for the disadvantaged group.

### **Key Recommendations for sustainability**

- CRA methodology is very complex. The guideline needs further revision.
- The duration of CRA should be short in order for ensuring full participation of the CRA stakeholders in all the sessions. Through a careful review of the methodology the steps can be shortened in order to reduce the duration of CRA exercise.
- RRAPs developed through CRA need to be implemented gradually by local, regional and national level resources.
- Allocation for CRA and similar nature of works need to be realistic for all hazard related awareness at the community level and the project should be extended to cover more intervention works by the partner organizations to consolidate the community confidence.

- CRA activities need to be continued and projects to be prepared based on the findings of CRA should be implemented for sustainable development as well as community risk reduction and enhancing the capacity of the community.
- The capacity enhancement of the Disaster Management Committees under the local government collaboration to cope with the adversity of natural hazards would be effective in the long run.
- Mobilization of community based volunteers and imparting training on search and rescue would be a key for sustainability.
- Need to mobilize fund at the local level or create reserve fund to support alternative income generating projects on a continuous basis
- Self reliance should be the main mechanism of the disaster mitigation to combat disaster.

# Chapter 1

## Introduction

### 1.1 Background of the Study

The frequency of occurrence and intensity of various disaster events across the globe have significantly increased over the last decade. Consequently, the global community has increased their attention to the problem of managing various hazards and disasters. The emphasis has been shifted from traditional humanitarian intervention to a more comprehensive risk reduction measures. With the adoption of the 'Hyogo Framework of Action 2005-2015' at the 'World Conference on Disaster Reduction' held in Kobe, Japan, the global disaster management movement has got a new impetus. With the launching of the 'Global Platform for Disaster Risk Reduction' by UNISDR, it has been spearheaded further. SAARC nations have come forward to adopt the 'SAARC Comprehensive Framework on Disaster Management 2006-2015'. Bangladesh has also engaged itself in disaster management policy and planning reform. Important milestones include the launching of the Comprehensive Disaster Management Programme (CDMP), publication of the 'MoFDM Corporate Plan' and 'Strategic Plans' of DMB, DRR and DGoF, the drafting of the 'National Plan for Disaster Management', 'Disaster Management Act', 'Learning and Development Strategy', revision of 'MoFDM Allocation of Business', 'Standing orders on Disasters', 'Community Risk Assessment Guideline', etc..

#### 1.1.1 Bangladesh Disaster Management Model

The 'Bangladesh Disaster Management Model' as presented in the Draft National Plan for Disaster Management duly emphasizes the importance of risk reduction which is divided into two parts: a) defining and re-defining risk environment and b) managing risk environment. The first element aims to define the risk environment first. Defining the risk environment creates knowledge of the interaction of hazard and the elements at risk (community) and is conducted in a structured and analytical process. 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 (Following ISDR policy Identification of risk treatment strategies).

The second element, managing the risk environment, promotes the design of risk reduction strategies (Community Based Adaptation Programmes) as an outcome of the risk assessment process. This ensures Prevention, Preparedness, Response and Recovery programmes 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.

Following ISDR indicators the Disaster Management Action Matrix 2007-15 (Section 4.0) of the Draft National Plan for Disaster Management aims at 'Empowering at Risk Communities' through 1) developing and establishing a standard assessment procedure to identify community and household level risks; 2) establishing a disaster risk reduction action planning framework; 3) strengthening community and household level capacity to withstand

the disastrous situations; and 4) reducing vulnerability of the at risk communities through social safety nets.

### **1.1.2 Background of CDMP**

As a determined effort to operationalise the Bangladesh Disaster Management Model, the Comprehensive Disaster Management Programme (CDMP) was launched in 2004. The CDMP is a collaborative effort by the Government of Bangladesh (GoB), United Nations Development Programme (UNDP), Department for International Development (DFID) and a host of disaster management stakeholders. The programme is designed to build upon critical lessons learned over the past decade. Following the devastating flood of 1988 and the most destructive cyclone associated with very high sea surges in 1991, Bangladesh decided to set up more elaborate and institutional arrangements for disaster management in a more coordinated manner at apex, regional and local level. To date, the activities of the Ministry of Food and Disaster Management (MoFDM) have been focused on short-term preparedness, public awareness, response, and recovery. These activities are valuable in responding to the immediate crisis needs of the population. But it is now being acknowledged that these initiatives are not able to satisfy demands for reducing vulnerability. What is needed in Bangladesh is a more holistic and comprehensive approach, wherein the processes of hazards identification, vulnerability analysis, prevention, mitigation, preparedness, coordinated response and recovery efforts are planned and undertaken contiguously within a risk management context to address the underlying causes of vulnerability. The approach also requires considering the importance of disaster risk management in poverty reduction, particularly the most vulnerable sector among women, and others who have limited access to productive resources. The CDMP adopts a programme approach that encompasses all aspects of risk management that aims to build upon the ongoing trend in Bangladesh, which is shifting away from a response and relief oriented system to a broad multi-sectoral strategy.

### **1.1.3 Background of LDRRF**

The Local Disaster Risk Reduction Fund (LDRRF) under the Community Empowerment Component 3c of CDMP aims to broaden and strengthen the coping capacities of communities to the impacts of natural and human induced hazards. In order to build the technical and institutional capacity of the most vulnerable to resist and cope with disaster threat, increase resilience and more sustainable livelihoods, this component has been designed to support small-scale innovative and strategic interventions that attempts to foster policy development and capacity building at grassroots level. The Local Disaster Risk Reduction Fund (LDRRF) is a funding mechanism for local demonstration projects in high-risk zones, research, dissemination, advocacy and capacity building programmes. The LDRRF was implemented by UNOPS and managed by a small team of project personnel with active support and guidance from PPPDU.

The LDRRF was designed to provide access to micro capital grants for pilot projects with innovative ideas for empowering local communities with a view to reducing the devastating impacts of natural and human induced hazards. LDRRF aimed at forging strategic partnership with NGOs and CBOs, and ensuring that all risks at the local level are addressed resulting to reduced vulnerability to a greater range of hazards, increased resilience and more sustainable livelihoods. It was also an intention that Intervention of LDRRF shall strengthen the institutional capacity of NGOs/CBOs making significant contribution to leadership building qualities and encourage their involvement in community risk reduction initiatives and ensure community participation in high-risk zones with demonstrable and sustainable positive impact on vulnerability reduction and capacity building. The geographic

focus of the LDRRF was limited to the pilot areas selected on the basis of vulnerability. However, the ultimate objective of LDRRF intervention was to replicate best experiences in other disaster prone areas all over the country

#### **1.1.4 Type of Agencies Eligible to Apply for LDRRF Grant**

The types of agencies were decided eligible to apply for LDRRF grant:

- State institutions (excluding MoFDM and its agencies which are supported through CDMP components)
- District, Upazilla and Union Disaster Management Committees
- CBOs
- NGOs
- NGO apex organizations
- Academic institutions
- Information dissemination and research bodies
- Private sector

#### **1.1.5 Eligibility Criteria**

**1.1.5.1** Agencies involved in Community Risk Assessment Process and linked to a formal hazard and risk analysis process in identifying hazards and risks of any particular area with proven track record of activities in community concerned sectors

**1.1.5.2** Linked to either LDRRAPs or Community Development Plans for the area or that they have clearly identified as a gap in the existing programming emphasis

**1.1.5.3** Financially accountable

**1.1.5.4** Proposals with well-defined exit strategy leading to future sustainability

**1.1.5.5** Proposals encouraging and establishing the indigenous practices as coping mechanism

**1.1.5.6** Projects with measurable benefits with innovative livelihood adaptation strategies to cope with and reduce vulnerability to climate change factors particularly amongst women and poor communities who have the lowest capacity to adapt

**1.1.5.7** Awareness on identification and effective utilization of existing facilities of government departments enabling people in high risk areas to adopt better lifestyle practices in the areas of health, hygiene, sanitation, nutrition, education, income generation and develop coping pattern to all disaster threats and reduce vulnerability

**1.1.5.8** Promote advocacy and dissemination of messages for awareness raising on various impacts of natural hazards and early warning mechanism and networking between civil society organizations (CSOs), government agencies and development partners

**1.1.5.9** Community based initiatives leading to income-generating and resources regenerating activities designed to alleviate poverty and providing opportunities for women to participate as decision makers in determining objectives and types of activities

**1.1.5.10** Research/pilot projects identifying indigenous best practices on disaster risk reduction in the form of publication of disaster-related books, journals, materials and

studies on indigenous coping mechanism and help to replicate them in other similar disaster prone areas/communities.

### **1.1.6 Rolling Out LDRRF Grants**

LDRRF launched its funding with a call for proposal in October 2005 from the qualified agencies under the following thematic areas to be working in CDMP 7 pilot districts:

1. Developing Community Based All Hazard Early Warning Dissemination System
2. Promoting Livelihood Security, Gender Equity and the needs of Socially Disadvantaged Groups with a focus on:
  - a. Strengthening resource mobilization capacity
  - b. Mobilizing disadvantaged groups to safety during major threat situation (for example: cyclone, flood, riverbank erosion, earthquake, tsunami etc.)
  - c. Shelters for all needs and resistant to all types of hazards
3. Risk Management Framework in Local Disaster Risk Reduction Action Planning process

Initially 44 entities from a range of diversified agencies including international organizations (FAO), academic institutions (Dhaka University, Khulna University, BUET), research and technical agencies (like ICDDR,B, CEGIS, CNRS) and national and local level NGOs received funding from LDRRF. The projects were implemented in 355 Unions, 23 paurashavas of the seven CDMP pilot districts (Sirajgonj, Faridpur, Lalmonirhat, Shatkhira, Sunamgonj, Rajshahi and Cox's bazaar). The present study aims to achieve the objectives described in the following section.

## **1.2 Study Objectives**

- A. Documenting the good practices with regard to their programmatic approaches and alternative options under each thematic area (early warning, livelihood support, community/social mobilization, community preparedness, risk mitigations and so on).
- B. Capturing the organizational, management and programmatic lessons learnt (both positive and negative) in the process of implementation of the projects funded under LDRRF and
- C. Looking at sustainability issues of the interventions implemented under the LDRRF support

## **1.3 Scope of Work**

The present study addressed the following tasks:

- Review the LDRRF guideline and project end report of all the 44 entities (to be provided by CDMP) worked under different thematic areas of LDRRF funding mechanism.
- Following ISDR policy finalize the methodology of the study including data gathering tools and techniques in consultation with relevant CDMP professionals and the experts to document the good practices and capturing the lessons by thematic areas and management issues.
- Conduct district level consultation workshops with the implementing partners to identify good practices and document cross-learning.



- Consult with the community beneficiary groups to document the good practices and their view regarding the utility of the interventions which should include the process, effect, impact and sustainability issues
- Conduct case studies to complement the research findings
- Organize a sharing workshop with the representatives from Donors, INGOs, National NGOs, major Disaster players in the country including GoB.
- Incorporate comments from the workshop participants and submit final study report to CDMP.
- Develop an Audio-Visual Documentary incorporating key findings of the study (an additional value added task)

#### **1.4 Stakeholders**

It is observed that LDRRF interventions are multi-layered. Beneficiary groups include both households and communities. Household level beneficiary groups include farmers, fishermen, small traders, women, people with disabilities, indigenous, minority groups, etc. Community level interventions are targeted for the entire population of the community. Interventions have been carried out through partner organizations in support with local level disaster management committees as well as local level government officials. Implementing partners include a range of diversified agencies such as international organization (FAO), academic institutions (Dhaka University, Khulna University, and BUET), research and technical agencies (like ICDDR,B, CEGIS, CNRS) and national and local level NGOs. In order to capture the organizational, management and programmatic lessons learnt in the process of implementation of the projects, it has been necessary to interact with all implementing partners as well local level officials.

# Chapter 2

## Methodology

### 2.1 Study Area

The present study was conducted in the areas wherein CDMP has operated its pilot interventions. A total of 14 upazillas (sub-districts) were selected to carry out the research from seven pilot districts – Cox’s Bazar, Faridpur, Sirajgonj, Satkhira, Rajshahi, Lalmonirhat and Sunamgonj.

### 2.2 Sources of Data

This study collected data from both secondary and primary sources. Secondary sources of data included, among others, the following: national level statistics and evaluation reports; statistics and evaluation by various international organizations, NGOs, research organizations and the academia; M&E reports of CDMP; Evaluation reports by donors on CDMP; other CDMP documents; Project End Report submitted by the implementing partners of CDMP, etc.

Primary sources of data had been collected through an ‘Onion Peeling Approach’. In community based initiatives, where the project management structure involved several layers down to the community level, this approach was followed to include all levels of stakeholders starting from national to the community levels. A mixed methodology had been pursued to gather relevant data and information as well as insights from various sources with a view to capture lessons learnt and to identify good practices.

### 2.3 Methods of Data Collection

Following the Provention Consortium Guideline on Evaluating Disaster Risk Reduction Initiatives (Guidance Note 13) and ISDR indicators/policy, the following data collection methods had been utilized in this study:

#### **Formal surveys of implementing partners**

Formal questionnaire survey had been carried out to capture lessons learnt from 44 implementing partners.

#### **Structured and semi-structured interviews with staff, partners, beneficiaries and other stakeholders**

Both structured and semi-structured interviews with field-level implementation staff and selected local level officials had been carried out. The targeted interviewees were: UNOs-07; PIOs-07; PIC Chair-14; female PIC member (14) Implementing staff-14, Beneficiary -70 (five from each FGD area/Union) (Total 126). Selected interviews had also been digitally photographed.

#### **Group discussions with stakeholders and beneficiary communities (e.g., participatory workshops, focus groups)**

Six workshops with stakeholders had been organized at six districts. Focus Group Discussion had been conducted at the community level to document good practices. A total of 14 FGD

had been organized (2X7). Communities had been selected in such a way that all hazards and all geographic areas are covered.

### **Selection of participants**

FGD participants were selected purposively. The groups were homogeneous in terms of age, sex and socio-economic class. 8-10 participants were usually allowed to participate in the FGD session. Participants were selected on the basis of their availability and willingness to participate in the FGD session.

### **FGD organization**

An organizer visited the area to select participants prior to conduct FGDs. During this selection process participants were informed about objective of the session, the venue, date and time of the FGDs for their consent. Participation were reconfirmed by visiting several times to them.

### **Instrument use**

Usually tape recorder was used to record the opinion of the participants. Besides, a note taker took note during the FGD session. All workshops and FGDs had digitally been photographed.

### **Direct observation and visual surveys**

Direct observation and visual survey of interventions had been carried out. The sample survey had been carried out to physically validate the existence and quality of the interventions. Interventions had been digitally photographed both in still and video mode. It was proposed to survey about 14 interventions.

### **Case studies/best practice documentation**

After identifying the good practices, a total of **14 cases against seven thematic areas** had been investigated in detail which included process, output, impact and sustainability issues of the interventions. Digital photography had been utilized.

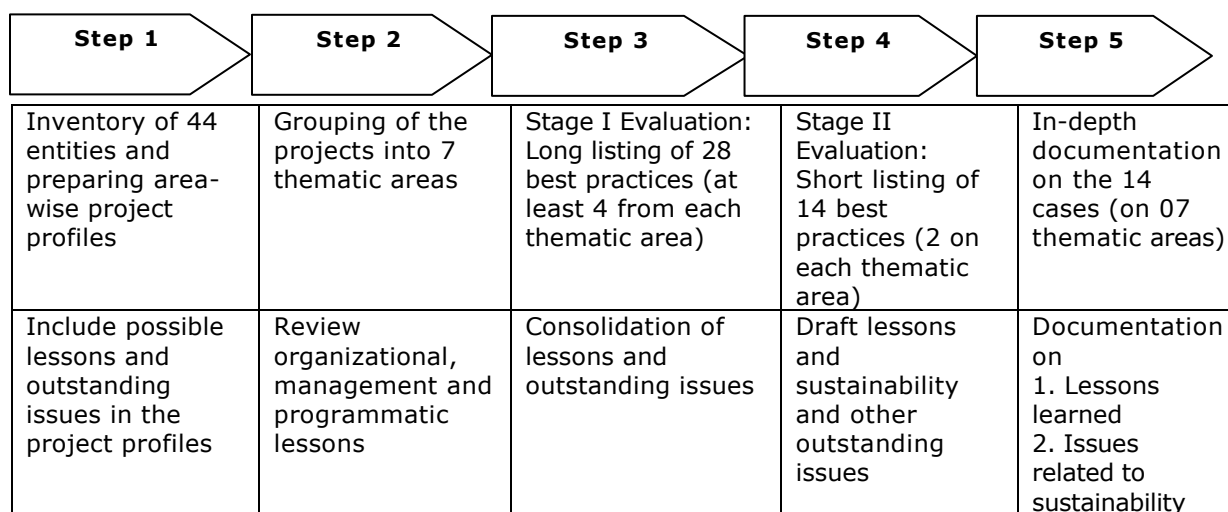
## **2.4 Best Practice Identification Process**

As a part of the overall methodology adopted to confirm the objectives, intended outputs and the scope of work, the Figure 1 shows the five different steps of the study.

The study basically had two parallel streams of activities:

- Documenting best practices
- Documenting lessons learnt in the LDRRF projects

**Figure 1: The implementation process diagram of the study**



**Step 1: Inventory of 44 entities and preparing area-wise project profiles the first step had been done as follows:**

- The study team carried out a general review of implemented projects by districts and communities, and the entities/implementers including the resource agencies that had an interest or impact on the LDRRF project, and had been broadly categorized with their detail profiles (based on qualitative and quantitative achievements against the set targets)
- The key institutions/resource agencies involved in the projects had been identified as the primary stakeholders, and detailed information had been obtained on the basis of the structured questionnaire
- The project profile consists of both hardware and software activity implementation status by the designated periods.

During preparation of the project profile the possible lessons and outstanding issues have been included so that they can be used subsequently.

**Step 2: Grouping of listed community projects into 07 thematic areas with relevant strategies**

All the listed projects have been thoroughly reviewed and their most successful areas (i.e. thematic areas) in terms of qualitative and quantitative achievements of each project had been identified. Based on identification of most successful thematic areas from all the listed projects, the projects (i.e. profiles) had been grouped into seven categories irrespective of their locations and contexts. The grouping has been done as follows:

- Risk Management Framework and RRAP
- Structural Risk Reduction Intervention
- Early Warning Dissemination System
- Community Mobilization through Awareness Raising and Capacity Building
- Promoting Gender Equity and the Needs of Socially Disadvantaged Groups
- Promoting Livelihood Security
- Reducing Health Risks

In order to reduce disaster risks and promoting household and community resilience to natural disasters, a number of strategies/options are applied under each of these thematic areas. These strategies are as follows:

### **1. Strategies followed in reducing risk through plantation/forestation**

- a) Wind breaking plantation in coastal belt
- b) River erosion protected plantation
- c) Embankment protected plantation
- d) Wetland plantation
- e) Wave protected plantation at haor areas
- f) Plantation to reduce environmental hazards
- g) Road side tree plantation
- h) Soil erosion and drought protected plantation
- i) Fruit bearing tree plantation
- j) Social forestation
- k) Forestation to protect village from sea wave erosion

### **2. Strategies followed in developing emergency evacuation route from risk areas to emergency shelter**

- a) Development of evacuation route
- b) Use of Balli to protect roads and houses
- c) Construction of Balli spars
- d) Maintenance of evacuation road

### **3. Strategies followed in raising risk awareness among larger community and most vulnerable people**

- a) Raising awareness through pot song, courtyard meeting
- b) Raising awareness on risk reduction issues through providing training
- c) Raising awareness on early warning through training
- d) Raising awareness on affects contamination and use of rain water harvesting system as source of safe drinking water
- e) Raising awareness on health risks
- f) Training on climate change issues
- g) Raising awareness of shrimp cultivation and virus protection
- h) Raising awareness through plantation

### **4. Strategies followed for building community volunteerism for early warning**

- a) Dissemination of flood warning
- b) Building capacity at community volunteers through training on rescue, emergency response and First Aid issues

### **5. Strategies followed to promote Alternative Livelihood Options (ALO) and hazard resilient livelihoods**

- a) Training on ALO (e.g. poultry/goat rearing, tailoring, bamboo and paper materials production, vaccination, fish cultivation, Bee keeping for honey extracting machine)
- b) Training on early and short duration variety at Haor areas
- c) Farmers training on crop diversification and flood tolerant agricultural practice on flood affected agricultural field

- d) Support with livestock, sanitation, vegetable seeds,
- e) Technical and financial support to women headed HH/PWDs with grocery to run small shop for ALO

## **6. Strategies followed for reducing health risks**

- a) Installation of Tube-well at Haor areas
- b) Lifting up of existing Tube well at Char areas
- c) Installation of pond sand filter/Deep Tube well/Tara Pump
- d) Reconstruction of Dug Wells
- e) Supply safe drinking water through Ring well
- f) Rain water harvesting
- g) Capacity building of TBAs to reduce new born death
- h) Providing sanitary latrine
- i) Raising awareness on hygiene defecation

## **7. Strategies followed to make the element resilient to hazards**

- a) Raising plinth of homestead
- b) Raising plinth of homestead with Tube well, Latrine and tree plantation
- c) Construction of Hazard Resilient House (reduce risk from Cyclone and Flood)
- d) Raising ground of common place at Haor areas using as harvesting place
- e) Raising school ground to be use as seeding place
- f) Raising school/market ground for using as temporary flood shelter
- g) Killa construction
- h) Protection and raise graveyard at Haor areas
- i) Protection from Haor wave using Chailla at Haor areas
- j) Re-excavation of canal
- k) Construction of U-Drain to reduce water logging at Rajshahi
- l) Maintenance of road cum embankment
- m) Developing Haor wave protection wall

The study also addressed the impact, effect and the process of the projects which applied the above strategies. The study initially identified the best practices which were implemented to achieve the strategies through discussions in the workshops with relevant stakeholders. In parallel to the above stream of activities the organizational, management and programmatic lessons will also be reviewed and screening has been done to identify important ones.

### **Step 3: Stage I Evaluation for long-listing of 28 best practices**

As stage I evaluation, as presented in the step 3 of the process diagram, it essentially involved short-listing of 14 best practices of the programme. A wide evaluation had been done through taking into account the project coverage and achieved targets, diversity in approaches and interventions, socio-cultural differences in the area contexts and other factors recognized important by the participating communities/community based organizations or Union Disaster Committees. This step was not secured that each group was contain same number of projects (not proportionately distributed) i.e. flatly 4 for each group, but at least one project was selected for each category/thematic area.

In parallel the lessons and issues of the LDRRF projects had been consolidated. The factors that had been considered will include sustainability, impact on the communities, prospects of replicability, etc.

#### **Step 4: Stage II Evaluation for short-listing of 14 best practices**

Stage II evaluation was involved short-listing of 14 out of the 28 best practices derived from Stage I evaluation. The short -listing process was included:

- Gathering primary and secondary information on the projects (i.e. best practices) and specifically on the project approaches and alternative options. At this stage the programme staff and the community people had been involved to evaluate the listed projects based on a set of criteria. The criteria were determined in consultation with the Client are as follows:
  - Project contains most demanded/needed interventions
  - Contains interventions in which community people effectively participated
  - Most liked approaches in which people feel comfortable to adapt
  - Project produced most tangible benefits to the communities
  - Project successfully integrated with local development initiatives and tends to sustain more than others.

In the parallel stream a draft lessons and outstanding issues included sustainability had been prepared. The consolidated lessons and issues had been filtered and verified.

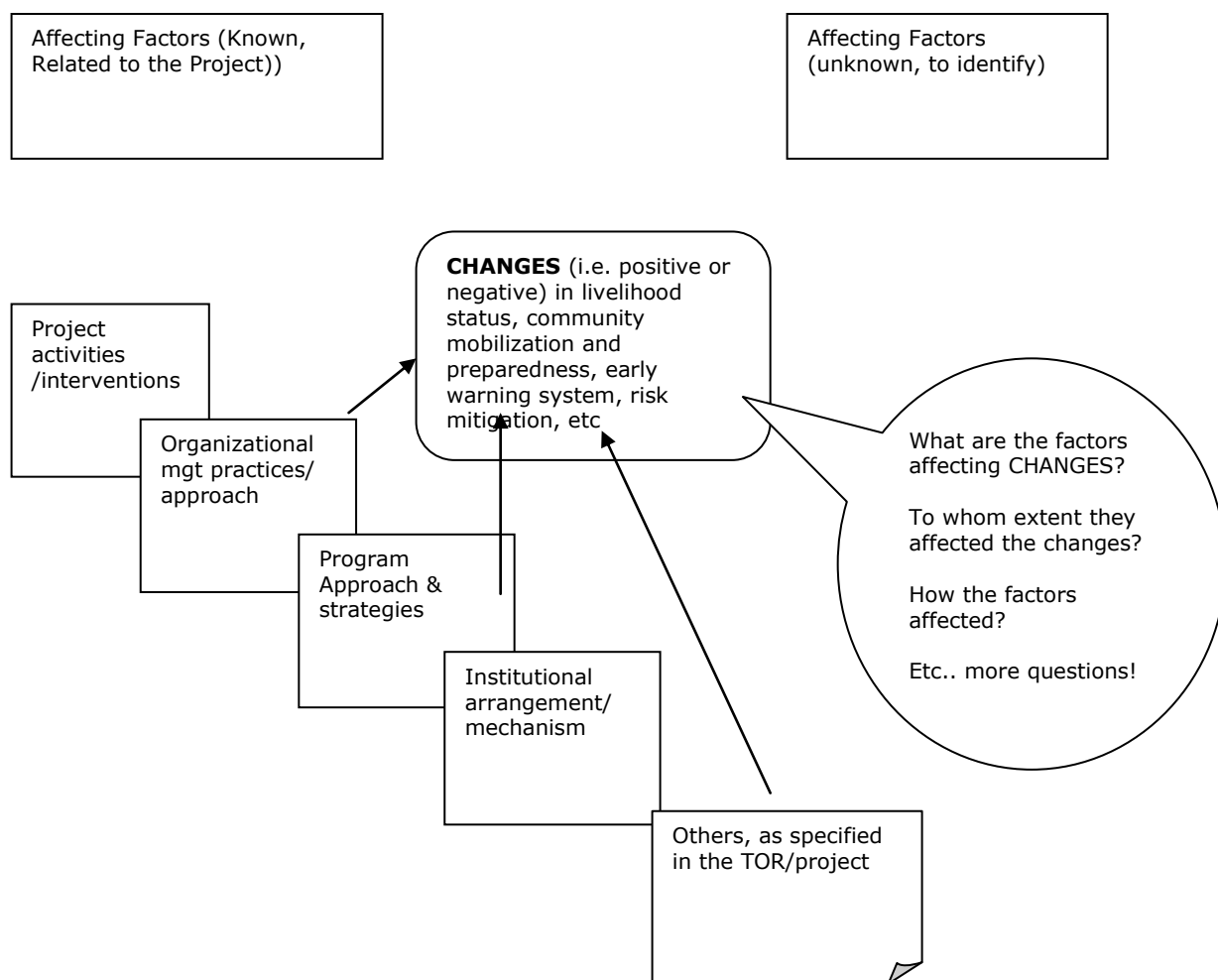
#### **Step 5: In-depth documentation on 14 selected cases/best practices**

This step involved the following:

- The field investigations focused on meetings/interactions, and semi-structured interviews with the programme staff/entities and the beneficiary communities for primary and secondary data collection, and
- Data analysis, synthesis and reporting
- Presentation of best practice documents in the mutually agreed formats (i.e. may follow Figure 2)

Together with the above the draft lessons had been finalized in consultation with the stakeholders. Here the issues related to sustainability had been highlighted. The documentation had been categorized into two areas: 1) Lesson learnt and 2) Issues related to sustainability. Any other outstanding issues werel also being surfaced.

**Figure 2: Cross-verification & analysis of best practices data**



**Best practice documentation formats**

The final documentation and presentation of the best practices is shown in Table 1. The format was simple but contained detailed information, analysis and lessons learned.

**Table 1: Case study presentation format**

Thematic areas/strategies 1,2,3...7 Case Topic/Title

- Key feature of the project
- Programmatic approaches and alternative options
- Notable/remarkable achievements (i.e. at process and results/impacts levels)
- Organizational and programmatic lessons (both positive and negative) on the process of implementation (can be presented in small and individual case-study forms)
- Sustainability and replicability of project processes and inputs
- Key messages (recommendations on how to replicate lessons in future projects)

The cross-verification of the data (i.e. project results and benefits with type of interventions or contributory factors) had been done as shown in the Figure 2.



## Documentary evidence

Project end reports, CDMP monitoring and evaluation reports, Donor Evaluation Reports, and materials from other secondary sources have been utilized as documentary evidence.

### 2.5 Quality Control Mechanism

Nielsen Bangladesh has always been quality conscious, and as a guiding principle 'Quality Control at all levels' is the basic policy of the company. Especially at the stage of research designing, data collection and analysis Nielsen maintained the uppermost quality at all levels. However, Nielsen follows the ESOMAR (Europe) code of conduct as a basic guideline in all the aspects of marketing and social research.

Only employing interviewers with adequate experience is one of the norms of the operational policy of Nielsen. Adequate records are kept in a computerized database about each individual to track him or her for maintaining field management standards. Moreover, checking procedure is even more rigid. All filled in questionnaires (100%) are scrutinized. Each higher level of authority checks the work of all others below. Nielsen had 6-levels of supervision according to the following manner:



# **Chapter 3**

## **Risk Management Framework and RRAP**

### **3.1 Contexts of Interventions**

Bangladesh faces natural calamities almost round the year. People, especially those in the coastal, riverside and low-lying areas suffer severe natural catastrophes like floods, cyclones, heavy storms, droughts, river erosions, excessive rains, earthquakes etc. of which flood is the most concurring phenomenon in the country. These natural calamities shatter the life of the people, and damage cattle, crops, shelters, educational institutions and many more. Floods alone cause huge wreckage to the standing crops, houses and other properties, communication facilities, and turning thousands of people homeless. Floods, as well as cyclones in the recent times, have played sarcastically with the poor people, mainly marginal farmers, sharecroppers, day laborers, pushing them into unbearable miseries and distress, snatching away their scanty supports. Droughts sometimes act with deadly spells to make the cultivatable land barren, adding to the miseries of the rural poor. In the recent years excessive rains have caused flash floods damaging hundreds of acres of standing crops and houses, as well communication facilities.

### **3.2 Defining the Thematic Area**

Risk Management Framework in Local Disaster Risk Reduction Action Planning process was one of the three major thematic areas identified for LDRRF interventions. The disaster management model developed by CDMP and adopted by the Government of Bangladesh give much emphasis on defining the risk environment as one of the three and main entry point for any risk reduction interventions. A tool called Community Risk Assessment Guidebook is therefore developed by CDMP and introduced under LDRRF as an intervention to assess, analyze and prioritize the risk and develop a risk reduction action plan and 28 LDRRF partners conducted the CRA (Table 3.1).

### **3.3 Objectives of the Interventions**

#### **General**

- To enhance capacity of DMCs at union level to design, develop and operationalize effective Local Disaster Risk Reduction Action Plans (LDRRAP) to significantly reduce the vulnerability of the community from the natural hazards.
- To develop sustainable mechanism and enhance effective participation of UDMC and the community people in preparation and execution of LDRRAP.
- Contribute in establishing a comprehensive framework for reducing disaster risks

#### **Specific**

- Build the technical and institutional capacity of the most vulnerable to resist and cope with disaster threats.
- Review Risk Reduction Action Plan, identify options for implementation and ensure community involvement.
- Support DMC's to take initiative to address some options of the Risk Reduction Action plan.
- Encourage and promote community participation in Risk Reduction initiatives.
- Assist UDMCs to establish linkage with government agencies, non-government organizations and donors.

- Construct structural measures as options for reducing socio-economic losses caused due to disaster.

**Table 3.1: CRA Implementing Partners and Their Working Areas**

SL No	Name of the Organization	Working Area
1.	IDEA	Jamalganj of Sunamgonj
2.	RDRS	Sadar, Aditmari, of Lalmonithar
3.	SAMADHAN	Kalaroo of Satkhira
4.	CODEC	Sadar, Ukeya and Teknaf of Cox's Bazar
5.	FAO	Kaligonj, Patgram of Lalmonirhat and Charghat, Bagmara of Rajshahi,
6.	SHUSHILAN	Symnagar of Satkhira
7.	SAMATA	Sadarpur of Faridpur
8.	BDPC	Cowhali of Sirajgonj
9.	IED	Dharampasha of Sunamgonj
10.	VOSD	Charbhaudrasan of Faridpur
11.	Islamic Relief (IR)	Sadar nfd Jagannatpur of Sunamgonj
12.	National Development Programme (NDP)	Kazipur of Sirajgonj
13.	Southern Gonounnayan Samity (SGS)	Bagha of Rajshahi
14.	Dhaka Community Hospital (DCH)	Durgapur of Rajshahi
15.	Resource Integration Centre (RIC)	Pekua, Ramu of Cox's Bazar
16.	Village Education Resource Center (VERC)	Tanore and Gudagari of Rajshahi
17.	Centre for Natural Resource Studies (CNRS)	Tahirpur of Sunamgonj
18.	FIVDB	Biswamberpur of Sunamgonj
19.	Shariatpur Development Society (SDS)	Bhanga of faridpur
20.	POPI	Hatibandha of Lalmonirhat
21.	Dhaka Ahsania Mission	Kaligonj of Satkhira
22.	Manab Mukti Sangstha (MMS)	Shajadpur of Sirajgonj
23.	Faridpur Development Agency (FDA)	Sadar of Faridpur
24.	OMI	Jamalganj, Biswamberpur and dharampasha of Sunamgonj
25.	ANANDO	Moheskhalia of Cox's Bazar
26.	Rakhaing Development Foundation (RDF)	Sadar, Cox's Bazar
27.	The Good Earth	Belkuchi of Sirajgonj
28.	SHARP	Sadar of Sirajgonj

### 3.4 Activities Undertaken

#### 3.4.1 The CRA and the RRAP Process

CRA is the key activity of CDMP. Effective development of LDRRAP depends on the appropriate implementation of CRA activities, whereby successful implementation of the CRA activities depends on the competency of the staff, appropriate use of the CRA tools and guidelines and the participation of different level of stakeholders. Only appropriate process can yield the desired outcome. CRA had been conducted at the union level. To implement CRA the following steps were followed:

- i. Training of Trainers (TOT) on CRA Organized by CDMP
- ii. Baseline survey of the upazilla and union
- iii. Orientation of the project staff on CRA process
- iv. Project Inception Meeting at Upazilla level
- v. Project Inception meeting with Union DMC
- vi. Implementation Planning meeting with DMC and other stakeholders
- vii. Identification of CRA participants as per criteria in consultation with the members of DMCs.
- viii. Recruitment of Staff, office set-up and mobilization logistic and materials for CRA Implementation
- ix. Conduction of CRA as per plan
- x. Pre-CRA session
- xi. CRA session with primary and secondary stakeholders
- xii. Validation of CRA output with union DMCs
- xiii. Consolidation of union CRA and RRAP to upazilla RRAP and validation with upazilla DMC

Five day-long TOT on Community Risk Assessment (CRA) was given to the project staff by CDMP personnel. Guideline of CRA was also provided by CDMP to the staff and based on the guideline and the instruction received in ToT the project staff facilitated the CRA at the community level. CRA exercise was conducted at the Ward level and then compiled at the union level. To facilitate the CRA Union Facilitators were assigned for specific union. It was basically a series of meetings and workshops. The project staff selected venue in consultation with the stakeholders, invite them, ensure participation of all the stakeholder representatives (farmer, disable, women, landless and community), ensure required materials (paper, pencil, marker, etc.), triggered the discussion, documentation of the outcomes, etc.

The main responsibility of the project staff was to keep the records efficiently and professionally. The senior staff of the project was monitored the record keeping process and preparation of the reports. It was another enormous task of the project staff to accumulate/compile the Ward level information/data at Union level. A validation workshop was also organized with the respective stakeholders. Finally a complete Local Risk Reduction Action Plan (LDRRAP) was prepared for each of the selected union. The union reports were also compiled at upazilla level and after a validation workshop it was finalized. Copies of the reports were sent to local government authorities, local DMC and local administration for their use and future planning.

### **3.4.2 Steps in CRA**

The following steps are followed in CRA

- CRA Step 01: Identification of all Hazards
- CRA Step 02: Identification of vulnerable sectors, community elements and location
- CRA Step 03: Identification of Hazard specific Risks in each vulnerable sector
- CRA Step 04: Risk Analysis and Evaluation
- CRA Step 05: First Plenary (Reconciliation about risks)
- CRA Step 06: Specific Risk Reduction Options
- CRA Step 07: Final Plenary (Reconciliation about Possible ways)

### **CRA Step 01: Identification of all Hazards:**

In this step all Hazards were identified in consultation with the community groups upon which occurrence their livelihood become largely vulnerable. The Hazards had been identified through large group discussion. The facilitators clearly explained the definition and type of hazards and then asked the participants to identify hazards they encounter in their community through discussions among them. Then the hazard list was prepared in the prescribed format of the CRA guideline which includes both the primary and secondary hazards.

### **CRA Step 02: Identification of vulnerable sectors, community elements and location:**

This step is an important one in CRA process. Vulnerable sectors (e.g. agriculture, housing, livestock, lifelines, industry), community elements (e.g. people, essential services, infrastructure, livelihoods, houses and personal property, community buildings) and locations had been identified through open discussion in a large group. The facilitators explained the group, the purpose and objectives of the exercise and provided clarity regarding understandings of community elements, risk, location and the relevant sectors to be affected by the hazards and asked them to respond accordingly. When the community elements, sectors and locations had been identified one after another, the facilitators then documented it in the prescribed format.

### **CRA Step 03: Identification of Hazard specific Risks in each vulnerable sector:**

#### a) Risk statement associated with hazards in each vulnerable sector:

The main objective of this step is listing all the risks that result from the interaction of the hazard with a vulnerable element, and also identify the less obvious risks that are associated with many of the hazards. The method of assessment was small group discussions and presentation in large group and open discussion.

#### b) Hazard specific risk selection:

The main objective of this step is to select hazard specific risks from the primary list of risks. Through large group discussions, lists of 'Hazard related risks' and 'Non-hazard risks' have been produced based on the opinion of the participants.

#### c) Risk Assessment:

The main objective of this step is to analysing and evaluating the risk statements to have an accurate picture of each risk and their respective potential consequences. This task allowed us to evaluate them according to the impact they may have on the various sectors/elements. Through large group discussion, list of potential consequences by the specific risk statements, its likelihood and whether the risk is acceptable to the community and its members or unacceptable requiring actions to either eliminate or reduce the impact of the risk have been produced.

#### **CRA Step 04: Risk Analysis and Evaluation:**

a) Risk Prioritization:

The task included preparing the priority list of 10 risks using scoring method. Each and every risk identified following step 3 has assigned with some numerical value from 1 to 10 , 1 being the least hazardous to 10 being the most hazardous.

b) Casual Analysis:

This task was done in order for identifying the potential causes of specific risk statements in line with the vulnerable sector, community elements and the locations and possible options for risk reduction. The method followed was large group discussion and answering questions. Through this task potential causes of specific risk statements and possible options were came out through analysis.

c) Risk Priority for Management:

Management priority for community unacceptable risks has been defined through large group discussion and answering questions in this step.

#### **CRA Step 05: First Plenary**

In this step consensus among primary and secondary stakeholders on output had been made through large group discussions and answering questions. The facilitators presented findings of previous sessions to the Union DMC members and the other participants. The primary stakeholders were divided into 4 subgroups who were then asked to read through the ward level findings. During the group reading necessary corrections had been made based on their suggestions and recommendations. Then both the primary and secondary stakeholders were asked to comment on the outputs developed by the community. Consensus was usually made through debates and discussions and finalized the findings developed following steps 1- 4.

#### **CRA Step 06: Specific Risk Reduction Options**

a) Selection of risk reduction options and management priority:

Once the priority list of risks and vulnerable sectors and elements and the locations were identified efforts were then made to identify the appropriate risk reduction options for the elimination, reduction and management of the risk. The compiled output of causal analysis (step 4, task b) with the other logistics is needed for this step. Through large group discussion and answering the questions in this step prioritized risk reduction options against each of the prioritized unacceptable risks have been identified.

b) Impact analysis of risk reduction options:

Evaluation of prioritized risk reduction options had been done through analyzing sector impacts of implementation through large group discussion and answering questions.

c) Option implementation strategy:

An implementation strategy is developed on proposed consensual options through discussion in large group.

d) Analysis of indicators for consensus building:

The options and the suggested implementation strategy were finalized through consensus among participants. Facilitator briefly explains the consensus building methodology to the participants (how to assess the indicators by Ranking, how these indicators are important for implementation of options). After scoring of all the indicators facilitator arranged the indicators according to priority as set by the participants and documented in the prescribed format in descending order. At the end, the facilitator presented the participants their assessment results and finalized.

**CRA Step 07: Final Plenary**

The main objective of this step is to build consensus among the participants and secondary stakeholders on proposed options (interventions). Through discussions, exchange of views display of posters and open discussions for about 4 hours consensus among the participants (primary and secondary stakeholders) on proposed options (intervention) had been done.

**Verification of collected information from secondary sources**

All the information collected through Pre-CRA have been crosschecked and verified from secondary sources. The secondary sources were: UP Chairman, Members, Local Administration, Upazilla Nirbahi Officer, Upazilla Fisheries Officer, Upazilla Agriculture Officer, Upazilla Social Welfare Officer, Upazilla Cooperative Officer, Involved NGO staff, and Local Forest Officer.

**Number and type of people consulted:**

On average 200 people from each union were consulted during the process of a union risk reduction action plan preparation and its validation. The participants include impacted primary and secondary stakeholders and members of the DMCs (Table 1). **The list includes** Farmers, women, disable and landless people from the grassroots level primary stakeholders in primary work for primary information generation; Present Chairman and other members of the respective UDMC, who are the representative of Union Parishad, GoB Health, Agriculture, Land office, NGO, Teachers, Community Women, Religious leader etc. From community level ex UP representative both Chairman and Members, Land surveyor, Village doctor, Local aged and disable people were involved in the CRA against each of the union. Other than that from Upazilla level Agriculture officer, Fisheries officer, Public Health Engineer, Education officer, Doctors, LGED Engineer, PIO and the Upazilla Nirbahi Officer also were involved.

**Table 1: CRA Participants**

Stakeholder	Impacted	Supportive
Primary Stakeholders	<ul style="list-style-type: none"> <li>• Fisher-farmer</li> <li>• Farmers</li> <li>• Landless</li> <li>• Women</li> <li>• Disable</li> <li>• Adolescent, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Union Parisad</li> <li>• Union Disaster Management Committee (UDMC)</li> <li>• Upazilla Nirbahi Officer</li> <li>• Upazilla Fisheries Officer</li> <li>• Upazilla Agriculture Officer</li> <li>• Upazilla Social Welfare Officer</li> <li>• Upazilla Cooperative Officer</li> <li>• Involved NGO staff</li> </ul>
Secondary Stakeholders	<ul style="list-style-type: none"> <li>• UP Chairman, Members</li> </ul>	

		<ul style="list-style-type: none"> <li>• Local Administration</li> <li>• Public and Private service Providers</li> <li>• Local Influential (Policy/Social - having influence on power structure)</li> <li>• Member of Parliament</li> <li>• Local Institutional Network</li> </ul>	<ul style="list-style-type: none"> <li>• Local Forest Officer</li> <li>• Local elites</li> <li>• Doctors</li> <li>• Local CBOs etc.</li> </ul>		
<b>Day</b>	<b>Ward</b>	<b>Step</b>	<b>Activity</b>	<b>Participants</b>	<b>Venue</b>
<b>Day 1</b>	1	1-3	1-5	24 person	Ward
	2	1-3	1-5	24 person	Ward
	3	1-3	1-5	24 person	Ward
<b>Day 2</b>	1,2 & 3	4	6-8	24 person (2 person from each group)	UP Office
<b>Day 3</b>	1,2 & 3	1-4	Compilation & reporting	Facilitator, Asst. Facilitator and Field Officer	UP Office
<b>Day 4</b>	1,2 & 3	5	First Plenary	Participants of the Day-2 and secondary stakeholders	UP Office
<b>Day 5</b>	1,2 & 3	6	10-13	Participants of the Day-2	UP Office
<b>Day 6</b>	1,2 & 3	1-6	Compilation & reporting	Facilitator, Asst. Facilitator and Field Officer	UP Office
<b>Day 7</b>	1,2 & 3	7	Final Plenary	Participants of the Day-2 and secondary stakeholders (UP, DMC, local elite, upazilla level officials, etc.)	UP Office

### 3.4.3 Data Collection for CRA

To identify the local risks and vulnerabilities the following PRA tools were used:

- Transect walk
- Social Mapping
- Hazard Mapping
- Hazard Seasonal Calendar
- Livelihood Seasonal Calendar
- Venn Diagram
- Key Informant Interview
- Focus Group Discussion

#### **Transact Walk:**

To gain clear idea about the locality and its natural resources, land use, local problems etc. the transact walks were conducted. Each Transact Walk continued for 3 to 4 hours. The facilitators had the Union map with common physical features, notebooks and pen with them. Here the participants were local *Amin*, knowledgeable persons having idea about Mouza map, local professionals, school teachers and representatives of primary stakeholders.

While walking slowly the facilitators gained the knowledge about each of the issues and features clearly and tried to be familiar with the local terms. The facilitators built rapport with the community people through frequent field visits and informal discussions prior to the



task. The facilitators asked them about walking through which way they can get clear idea about the locality and its natural resources, land use, plant and wildlife biodiversity etc.

To know each of the specific issues mentioned above the facilitators usually asked the following 6 questions i.e. 'what is it?', 'when occurs?', 'where takes place?', 'who does?', 'why do they do?', and 'through which process?'

The facilitators started walking with 6 to 8 local knowledgeable individuals from one side of the area and tried to focus on every related issue during the walk and taken notes. Besides that the facilitators talked with everybody they met during walk. When the walk came to an end, the facilitator displayed the notes/information to the accompanied persons so that they can provide feedback for necessary addition, modification, alteration or deletion with certain justification. The outputs of Transact Walks provided cross sectional information on the Unions and its natural resources, land use, plant, main crops, fisheries, housing and homestead land, rivers, roads, woods, available irrigation system, problems etc.

### **Social Mapping:**

The Social Mapping tools were used to collect information on the topographical, village/settlement, physical infrastructure, institutions, commonplaces, land use, disaster prone and impacted areas and natural drainage of the areas. The information were recorded on the Social Maps. The time consumed for preparing of each social map was 3 to 4 hours. The facilitators had with them brown paper, the Union map, permanent markers of various colours, notebooks, pen, adhesive labels, scissors, pencil etc. to form social maps. The participants were UDMC members, local *Amin*, local knowledgeable persons having idea about *Mouza* and Union maps, schoolteacher and representatives of primary stakeholders (about 6 to 10 persons). Prior to the session facilitators studied the *LGED Thana Base Map* to get an in-depth idea about the locality.

At the orientation session, the facilitator explained the objectives of the activity. Participants were encouraged to clarify any doubts regarding the purpose of the task and role of the participants in the exercise. Participants have been provided with the drawn perimeter and common physical features of the Union and they recorded topographical, settlement, physical infrastructure, institutions, commonplace, land use, disaster be prone and impacted areas and natural drainage of the area. The facilitation of facilitator was 'light facilitation'. In some cases, first hand information on social map had been checked with concerned departments and Upazilla government officers if required.

All the social maps drawn by the participants have the information about village/settlement, physical infrastructure, institutions, commonplaces, land use, disaster prone and impacted areas and natural drainage of the areas.

### **Hazard Mapping:**

The main objective of Hazard Mapping was to locate the affected areas by specific hazards within the locality/Union. Time taken for each of the hazard mapping session took about an hour. Large size Union boundary map with general physical features (e.g. river, canal, major road, culvert/sluice gate, and some other institutions), colour pencil and markers were used for Hazard Mapping. The participants were UDMC members, local *Amin*, local knowledgeable persons having idea about common hazards occurred in to the locality, schoolteacher and representatives of primary stakeholders.

Before the session of Hazard mapping facilitators had come across with idea on the local hazards, their intensity and frequency, damage caused, and risk etc. The list of common local hazards (developed during Hazard Venn diagram) that take place had been presented in front of participants. After discussing about Union Boundary the participants were requested to identifying locations affected by specific hazards in the locality and to draw hazard maps within union boundary. Through process consensual hazard maps were produced.

### ***Hazard Seasonal Calendar:***

Seasonal hazard Calendar is to identify the occurrence and intensity period of listed hazards and their changing trend due to climate change in the locality. Brown paper, scale, colour markers, board, and adhesive tape were used and each session consumes an hour of time. The participants were UDMC members, local *Amin*, local knowledgeable person, schoolteacher and representatives of primary stakeholders.

The facilitators prepared brown paper formatted with months at the top and place to write the local hazards on the left hand side. The facilitator requested the participants to prepare a list of common hazards that takes place in the locality (identified in Hazard Mapping). One of the participants read out the list and the participants were asked if there anything left, if anything comes new that would be included.

The participants were requested to identify the months of occurrences of each of the hazards; they also identified the months when the situation becomes worst. The participants then graphically represented the variability of the hazards throughout the selected months by options. By this way the participants presented the consensual seasonal calendar of hazards with its seasonality dimensions.

### ***Livelihood Seasonal Calendar:***

Livelihood seasonal calendar are produced in order to gaining information about local livelihood options and its seasonality dimension. Brown paper, scale, colour markers, board, and adhesive tape were used and each session consumes an hour of time. The participants were UDMC members, local *Amin*, local knowledgeable person, schoolteacher and representatives of primary stakeholders.

Facilitator prepared brown paper formatted with months at the top and place to write the livelihood options on the left hand side. After creating an enabling environment and preliminary understanding the participants had been requested to identify the months of operation of each of the options take place in the locality. The participants discussed among them and agreed up on one of the participant putted colour under the months as per agreement and finalize the seasonal calendar of the local livelihood options. The participants then graphically represented the intensity of the operation throughout the selected months by options. By this way the consensual seasonal calendar of livelihood options with its seasonality dimensions had been pictured. A Livelihood Seasonal Calendar (Sadarpur Union) presented bellow as example.

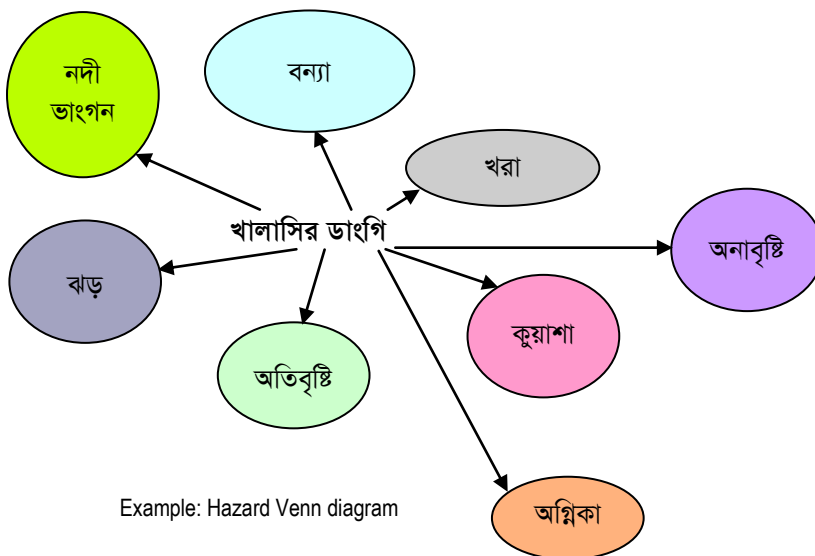
### ***Hazard Venn Diagram:***

To identify and analyze the common hazards takes place in the locality, their magnitude and likelihood Hazard Venn diagrams have been produced by the participants (local community people of Sadarpur). Each of the Hazard Venn diagram session has taken about an hour. Brown paper, art paper pieces of different size and colour, marker, adhesive have been

used in Hazard Venn diagram session. The participants of Hazard Venn diagram sessions were UDMC members, Local knowledgeable persons, schoolteachers and representatives of primary stakeholders.

The participants prepared a list of common hazards that takes place in the locality, and one of them read out the list.

The participants were asked if there is anything left, if anything comes new that may added. Then the participants were requested to select round shaped art paper pieces of different size for each of the hazards. The size depended on the intensity and damage caused by the hazard, biggest size paper was for the most intensive and most damaging hazard. They wrote down the hazard on the selected piece of round shaped paper.



Example: Hazard Venn diagram

The participants were requested to put a piece of art paper in the middle of the big brown paper writing the name of their locality/ward and mark the upper side of the brown paper as north, then they put the hazards on the brown paper around their locality depending on the direction they come into the locality. At the same time they considered the frequency of occurrence of each of the listed hazards, most frequent one had been placed closest to their locality and so on. Then they discussed among themselves and agreed about the position of each of the hazards.

While the discussion was going on, facilitator asked them few questions those were like: 'why do they think in this way?', 'why they are putting one close and another faraway place?' During the discussion, if the participants wanted to change place for any hazard, they could do it. After agreement they plotted them on the places they agreed. Through the sessions consensual Venn diagrams of hazards based on their consequences, likelihood and the vulnerable people came out.

### **Key-Informant's Interview:**

The main objective of using this tool is to gain information about the locality, people, their livelihoods, past and potential future hazard impacts. The individual who has involvement with a particular issue of interest had been selected as a key informant. A checklist had been followed for interviewing key informants. The interviewer introduced himself and explained precisely what he was going to do and why. The interviewer started asking questions based on the checklist to gather responses from the respondent. The interviewer concluded the interview by telling his (key informant) inputs are very useful.

### **Focus Group Discussion:**

To gain information about the locality, people, their livelihoods, local risk environment (hazards) and traditional preparedness and coping strategy practiced by local community the FGDs have been conducted. Each FGD continued for 3 hours. The facilitators had the

FGD checklist (see annex), notebooks, whiteboard and markers, brown paper, flip charts, masking tape and pen with them for the FGDs. The participants of FGDs were UDMC members, Local knowledgeable individuals, local professionals, schoolteachers and representatives of primary stakeholders (6 to 10 persons per FGD).

Before FGDs the facilitators and other respective persons contacted with the Union Disaster Management Committee (UDMC) to ensure their support and participation in the CRA process. After that the organizers (facilitators and other respective persons) finalized the participants (UDMC members and local knowledgeable) and contacted each individual day before of the FGD mentioning date, time and venue. Before that a suitable (medium sized room with capacity for sitting about 15 to 20 people) venue had been identified and all necessary materials required for conducting FGD were arranged and all those are checked properly whether the materials are in adequate quantity and quality. The facilitator prepared the copy of checklist to be used in the session before starting of the FGDs. The facilitator prepared himself with all necessary arrangements before the participants come to the venue and a co-facilitator always with him for helping such as taking notes of discussion.

During the FGD session facilitator welcome all the participants (1 male member from each ward, and 3 female member members) for the session and request them to together in a large group. After ice breaking the facilitator explains the purpose and the detailed tasks of the session and then gives an introduction to the disaster risk environment and features and benefits of comprehensive disaster management approach. The facilitator starts discussion in line with the prepared checklist to gain information about the locality, people, their livelihoods and local risk environment and local/traditional preparedness and coping strategy. While running FGD the co-facilitator takes notes of discussion in a systematic manner.

Through the FGDs information on the locality, people, their livelihood and institutional arrangements, and local risk environment etc. have been known.

### **3.5 Outputs of CRA**

The key outputs of the reports are:

- Union-wise demographic, geographic, economic, environmental and social information
- Union-wise type of hazards identified
- Union-wise details on the risk reduction options identified by risk/ hazard types
- Union Social Map, Hazard Map and Risk Map
- A detailed local disaster risk reduction action plan
- The community people, especially UP, DMCs and local government and service provider institutions are mobilized to risk reduction
- Capacity of the local community to address disaster assessed
- Long-term and short-term activities to address disaster identified with specific responsible person/ institution

### **3.6 Key benefits produced**

- Local people became aware about natural calamities.
- Risks were identified.
- Local hazards and vulnerabilities identified by the community people themselves.
- Community exposure to participatory approach;
- Options to reduce risks and vulnerability were also identified.

- In short, a systematic approach was adopted to reduce risks.
- Community people were more aware about their risks and capacity that allowed them to suggest perfect strategies to reduce their risks. On the other hand, people were more conscious to increase their capacity to cope with disaster. Furthermore CRA helped to make an effective measure to mitigate disaster risks at their community level. The key benefits were:
  - The communities have their long-term plan to cope with disaster risks and thereby contributing towards the paradigm shift from relief to prevention.
  - Ownership of the plan by the community
  - Help to mobilize resources
  - Avoid duplication and overlapping and thereby misuse of resources
  - Guide the local, national and international planners to take effective steps
- The project produced the benefits through implementing various risk reduction options according to CRA reports like jangal cum embankment construction, early rice variety introduction, tub-well installation, harvesting place raised, wetland plantation, canal re-excavation with box culvert and homestead rising and protection measures with bamboo and chilla, cluster-wise and individual homestead raising, installation of water sealed latrine, tube well for pure drinking water, tree saplings, and cattle distributions. The project interventions also raise awareness of the community people on DRR.
- Involvement of community people in the planning process.
- Local people developed their own plan and empowered
- A local level action plan in place for action by the development actors.
- CRA would have utility for govt. authority, non govt. agencies, Disaster Management Committee at various level, private trade bodies and even the family to undertake actions and measures at their respective level to minimize and reduce loss and damage resulting from the risk in question;
- The community in a particular area has the option to bargain with the govt. and other concern agencies on adopting some Risk Reduction measure or the other on the basis of CRA findings and more importantly, long term Action Plan is possible at various levels in the interest of Risk Reduction;
- CRA helped building relationships and networks with the Government Officials, local administrative personnel, UzDMC members, UDMC members, UP members, Chairmen, local elite, civil society people, journalists etc. so, it will help to get cooperation from them to prepare and implement future plans.
- Effective linkage established between community people and other DRR actors in the area.
- The CRA reports collected the information on socio-economic and cultural conditions, norms, traditions, practices, believes etc. So, it will help for future direction of development activities.
- Historical data on different hazards are available in the report, so, from those learning and experiences, future appropriate plans and programs can be taken.
- In the CRA reports stakeholders and resources related all information are available, so, it will help to prepare future plans like contingency plan, project plans, action plans.
- The CRA reports can be used as guidelines for future project planning and implementation.
- Excluded and vulnerable community people are aware of disaster risks.
- Union as well as Upazilla wise disaster risk Reduction plan developed
- Community people's opinion is considered in DRRAP which creates community ownership.
- Reduced disaster risk through implementation of selected risk reduction options.

- Integrated pre, during and post-disaster measures with linkage to other communities and agencies and the developmental activities,
- Emphasized on structural & nonstructural measures and short, medium and long-term measures
- Empowered people and the community
- Address and reduce the complex relation of conditions, factors, and processes of vulnerabilities present in the society.
- Any agency, department and DMCs can use the CRA reports to plan future development interventions regarding disaster risks reduction, disaster preparedness and management all the information accumulated in the report by union, pourasova and upazilla.
- Stakeholders and resources related all information are available in the CRA reports at a glance that would help to prepare future plans like contingency plan, project plans, action plans etc.
- All levels of peoples' participation were ensured in the CRA that would continue in future locally.
- Developed relations with the Government Officials, local administrative personnel, UzDMC members, UDMC members, UP members, Chairmen, local elite, civil society people, journalists etc. in order to get cooperation from them to prepare and implement future plans.
- Information on socio-economic and cultural conditions, norms, traditions, practices, believes etc. have found available for future direction of development activities.
- Past histories of different disasters are available at a glance by which those learning and experiences, future appropriate plans and programs would be taken.
- The CRA reports would be used as guidelines for future project planning and implementation.
- UzDMC, UDMCs, and other government officials will cooperate to implement future project activities.
- The system of CRA is very systematic, easiest to understand and presentable to the community.
- The community people spontaneously participated in CRA as it is self explanatory and interesting.

### **3.7 Usage of CRA**

- The CRA data will be helpful to identify risks in disaster prone area
- It provides the proper direction how to reduce risks.
- It plays as the foundation of a systematic approach to reduce risks and to frame LDRRAP.
- These data will be helpful for further intervention related to disaster management and risk reduction.
- Identified Risk Reduction options can be implemented as development activities by government departments and NGOs.
- Source of documents for implementation of the DRR activities
- UzDMC and UDMC follow the CRA report when implement the DRR activities
- Different NGOs follow the report when design new project on DRR activities in similar working areas
- The CRA report has been enriched with demographic, geographic, economic, environmental and social information. Thus it can be used as important union/upazilla information toolkit.
- Since it has been developed by the community people thus it can be an important booklet of community's desire.

- Since the plan contained in the CRA report formulated by the community people thus it should be the masterpiece of local development plan.
- As the CRA contains the resources and capacity of the community people, thus any development organization can consider it before implementation of any project in the area.
- It may be used by the local agencies and government departments for the community development.
- It may be used by the national level planner to formulate any development plan for the area.
- It may be used by the district and upazilla administration and union parishad to formulate and implement any development activities.
- It can be used by any bi-lateral or multi-lateral agencies for formulating any development projects.
- Moreover, as the plan developed by the community, thus it can be used by themselves for their development.
- CRA report is being used in various project developments for reducing risks of haor areas.
- CRA report disseminated to local government institutions, upazilla administration and district administration.
- UDMCs capacity built through implementation various interventions
- For future planning and implementation of any project in Hatibandha, CRA reports can be used as guidelines.
- CRA reports can be used for information collection, situation analysis, problem analysis, identification of beneficiaries, needs assessment, problems identification, designing, planning, and implementation of disaster response projects in respective Unions.
- CRA report can be used for policy formulation at the local level, district levels and national level.
- Local govt. officials can use the CRA reports for undertaking different plans and implementation.
- CRA report can be used as a hand book for the development of Hatibandha Upazilla especially on DRR.
- Disaster coping technique identified through CRA will be continued at the grass roots level by people at risk through behavioral change and communication
- CRA model will be replicated in other disaster prone area to reduce disaster risk, to mobilize the active participation of community people in disaster mitigation activities and to institutionalize community participation in disaster management planning and implementation
- It has expected that the CRA reports for the Union Parishads and Upazilla Parishad would be used for undertaking different development plans and implementation. It has found as a hand book for the development of Bagha Upazilla.
- The CRA has been found as process of policy formulation at the local, district and national level.

In the CRA process the participating representatives list down all hazards, identify all vulnerability aspects, causes and prepare consensual actions on risk reduction, coping and preparedness measures through analyzing each of the prioritized options. Risk reduction actions are then developed with the participation of stakeholders (both primary and secondary). The method requires active participation of stakeholders from different occupational groups and social classes as it gives an opportunity for their opinions and concerns to be discussed and recognized. The method can potentially reduce conflict among the stakeholder groups and interests of individuals during project implementation and if the situation arises it assists the local people with resolving it. Through the process people

understand the importance of their participation in all the steps (starting from identification of hazards, deciding upon risk reduction options, coping and preparedness measures, preparing an outline work plan and in implementation). This enables them to feel a sense of ownership and play a more effective role during implementation of actions.

Rural people, especially the poor, landless, fisher-farmers, women and disable are highly vulnerable to hazards. The increasing frequency of hazards and subsequent loss of lives and resources are making them more vulnerable. Considering all these factors, the need to practice wider participation in preparing risk reduction actions is inevitable, where all the stakeholders and their representatives participate in planning and implementation processes through consensus the CRA has been conducted. The facilitators involved in CRA were experienced on PRA and had gone through the CRA facilitation guide. Beside a clear idea of locality, they also had some knowledge about its livelihood options, local tone, conflicts, history of element, physical situation of resources, present hazard management initiatives etc. which helped them to conduct successful CRAs.

In Bangladesh, dry winter season is suitable for conducting CRA. But, the schedule had to be synchronized with the farming system and local practice. Rice planting and harvesting (*Kharif* Season) times have avoided. In the project area schools NGO offices, UP offices are used as venues for conducting CRAs. CRA has been conducted in two methods. The primary source of information is local people and the secondary sources are relevant offices, organizations and local Key Informant. The factor of participation has been treated as most important factor.

### **3.8 Key challenges faced and action undertaken to overcome the challenges**

- a. Inactive UDMCs. Re-organize different levels DMCs with adequate number of members as per SOD.
  - Awareness meetings were organized and members as well as community were made understand the importance and necessity of this type of committee.
  - Shared with Upazilla DMC Chairman, who authorized to alternative person from the respective UDMC.
  - Built liaison, linkage, Co-ordination and communication with DMC's.
- b. Indifferent attitude of local administration. Inter-agency coordination and information sharing was weak in Upazilla.
  - Organized meetings involving community, government officials, NGO representatives, teachers, imams and religious leaders to make them understand that without concerted effort no remarkable changes can be brought in. The meeting helped removing the differences between govt. department and community.
  - The Secretary of the Ministry of Food and Disaster Management to DC and UNO to extend their cooperation in implementation of LDRRF activities which was very effective.
- c. At initial phase of CRA activities the communities showed reluctance to hear the mission of the project staffs and treated them as strangers.
  - Constant discussion and motivation with the community leaders helped to obtain their cooperation and participation in the CRA activities. Subsequently working and functional relation were established with the community members.



- d. Poor communication system to reach to the remotest areas. In some areas road communication was totally absent. A network with fisher folk community helped.
- e. Limited access of scientific data and information. To overcome the challenges proxy data were collected from different government, NGO and UP offices.
- f. Many of the NGO's did not have their permanent setup in the project areas and operated from either a nearby office or set-up a temporary office there. Therefore this took more time or delayed to start the project activity as because of lack of suitable office locally.
- g. Initially representation of the local Chairman was almost nil due to absence of political government, which hampered UDMC participation in full swing.
- h. The project faced natural calamities for cyclone and flash flood, which disturbed project advancement to some extent.
- i. Delayed attendance of some participants in CRA exercise session.
  - Community people were motivated on the issue with the help of local elites, opinion leaders, DMC members local UP members and government officials.
- j. Community expectation was more of receiving relief than the knowledge about hazards awareness and risk reduction concepts.
  - Huge times were invested by the project staffs to bring the community under the umbrella of CRA activities and preparation of local level action plan. Participation of the community in CRA activities helped them to overcome their relief oriented attitude for disaster mitigation and realized the need for hazards awareness and capacity building as an individual and also as member of the community to reduce their risk.
  - The over all challenge of disaster risk is to support sustainable development, and reduce disaster risks, with particular focus on targeting of the most vulnerable people, particularly women, disable people and female headed households.
- k. DMC's lack knowledge on comprehensive disaster management. Members of the local government, community leaders, Upazilla level officers did not receive disaster related training.
  - CDMP designed and imparted a three-day introductory disaster management training for union, Upazilla and district DMCs before the CRA were conducted.
  - Held series of meetings, discussions and dialogue with the Upazilla level officers.
  - Participation of the departmental officers in CRA activities and attendance in workshops were conducive to remove their traditional relief based disaster management concept and helped them to receive the modern concept on disaster management.
  - Members of the local government, community leaders, Upazilla level officers participated in different training and workshops. On realizing the need for knowing the disaster management mechanism, these stakeholders extended their utmost cooperation in CRA activities and preparing the risk reduction action plan.
- l. Biasness in selection of participants.

- Biasness in selection of participants. The members of Union DMCs were helpful but sometimes they created pressure to include their favourable beneficiaries comparatively less vulnerable.
- m. The disaster-affected people changed their professions/occupations depending on the need and availability of jobs; however, most of the people in the remote villages do not have any significant income earning activity. They are found to be solely dependent on relief for their food supply.
- Huge times were invested by the project staffs to bring the community under the umbrella of CRA activities and preparation of local level action plan. Participation of the community in CRA activities helped them to overcome their relief oriented attitude for disaster mitigation and realized the need for hazards awareness and capacity building as an individual and also as member of the community to reduce their risk.
- n. Seasonal flood disturbed in some of the interventions in late implementation Poor people of charlands are always busy with their livelihood. So they can not response any program in time. They were motivated through innovative ways by NCDS.
- o. Conduction and completion of baseline survey and CRA during rainy season, as because the some areas were affected for water logging and the people were suffering for food and shelter. The affected people were searching relief support to reduce their immediate suffering.
- p. Ensure participation of the participants for daylong CRA session without compensation (Conveyance) was not possible as it is a 5 day task and the participants are the poor who mainly depends on day labour.
- The process made provision for compensation
- q. During plenary session UP members were always try (bargain) to incorporate new plan for development work against their own areas in the LDRRAP, which created debate and un-wanted situation.
- r. Venue of some union Parishad Bhaban was not always suitable for group work. As an alternative community places like School, Colleges, etc. were used for the same.
- s. Initially found political unrest and then some UP representatives were taken shelter at outside of the union during CRA for strict law implementation by the caretaker government.
- t. Make women oriented with the CRA process to give their valuable comments and opinion especially in the first and final plenary, where other male leaders were present.
- u. Community people strongly recommended to include man made disasters within the CRA AP i.e. excess population, short notice eviction by GoB, sanitation, child marriage during the CRA AP development. However, we have successfully made them understand that, to avoid overlap of work among different department of GoB,

we are excluding it but certainly the other department of Upazilla Administration will come and address the problems.

- v. Most of the LDRRF working areas were very remote and it was very difficult to carry all the CRA process supporting materials (white board etc.) and project implementation support inputs i.e. bolli piling materials, tube-well, sapling for social forestry. Only active involvement of UDMC and UzDMC made it successful.
- w. Ensuring participation of the same member in the whole process and keeping balance among the opinion came from UDMC, UzDMC and from other stakeholders was a big challenge. A tendency of putting pressure to give importance of each stakeholder's opinion was there.
- x. Consensus building among the different stakeholders in terms of priority setting was a big challenge. Training on CRA provided by CDMP made it easy to understand and implement it with all the stakeholders putting proper weight age according to necessity.
- y. Adverse weather (some times heavy downpour and some time very hot in Char land).  
CRA process was new to the community people and UDMC and UzDMC and took some time orient them about it. NGOs had to spend considerable time to explain and convince the UDMC and the UzDMC members about the process and made sure that understood the process clearly before they participated in it. As a result their performance or involvement was highly satisfactory and spontaneously gave their opinion to make the CRA AP fruitful.
- z. Completion of the project within the contracting period was highly challenging due to political instability during the starting period of the project (October February 2007). Putting extra effort of our staffs and prior very good contact with the UDMC made it possible to complete the assignment within the project period.

### **3.9 Lessons learned**

#### **3.9.1 Managerial**

- CRA was a newly developed by CDMP risk assessment methodology and there were not any experienced people available that time in the labour market. The methodology itself is very complex and requires simplification for organizations to adopt. The implementing partners were totally dependent on the TOT and the CDMP guidance and the CDMP technical support was not enough.
- CRA should be started only after complete instruction from the CDMP.
- There is no monitoring to check whether the materials provided after training are being used or not.
- The partners had to choose the alternatives as the total LDRRF allocations were not adequate enough for the implementation of the priority risk reduction interventions identified by the community.
- There was no fund for documentation or reporting the activities implemented.
- Project duration was very short to ensure long term sustainability of the benefits it produced.
- Assistance from GoB Officials was most essential to get the adequate support from them to accomplish the targeted activities
- Program implementation was so difficult because of rainy season.

### 3.9.2 Programmatic

- Community Risk Assessment (CRA) is the key process of community mobilization to pre disaster management activities.
- It is an effective way to assess the community risks. CRA can also be treated as a good tool for community awareness on their risks and vulnerabilities. Through involvement in CRA process the community people, especially the poor and risk communities were aware about their rights. They are now able to take their decisions themselves.
- This has also been realized that proper awareness, specific skills and prompt steps in time can reduce the losses in human and other assets during any disaster.
- Through these CRA activities the members of the community could know their strength and wisdom when they worked together and they could also know if they are aware ahead of the commencement of the hazard, the extent of damage and loss of property will be less. For mitigating the disaster all time awareness and preparation for disaster is essential .The community members could realize if disaster preparedness activities are taken at right time the vulnerability of the community will be reduced .The community also could know relief and response are not the right answer to address the loss of life and property caused by the disasters. It is the capacity building which should be the prime objective of disaster management strategy.
- The project created space for involving UP and Community people for Union level development.
- CRA also helped the DMCs organized and functional in line with the Standing Orders.
- Attitude and concept of UDMC members on their roles and responsibilities have been changed in positive manner. The people of the project area are now more aware about disaster preparedness. NGO staffs become more aware and capable on disaster management.
- Area specific-Hazard, Risk and Vulnerability Assessment has for the first time been undertaken and executed involving the community people in the real sense of term
- CRA had proved the fact that community people can be well involved in Risk Reduction Process under proper guideline and management.
- CRA activities created scope for the members of the different strata of the community for participation in preparing the Risk Reduction Action Plan (RRAP). Thus, the people themselves living in the area demonstrated the process of community empowerment with the preparation of the RRAP based on need assessment.
- Capacity building of individual of disaster prone area is equally important as the capacity building of the institutions dedicated to the risk reduction activities. The more the capacity of the individual, the less is the risk when disaster occurs. The whole effort should aim at increasing capacity of individual as well as the community. Theory of entitlement is relevant in raising the capability of the community living in the disaster prone area.
- People provided reliable information about their locality, hazard related risk and way of reduction, which are more effective & sustainable for LDRRAP implementation. Without the participation of community it is not possible to develop as well as to implement the LDRRAP smoothly and effectively.
- GO, NGOs and local government institutions' collaboration is essential for effective management of risk reduction activities.
- Hazard map is the base for information management in the selected areas for mitigation of disaster risk reduction
- Confidence building among the members of the community is essential for involving them to get community work done through participatory manner.

- The CRA process under the CDMP project provided ample scope to the community people to offer their problem and issues (regarding risk and vulnerability) as well as their view of probable solutions.
- The community people in all the Union showed keen interest, and well cooperated with, the project during implementation period.
- The project for the first time focused on community people's livelihood protection as a way of Disaster Risk Reduction.
- Disaster Management Committee at Union and Upazilla level took serious and meaningful interest in the CRA process.
- The CRA report has become more acceptable document due to participation of wide range of people, especially the most vulnerable people.
- Involvement of journalist, NGO representatives and other representatives of different stakeholders make the program more effective.
- In conducting CRA, Ward base small discussion could be avoided replacing the Union base medium groups basing on livelihoods;
- At least the Secretary or any assigned UP member should be all along with the CRA functionaries in his respective Union so that, at least one from each UDMC can understand the total process of CRA involved;
- Allocated time to complete the total prescribed process in CRA guideline was inadequate
- Continuation in implementing project is essential to ensure long term sustainability of the benefits it produced.
- Knowledge earned through life experience is always more practical than the outsider's theoretical knowledge.
- Proper orientation smoothens and makes UDMC & UzDMC members more responsive.
- UzDMC and UDMC members and other local stakeholders participated encouragingly with great interest.
- Participation of disables persons was remarkable and they had provided very significant information for CRA.
- Interaction among all stakeholders is an effective way to solve difficulties.
- Funding and adjustment among different stakeholders was insufficient.
- The different government specialized offices did not have detailed sectoral information. The sectoral officers did not provide sufficient time and their expert opinion.
- Since the participants spent the whole day for CRA discussion so, the participant's honorarium needs to be increased ensuring their full cooperation in CRA outcome at the field level.
- Illegal intervention of UP chairman in the intervention created problems. PIC committee was not enough supportive as they did not receive any incentives for their time spent for supervision.
- Having understand to the objective of project the common community people endow with their active support;
- Risks of children are not addressed in CRA Process.
- Some information collection on resources identification was difficult to find out actual data.
- Physical presence proved more effective than communication over phone or other media but sometime it takes too much time.
- Conduct CRA in rainy season is difficult as is a lengthy process as it requires continuous involvement of the participants to attend all the consecutive 5-day long process.
- UP Chairmen and members sometimes wanted to suppress the local professional personnel. Even they wanted to take leadership during discussions.

- Local influential people tried to disrupt the sessions like rich people did not allow poor people to take part in discussion and decision making process.
- Through these CRA activities the members of the community could know their strength and wisdom when they worked together and they could also know if they are aware ahead of the commencement of the hazard, the extent of damage and loss of property will be less. For mitigating the disaster all time awareness and preparation for disaster is essential .The community members could realize if disaster preparedness activities are taken at right time the vulnerability of the community will be reduced .The community also could know relief and response are not the right answer to address the loss of life and property caused by the disasters. It is the capacity building which should be the prime objective of disaster management strategy.
- Active participation of the DMC members in the CRA sessions is required to ensure ownership of the LDRRAP by them as they are the final authority to ensure its implementation
- Community people know better about risk associated hazards and its reduction options than outsider.
- Participation of primary and secondary stakeholders enriched the CRA and preparation of Action Plan.

### **3.10 Limitations of the Interventions**

- At the initial stages project staff was not sufficient skill to conduct CRA. The project staffs were not receiving sufficient training by the project.
- Both time and resources for CRA were inadequate.
- Intervention works were too inadequate to meet the minimum demand of the community. Expectation for remuneration and intervention activities of the local government officials of Union, Poursava and other stakeholders remained unfulfilled due to budget constrains.
- No coordination meeting provision was for idea sharing for each other at CDMP office.  
There was no scope for exposure visit or idea sharing for PNGOs.
- There was no system to retention of competent staff within the implementing partners
- All the DMCs in different levels like Union, Poursava and Upazilla were unorganized. A considerable portion of time was invested by the project staffs to make the DMCs organized and functional in line with the Standing Orders.
- Community people demonstrated more of their interest in intervention works than the preparation of RRAP through CRA by putting pressure on project officials to select interventions in their own locality.
- Budget was so poor compared to options of LDRRAP to reduce overall hazard related risks. It was necessary to implement with proper funding and long-lasting options.
- If we can run this kind of activity continuously then the community vulnerable people can get the opportunity to aware more about their risks and
- In some cases, it was late to start the project activities due to delayed approval and processes by the CDMP authority. So, the project should be approved and started in due time.

### **3.11 Recommendations for Sustainability**

- CRA process is too long and the methodology is very complex. The guideline needs further revision.

- The duration of CRA should be short in order for ensuring full participation of the CRA stakeholders in all the sessions. Through a careful review of the methodology the steps can be shortened in order to reduce the duration of CRA exercise.
- RRAPs developed through CRA need to be implemented gradually by local, regional and national level resources.
- Allocation for CRA and similar nature of works need to be realistic for all hazard related awareness at the community level and the project should be extended to cover more intervention works by the partner organizations to consolidate the community confidence.
- CRA activities need to be continued and projects to be prepared based on the findings of CRA should be implemented for sustainable development as well as community risk reduction and enhancing the capacity of the community.
- For life experience old personnel of different groups can be included and their past and long experiences should be emphasized in different respects like technologies on disaster preparation, risks reductions, rescuing, management and implementation etc.
- Disable can't participate as per desire of the system of CRA as they can't say something, share their views, and so exclude their representation from the process of CRA.
- Some sorts of orientation should be given to the farmers, women, fishermen etc. participants, because, they feel shy to express their presentation in front of the other persons. If they become early oriented, then they can actively participate in discussions.
- Some sessions should be organised with the UDMCs and UzDMC for disseminating information and rectifications.
- For equal participation in discussions, focus groups should be maintained and the Facilitators should emphasize the weak groups.
- Inclusion of wider groups in the process be ensured.
- An effective monitoring system should be established to guide and support the local CRA facilitators to improve the performance.
- The effectiveness of the LDRRAP depends on the continuous supervision, monitoring and evaluation by the different level of stakeholders. It is very important to develop a community based knowledge transfer group, so that they can continually supervise, monitor and evaluate the LDRRAP through conduction of CRA. Even they can revise the LDRRAP by evaluating its implementation status. The plan formed through CRA should be followed strictly.
- Sharing CRA output with the community people at the village level would enhance peoples awareness on their risks, vulnerabilities and their rights.
- Community level gathering may organize to make people aware about LDRRAP, especially by wards, by union inviting all levels of participation.
- Confidence building among the members of the community is essential for involving them to get community work done through participatory manner. UDMCs should remain activated.
- Appropriate time should be identified to implement plan.
- Appropriate person/organisation needs to be selected for implementation.
- Implementation of the LDRRAP by Union and Upazilla administration be ensured.
- Follow LDRRAP by all (GO and NGO) to implement risk reduction project in the area.
- Enhancement of capacity of the community people should be given priority in risk reduction initiatives.
- CRA activities need to be continued and projects to be prepared based on the findings of RRAP developed through CRA need to be implemented gradually by local, regional and national level resources.

- CRA report should be updated regularly in consultation with the community people and stakeholders.
- CRA exercise should complete before the rainy season.
- Children be included as a separate group so as to address the challenge the children face like trauma, insecurity and trafficking, deprivation in the area of food, shelter, education and recreation as well as their used in risky work amidst unholy and unhealthy environment.
- Gender sensitiveness has to be strengthened further.
- Risks of children, pregnant mother and disabled person should be addressed.
- Need to develop and maintain an expert team for facilitation the CRA workshop.
- Focus group wise separate CRA should be conducted and those CRA reports should be compiled in big group i.e. ensuring all levels of participations.
- To ensure sustainability regular up gradation of the Risk Reduction Action Plans will be required.
- More involvement of local community in the disaster management and
- Continuous efforts are required to make people conscious on their risks and vulnerabilities.



# **Chapter 4**

## **Early Warning Dissemination System**

### **4.1 Defining the Thematic Area**

Disasters arising from natural hazards are a growing global threat affecting tens of millions of people every year, with devastating impacts on vulnerable communities in developing countries and high costs to developed countries. It is internationally well recognised that effective early warning systems are essential to save lives and protect property, and to secure livelihoods and sustainable development. However, despite quite good knowledge of disasters and early warning methods and some outstanding successes, overall progress over the last decade to build warning systems that truly serve those affected and most at risk has been disappointing.

The Second International Conference on Early Warning (EWC-II), held in Bonn Germany, 16-18 October 2003, together with its preparatory regional consultation meetings, has concluded that a bolder and more systematic approach is needed to overcome this problem. The Conference identified a number of priority areas for action. Key requirements are the motivation of sustained political commitment and the incorporation of early warning as an integral and sustained part of policy and decision-making. It was agreed that a more systematic, coordinated effort is needed, particularly through better international cooperation, partnerships and programme action. The Conference's recommendations provide the starting point for an international programme to support the development of more efficient and effective early warning systems.

The past decade has seen many technical improvements, arising from better understanding of the physical causes of disasters, better tools for forecasting and prediction, including seasonal forecasts, and better monitoring and modelling of disaster related factors, e.g. soil moisture, crop status and river levels. Slower progress is being made in developing comprehensive drought monitoring and mitigation programmes and warning methodologies for geological hazards. Resources are an issue, particularly to maintain adequate observation networks for hydro-meteorological hazards.

In contrast, progress in the use of warnings to achieve effective responses and interventions has been inadequate, particularly at the local level and at the national and community levels in developing countries. Major concerns and constraints include the design of warning messages, community engagement, understanding of appropriate responses, the credibility of warnings, issues of responsibility and authority, as well as inadequate access to warnings by high risk groups.

### **4.2 Summary of Intervention**

Under the thematic area of early warning dissemination system 6 partner organizations namely CNRS, BDPC, NDP, RDF, SGS, TARANGA, CEGIS and Khulna University implemented the following activities (Details have been given in Table 4.1):

- Development of SMS Based Warning Message
- Trained the Union DMC members, volunteers and the community people on cyclone and flood warning and signaling system
- Piloted different options of the community alerting system
- Piloted Early Warning System to address flash flood
- Refreshers training to Volunteers etc.

**Table 4.1: Early Warning activities undertaken by Partner Entities**

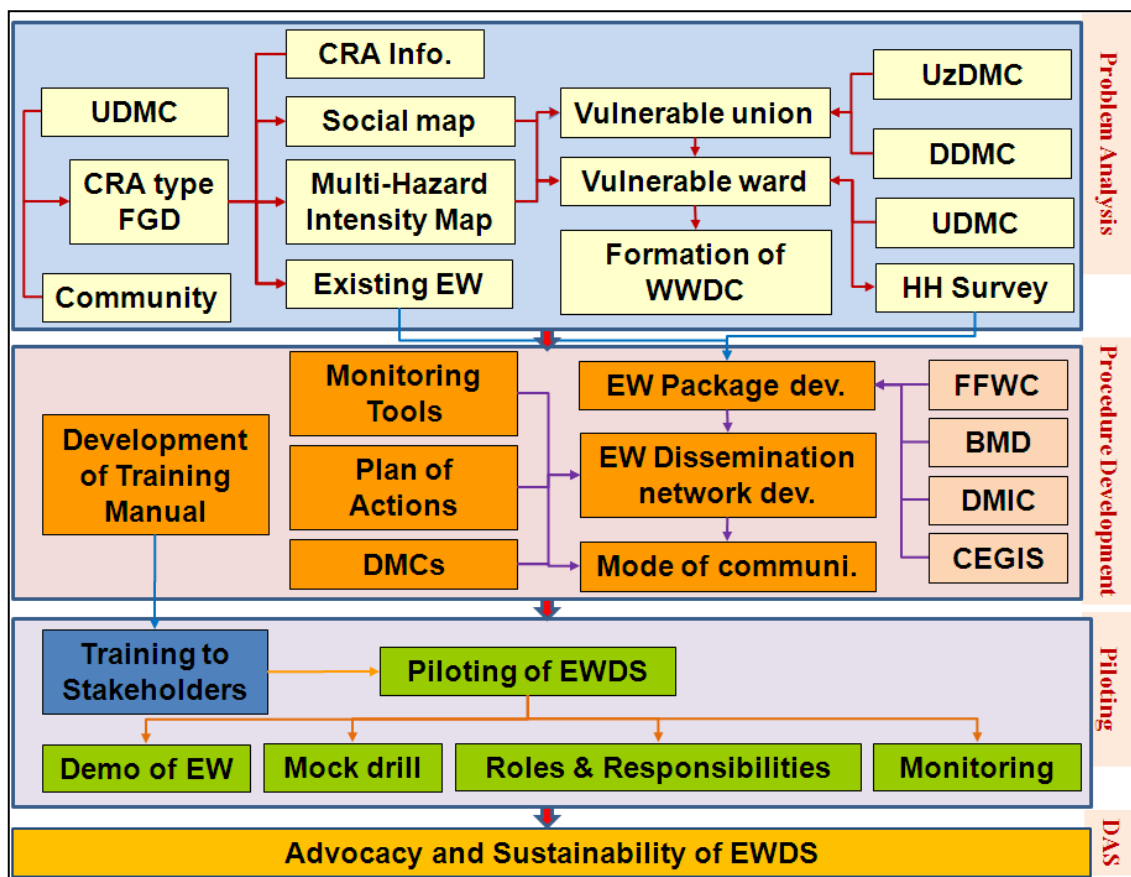
<b>DISTRICT</b>	<b>UPAZILLA</b>	<b>UNION</b>	<b>NGO</b>	<b>Name of intervention</b>
Sunamgonj	Tahirpur	Daskhin Sreepur	CNRS	Emergency support to marooned people.
Sunamgonj	Tahirpur	Tahirpur Sadar	CNRS	Training to enhance capacity of CNRS Volunteers on Early Warning Dissemination Systems
Sunamgonj		All 7 union of Tahirpur	CNRS	Adaptation Early Warning System to address flush flood
Shirajgonj	Chowhali	All union	BDPC	Dissemination of flood warning at community level
	Kazipur	Tekani Union	NDP	Nine days training on awareness raising training on Early warning and preparedness
		Nischintapur	NDP	Nine days training on awareness raising training on Early warning and preparedness
		Monsur Nagar	NDP	Awareness raising on Early warning and preparedness for Flood and Cyclone
		Khasrajbari	NDP	Awareness raising on Early warning and preparedness for Flood and Cyclone
		Kazipur Sadar	NDP	Awareness raising on Early warning and preparedness for Flood and Cyclone
		Gandhail	NDP	Awareness raising on Early warning and preparedness for Flood and Cyclone
		Pourashava	NDP	Nine days training on awareness raising training on Early warning and preparedness
		Maijbari	NDP	Awareness raising on Early warning and preparedness for Flood and Cyclone
		Kazipur Sadar	NDP	Awareness raising on Early warning and preparedness for Flood and Cyclone
Cox's Bazar	Cox's Bazar Sadar	Chowfaldandi	RDF	Training on Early Warning Dissemination System with material support among Rakhaing Fishermen & Monks
Rajshahi	Bagha		SGS	Refreshers training for Volunteers
	Agoilghara	3 union of Agoilghara	TARANGA	Awareness raising workshop for Community Voluntary Group

### 4.3 The objectives of the Interventions were

- Development of an all hazards early warning dissemination system (EWDS) at the community level through participatory learning process with stakeholder consultations for easy and effective interpretation and quick dissemination of disaster warnings.
- Reduction of potential damage and loss through strengthening early warning and community alerting systems (EWS)
- Provide radio, mikes and other accessories for transmission and dissemination of early warning messages to the community
- Construction of new and renovation and maintenance of existing shelters to ensure safer shelter for human and the livestock during cyclone, storm surge and flood

### 4.4 The Approach Adopted

Among the organizations involved CEGIS piloted a comprehensive programme and the below diagram describes the steps and approach followed in order for developing an all hazards early warning dissemination system (EWDS) at the community level:



**Figure 1: The CEGIS approach of an all hazard early warning dissemination system (EWDS)**

The approach includes the below 4 major steps.

### Step-1: Problem Analysis

#### Problem Analysis

- Investigate Spatial and Temporal dimensions of Hazards
- Multi-Hazard Intensity Mapping
- Exposed Livelihoods through Vulnerability Analysis
- Examine Existing and Potential End to End EW Info.
- Investigate Existing EW Dissemination Network

- Using CRA Techniques
- Review of Secondary Info.

### Step-2: Procedure Development

#### Procedure Development for Sustainable EWD

- What is the Available Early Warning Info. in Bangladesh
- Who are the Producers, Who are Responsible for Dissemination & Who are Beneficiaries

- Agency Visits
- Literature Review
- FGD

- Information Needs in Terms of Context of Info. How, When & Where People Want, Lead Time, etc.

- FGD, HH Survey
- DMC's Workshop

- Indicator Based Network Development for Sustained EWD

- Reliability
- Replicable

- Designing of EWD Network

- Packaging of EW
- Roles & Responsibilities
- Plan of Actions
- Monitoring Tools
- Training to UDMCs & WWDCs
- Find Dissemination Nodes

### Step-3: Piloting of Option

#### Piloting of EWDS

- Piloting was done for:
  - Finding Bottlenecks
  - Finding Gaps
  - Judging the Acceptability to Stakeholders
  - Measuring Efficacy of the EW System
  - Reliability of the system
  - Integration of the GOs and NGOs

▪ Through Mock Drill

### Step-4: Dissemination, Advocacy and Sustainability of EWDS

#### Dissemination, Advocacy & Sustainability

- Cost for Individual EWD per Hazard per Ward
- Development of Voluntary Groups Containing 20 members including Women, Teacher, Imam, etc.;
- Sustainable Dissemination using Banglalink Network
- EW Dissemination through 374 SMS to Lalmonirhat during 2008 Flood

▪ Ensuring Sustainability

Details on the activities undertaken under each step with their expected outcomes and outputs are presented in the below Table:

**Table 4.2: Outputs and outcome of the piloted EWDS**

Activities	Activity Outputs
<b>Step 1. Problem analysis</b> to establish a social and all hazard spatial and temporal identification procedure (e.g. social and multi-hazard intensity map)	
Agency visits/reconnaissance in all areas	- Liaison developed with DC, DRRO, UNO, PIO, BBS, etc. and NGOs who are engaged in disaster related activities - Collection of CRA reports
Review of secondary information	- List of exposed and potential hazards - Hazard specific risk statements - Risk reduction options - Social information - Strengths and weaknesses of NGOs
Preliminary questionnaire survey (at community and agency levels)	- Social resources identification - Magnitude and recurrence of exposed hazards - Existing EW status (source, lead time, media, usefulness, etc.) - Needs assessment of EW (source, lead time, local dissemination place, media, usefulness, etc.)
Consultation with DMCs (at all levels)	- Corrected multi-hazard intensity map - Selection of the most vulnerable five unions and five respective wards from five upazillas
Consultation with selected national level stakeholders	- Availability of early warning information in BMD, FFWC, DMIC and CEGIS
GIS based Multi-Hazard Intensity Mapping	- Development of multi-hazard intensity map for all units

Activities	Activity Outputs
Early Warning Baseline Assessment	<ul style="list-style-type: none"> <li>- Existing early warning status</li> <li>- Needs assessment of early warning</li> <li>- Damage assessment for individual hazards</li> </ul>
<b>Step 2. Procedure development</b> Developed and introduced community based all hazard specific Early Warning Dissemination System (EWDS)	
Development of Early Warning Information Packages (EWIP)	<ul style="list-style-type: none"> <li>- Early Warning Information Package with the assistance of FFWC, BMD, DMIC &amp; CEGIS</li> </ul>
Development of Participatory Early Warning Dissemination Network Platform (PEWDNP)	<ul style="list-style-type: none"> <li>- Early warning dissemination network platform by engaging administrative bodies and local community</li> </ul>
Design and development of community based cost effective Early Warning Dissemination Network (EWDN)	<ul style="list-style-type: none"> <li>- Formation of volunteers (WWDC) for EW dissemination to the community</li> </ul>
Development of key communication materials/documents	<ul style="list-style-type: none"> <li>- Leaflets, flags, microphone, etc.</li> </ul>
Development of message and demo for EW	<ul style="list-style-type: none"> <li>- Message in document (e-mail/fax) and mobile sms format</li> <li>- Demonstration of EW message in five pilot wards</li> </ul>
Multi-hazard mapping tools development	<ul style="list-style-type: none"> <li>- A multi-hazard mapping tool containing an equation</li> </ul>
Multi-hazard maps/atlas	<ul style="list-style-type: none"> <li>- An atlas of multi-hazards containing 55 maps</li> </ul>
Dissemination procedures	<ul style="list-style-type: none"> <li>- An Early Warning Dissemination System (EWDS) for all hazards by describing the roles and responsibilities of the stakeholders</li> </ul>
Awareness, advocacy and IEC materials, Training module, Management monitoring tools development	<ul style="list-style-type: none"> <li>- Awareness building through training</li> <li>- Advocacy to local BWDB, FFWC, BMD, DAE, CEGIS, etc.</li> <li>- Leaflets and flags are part of IEC</li> <li>- Training module for UDMC and WWDC</li> <li>- Monitoring tools for</li> </ul>
<b>Step 3: Piloting</b> Developed capacity of local DMCs and other associated agencies for activation of the EWDS	
Plan of action for local and national actors/agencies	<ul style="list-style-type: none"> <li>- Plan of action and monitoring tools for stakeholders</li> <li>- Roles and responsibilities for all stakeholders involved in dissemination procedure</li> </ul>
Training, mock exercise and capacity development of stakeholders, change agents and local DMCs for EWIP, PEWDNP and EWDN	<ul style="list-style-type: none"> <li>- Understanding of EW message, its interpretation, corresponding response and preparation through training</li> <li>- Knowledgeable and capable disaster managers</li> <li>- Functionality test of the EWDS by engaging the stakeholders</li> </ul>
Piloting of the combined products/initiatives above three (of EWIP, PEWDNP and EWDN)	<ul style="list-style-type: none"> <li>- Piloting of the full EWDS</li> </ul>
<b>Step 4: Dissemination, Advocacy and Sustainability</b> Advocacy and dissemination for all hazards EWDS where the roles and responsibilities of all parties are implemented and an interface created for follow up sustainability of EWDS	
Local level: Operationalizing the EWHDS at the local DMC level	<ul style="list-style-type: none"> <li>- Empowering and capacity building of the local DMCs and ownership of the system</li> </ul>

Activities	Activity Outputs
Development of community based all hazards early warning dissemination systems	- Reliable participatory EWDS

For dissemination of early warning to the community the project identified the important local level actors and also suggested to form a 20-member ward level warning dissemination committee headed by the UP chairman. The criteria that were followed in selecting the representatives of WWDC include the followings:

- Representatives should be socially important and influential;
- Socially responsible persons;
- Proactive;
- Involvement of people representatives;
- Consideration of women participation; and
- Involvement of religious and academician bodies.

The WWDC is a volunteer group of people and the sustainability of the committee can be articulated as the representatives are not paid, they have included themselves spontaneously; they are socially responsible, they are socially important and represent the inhabitants of the respective ward. The roles and responsibilities of the local level actors have been described in Table 3.

While packaging the early warning for dissemination the followings have been taken into consideration:

- Hazard wise suitable and acceptable early warning information,
- Acceptable lead time for simultaneous occurrences of multi-hazards,
- Easily accessible to the community and wide dissemination coverage, and
- Trustworthiness of EW information receiving person.

The early warning messages have been communicated to the community using all sorts of available communication options as shown in the below diagram

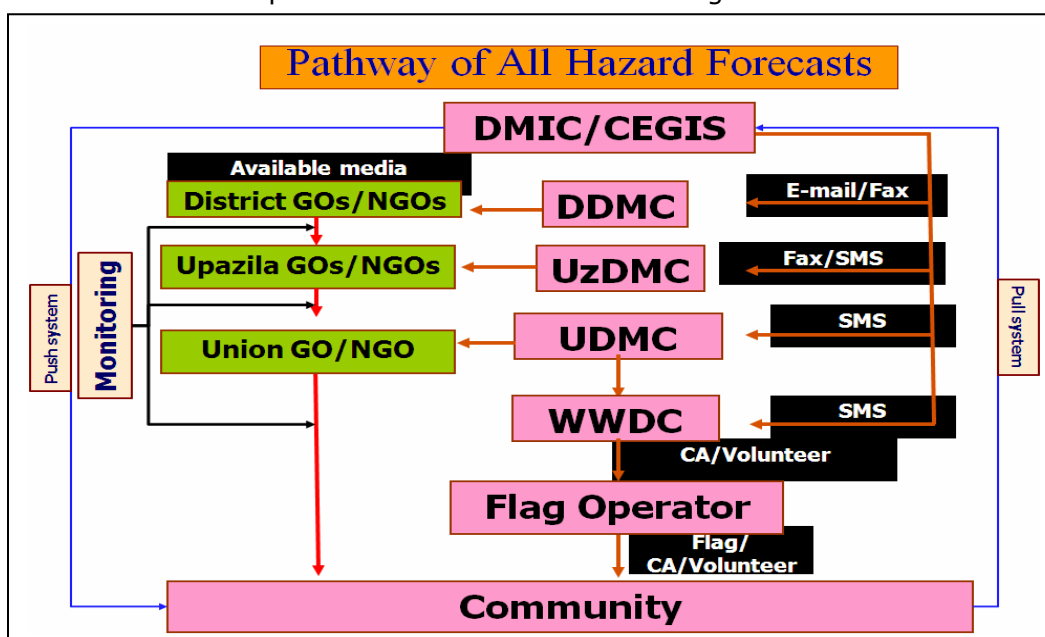
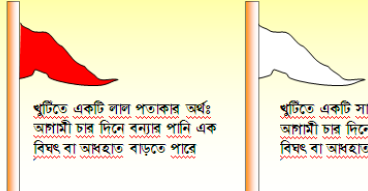


Figure 2: Early warning information dissemination network

For easy understanding of the early warning messages by the diverse group of community people a number of IEC materials has been developed with easy signs and symbols

COMMUNITY BASED ALL HAZARDS EARLY WARNING DISSEMINATION SYSTEM DEVELOPMENT (LDRRF)  
 দুর্ভোগ পূর্বাভাস প্রচার ব্যবস্থা উন্নয়ন প্রকল্প

**বন্যা পূর্বাভাস তথ্য পরিচিতি**



খুটিতে একটি লাল পতাকার অর্থঃ আগামী চার দিনে বন্যার পানি এক বিঘৎ বা অধহাত বাড়তে পারে

খুটিতে একটি সাদা পতাকার অর্থঃ আগামী চার দিনে বন্যার পানি এক বিঘৎ বা অধহাত কমতে পারে

এইকল্পঃ

- > খুটি একটি লাল পতাকার জন্য সর্বোচ্চ অধহাত ( এক বিঘৎ) পরিমান পানি বাড়ার সম্ভাবনা আছে
- > খুটি একটি সাদা পতাকার জন্য সর্বোচ্চ অধহাত ( এক বিঘৎ) পরিমান পানি কমার সম্ভাবনা আছে
- > খুটিতে কোন পতাকা না থাকার অর্থঃ আগামী চার দিনে পানি পরিবর্তন হলেও তা সামান্য হবে

বাস্তবায়নে : কম্পিউনেন্সিভ ডিজিটাল ম্যানেজমেন্ট প্রোগ্রাম (সিডিএমপি)  
 সেন্টার ফর এনভায়রনমেন্টাল এন্ড জিওগ্রাফিক ইনফরমেশন সার্ভিসেস (সিইজিআইএস)

অর্থিক সহযোগিতায়: ইউএনডিপি, ইউপি, ডিএফআইডি




Figure 3: Flood forecasting recognition

COMMUNITY BASED ALL HAZARDS EARLY WARNING DISSEMINATION SYSTEM DEVELOPMENT (LDRRF)  
 দুর্ভোগ পূর্বাভাস প্রচার ব্যবস্থা উন্নয়ন প্রকল্প

**SMS ম্যাসেজ দেখে**

**পানি বাড়ার ও কমার সম্ভাবনাকে বুঝুন**

- একটি + (যোগ চিহ্ন) অর্থ আগামী চার দিনে সর্বোচ্চ অধহাত ( এক বিঘৎ) পরিমান পানি বাড়ার সম্ভাবনা আছে
- দুইটি ++ (যোগ চিহ্ন) অর্থ আগামী চার দিনে সর্বোচ্চ একহাত ( দুই বিঘৎ) পরিমান পানি বাড়ার সম্ভাবনা আছে
- একটি - (বিয়োগ চিহ্ন) অর্থ আগামী চার দিনে সর্বোচ্চ অধহাত ( এক বিঘৎ) পরিমান পানি কমার সম্ভাবনা আছে
- দুইটি -- (বিয়োগ চিহ্ন) অর্থ আগামী চার দিনে সর্বোচ্চ একহাত ( দুই বিঘৎ) পরিমান পানি কমার সম্ভাবনা আছে
- এইকল্প যোগ(+) বা বিয়োগ (-) চিহ্নের সংখ্যা দেখে পানি বাড়ার ও কমার সম্ভাবনা বুঝুন।
- ম্যাসেজ দেখে পানি বাড়ার ও কমার আগাম সংবাদ সম্পর্কে নিজের অবগত হউন এবং আপনার প্রতিবেশীকে অবগত করুন।
- ক্ষয়ক্ষতি কমাতে নিজের পরিবারেও ধস্তাধি নিন এবং আপনার প্রতিবেশী পরিবারগুলোকেও ধস্তাধি থহনে উৎসাহিত করুন।

বাস্তবায়নে : কম্পিউনেন্সিভ ডিজিটাল ম্যানেজমেন্ট প্রোগ্রাম (সিডিএমপি)  
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 অর্থিক সহযোগিতায়: ইউএনডিপি, ইউপি, ডিএফআইডি


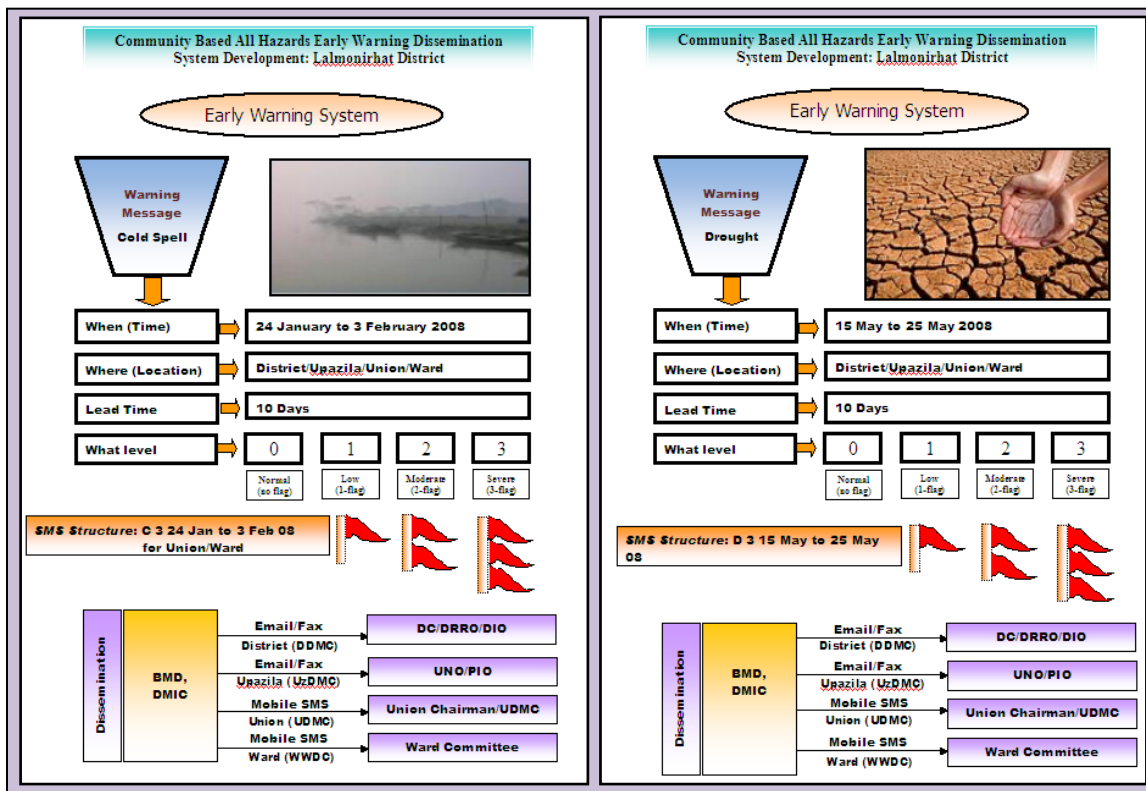
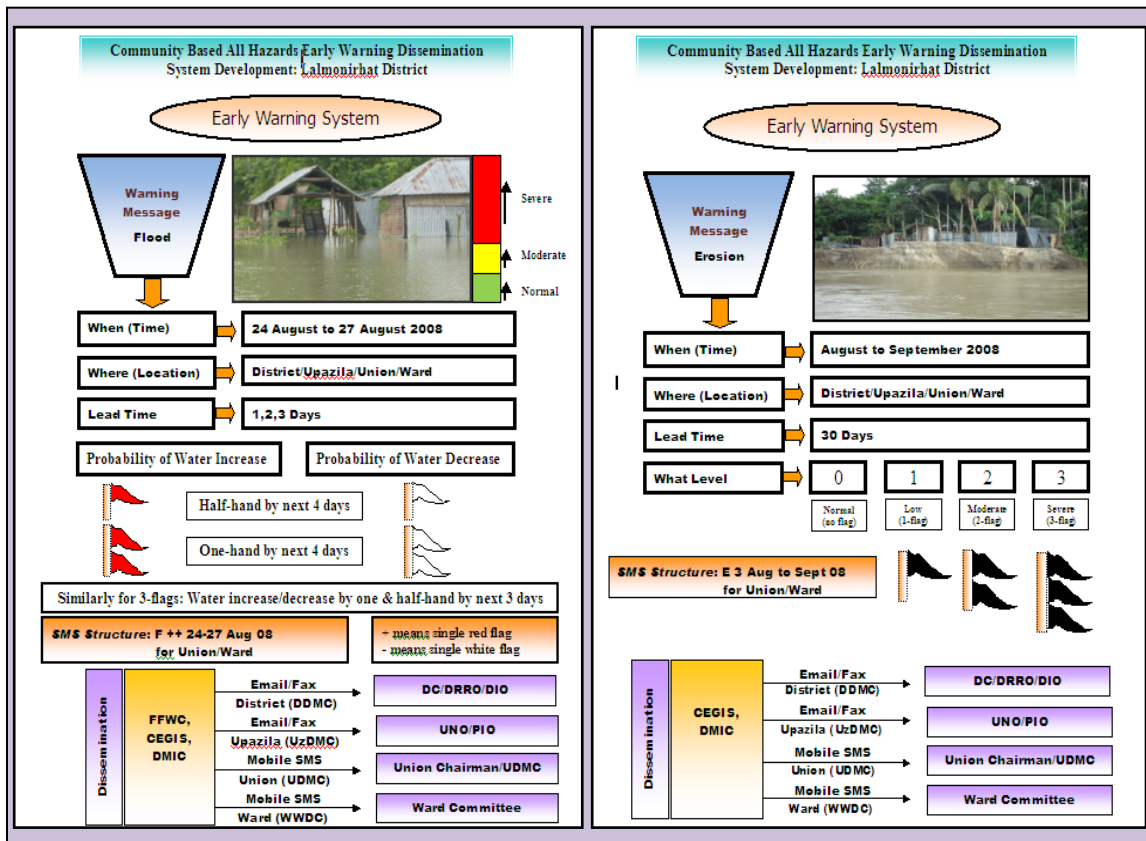


Figure 4: Meaning of signs of SMS



**Table 4.3: Attributes of hazard early warning parameters used in EWDS**

Hazard	Level of Intensity	Meaning of Intensity	Interpretation of Intensity	Lead Time	Colour & Number of Flags
River erosion	3	Severe	≥ 50% possibility to be eroded	30 days	Hoisting of 3 black flags at regular intervals in possible erosion line
	2	Low	30-49% possibility to be eroded		Hoisting of 2 black flags at regular intervals in possible erosion line
	1	No	Below 30% possibility to be eroded		Hoisting of 1 black flag at regular intervals in possible erosion line
Flood	+++	-----	3 bighat/one and half hand (27 inches) water possibility to be increased	3 days	Hoisting of 3 red flags
	++	-----	2 bighat/one hand (18 inches) water possibility to be increased		Hoisting of 2 red flags
	+	-----	1 bighat/half hand (9 inches) water possibility to be increased		Hoisting of 1 red flag
	0	Steady condition	No significant change water level		No flag
	---	-----	3 bighat/one and half hand (27 inches) water possibility to be decreased		Hoisting of 3 white flags
	--	-----	2 bighat/one hand (18 inches) water possibility to be decreased		Hoisting of 2 white flags
	-	-----	1 bighat/half hand (9 inches) water possibility to be decreased		Hoisting of 1 white flag
Drought	3	Severe	No raining in a week	10 days	Hoisting of 3 red flags
	2	Moderate	1 day raining in a week		Hoisting of 2 red flags
	1	Low	2-3 days raining in a week		Hoisting of 1 red flags
	0	Normal	3+ days raining in a week		No flag
Cold spell	3	Severe	≤4-6 °C	10 days	Hoisting of 3 red flags
	2	Moderate	6-8 °C		Hoisting of 2 red flags
	1	Low	8-10 °C		Hoisting of 1 red flags
	0	Normal	10-20 °C		No flag



**Table 4.4: Stakeholder wise roles and responsibilities for Ward Level dissemination of Early Warning Messages**

<b>Deputy Commissioner (DC)</b>	<b>District Relief and Rehabilitation Officer (DRRO)</b>	<b>Upazilla Nirbahi Officer (UNO)</b>	<b>Project Implementation Officer (PIO)</b>	<b>Chairman of the Union Parishad</b>	<b>Secretary of the Union Parishad</b>	<b>Ward Warning Dissemination Committee (WWDC)</b>
Assigning a single person for receiving and transmitting the early warning message on behalf of the District Disaster Management Committee (DDMC)	Regular receipt of the early warning of hazard on behalf of the DDMC	Assigning a single person for receiving and transmitting the early warning message on behalf of the Upazilla Disaster Management Committee (UzDMC)	Regular receipt of the early warning of hazard on behalf of the UDMC	Assigning a single person for receiving and transmitting the early warning message on behalf of the Union Disaster Management Committee (UDMC)	Regular receipt of the early warning of hazards on behalf of the UDMC	Selection of suitable early warning dissemination places
			Informing the UNO about the early warning of hazard regularly and timely			
	Informing other representatives of the UzDMC about the early warning of hazard so that easy and effective initiatives can be adopted based on the intensity of the situation					
Be informed of any kind of early warning of hazard	Informing the DC about the early warning of hazard regularly and timely	Be informed of any kind of early warning of hazard	Providing necessary directions to the Chairman/Secretary of the Union Parishad (UP) of the respective unions considering the situation and maintaining close monitoring	Looking into the forecasting and ensuring dissemination of the forecast if the intensity level of the received early warning is 2 or 3	Sharing the views regarding the current situation with the chairman according to the received forecast	Preparation of a duty distribution formation regarding who will observe which responsibility in rapid dissemination of early warning and what will be the modes of dissemination
			Direction for undertaking necessary initiatives depending on the intensity of the situation and monitoring the situation closely			
Direction for undertaking necessary initiatives depending on the intensity of the situation and monitoring the situation closely	Providing necessary directions to the PIO of the respective upazillas considering the situation and maintaining close monitoring	Knowing the status of the union level response and preparedness against prevailing hazard considering the situation	Considering the situation adoption of necessary initiatives in consultation with UNO	Arranging meeting with participation of the UDMC depending on the situation and taking necessary steps as well as monitoring the activities	Ascertaining the dissemination of the early warning to the ward level through the representatives of the Ward WWDC if the forecast is 2 or 3 and monitoring the dissemination activities	Preparation of the action plan for the dissemination of early warning/forecast
			Be informed of the status of the early warning considering the situation			
	Considering the situation for the adoption of necessary initiatives in consultation with DC	Providing necessary directions to WWDC through the respective ward member regarding the dissemination of intensity based early warning	Updating the UzDMC on the current situation of the emergency	Organizing emergency meeting with UDMC if situation demands	Organizing emergency meeting with UDMC if situation demands	Inform the concerned stakeholders regarding the proper implementation of action plan for forecast dissemination through mock drill
						Analysis of the forecast message that is received through SMS with giving emphasis and translate the message with local interpretation
						Inform the local people about the forecast and its local interpretation
						Building awareness to the local people regarding the disaster preparedness
						Preserve the received information from the UDMC as the record
						Dissemination of early warning by following the action plan just after getting order from UDMC as and when emergency arises
						Organize meeting during the emergency situation
						Encourage the local people to take necessary steps to reduce the risk on life and wealth from disaster according to the forecast
						Evaluate the early warning dissemination activities and recast the warning dissemination action plan if needed

## **4.5 Key Benefits Produced**

- People's capacity and knowledge regarding disaster warning and response to warning is increased significantly. They know better the meaning of different signals
- Peoples are informed about the meaning of different signals due to operation of volunteers
- Previously the locals did not know when to move to cyclone centers as they were not accustomed to the signal/ warning sign numbers. But now they know at which warning sign number they need to shift to the cyclone centers.
- Everyone can hear the weather forecast/ signals through mikes.
- If someone hears the miking regarding the storm then it's disseminated through him to others.
- Locals are trained how to keep their household stuff orderly to ensure that they are not blown away during storm.
- Locals are trained how to store dry food, saline, drinking water, matches, stove and candles under soil and carry it with themselves to the cyclone centers during storm.
- More cyclone shelters are now available within the reach of the community. A number of extra facilities in the existing cyclone shelters have been created with LDRRF support
- Community people use cyclone shelters for keeping their valuables
- The mikes provided under LDRRF are being used during religious/cultural occasions

## **4.6 Case Study of Good Practices**

### **4.6.1 Cyclone Shelter and Early Warning Dissemination System in Rakhainpara – A Case Study**

Bangladesh is comprised of diverse community, religion affiliation, cultural identity and race. Many tribal communities representing the unique cultural identity are scattered all over the Bangladesh. Rakhaines are such an ethnic community living in Rakhaingpara of Khurshkul village in Sadar Upazilla of Cox's bazaar District. In Rakhainepara there are about 100 to 150 buddhist Rakhaine families whose major livelihood is open water fishing. Male usually move into deep sea for fishing, some of them stay for days together and some return within a day or two whenever they have had enough. Women of this area stay mostly at home do household chores and are busy to care of their children. Local Rakhaines lead a distressed livelihood. The foremost problem of Rakhaines is water logging caused from monsoon rain water. Cyclones hits the village very frequently and there was no safe shelter nearby. The only available place for shelter was either the temple or the cyclone center at Muslim para, which is far from their community. Moreover, the cyclone center located in Muslim Para was not spacious and so couldn't make room for enough people. People of the Rakhainepara remain reluctant to go to Muslim Para for shelter as because they are not sure whether there will be space left for them to take shelter there after crossing through long muddy road with their children and the aged to reach there. During storm trawlers hovering in the deep sea are in the most disastrous situation. The trawlers are not equipped to receive weather forecast and had to rely on guessing and their experience of the sea. Every day they were the victims of these hazards. RDF, a local NGO constructed a two storied cyclone shelter adjacent to the Buddhist Temple in Rakhaine Para with LDRRF funding. An approach road is also constructed under this project to make the cyclone shelter easily accessible by the Rakhaines. The Rakhaines took shelter in this cyclone shelter during the recent AILA. Under this project mikes were also provided to the temple for dissemination of signals prior to storm. The Rakhaine temple has been equipped with mikes to inform locals during cyclone and storm to take necessary actions. The Rakhaines do not trust on the early warning messages broadcasted in Radio/TV but rely on the announcement comes from

temple. The fishermen were also provided with radios to receive the early warning message while they are in deep sea far from the coast. Signals are broadcasted in both Bangla and Chakma dialect so that everyone can understand the forecasting news.

Premase a Rakhaine woman received training from RDF on early warning. During the survey she was mentioning that now I know which number of signal is secure and which is risky." During Sidr and Aila Premase along with her family members went to cyclone shelter after hearing the cyclone warning messages disseminated from the temple. She mentioned that she got to know during training that aged and children should be given priority in shelter house. So Premase and several others had sent aged and children first to shelters unlike previous occasions. Due to the development of roads locals can move around without hassle. Premase's" father-in-law is a leader of fishermen, received a radio for weather forecast. During Sidr he was in deep sea. After receiving the signal from the radio he along with his group of fishermen moved to safety. On the whole all these pre disaster initiatives have reduced their loss to an extent. But still a lot of problems exist. The cyclone warning announcement made from temple through mike was loud enough for people living in distant place, especially from the temple.

### **Challenges Ahead**

- The cyclone center is not spacious and cannot accommodate more than 300-350 people. So a large number of people have to take shelter in temple during cyclone. Moreover, the cyclone center is still under construction and there are no electricity and pure drinking water and sanitation facilities yet. The stairs of the cyclone centre has no railing.
- Though roads and drains were constructed no actions were taken for their ongoing maintenance. During field survey the drains found full of garbage which become the safe heaven for the mosquitoes to breed and therefore became a concern for the community.
- Number of radio is not sufficient for huge fishermen. Need to assign someone for the regular maintenance of the mikes.
- More training is needed to make the locale understand the message and the interpretations of the signals as most of the people of the pilot areas were illiterate.

## **4.7 Lessons Learned**

### **4.7.1 Managerial**

- Field level presence of the implementing agency is very much essential for understanding the on the ground situation, insuring reliability and acceptability by the community the warning messages.
- This kind of project requires inputs from experts of different disciplines; but budgetary allocation to hire experts had been bare minimum and therefore full time experts had not been possible to recruit. This also delayed completion of the project.
- During the selection of the pilot unions and wards it was observed that the respondents of the respective unions and wards wanted to select their own unit for demonstration. It was therefore a tough decision to select the correct unions and wards. However, the selection was properly done in the end due to the excellent skill of the facilitators.
- Frequent changes in local administration and slow decision making process influenced the pace of the project and for that project had to concede time overrun for 6 months.

- Early warning dissemination network suggested by the experts could not be fully implemented due to resource constraints.
- Guidance provided from CDMP for work progress and financial progress monitoring was same as other LDRRF projects on CRA. But the nature and activities of the project were very different from those projects.

#### **4.7.2 Programmatic**

- Training should include more beneficiaries.
- During the demonstration of Early Warning of the selected hazards and mock exercises it was found that not all the upazillas have e-mail and fax facilities. Therefore in those upazillas the project were mostly relied on SMS and other modes of transmission
- The SMS receivers up to Ward Warning Dissemination Committee (WWDC) level still have some confusion regarding the system in spite of being trained well. So, regular monitoring and training should be done for ensuring proper response.
- It was learnt from the coordination meeting at Lalmonirhat that people from relevant organizations felt the need to be involved in this programme as they found the early warning dissemination process very effective.
- For quick and efficient dissemination of disaster warning, community based network of people was found very effective. This network should include UzDMC, UDMCs and local volunteers.
- With minimum logistic support and trainings UzDMCs, UDMCs and local communities could be brought into an effective network for disseminating disaster warnings.
- Disaster Information Committees (DIC) established in each of the unions of the project area had been found very effective in coordinating warning dissemination activities.
- Local government institutions were found most effective agency for disaster warning dissemination. However, their effectiveness was found reduced due to resource constraints that they face.
- A trained set of local volunteers, equipped with modest communication device for communicating with the UzDMC and UDMC could be effective in disseminating disaster warnings.
- Pre-designed separate text message templates for different types of hazards were found to be very useful for speedy dissemination of disaster warnings.
- For disasters like arsenic contamination, salinity increase awareness building is synonymous to 'early warning'.
- The community alerting system piloted was able to quickly disseminate the early warning messages up to household level. The system was found effective to transfer information of locally generated hazards such as embankment collapse, water logging etc to the local administration.
- Cultural activities with participation of local performers had been found to be very effective mechanism for awareness building of local communities.
- Capacity building of local government bodies was found to be extremely essential for speedy dissemination of disaster warnings.

#### **4.8 Limitations of the Interventions**

- Lack of fax and e-mail facilities as modes of dissemination up to upazilla level, which may cause the issue of sustainability of the developed system to come under question;
- The responsible persons of the DMCs have no official mobile to use in early warning dissemination;

- Apportioning project fund was found to be appropriately done. More resources were required for conducting detail resource survey.
- Due to resource constraints all trained volunteers could not be provided with the communication devices.
- On time transmission of the warning messages to the DDMC and UzDMC is a challenge
- Monitoring of the roles and responsibilities of the stakeholders was another challenge.
- Bad weather condition and inaccessible communication facility in some parts of the project area hindered smooth progress of the project activities. This constraint was overcome by putting extra resources and efforts viz, time, money and additional staff inputs.
- Given the existence of a diverse natural hazard profile in the Project Area, developing a warning dissemination system for all hazards had been a real challenge for the project. This has been achieved through
- Most of the UDMC's in the project area had been found either non-existing or non-functional. It was found very difficult to motivate union parishod members to become a part of the designed EWDS.
- To establish a community based EWDS system for a rural and relatively backward community a tricky compromise had to be made between technology availability and acquaintance and user friendliness of the technology by the local community.
- Most of the communities in project area were found to be very little aware about the effects of disasters like salinity increase and arsenic contaminations. Awareness campaigns were designed and conducted emphasizing on this issue.
- Communities in the project area were found to have very minimum understanding about the disaster warnings such as cyclone warnings and flood warnings. Various trainings imparted to the UDMC members, and local volunteers from the project helped increasing their understanding.
- The mind set of the Union Parishod Chairmen members were found to be very 'reactive'. They were found to be eager to get 'tangible' material support rather than increasing their capability through 'management trainings'. Breaking this mind-set had been a real challenge for this project. Rapport building and continuous communication with them by the project staffs, and establishing DICs under their supervision had been found to be very effective in overcoming these difficulties.
- real time forecasting was not possible as the project period was too short; (iv) accuracy of the system could not be measured well due to time constraints; (v) the EWDS was tested in only five wards due to time constraints and therefore should be replicated in more areas to ensure reliability; and finally (vi) data acquisition from relevant agencies and CRA reports were up to the mark.

#### 4.9 Recommendations for Sustainability

- The characteristics of an early warning system are bounded by the characteristics of the hazard(s) of concern and by the political and cultural setting in which the EWDS operates. However, there are generalizations that can be identified as a minimal requirement for an effective EWDS regardless of the hazard or its political setting for the sustainability issue. To make sustainable EWDS for natural hazards some vital recommendations can be optimized. These include but are not limited to the following:
  - **Continuity in operations:** An EWDS must operate continually, even though the hazard of concern may occur only intermittently. Operation and maintenance of EWS is often a bottleneck for sustainability - low cost solutions and technical

assistance designs must reflect realistic budgetary commitment. Operational planning includes drills, community preparedness and programs and all components requiring maintenance and system calibration and updating by community or individual over time. These decisions and actions ultimately determine the system's success or failure.

- **Timely warnings:** For a warning to be considered useful, it must provide enough usable lead time for those at risk to decide whether and how to react. A warning should have time for responses to the warning and to the event. This varies from hazard to hazard. For tornadoes, warning time may only be in the order of minutes; for floods it might be three to seven days; for river erosion it could be one to three months; for cold spells and droughts it may be seven to ten days. A balancing act is required of those in an EWDS because they must avoid issuing warnings that are too early or too late.
- **Communication and dissemination:** The communication network is the heart of the EWDS. The system preferably adapts level based existing communications. The implementation of a communication system is by e-mail, fax, mobile SMS, microphones, drums, flags, etc. some of which work even when commercial power is down in cases of emergency. Community radiolink can also be used as an alternative.
- **Transparency:** The process of early warning dissemination system, whether the system only issues a warning or is involved in the total process from warning to societal response, needs to be open to the media and public. Transparency and accountability can help to minimize the potential for political influence on the various stages of early warning and thus can ensure the sustainability of the system.
- **Integration:** An EWDS must be integrated into other parts of the warning process, including monitoring and communication; it needs to be viewed as a subsystem within the larger socioeconomic, cultural, and political system.
- **Advocacy:** The roles and responsibilities of the DMCs in the government issued SOD are clear and strong enough to make the system effective and sustainable. So, it is recommended that advocacy for the enforcement of SOD is very much important.
- **Creditability:** Changing the mind-sets of government stakeholders at different levels is important. It is necessary to work with them with the early warning system for at least two years in order to prove to them the effectiveness of early warning dissemination in terms of loss and damage reduction. In that case, they would feel encouraged to manage hazards and disasters and become accustomed to the system.
- **Push-pull system:** The applied modes of communication for warning receipt, transmission, dissemination and monitoring were found effective. But there may be information missing at different levels. During the mock exercise, the Patgram UzDMC missed 3 messages out of 4. The mode of communication was fax in that case. So, an alternative way is needed to ensure receipt of messages. In this context, the authorities may add a bottom up approach in the system. As every level receives early warning individually from the source, every committee under this approach should transmit the information to its immediate lower level of DMCs. It will ensure the receipt of message if even if missed the first time. Similarly, the government officials may also adopt this bottom up approach. For informing the upper level both DMCs and GoB officials may adopt the available and appropriate media at each level.
- **Human capacity:** Appropriate staffing is essential along with expertise suited to work with the hazard(s) of concern.



- **Logistic and fund support:** The WWDCs and DMCs expressed their need for official mobile phones as the system is much dependent on that means of communication. Besides, a substantial fund for the functioning of the committees and the warning dissemination system is essential. Unfortunately, the DMCs are unable to function as expected, especially at normal times due to inadequate logistic and fund support. Advocacy is needed for allocating funds and adequate logistics for the DMCs.
  - **Use of religious logistics:** The project has another important finding that the use of the microphones at mosques was much effective at the community level. So, all the mosques that have microphones can play an important role in disseminating the warning in local language. In that case, those who cannot interpret flags or cannot see them or come out of their homes for some physical limitations will also get the warnings from the mosque, which is a very credible source for the community. So, the WWDCs should take the responsibility to ensure that warning is disseminated by using microphones at mosques.
  - **Flexibility:** An EWDS needs flexibility to expand its activities to other hazards and to other functions, if and when the occasions arise.
  - **Catalysts:** There is a need for a defined "triggering" mechanism; the trigger can be anything from a quantitative indicator to an anecdotal comment.
  - **Apolitical:** An EWDS needs to be apolitical in performing its functions; it is important that EWS should be viewed as an objective uninfluenced by national or international politics.
- It has been understood from the experiences of pilot project, for sustainability of such kind of community based EWDS a set of trained, young and energetic volunteers are needed. But in context of Bangladesh it is very difficult to have such kind of volunteers if they are not paid. Therefore, it is recommended that some kind of arrangement should be made so that a set of volunteers are always available for to work for local DMCs when disaster warning dissemination is needed.
  - It has been observed that Local Government Institutions are very effective in doing such kind of activities in community level. In context of Bangladesh these institutions are very weak in terms of their financial and technical abilities. Therefore, it is recommended that more resources should be made available to local government bodies.
  - UzDMCs and UDMCs should be strengthened and their activities should be closely monitored by local administration.
  - Awareness building activities should be carried out on regular basis and UDMCs should be entrusted with this responsibility.
  - Regular trainings and workshops should be arranged for UzDMCs, UDMCs and local volunteers to update them with information regarding new developments in this arena.
  - Arrangements should be made by the Upazilla administration for monitoring proper functioning of the DICs established in every union, primarily for coordinating disaster warning gathering and disseminating activities.
  - Present signaling system regarding hazards should be simplified and understandable to the community people.

# Chapter 5

## Community Mobilization through Awareness Raising and Capacity Building

### 5.1 Defining the Thematic Area

In many instances, the current levels of exposure and vulnerability to natural hazards are mostly due to human-induced factors, such as the increasing concentration of people in high risk areas, inadequate land-use zoning and planning, inadequate construction standards, environmental degradation, the inability to adapt to climate change, and an insufficient level of disaster risk preparedness. Changes in patterns of human behaviour and perception at all levels of government and society, therefore, could lead to a substantial reduction in disaster risk. Disaster risk awareness and education strategies should be aimed at promoting a culture of safety, so as to achieve changes in current patterns of human behaviour that influence the risk of large-scale damaging effects of natural hazards.

While in the past educational efforts in this field have often been based on a rescue and relief-centric approach, the orientation has currently shifted to a holistic disaster management approach that includes catastrophic risk prevention and risk reduction education. This reorientation requires an emphasis on disaster risk reduction tools and strategies and a combination of individual and collective actions. Accurate and trustworthy information on hazards, vulnerability, risks and risk reduction measures and strategies provide the foundation for promoting a culture of safety. In addition, clear and consistent messages concerning the allocation of expected disaster costs and disaster prevention responsibilities that are conveyed *ex ante* to all interested parties can promote a shared understanding of roles and responsibilities and stimulate appropriate individual and collective actions. Increased awareness of natural hazards and appropriate risk reduction measures can encourage voluntary risk reduction activities, including such key measures as safe construction, retrofitting, and household preparedness. As part of a broad national risk reduction strategy, increasing public risk awareness can strengthen public support for the investment of public funds in risk prevention activities and for the implementation of compulsory risk reduction measures such as land use planning, building codes, environmental stewardship and, where applicable, disaster insurance schemes. A primary mechanism through which these disaster risk reduction efforts can be initiated and realised is through the education of relevant audiences, with a view to changing their perceptions of normative behaviour. Linking norms to socially accepted values, such as the social benefits and positive spillover effects of risk-wise behaviour, is the main way to achieve the goal of promoting a culture of safety in the long run.

Effective disaster risk communication and education strategies require an in-depth knowledge and understanding of: (1) the key features of the relevant natural hazards and disaster risks; (2) the behaviour and perception changes that the strategy is aimed at inducing in the target audiences (e.g. the type of risk reduction measures that can be adopted at different levels of government and society); and, (3) the most appropriate tools and methods to convey the information and to educate stakeholders and induce action. Risk awareness and risk reduction education initiatives should be integrated into broader national or international disaster risk management strategies. Risk awareness and risk reduction programmes and policies should be scaled to the level of country exposures and vulnerability and be aligned with the geographical distribution of risks. Promoting a culture of safety requires long-term sustained strategic planning by governments and must be based on a strong commitment of all institutional actors. Higher levels of government

should be the sources of innovation and lead the process, but local governments, communities, businesses and individuals are the driving force of implementation. Ongoing monitoring and evaluation of awareness and education efforts are essential to assure accountability and transparency, and increase public confidence in the outcomes.

Public education and awareness can be raised in a number of ways, from short-term, high-profile campaigns using broadcasts, literature and posters, to more long-term, low-profile campaigns that are carried out through general education. Education should attempt to familiarize and de-sensationalize hazards. Everyone who lives in a hazard-prone area should understand the potential for hazards as a manageable fact of life. Information about hazards should be part of the standard curriculum of children at school and be part of everyday information sources, with occasional mention of hazards in stories, TV soap operas, newspapers and other common media. The objective is to develop an everyday acknowledgment of hazard safety in which people take conscious precautions because they are aware of the possibility of hazard occurrence. Their understanding should include an awareness of what to do in the event of a hazard; and a sense that their choice of house, the placement of a bookcase or a stove and the quality of construction of the garden wall around an outdoor work or play area, all affect their own safety. Community involvement in risk reduction planning processes reinforces awareness and develops automatic behavioral responses.

## **5.2 Summary of the interventions**

A number of interventions have been carried out under this thematic area by the following 17 Implementing Partners of CDMP:

SHAMADHAN, RISDA, IR, SHUSHILAN, DAM, FIVDB, GHARANI, DNP, SDS, VOSD, NCDS, BDPC, MMS, SAMATA, NDP, HITAISHI and VERC.

Major interventions include (a) creating disaster awareness, (b) increasing awareness about tsunami and earthquake in coastal and earthquake prone areas, (c) training on pre disaster preparation, and (d) developing volunteer groups.

Training workshops, seminars and meetings were organized. Committees were formed with school teachers, religious leaders, UP member, civil society leaders, farmers, and people with disability. Training was also provided to daily workers, housewives, local businessmen, young people and school children. Meetings were conducted with chairman and members of the UP regarding water and sanitation, storm, flood, disaster, education, pre and post disaster preparedness, etc. Volunteer groups were formed involving young people. Volunteers were put under rigorous training. Mock drills were organized in educational institutions.

## **5.3 Objectives of the interventions**

The interventions were carried out with the following objectives:

- To increase level of awareness on disaster preparedness
- To strengthen coping capacity to deal with disaster
- To aware farmers about local hazard friendly cultivation
- To enhance capacity of the farmers about disaster preparedness measures for agricultural sector
- To make the target people aware and well trained as to preparation and management of disaster and its risk reduction by raising mass awareness, capacity

building, information dissemination and involving the people of different levels of the communities.

- Support DMCs to establish linkages with government agencies, non-government organizations and donor agencies for resources to implement risk reduction options as per the Action Plan

#### 5.4 Details of Activities Undertaken by Implementing Partners

Two types of awareness raising and capacity building interventions were carried out under LDDRF. Firstly, trainings were conducted on climate change impacts and adaptation options. Secondly, activities were undertaken to create awareness of disaster risk reduction as well as to build community capacity for disaster preparedness and response.

**Table 5.4.1: Climate Change Training**

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
Shatkira	Kolaroa	Diara	Shamadhan	Training on Climate Change issues
		Diara	Shamadhan	Training on Climate Change
Faridpur	Sadarpur	4 unions of Charbhadrasan	RISDA	ToT on Climate Change impacts and Awareness Raising

**Table 5.4.2: DRR Training**

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
Sunamgonj	Sadar/South	Jykolosh, Pataria and Surma	IR	Training on Disaster Preparedness for Vulnerable Group
		Gourarang	IR	Training on Disaster Preparedness for Vulnerable groups, CRA participants (48)
Satkira	Shyamnagar	Kashimari	Shushilan	Public awareness (Pot song, poster display, Courtyard meeting, Training)
	Kaligonj	all unions	DAM	Awarness raising
Satkira	Sadar/South	Gourarang	IR	Training on Disaster Preparedness for Vulnerable groups, CRA participants (48)
	Biswamberpur	Fatepur	FIVDB	Training on Disaster Management
	Biswamberpur	Badhagat South	FIVDB	Training on Disaster Management
Satkira	Syamnagar	Shyamnagar, Noornagar, Ishwaripur, Bhurulia	Gharoni	Training on Disaster Risk Reduction issues
	Kalaroa	Diara, Joynagar, Jalalabad, Jugikhali Union	Shamadhan	Posting of 10 Signboards
Faridpur	Sadar	Char Madhabdia	DNP	Awarness raising on Reducing damages and Losses

		Chandra	SDS	Preparedness training on Flood and Tornado
		Chumordhi	SDS	Preparedness training on Flood and Tornado
		Hamirdhi	SDS	Preparedness training on Flood and Tornado
		Tuzerpur	SDS	Preparedness training on Flood and Tornado
		Kawlebera	SDS	Preparedness training on Flood and Tornado
		Algi	SDS	Preparedness training on Flood and Tornado
		Gharua	SDS	Preparedness training on Flood and Tornado
	Charbhadrason	Charbhadrason Sadar	VOSD	Awareness raising programme on risk reduction
	Charbhadrason	Gazirtek	NCDS	Awareness Raising Training on Disaster Preparedness
Shirajgonj	Chowhali	Khaskawlia Union	BDPC	Training on Disaster Preparedness (90 Change Agents)
	Shahjadpur	Different union	MMS	Fixing Bill board with Risk Reduction messages (13)
		Different union	MMS	Fixing Bill board with Risk Reduction messages (8)
Faridpur	Sadarpur	Diara Narkelbaria, Akuterchar, Dewkhali	SAMATA	Advocacy for construction of connecting road between three vulnerable Unions
Sirajgong	Kazipur	Kazipur Sadar	NDP	Training on Disaster Response
	Kazipur	Chalita Danga	NDP	Training on Disaster Response
Cox's Bazar	Sadar/Ukeya	Pourashava	HITAISHI	Public Awareness
		Haldia palang, Rajapalong, Jhilonga	HITAISHI	Awareness raising on risk reduction
Rajshahi	Tanore/ Godagari	Deopara	VERC	Awareness raising for plantation of trees, river bank erosion, building houses on raised grounds, etc.

## 5.5 Key Benefits Produced

### Immediate benefits

- Community members became aware of natural hazards in advance through Uthan Baithak (Courtyard Meeting).
- They are aware of taking measures through the Union Parishad.
- They are better prepared to rescue people during disaster.
- They are better prepared to cope with scarcity of drinking water and to deal with water borne diseases.
- They are aware of necessity for preparedness.

- Overall disaster awareness is increased.
- Learned what is necessary for pre and post disaster period.
- Learned about the necessity of saving dry food.
- Learned about the use of water purifying tablet and FITKIRI.
- Learned about seed consumption process.
- Saved themselves from the frequency of diarrhoea, dysentery, etc.
- Understood the importance of moving the disables to shelter during disaster.
- Disaster losses have been lessened.
- Properties saved during disaster event.

### **Long term benefits**

- They can themselves enhance the awareness level of the community.
- Received training on pre disaster preparedness and so that they can be better prepared every year before flood.
- Occurrences of diseases have been reduced comparatively due to better sanitation.
- People became aware of the facilities of government hospitals.
- Their overall resiliency is increased.
- Different types of training have strengthened the capacity and skill of the people engaged in relevant government and non-government organizations.

### **5.6 Key Challenges Faced and Action Undertaken to Overcome the Challenges**

- Ensuring the participation of vulnerable group, i.e., women, elderly people, and Person with Disability. Special efforts have to be undertaken to ensure their participation.
- Monitoring of the implementation activities had been a problem, as the cost of monitoring was not included in the budget. The implementing partners undertook special measures at their own cost to carry out monitoring activities.
- Involving the members of the Disaster Management Committees (DMC) has been a big challenge. They have to be convinced first about the importance of awareness raising in relation to risk reduction as well as emergency response.
- Community expectation increased due to conduct of CRA in the community, and people became aware of their risks and they expected that the implementing partners will implement risk reduction interventions. Due to budgetary constraints, only a few interventions could have been carried out. People were given hope that government will implement the rest later.
- Indifferent attitude of relevant Government officials. In many instances, they do not recognize the importance of risk reduction interventions implemented through NGOs. In this backdrop, special efforts have to be made to liaise with the senior personnel of that respective office and got positive result.
- *Unusual Political Situation:* During implementation of this project, the political situation in the country was unusual. Most of the chairmen and ward members of union parishad were scared of being arrested due to on going political situation. They did not stay in their administrative areas. For this reason, it was very difficult to complete the project activities as per agreed time schedule. Also, it was very difficult to travel from one place to another place.
- *Coordination with different stakeholders:* All stakeholders were too busy during the project period because of the political situation, which was happening not only at the national level but also at the grass-roots level, i.e. village level. At that time, every body was confused on the national political issues. This issue negatively impacted on the implementation of project activities.

- Difficulty in contacting UDMC members, PIO and CDMP stakeholders resulted in communication gap. Project staffs increased frequent field visit and tried to communicate with them and make them updated about the project activities.
- Due to flood during the month of July-Aug-Sep in 2007, project implementation was badly affected. IPs had to work intensively to finish the job in time.

## **5.7 Case Study of Good Practices**

### **5.7.0 Project Name:**

Capacity Building through awareness raising and public education at Kashamari Union in Shyamnagar Upazilla under Satkhira District to reduce overall disaster risks.

#### **5.7.1 Background**

Shyamnagar is the biggest and remotest Upazilla of Bangladesh. It is located near the Sundarban -- a world heritage site, and adjacent to Bangladesh-India border. It is in Satkhira district with a population of more than 350, 000. Satkhira is very backward and under developed district in Bangladesh. Satkhira is cyclone prone area with subsequent flooding and water logging. There are about 72,021 households in its 219 villages. Most of the people of Shyamnagar Upazilla are involved in aquaculture and agriculture. The area is being vulnerable to disasters due to unplanned polder embankment, soil erosion, use of pesticide, shrimp virus and increasing salinity. Moreover due to global warming sea level is rising and it has been predicted that if water rises one meter higher than the present level, then this part of Bangladesh will go completely under water. Among the twelve Unions of Shyamnagar Upazilla, Kashamari Union is considered the most vulnerable. So, it is absolutely essential to build capacity of community and local government organizations to improve their ability to mobilize community through awareness raising and public education interventions with a view to reducing disaster risks. Shushilon, a partner NGO of CDMP, took up a project titled "Capacity Building of Union level Disaster Management Committee to Reduce Vulnerability in Shyamnagar Upazilla under Satkhira District of the South West coastal region of Bangladesh" in Shyamnagar Upazilla. Specific objectives of the intervention were:

- To strengthen role of DMCs through community involvement;
- To identify issues and options of operationalizing the risk management framework in Local Disaster Risk Reduction Action Plan (LDRRP);
- To create awareness of hazards and climate change implications and
- To raising awareness and public education of community people in relation to preparedness and response to disaster emergencies.

Shushilon concentrated their awareness raising and public education efforts in Kashamari Union. After necessary pre-testing and community consultation a number of strategies and methods were utilized, namely, a) courtyard meeting, b) pot songs, c) picture drama, d) capacity building training and e) formation of youth volunteers, etc.

#### **Courtyard meeting**

A total of 729 courtyard meetings were held at 12 Unions of Shyamnagar Upazilla to aware the vulnerable community about their roles and responsibilities before, during and after disaster. Cross section of vulnerable people including people with disabilities, landless

people, widow and divorced women took part at the meetings. In total, 19,683 disadvantaged people of 12 Unions under Shyamnagar Upazilla took part at the meetings.

In the Kashamari Union, a total of 27 courtyard meetings were held. In each Ward of the Union, three courtyard meetings were held with vulnerable community and discussed about disaster related issues. In these meetings, various issues such as hazards, vulnerabilities, disasters, risks and roles and responsibilities in relation to preparedness and response were discussed.

Date	Ward	Participants				Total
		PWD	Land less	Divorced	Dowry victim	
23 July 07 to 21 August 07	Each ward	60	548	85	81	774

Disaster Management Committee of No. 2 Kashamari Union has prepared local disaster risk reduction action plan (RRAP) through participatory community risk assessment (CRA). They have identified some risk reduction options; awareness camping activities was one of them. Awareness camping activities were carried out through capacity building training, court yard meeting, pot song among the vulnerable community, etc. It helped to create awareness among people about disaster preparedness. People were made aware of their responsibilities before, during and after a disaster.

#### A) Training on capacity building of union level vulnerable community

Date	Ward	Place	Participants				Total
			PWD	Land less	Divorced	Dowry affected	
5 July 07	08	Kashamari Cyclone Shelter	6	0	3	6	15
7 July 07	09	House of Satter Member	5	0	7	2	14
9 July 07	06	Ghola Primary School	5	7	2	1	15
10 Jul 07	07	Kashamari Cyclone Shelter	5	1	5	4	15
12 Jul 07	02	House of Ansar Member	5	1	1	8	15
14 Jul 07	01	Sankerkhati Mosque	5	1	2	7	15
16 Jul 07	03	Gobindapur school	4	1	2	8	15
18 Jul 07	05	UP building	3	0	3	9	15
21 Jul 07	04	UP building	5	0	4	6	15





Awareness raising activities at Kashamari Union

### **B) Pot song**

Pot song was also arranged in the Kashamari Union. Mass awareness camping activities were carried out through Pot Song in each large ward in the Union. Three pot song events were arranged in three different places. These places were Kashamari Union Parishad, Gobindapur puja mondap and Ghola primary school. In these events, attendance was very large. About 1500 people participated in each pot song event events.



A pot song event in Kashamari Union

### **C) Picture Drama**

A total of three picture drama were staged by Shushilan at Gabindopur High School premises, Kashamari Union Parishad premises and Kashamari Cyclone Shelter of Kashamari Union to create awareness among the local people about disaster preparedness, safe drinking water, sanitation, health and hygiene practices etc. Above one thousand community people were present at the each picture drama events. The chairman and other UDMC members of Kashamari Union were present at almost all the picture drama events.

## **D) Formation of 'Shuvoshakti'- A Youth Volunteer Group**

A total of 311 meetings of Shuvoshakti committee were held at 12 Unions of Shyamnagar Upazilla in a view to build up their capacity to face any kind of disaster. About 5219 youth (both male and female) took part at the meeting. Youth groups can play active roles before, during and after a disaster.

### **5.7.2 Expected Output and Out come:**

About 88% of Union DMC members along with PIC, local civil society, farmers group, vulnerable community and youth group have actively participated in project proposal preparation, LDRRAP implementation process, pre planning meeting, vulnerable people and vulnerable places selection process, beneficiaries' contribution system, RRAP implementation and monitoring as well as participatory decision making process.

Consequently, Union Disaster Management Committee (UDMC) has now become more efficient and active to respond to local disaster risk reduction initiatives having support from the community level. Recently, the embankment erosion caused local level disaster in Gabura, Burigoalini, Padmapukur and Kaikhali Union. UDMC, local civil society and youth groups of the Union jointly repaired the embankment.

During implementation of different interventions against LDRRAP at 12 unions of Shyamnagar Upazilla, Union DMC, PIC, local community and beneficiaries have played active role. All the interventions under Shushilan-CDMP partnership project have been successfully completed due to cordial help from the DMCs, PICs, local civil society and youth groups.

12 union levels & 01 Upazilla level DMCs are in operation in the area. A total number of 108 ward Shuvashakti committees in 12 Unions were sensitized and well organized to address disaster risks and they have known their roles and responsibilities before, during and after a disaster.

Union DMC and PIC members have exchanged their views, indigenous knowledge and resources among each other during RRAP implementation in Autulia and Burigoalini, Rmjannagar, Munshiganj and Padmapukur Unions. 75% of Union DMC members, PIC members, local civil society and ward level volunteers are sensitized and they are now capable enough to handle disaster risks management in their own localities.

60% of the community people along with PIC & local elites become aware on emergency disaster preparedness through training, meeting, workshop, picture drama, pot song, poster paper, focus group discussion etc. 70% community people especially women and disable are aware on Local Disaster Risk Reduction Action Plan implementation through meeting, focus group discussion, court yard meeting, awareness program and Union DMC, PIC's activities. 60% community people especially women have become aware on disaster risks/vulnerabilities and its reduction measures.

## **5.8 Lessons Learned**

### **5.8.1 Managerial**

- The experience gathered by the implementing NGO would be very much helpful to implement any additional projects in the same operational areas.
- Monitoring mechanism of implementation activities should be included in project proposals.

- Frequent transfer of Government Officials at the Upazilla level is a serious problem from the program coordination perspective.
- Local level capacity building facilitates implementation.
- Inadequate support services were not considered while preparing the project resulting in cost escalation
- High cost of living at certain project areas was not considered while preparing the proposal. So the IPs faced the problem of budget over-run.
- Time to time information sharing & mutual reciprocity avoid gaps and built trust among partners.
- For the sake of smooth implementation, during preparation of schemes it is wise to discuss widely with different stakeholders through whom proposed schemes will be implemented.
- Key project personnel should not be changed in the middle of implementation.

### **5.8.2 Programmatic**

- Priorities of local elite and that of people at risk are different. At the end of the day, it is the priority of the elite, not of masses, that prevails. Most members of the elite such as UP members, Chairmen and local government officials preferred their own interest and they do not consider mass peoples' necessities.
- People were not confident on NGO activities when IPs initiated their project activities. After implementation of some interventions from their action plan in some places, people got confidence on project activities and IPs.
- At the implementation stage, the participation of women, different types of stakeholders as well as members of UDMC, etc. should be ensured. This will develop the ownership of the program and also ensure the success of all initiatives.
- Building rapport with government officials is needed to avoid any complexity. Regular communication with local level officials contributes to increase mutual understanding which eventually helps to carryout the planned works.
- While participating in project activities, participants expected honorarium and refreshment which was not covered in the project budget but it was managed through motivation.
- Cooperation and support from all UDMCs were not equal but majority were in positive.
- UDMC members are less interested on risk reduction rather they are interested to support relief activities, although it is changing gradually.

### **5.9 Limitations of the Interventions**

- Local support service was very poor that it caused enormous delay in project implementation.
- Based on the completed CRA workshop, there were many ways come-out to reduce the identified risk. With the limited budget, it was not possible to implement those activities.
- Short-term nature of the intervention may not be helpful to attain the objectives. Awareness can not be raised through one-off interventions. It should be a continuous one.
- Limited understanding of risks and vulnerabilities on the part of government officials and political leaders impedes community risk reduction efforts.
- The project period is too short to comply with the demand and needs, which need long term project implementation.

- Project implementation was delayed due to delay in the approval process of the project.
- Continuous and multiple floods disturbed the planned implementation activities.

### **5.10 Recommendations for Sustainability**

- The project duration should be for 3 years and it could be continued for 2 phases at least for its more sustainable achievements.
- Project sustainability would be ensured through continuous participation of community people in the process of services delivery, cost sharing and services promotion.
- The capacity enhancement of the Disaster Management Committees under the local government collaboration to cope with the adversity of natural hazards would be effective in the long run.
- Mobilization of community based volunteers and imparting training on search and rescue would be a key for sustainability.
- Active participation of DMC and other stakeholders
- Government and non-government organizations should come forward to implement the interventions documented in the LDRRAP.
- Special fund for disaster risk reduction should be created at the local level for the local disaster management committee.

# **Chapter 6**

## **Promoting Gender Equity and the Needs of Socially Disadvantaged Groups**

### **6.1 Defining the Thematic Area**

Women, indigenous people, people with disability and other socially disadvantaged groups (SDGs) across the world continue to confront institutionalized inequality and exclusion from decision-makers. Partly because of this, these groups have become a focus for capacity-building through self-organization and in partnership with supporters. Supporting the capacity of women and SDGs to manage disaster risk is a key step in effectively engaging local actors in disaster risk reduction activities. A core challenge is to identify ways to develop new partnerships between women and SDGs, and disaster risk reduction actors, including government representatives (from local to national level) and humanitarian and development agencies. Such partnerships would not only formalize the role of grassroots actors in agenda-setting for disaster risk reduction, but would also allow for the up-scaling and replication of established, successful activities involving these groups.

A second key challenge is to more effectively institutionalize the participation of grassroots groups in disaster risk reduction activities. This requires breaking down myths surrounding current involvement in risk management activities and the capacity and scale of their actions. It is not enough to identify indigenous, women and other minority or excluded groups (such as migrants, those with chronic illness, disability, children or the elderly); participation also needs to be meaningful. Too often, reports proclaim the participation of local actors, but are only able to offer scant evidence of either the depth or sustainability of such participation. There are well-known advantages of including local actors in disaster risk reduction projects – from accessing local knowledge to saving costs and adding ownership. Women frequently form the majority in community groups and are often the glue that holds the local community together. Local actors, including indigenous people and women, are the first to respond in a disaster, they know the vulnerabilities of their families, and work together both formally and informally to build the resilience of their communities. But their contribution is often not formally acknowledged. It seems that a lack of technical language, as well as their invisibility in formal accounting processes, renders their contributions invisible, thereby perpetuating the myth of dependency and lack of capacity.

Women and SDGs already possess a great deal of risk management knowledge and experience. It is vital to learn from this experience, and to have the opportunity to share details of challenges and drivers for these activities. Lessons on how to incorporate knowledge into policy planning and to replicate lessons and good practice, as well as to learn from the lessons of failure, are key to any disaster risk reduction program that claims community-level engagement. Grassroots organizations can hold vital knowledge on local culture and values, which can then be integrated into the risk management process and therefore strengthen activities. Experience has shown that in the field of disaster risk reduction, language can create barriers between actors, in particular, between grassroots organizations and disaster management experts. Without understanding each others' languages we will not be able to share knowledge and experience of success and failure.

### **6.2 Summary of the Interventions**

A number of interventions have been carried out under the thematic area of promoting gender equity and the needs of socially disadvantaged groups by the implementing partner IED, Shamadhan, BNM, Gharani, RDRS, MMS and SGS. These implementing partners have

implemented activities like (a) supporting people with disability (PWDs) to run small grocery shops (b) constructing disaster endurable houses for families with PWDs (c) livelihood skills training to PWDs to improve livelihood security (d) distribution of necessary life support accessories and (e) livelihood support to indigenous community specially disable and women-headed family. Under this thematic area skill development training were provided to members of the physically and socially disadvantaged families, courtyard meetings were held on disaster preparedness, capacity of the staffs of PNGOs and UDMC members, PIC members were also built.

### **6.3 Objectives of the Interventions**

- To improve coping capacity of these group with livelihood support
- To involve socially disadvantaged and vulnerable groups from the community irrespective of their sex, age, occupation, religion and caste in the process of disaster management
- To ensure gender equity by promoting socially disadvantaged females and vulnerable and physically challenged groups in different community level activities and
- To create wider constituency for raising voice to implement local RRAPs through active participation of the community people with increased capacity.

### **6.4 Details of activities undertaken by Implementing Partners**

Most of the risk reduction interventions were directly and indirectly targeted towards improvement the wellbeing of the socially disadvantaged groups and thereby contributed towards gender equity. There were also a number of activities undertaken by the implementing partners to support PWDs with different types of technical and financial supports. Besides houses of the PWDs were constructed and training on different aspects to improve livelihood security for PwDs with distribution of necessary accessories were provided. The detail activities can be found in the following Table 6.1.

**Table 6.1: Detailed list of Interventions implemented by different Partner NGOs**

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
Sunamgonj	Dharmapasha		IED	Support PWDs with grocery to run small shop
Satkhira		Jalalabad, Jugikhali, Joynagar & Diara	Shamadhan	Support with Assistive Devices (Plastic Made Artificial leg, Wheel Carrier and Auxiliary Crutch to 10 Physically Disabled Persons)
	Kolaroa	Kushodanga	BNM	Provide Technical and financial support among persons with disability to increase their livelihood
	Shyamnagar	Nur Nagar	Gharani	Construction of 5 houses in to disaster endurable houses for families with PwDs
		Shyamnagar, Noornagar, Ishwaripur, Bhurulia	Gharani	Construction of 20 houses in to disaster resilient houses for families with PwDs
		Nur Nagar	Gharani	Renovate 20 vulnerable houses in to disaster endurable houses for families with PwDs
Lalmonirhat	Lalmonirhat Sadar and Aditmari	7 Unions & 1 Pourashava of Sadar and 8 Unions of Aditmari Upazilla	RDRS	Training on different aspects to improve livelihood security for PwDs with distribution of necessary accessories
Shirajgonj	Shahjadpur	Habibullah Nagar	MMS	Livelihood support to Disable and women headed family (10)
		Kaijuri	MMS	Livelihood support to Disable and women
		Sonatani	MMS	Livelihood support to Disable and women
Rajshahi	Bagha	Bausha	SGS	Livelihood support to indigenous community specially disable and women headed family

### 6.5 Key Benefits Produced

- Income of the marginalized poor and most vulnerable people have been increased.
- Whose plinth of the houses elevated, they don't need to shift their residence during flood. Other people can take shelter during flood.
- Poor people have become financially solvent and can contribute in family welfare.
- Houses, institutions and livelihood are secured from flood inundation.

- Demand of protein is met from the support provided by CDMP.
- Marginalized people have been financially self-sufficient. They are able to start small business to increase family income with grocery and other support. The chickens/ducks are giving eggs and they earn by selling those.
- Vegetables would be grown during rainy season in the ground elevated.
- Seeds of crops and seed bed would be protected from flood due to elevation of the ground.

## **6.6 Key Challenges Faced and Action Undertaken to Overcome the Challenges**

- Compared to the total demand the budget was too limited. To avoid any dispute the project staff involved the community in identifying the right people for intervention. The community had also been appointed through formation of the Project Implementation Committee to have an oversight role in order for ensuring that the assets given under the project were not sold out.
- The challenges to disaster risk reduction are so huge that all institutions need to work together. No institution should be more important than others.
- The duration of the project was too short. Long time and integrated development project should be undertaken and implemented with the fullest participation of the community people.
- Constant discussion and motivation with the community leaders helped to obtain their cooperation and participation in the CRA activities. Subsequently working and functional relation were established with the community members.
- Community expectation was more of receiving relief than the knowledge about hazards awareness and risk reduction concepts.
- Most of the flood affected people in the remote villages usually do not have any significant income earning activity. They are found to be solely dependent on relief for their food supply. To change peoples' mindset from the long year practice of waiting for relief towards self reliant would require substantial time and continuous effort. This one year project was just a starting point.
- Duration of the Project period was short to achieve the goal and objectives of the project, as one year duration is not sufficient for a project for sustaining. At least three years are needed to make a project sustain.

## **6.7 Case Study of Good Practices**

### **6.7.1. Cluster Housing for the Poor Women and People with Disabilities**

Manab Mukti Sangshya (MMS) is an implementing partner of CDMP assisted the UDMC of Gala Union in Shajadpur Upazilla at Shirajgonj district to identify the risks and vulnerabilities of the locality. The union is a remote area located on the bank of almighty river Jamuna. The area submerges almost every year during monsoon and the ultra poor women, persons with disabilities and the children of the poor households used to suffer a lot. They are in immense problem of finding appropriate shelter.

MMS identified 5 clusters where the most vulnerable people reside and raised the plinth of the 20 houses with the project support. They also received cattle as means to enhance their income and thereby improve their coping capacity.

Similar interventions were designed and implemented by MMS in 8 unions of the Shajadpur Upazilla of Shirajgonj district. Along with homestead plinth raising needs based livelihood supports were provided to the most vulnerable households. Altogether MMS provided support to 165 women headed vulnerable households and PWD. The package included



homestead plinth raising, providing of cattle and goat, installation of tube-well to ensure safe drinking water and skill and awareness raising training.

### 6.7.2. Living with Risks – The Alternative Adaptation Options for Livelihood Support

Samadhan, another NGO partner of CDMP worked in Jalalabad, Jugikhali, Joynagar & Diara unions of Kalaroa Upazilla at Satkhira district. Since 2000 the areas remains waterlogged 3-5 months a year and people, especially women, children, elderly and the PWD suffer most in such condition. Some crops land of low laying areas are under water and no crops are growing in low lying area in most of the time of the year. Peoples' livelihood pattern seriously disrupted as their houses are damaged and the homestead went under water. Their family remained in pre-famine condition as all their sources of livelihood support became interrupted. The physically challenged people are unable to move and remained locked in their house



Samadhan with LDRRF support designed and implemented a comprehensive package programme. Under the programme assistive devices such as Plastic Made Artificial leg, Wheel Carrier and Auxiliary Crutch were given to 10 Physically Disabled Persons. In order to cope up with the situation people were trained and inspired through pilot demonstration for adoption a number of alternative livelihood options like- Cattle fattening, Milky cow fattening, Vegetables cultivation, Homestead gardening, Floating gardening, Tree nursery, Poultry rearing, Deepwater rice cultivation, Use of safe water, Primary health care, Seed preservation, Small business, Fish cultivation, handicraft & IPM.

As part of the pilot demonstration 20 Khaki Camble of duck were given to each of the 100 women-headed disadvantaged families of 4 unions of Shyamnagar Upazilla as an option of livelihood risk reduction. The objectives of the piloting were

- a) To keep flow of income throughout the year including the time of disasters.
- b) To meet up the need of protein and reduce the risk of diseases.
- c) To save money for the purpose of disaster risk reduction.
- d) To adhere as an option of poverty reduction.
- e) To inspire the community people towards IGA.



This Khaki Camble variety of duck gives eggs almost throughout the year. It is profitable because it does not need extra care for its living. Duck is not attacked with diseases like other birds. Women can take care of it without hampering their household works. Besides, plenty of food they can get from the water bodies around the villages.

## **6.8 Lessons Learned**

Following lessons were learnt through implementation of the project.

- Capacity building of individual of disaster prone area is equally important as the capacity building of the institutions dedicated to the risk reduction activities. The more the capacity of the individual, the less is the risk when disaster occurs. The whole efforts should aim at increasing capacity of individual as well as the community.
- Community people became confident and hopeful to cope with disaster with the resource both in kind and knowledge in their possession.
- To minimize or reduce the disaster risk local resource mobilization is necessary.
- Spontaneous participation of women and persons with disabilities (PWDs).
- The community also understood that relief and response are not the right answer to address the loss of life and property caused by the disasters. It is the capacity building which should be the prime objective of disaster management strategy.
- The relief and response culture should be transformed into risk reduction strategy by raising community capacity through structural and non structural ways.
- The lessons learned through CRA activities with the community is that community understanding of disaster management strategy is coming closer to the governments' mission that empowerment and capacity building of community can contribute to risk reduction instead of relief and response activities.
- Through participation in the CRA activities the communities, local government authorities and Upazilla administration could realize that the more the capacity of the community the less will be the risk due to hazards and calamities.
- School going students can play important and active role in family preparedness if they are awareness buildup on DRR. Students are even saving in their earthen banks as part of the family preparedness.
- Risk reduction work would be successfully if people are allowed with the opportunities to use their potentials and community based DRR can become an effective way to safe and secured life of people.
- Livelihood support to the vulnerable women and their families needs to be followed up further for maintaining their economic growth and reducing vulnerable situation.
- About 6500 families affected by flood but we responded only to meet emergency need of 1500 families. That was very poor comparing the demand. We gave priority on the old aged people, women and disables.
- Besides preparedness response is also an emergency work. Besides NGOs and Government response community needs to be capable in terms of resources (materials and money) to address the need of emergency.
- A better coordination of GO-NGOs and UDMCs is important to complete for effective emergency such as this year happened.

## **6.9 Limitations of the project**

- Budget for risk reduction interventions were too inadequate to meet the minimum demand of the community.
- Insufficient backstopping support from CDMP
- Project duration was too short
- No follow-up activities to ensure retention of the assets given and their productive use in future

### **6.10 Recommendations for sustainability**

- Need to mobilize fund at the local level or create reserve fund to support alternative income generating projects on a continuous basis
- Coordination among government and different development partners is essential.
- Self reliance should be the main mechanism of the disaster mitigation to combat disaster.
- Climate change effects on agriculture, livestock and other sources of livelihoods should be communicated to the community for their awareness and livelihood adaptability mechanism, and projects regarding livelihood security should be undertaken to enhance the capability of the community.
- Early response from outside is necessary, but it cannot sustain the livelihood strategy of the inhabitants of the disaster prone area.
- There should have been continued efforts for all hazard related awareness, community empowerment and knowledge sharing and networking with govt. and non govt. organizations.
- The people have become aware but still strong motivation and awareness raising activities should be continued among the project people for confirming their present awareness and self-realization.
- It has been found, people need employment and income earning opportunities so, peoples' economic status should be improved through undertaking different income generating activities to create employment and earning opportunities for them.

# Chapter 7

## Promoting Livelihood Security

### 7.1 Defining Thematic Area

Natural hazards, which are becoming more intense and frequent, have a devastating impact on the world's poor. A large-scale hazard that hits a highly vulnerable community with low capacity to cope reverses hard-won development gains, entrenching people in poverty cycles, and increasing vulnerability. How to break these cycles is a huge challenge for governments, development practitioners and societies as a whole. Sustaining and protecting livelihoods of the poor and marginalized is a way to tackle poverty. This, however, is a huge task for poor communities, especially those that are vulnerable to natural hazards.

When it is known early enough that severe food insecurity is a threat, the most effective way of saving lives is by protecting how people get their food. People acquire their food (and income) differently – through production or purchase, by harvesting or hunting wild foods, through gifts, or in exchange for work. To do this they rely on their 'livelihood assets': their labour and skills, land and other natural resources, livestock, tools, facilities (health, education, banks, markets and roads), savings, social networks and political representation. By protecting people's livelihoods in times of crisis, the humanitarian response can save lives. When a person is livelihood secure, they are food secure.

A baseline analysis is important in understanding how people are vulnerable, the risks they face and how they cope. One type of baseline is useful for understanding livelihoods for better programme design – often called a vulnerability analysis. Another type identifies indicators that can be monitored over time to understand changing conditions. This second type is useful for early warning and for programme monitoring and evaluation. Because baseline studies can be time consuming, costly and require a certain technical expertise, agencies tend to neglect them. However, in some cases, baseline information may exist already. Or, better, agencies can choose to support or participate in government efforts to create baselines with longer-term benefits for humanitarian and development programmes.

### 7.2 Summary of Interventions

A good number of partner organizations of CDMP have implemented different projects under the thematic area of promoting livelihood security. Partner organizations include IED, IR, FIVDB, GJKS, Samadhan, IDO, BNM, Shushilan, Gharoni, RDRS, POPI, SAMATA, BDPC, NDP, GOOD EARTH, SHARP, RIC, VERC, FHD, TARANGA, IDEA, CNRS, RISDA. These PNGOs have implemented a range of livelihood interventions in the pilot districts. The type of interventions and activities carried out include technology transfer through skills development training along with inputs support plus the required extension services.

### 7.3 Objectives of the Interventions

- Improvement of coping capacity and reduction of disaster vulnerability through improved livelihood security at household level
- Ensuring gender equity by promoting socially disadvantaged females and vulnerable and physically challenged groups in different community level activities.
- Creating wider constituency for raising voice to implement local RRAPs through active participation of the community people with increased capacity.
- Technological refinement of different adaptation options for replication through pilot testing

## 7.4 Activities undertaken by partners

### 7.4.1 Support on Agricultural Adaptation

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
Sunamgonj	Tahirpur	Badaghat	CNRS	Workshop on 'Integrated Pest Management' for 20 farmers
	Tahirpur	All 7 union of Tahirpur	CNRS	Piloting Short Duration Rice Varieties and adaptation Alternative crops by Engaging BRRI, BARI
	Tahirpur	All 7 union of Tahirpur	CNRS	Awareness on Alternative crops & short duration rice cultivation
	Tahirpur		CNRS	Institutional Dev through Training, providing Legal Basis to CBOs
Satkhira	Kolaroa	Diara	Shamadhan	Floating Garden
	Kolaroa	Diara	Shamadhan	Floating Garden
	Kolaroa	Diara	Shamadhan	Integrated Model of Risk proof homestead for Demonstration
	Bhabadaha	Diara	Shamadhan	Training and Demonstration of Ring based Vegetable Cultivation
	Bhabadaha	Diara	Shamadhan	Training on Bamboo Craft
	Bhabadaha	Diara	Shamadhan	Fish cultivation at open water bodies
	Avoy nagar, Monirampur, Keshobpur	Sufolakati, Panjia of Keshobpur, Durbadanga, Kultia, Monoharpur of Monirampur & Calitia of Avoy nagar	Samadhan (Bhabadah)	Chinese Rice Hatching Incubation Training and Support
Syamnagar	Kashimari, Atulia, Buri-Gualini, Munshigonj	Shushilan	Quick Compost Fertilizer Plants (80)	
Faridpur	Sadarpur	Dheu Khali	RISDA	Training on Crop Diversification & Flood Tolerant Crop Cultivation for 27 marginal farmers with Plot Demonstration
	Sadarpur	Krishnapur	RISDA	Training on Crop Diversification & Flood Tolerant Crop Cultivation for 27 marginal farmers with Plot Demonstration
	Sadarpur	Bhasan Char	RISDA	Training on Crop Diversification & Flood Tolerant Crop Cultivation for 27 marginal farmers with Plot Demonstration
Shirajgonj	Chowhali	Khaskawlia, Khaspukuria, Umarpur & Stahl	BDPC	Training to 360 farmers on Disaster Resilient Farming Practice

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
	Kazipur	Natuar Para	NDP	Nine days training on Flood Tolerant Agriculture Practices
		Nischintapur	NDP	Nine days training on Flood Tolerant Agriculture Practices
		Khasrajbari	NDP	Training on Flood Resistance Crop cultivation on Flood Affected agricultural field
		Chalita Danga	NDP	Training on Flood Resilient Crops Cultivation
		Gandhail	NDP	Training on Flood Resilient Crops Cultivation
			NDP	Training on Flood Resistance Crop cultivation on Flood Affected agricultural field
Rajshahi	Bagha	All union	SGS	Capacity building on improve agriculture practice by proper Seed Preservation
		Tanore/ Godagari	Mohonpur	VERC
	Badhair		VERC	Training on Agricultural practice to protect crops insecticides and Fogs
	Panchandar		VERC	Training on Agricultural Practice to Save Crops from Disaster Risks
	Badhair		VERC	Training on Integrated pest management
	Taland		VERC	Training on Modern Agricultural Technique
	Godagari		VERC	Support for reduce vulnerability by integrated project
	Gogram Union		VERC	Training of Fish Farming to enhance Income of Alternative Income
	Mohonpur		VERC	Training on Fish Cultivation
	Saranjai		VERC	Training to Farmer on Agriculture product
	Godagari	Basudevpur	FHD	5 days training and Demonstration on Production of Fodder and storage
		Basudevpur	FHD	5 days training on Skill Building by use of Modern Agricultural Technology
		Matikata	FHD	5 days training and Demonstration on Production of Fodder and storage
		Char Asharia Daha	FHD	5 days training and Demonstration on Production of Fodder and storage
		Godagari	FHD	5 days training and Demonstration on Production of Fodder and storage

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
		Matkata	FHD	5 days training on Skill Building by use of Modern Agricultural Technology
		Godagari	FHD	5 days training on Skill Building by use of Modern Agricultural Technology
		Char Asharia Daha	FHD	5 days training on Skill Building by use of Modern Agricultural Technology
		Char Asaria Daha	FHD	Day long training on use compass to Identify Right Direction During Foggy Weather
		Gogram	FHD	Training on Skill Building by use of Modern Agricultural Technology

#### 7.4.2 IGA Support

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
Sunamgonj	Dharmapasha		IED	Nursery training for sapling production
	Jonnathpur	PB Birgaon	IR	Training on poultry rearing and provide poultry support
		Holdipur	IR	Training on poultry rearing and provide poultry support
		Mollapara,	IR	Training on poultry rearing and provide poultry support among women & PwD participants
		Patli	IR	Training on Cow Fattening
		Haldipur	IR	Training on Tailoring and provide Sewing Machine for IGA
		Asherkandi	IR	Training on Tailoring and provide Sewing Machine for IGA
		Kolkolia,	IR	Training on Homestead Nursery and provide support for Nursery development
		Asharkandi	IR	Training on goat rearing for vulnerable women with Goat support for rearing
		Sayedpur	IR	Training on goat rearing for vulnerable women with Goat support for rearing
		Kalkalia	IR	Training on goat rearing for vulnerable women with Goat support for rearing
		Durgapashi	IR	Training on poultry rearing and provide baby duck and chicken
		Patli	IR	Training on poultry rearing for vulnerable women with chicken support for rearing
		Patli	IR	Training on Cow Fattening with support
Haldipur	IR	Training on Tailoring and provide Sewing Machine for IGA		

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
		Asherkandi	IR	Training on Tailoring and provide Sewing Machine for IGA
		Kolkolia,	IR	Training on goat rearing for vulnerable women with Goat support for rearing
		Asharkandi	IR	Training on goat rearing for vulnerable women with Goat support for rearing
		Sayedpur	IR	Training on goat rearing for vulnerable women with Goat support for rearing
		Kalkalia	IR	Training on Cow Fattening with support
	Biswamberpur	Fatepur	FIVDB	Training on enhance Family income to reduce Disaster Risks through Duck Rearing
	Biswamberpur	Badhghat South	FIVDB	Training on enhance Family income to reduce Disaster Risks through Duck Rearing
	Tahirpur	Dakkhin Sreepur	CNRS	Training on 'Murta' cultivation with necessary support among 20 farmers to enhance family income
	Derai	Sharmongal	GJKS	Training on Sheep rearing with support for IGA
	Derai	Tarol	GJKS	Training on Sheep rearing with support for IGA
Satkhira	Avoy Nagar, Monirampur, Keshobpur	Panjia, Sufolakati union of Keshobpur, Durbadanga, Kultia, Monoharpur of Monirampur & Calitia of Avoy Nagar	Samadhan	Training on Duck rearing and provide support among women & PwD participants
		Sufolakati & Panjia union of Keshobpur, Monoharpur & Kultia union of Monirampur & Calitia union of Avoy Nagar	Samadhan	Training on Vaccination
		Sonabaria, Keralkata, Chandanpur, Keragachi & Kalaroa poyrashava	IDO	Training on Tailoring with Sewing Machine Support among <b>50</b> vulnerable Women from women headed families & families with PwDs
		Sonabaria, Keralkata, Chandanpur, Keragachi & Kalaroa poyrashava	IDO	Training on Duck rearing for IGA
		Kalaroa Municipality	IDO	Training on Block Boutique for <b>40</b> poor and vulnerable women with material support to start IG activities
		Langal Jhara	BNM	Training on Poultry rearing and proved ducklings to <b>45</b> beneficiaries for IGA



DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
	Syamnagar	Munshigonj	Shushilann	Training on Bee Keeping for Honey Extracting Machine
		Shyamnagar, Noornagar, Ishwaripur, Bhurulia	Gharoni	2 days Training on Poultry Rearing with poultry support
		Shyamnagar, Noornagar, Ishwaripur, Bhurulia	Gharoni	2 days Training on Duck rearing with support t
		Shyamnagar, Noornagar, Ishwaripur, Bhurulia	Gharoni	Training on Goat rearing with support for IGA
		Shyamnagar, Noornagar, Ishwaripur, Bhurulia	Gharoni	Training on livelihood and livelihood support (50)
Lalmonirhat	Lalmonirhat Sadar and Aditmari	Kuaghat and Moghalhat	RDRS-	Training on Tailoring with sewing machine support
		Khuniagacha & Tajpur union of Sadar & Mohishkocha union of Aditmary U/Z	RDRS-	Two days training on livestock rearing with livelihood support
	Hatibandha	Shingimari Union	POPI	Training on Goat rearing with support for IGA
Faridpur	Sadarpur	Sadar	SAMATA	Training on duck & Chicken rearing
		Char Biswamberpur Union	SAMATA	Training on duck and chicken rearing
		Akoter Char	SAMATA	Training on goat rearing with goat support
		Char Monair	SAMATA	Training on goat rearing with goat support
		Diara Narikelbaria	SAMATA	Training on goat rearing with goat support
		Char Manair	SAMATA	Training on poultry rearing and support with 25 chicken to 125 women headed families
		Akoter Char	SAMATA	Training on poultry rearing and support with 25 chicken to 125 women headed families
		Diara Narikelbaria	SAMATA	Training on poultry rearing and support with 25 chicken to 125 women headed families
		Char Biswamberpur	SAMATA	Training on Goat rearing and support with 2 goat to 75 women headed families
		Sadarpur Union	SAMATA	Training on Goat rearing and support with 2 goat to 50 women headed families
Sirajgonj	Chowhali	Omorpur	BDPC	Training on Livestock Management
	Kazipur	Nischintapur	NDP	<i>Livelihood Support including support training on Risk reduction through IGA</i>

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
	Belkuchi	Belkuchi Sadar	GOOD EARTH	Training on Tailoring with Sewing Machine support
		Belkuchi Sadar	GOOD EARTH	Training on IPM for 30 marginal farmers with the help of Upazilla Agricultural Extension Office
		Belkuchi Sadar	GOOD EARTH	Training on Livestock Rearing with Livestock Support
	Sirajganj Sadar	Bahuli	SHARP	Training on Poultry & Duck rearing with poultry & duck support for livelihood security
Cox's Bazar	Pekua & Ramu	Eidgor	RIC	Livelihood support to indigenous community to increase their family income
Rajshahi	Tanore/Go dagari	Rishikul	VERC	IGA Training on Duck Rearing
			VERC	Provide Sewing machines and 20 days training on sewing technique for IGA to increase family income
		Taland	VERC	Day long training on Income Generation through Poultry rearing
		Badhair	VERC	Day long training on Income Generation through Poultry rearing
		Saranjai	VERC	Day long training on Agricultural Practice to Protect Crops from Insecticides & Fogs
		Chanduria	VERC	Day long training on Agricultural Practice to Protect Crops from Insecticides & Fogs
		Kalma	VERC	Day long training on Income Generation for Goat rearing
		Kamargoan	VERC	Income Generation Training on Duck rearing
		Pachandar	VERC	Income Generation Training on Goat rearing
		Rishikul	VERC	IGA Training on Duck Rearing
		Badhair	VERC	Provide Sewing machines and 20 days training on sewing technique for IGA
		Pachandar	VERC	Provide Sewing machines and training on sewing technique for IGA
		Mohonpur	VERC	IGA Training on Bag, Envelop, and other paper products
		Mohonpur	VERC	IGA Training on Bamboo products
		Mohonpur	VERC	Training on Goat rearing among 20 participants with goat support for IG activities
		Mohonpur	VERC	IGA Training on Goat and Poultry Rearing
		Basudevpur	VERC	Training on Income Generation through Duck Rearing for 20 women with duckling support

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
	Godagari	Gogram Union	FHD	15 days training on Tailoring and provide Sewing Machine
		Basudevpur	FHD	15 days training on Tailoring and provide Sewing Machine
		Matikata	FHD	15 days training on Tailoring and provide Sewing Machine
		Godagari	FHD	15 days training on Tailoring and provide Sewing Machine
		Godagari	FHD	Day long training on Duck and Goat rearing and support for IGA
		Char Asharia	FHD	Day long training on Duck and Goat rearing and support for IGA
	Agoilghara	Bakal, Goila and Rajihar	TARANG A	2 days training on business management with materials support for small business
		Bakal, Goila and Rajihar	TARANG A	Day long training on Duck and Chick rearing and support for IGA
		Bakal, Goila and Rajihar	TARANG A	Day long training on Cow rearing and support for IGA
		Rajihar	TARANG A	Training on livestock and distribution of Cow for rearing to increase family income
		Bakal, Goila and Rajihar	TARANG A	Provide Sewing machines to 20 vulnerable poor women to increase family income
		Bakal, Goila and Rajihar	TARANG A	Livelihood support with livestock

### 7.4.3 Health Support

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
Sunamgonj	Dharmapasha	Dharmapasha, Joysree, Paikurhati, Selboros, Rajapur uttar/dhakin, Bangsikundu	IED	Installation of 10 Deep Tube wells
		Joyshee, Shukhair Rajapur South and north, Maddhanagar, Maddhanagar,	IED	Installation of 5 Deep Tube wells
		Bhimkhali, Sachna Bazar, Jamalgonj Sadar	IDEA	Tube-well Installation (13 nos)
		Sadar, Fenerbac, Bhimkhali, Sachnabazar, Behali	IDEA	Tube-well Installation (14 nos)
	Sadar/South	Jahangirnagar	IR	Construction of Dug wells (3nos)
		Jahangirnagar	IR	Construction of Rain water harvesting plant
		Jahangir Nagar	IR	Reconstruction of 4 Dug Wells

				as Source of Safe Drinking Water
		Jahangir Nagar	IR	Reconstruction of 4 Dug Wells as Source of Safe Drinking Water
	Derai	Charnerchar	GJKS	Basic Training for TBAs (24 TBA)
		Charnerchar and Rafi Nagar	GJKS	Secure safe drinking water (16)
Shatkhira		Diara	Shamadhan	installation of tube-well
	Kaligonj	Champaful	DAM	Pond Sand Filter to ensure safe drinking water
		Bharashimul	DAM	Pond Sand Filter to ensure safe drinking water
		Bharashimul	DAM	Pond Sand Filter to ensure safe drinking water
		Mathureshpur	DAM	Pond Sand Filter to ensure safe drinking water
		Dhalbaria	DAM	Pond Sand Filter to ensure safe drinking water
		Mathureshpur	DAM	Pond Sand Filter to ensure safe drinking water
		Krishnanagar	DAM	Pond Sand Filter to ensure safe drinking water
		Moutala	DAM	Pond Sand Filter to ensure safe drinking water
		Ratanapur	DAM	Pond Sand Filter to ensure safe drinking water
		South Shreepur	DAM	Pond Sand Filter to ensure safe drinking water
		Nalta Union	DAM	Ensure safe drinking water through Filtering of Pond water (1)
		Mothureshpur	DAM	Ensure safe drinking water through Filtering of Pond water (1)
		Ratanpur	DAM	Supply of safe drinking water through pipeline
		Bishnapur	DAM	Pond Sand Filter to ensure safe drinking water
			Sanarbaria & Keralkata union	IDO
	Kolaroa	Kushodanga	BNM	Installation of Rain Water Harvesting Systems ( <b>9</b> )
		Koila		Installation of Rain Water Harvesting Systems (45)
	Syamnagar	Nur Nagar	Gharoni	Rain water harvesting System ( <b>10</b> )
			Gharoni	Construction of Rain Water Harvesting Systems (18)
		Munshigonj	Shushilan	Construction of Rain Water Harvesting System (25)
		Ramjan Nagar	Shushilan	Construction of 50 Units of Rain Water Harvesting Plants

		Atulia	Shushilan	Raising of plinth height (36) with safe drinking water support
Faridpur	Faridpur Sadar	North Char	FDA	Lifting up of Existing 13 tube well at char areas
Shirajgonj	Chowhali	Sadia Chandpur, Khaskawlia, Khaspukuria, Umarpur & Stahl	BDPC	Training for Traditional Birth Attendants (35 TBAs)
	Kazipur	Pourashava	NDP	Training on Emergency Health Service
		MonsurNagar	NDP	Training on Emergency Health Services for Mothers, Child and PWD during Flood
		Gandhail, Majjbari, Khashrajbari, Char Girish, Nishchentapur and Tekani	NDP	Installation of Tube well, Sanitary Latrine and Plantation at Earthen Killa
		Shubhogacha and Nischintapur Union	NDP	<i>Livelihood Support including support for safe drinking water</i>
Cox's Bazar	Teknaf	HoaiKhong	CODEC	Construction of Ring Well
		HoaiKhong	CODEC	Construction of Ring Well
	Ukhia	Bharuakhali	CODEC	Rain water harvesting <b>(3)</b>
	Sadar/Ukeya	Raja Palong Union	HITAISHI	Installation of Deep Tube well (4)
	Pekua & Ramu	Reduce health hazard by providing Mosquito net	RIC	Awareness raising on Malaria & distribution of Mosquito Nets
		Khunia Palong, Joarianala, Rashid Nagar	RIC	Installation of 4 Deep Tube well for safe drinking water
Rajshahi	Bagha	Covering all 9 union	SGS	Training on First Aid and rescue
		Kismat Ganakoir	DCH	Renovation of Existing Water well and Installation of Tubewell to connect with water well water
		Kismat Ganakoir	DCH	Renovation of Existing Water well and Installation of Tubewell to connect with water well water
		Joy Nagar Union	DCH	Renovation of Existing Water well and Installation of Tubewell to connect with water well water
		Joy Nagar Union	DHC	Renovation of Existing Water well and Installation of Tubewell to connect with water well water
		Joy Nagar Union	DCH	Renovation of Existing public Water well and Installation of Tubewell to connect with water well water at Md. Amjad Hossains Home

		Naopara	DCH	Renovation of Existing public Water well and Installation of Tubewell to connect with water well water at Purbo para Jame Masjid's Ground
		Maria	DCH	Renovation of Existing public Water well and Installation of Tubewell to connect with water well water at Md. Abed Ali's Home
	Tanore/Godagari	Godagari	VERC	Installation of 3 Tara-II Dev Head Hand Pump Tube Well
		Chanduria	VERC	Installation of TARA Pump to reduce water born disease (9 Tara pump)

#### 7.4.4. Support on Tree Plantation

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
Sunamgonj	Jamalgonj	Beheli, Fenerbak	IDEA	Wetland Plantation Programme (5,000 karach)
	Derai	Sharmongal	GJKS	Plantation of <b>600 nos.</b> Karach tree to protect home yards from soil erosion by hafal
Shatkhira	Kaligonj	Moutala	DAM	Road side Tree Plantation (2 km)
		Nalta	DAM	Road side Tree Plantation (2 km)
		Dhalbaria	DAM	Road side Tree Plantation (1km)
		Tarali	DAM	Road side Tree Plantation (2km)
		Champaful	DAM	Plantation of Mehagani, Raintree, Keora and Neem (3km)
		Krishnonagar	DAM	Road Side Plantation (1km)
		Mathureshpur	DAM	Road Side Plantation (2km)
		Nalta Union	DAM	Tree Plantation
	Syamnagar	Kashimari	Shushilan	Forestation (1.5 km of river bank)
	Syamnagar	Koikhali	Shushilan	Forestation on River Bank Char land (2km)
Faridpur	Syamnagar	Paddmapukur	Shushilan	Plantation of Keora Tree (8000) in 2 km
	Bhanga	Agli	SDS	Plantation (12,000)
Shirajgonj	Charbadrasan	Charbhadrasan and Charharirumpur	VOSD	Plantation of 1000 tree
	Chouhali	Khaspukuria, Omorpur Sthal, Sadia Chandpur	BDPC	Plantation for Disaster Risk Reduction ( <b>4,000 plantation</b> )
Cox's Bazar	Belkuchi	Belkuchi Sadar	GOOD EARTH	Tree plantation on 2 kms roadside (2,000 plant)
	Ukhia	Ratna palonh and jalia Palong	CODEC	Training on Disaster Preparedness for Vulnerable Groups 320 on plantation
	Ukhia	Pokkhali	CODEC	Tree Plantation (2700 plant )
	Ukhia	Holdia Palong	CODEC	Tree Plantation (2000 plant )
	Sadar/Ukeya	Palongkhali	HITAISHI	Social forestation on 2 km long roadside

	Pekua & Ramu	Rajakhali, Mognama	RIC	Plantation to reduce soil erosion (97,460)
	Pekua & Ramu	Fatekcharkul, Chakmarkul, Khunia Palong, Gorjonia and Kacchapia	RIC	Social Forestation by Plantation (20,000)
	Cox's Bazar Sadar	Chowfaldandi	RDF	Afforestation to protect village from sea wave erosion
Rajshahi	Bagha	Monirampur	SGS	Plantation to reduce soil erosion ( <b>4,800</b> )
	Bagha	Baju Bagha	SGS	Plantation of <b>4,000</b> Saplings
		Panan Nagar union	DCH	Plantation to reduce flood erosion and impacts of Drought on 1.5 km road side (1,700)
		Deluabari	DCH	Roadside Plantation covering 1.5 km to reduce flood erosion and impacts of Drought (1,700)
		Ragunathpur to Kabari Para	DCH	Plantation to combat Drought (500)
		Pakri	VERC	Plantation of 640 Mango Saplings

## 7.5 Key Benefits Produced

- The technology along with skills training and the inputs in the form of productive assets and working capital provided through project helped the vulnerable and ultra poor to be productively engaged and have a continuous source of income.
- The most vulnerable women along with the physically challenged people were the priority beneficiary groups who received two-third of the project benefits.
- The small and marginal farmers were the other beneficiary groups with whom a number of alternative agricultural adaptation to climate change options were tested. The options include field testing of different flood and drought resilient crop varieties, integrated rice-fish cultivation, integrated pest management, training on crop diversification, preparation of compost, agro and social forestry training along with input support.
- The homestead plinths of the most vulnerable families were raised. They were also given with hybrid seeds and the saplings for homestead gardening.
- The landless vulnerable women received cattle goat, chicks and ducks and required skill training for their rearing. Depending on scope and availability of time and required helping hands some of the women were given with sewing machine and training on tailoring; others were supported with initial capital and the on the job training to run small tea and grocery shops. These supports made the de-facto women become self-reliant which had contributed towards development of their overall lifestyle.
- The grown plants would save them from starvation by providing food and nutrition support. Plants will also save them from storm and lightning in the future. Reduced the risks of soil erosion and the road is safer now.
- To expand the employment opportunities in informal sector beneficiaries were provided with bamboo and other raw materials to make baskets with them. They made baskets, sold them and used the earned money in several purposes

## **7.6 Case Study of Good Practices**

### **7.6.1 Case Study-1: Flood Risk Reduction Programme**

The programme was implemented from April 2008 to May 2008 in Diar Kadirpur (Tiktikir Char) of Pakuria Union. It is located in the Bagha Upazilla of Rajshahi district. This integrated programme homestead raising, installation of supplying drinking water and sanitary toilets. Diar Kadirpur is lying on the south bank of Padma. Padma, the mighty river on three sides, surrounds it. This char is full of sand where trees are very rare. Here about 130 to 135 landless families who lost their land from river erosion settled here in this low lying land four to five years before. Every year this area gets flooded. Most of them are agricultural day labourer. They built their houses on *khash land*. Road is not well developed with Upazilla Sadar. Walking and boat are the only ways to reach the area in rainy season. There is a scarce of loamy soil in char area. There is some well-inundated land by river on the north side of the village. Jute and rice grows well. A mango garden is growing here which will take two to three years to flourish. They have no facility to lead normal life. There is no good infrastructure like market place, health complex, mosque etc. The only school shifted several times for river erosion. People feel that as such they live in a desert having no minimum facilities of the citizens.

#### **Objectives**

- To protect the families from flood.
- To improve their livelihood options by providing them financial support.
- To ensure the supply of drinking water by installing tube wells
- To save people from different water-borne diseases and ensure a healthy life.
- To reduce the sufferings of people by making an easy access of/availability to drinking water.
- To ensure primary health care for all people.
- To protect the seeds easily by providing training and seeds support.

#### **Beneficiary Groups**

The 45 landless families who are affected by river erosion are the beneficiary group of the programme. The plinths of their houses had been raised to protect from flood. Under this comprehensive programme four goats were provided to each family to increase family income, installed six tube wells and twenty two sanitary latrines.

#### **Situation Existed before the Programme Implemented**

In this char there is a single primary school which had been flooded every year. Earlier it has shifted several times. It is now eight to ten kilometer away from its original place. The school had no structure at all. Even it has no furniture and electricity. All the villagers wanted to reconstruct this school, which can disseminate the light of education. There was no sanitary latrine in this village. Safe water was a dream for the villagers. CDMP had re-built the school, with provision all the minimum facilities.

#### **The Benefits Received**

- This program protects houses from flood by elevating ground of the houses.
- People now can drink safe water.
- People's hygienic defecation and health has been ensured
- Water-borne diseases can now been protected



- Villager’s livelihood options and income generating activities have been enhanced.
- There were many skills enhancement trainings provided which includes seed preservation, gardening, motivation etc. The project also organized medical training and handed over medical kits to twenty two trainees to ensure primary health care services during emergencies.
- Active participation of the local people is a significant part of this program.

### Challenges Ahead

- To achieve more success it needs to give cows instead of goats because cows are more useful and suitable especially in Char area.
- The plastic-pipe of the tube well is not sustainable and platforms have already damaged.
- There is no Monitoring from the Government at all.
- Sustainability of a project is highly related with available funding. Lack of funding hampered the effectiveness of the project.
- The existing PIO complains about the proper use of funding.

### Learning Points for NGOs and ISS

- The implementing partner NGO had already closed its office. There is a need for some follow-up support services designed and implemented in order to make it more sustainable and helpful for the target beneficiary. The implementing part
- There should be a good coordination between GO and NGO stakeholders in terms of implementing and designing the activities.
- Communication system is very poor. Communication and educational infrastructure development should be given priority.
- Char people are greatly deprived of their basic human rights. GO and NGO should be more aware about their basic problems to mitigate their natural disaster related vulnerability.

### 7.6.2 Cast study-2: Seed Bed Raising

Name of the Case	Seed Bed Raising
Union:	Paikurati
Upazilla:	Dharampasha
District:	Sunamganj

#### Introduction:

Seed bed is very important in agriculture because the first relationship between seeds and soil grows from here. Bangladesh is an agricultural country. Two third people of the country are directly or indirectly related to agriculture. Seed bed is one of the primary steps of agricultural production. That is why seed bed is so important. All seed beds are not same because of geographical diversity of Bangladesh. Sunamganj is a haor area. Dharampasha is one of the Upazillas of Sunamganj that is surrounded by haor; most of the people of this area are directly related to agriculture. Seed beds in such haor areas go under water in almost every year. Seed bed raising is a very important activity, especially for haor area.

In 2007, seed bed raising programme was conducted in the school field of Badshaganj of Paikurati Union of Dharampasha Upazilla. IED (Institute of Environment and Development)

conducted this seed bed raising program here. Around 350 feet long and 250 feet wide seed bed is beside the Badshaganj Bajar. One and half feet high soil was dug here. A total of 131 thousand cubic feet soil was dug for this seed bed. The program was implemented within the month of February to March of 2007 and the total cost amounted to be Tk.1,68,400. Community contributed Tk. 33,000. Seeds of Ropasman of about 200 acres could be preserved by this high seed bed. Main aim of this program was to decrease the crisis of seed bed for the people living in low-lying land. Most of the seed bed goes under water during the period of flood. As a result seed bed plays a crucial role for those relying on agriculture.

### **Good Practices**

- To ensure rice cultivation properly by elevating seed bed.
- It is a very good intervention in haor areas especially in Sunamgonj because it ensures farmer's access to seed bed for cultivating seed during flood when low-lying seed bed goes under water.
- To provide access to seed bed for the poor farmer who don't have any elevated seed bed.

### **Challenges Ahead**

- Soil protecting measures are not effective. Hence, innovating measures should be taken.
- PIC member should be more active in selecting beneficiary for such program.
- Poor farmers should be given priority for cultivating seeds at the elevated seed bed.

### **7.7 Key Challenges Faced and Actions Taken to Overcome the Challenges**

- Due to flood during the months of July, August and September, the pre-designed project proposals were submitted and approved in delay. RISDA-Bangladesh had to work intensively to finish the job in time with good cooperation with the local govt. bodies.
- Need for development projects in the disaster stricken and disaster-prone areas is very intense. Crises in the areas are manifold. In the char (dried river bed) areas, livings places are not permanently settled, livelihood options vary largely from season to season and area to area, and infrastructures for village life are also absent. A new need arises before another 2 are met. So, when a need is fulfilled or set to be fulfilled, another is felt much stronger.
- The UDMCs members were inactive and ignorant of their duties.
- Lack of leadership in community affairs.
- Ensuring the participation of vulnerable people i.e. Women and Persons with disability in the training sessions were a challenge because of the cultural taboo.

### **Actions Undertaken to Overcome the Challenges**

- Through motivational activities and frequent communication with the members of UDMCs, they were made pro-active.
- Though motivational activities and building awareness on social, economical and cultural rights, their leadership grew in the communities.
- With the help of the public representatives of local government, the elite people, journalists and educated persons, through discussions and communication, the gap between them is reduced which activated on both males and females.

- The participation of the most vulnerable people was ensured by contact with them at several times and the list provided to the UDMCs.
- Participatory monitoring approach was introduced in the project by involving the UDMCs and PICs
- Several interaction both formal and informal; and interpersonal relationship were developed among the DMC members the NGO project personnel.
- At the initial stage it was difficult to motivate the members of UDMC; actually the UDMC was not functional at that stage. The project staff had to motivate them through organizing different meetings and workshops involving them in livelihood risk assessment and preparation of projects on risk reduction options and UDMC is now quite active in regard to disaster related activities.
- SIDR made another challenge in regard to implementation of the project activities. SIDR made huge damage to properties and crops. Local administration, Union Parishad, UDMC, UzuDMC, NGOs worked together to help the affected people to overcome the situation.

## **7.8 Lessons Learned**

### **7.8.1 Managerial**

- It has strengthened the possibility of bird firms in this area.
- Continuation of the project needs to be ensured.
- Long term staffs are needed for monitoring.
- More involvement of the local influential persons will strengthen the program.
- Representative from outside of the Union Parishad could be included.
- More training program can enhance the opportunity.

### **7.8.2 Programmatic**

- The first flood in the middle of 2007 damaged standing crops and washed away many of the houses of the farmers in the project area. As usual, in 2 months time, they withstood the sufferings, held courage and borrowed money from different sources to cultivate crops again. When the farmers were about to harvest crops, another spell of flood brought havoc to their crops and properties. As learnt from the local people of Krishnapur Union, the CDMP staffs visited the project villages and encouraged the farmers not to lose their heart, rather they advised them to gather their resources whatever left and cultivate their lands. This visit and repeated encouragement convinced many of them to resume cultivation.
- It's true that the farmers of the project area had a traditional knowledge and practice of diversification of crops and earn extra money, which is absent in many other areas in Bangladesh. During field study at the end of the project period, it was known that the technical knowledge imparted through training on tolerant crop cultivation and crop diversification had a welcoming and lasting effect in the way the local farmers cultivate their crops.
- The follow-up meeting with the participants of climate change sessions shows indication of their gained knowledge in identifying the causes of climate changes. While asked about their awareness following the sessions, they showed their activities like steps for homestead gardening, dumping garbage in a particular hole, child health care etc. They also spoke about their roles they can play to protect themselves as well as the environment
- During meetings with UDMC, an attitude of apathy from concerned UP Chairman and Members was observed. They also expected free lunch and honourarium. At the initial stage, they claimed that our works might be limited to meetings, workshops,

data collection, home visits etc. Regular (informal) communication with UP has contributed to increase mutual understanding, which eventually helps carry through the works planned.

- During the recent floods, we have understood the weak coping capacity of the people at the grassroots. Floods or other natural calamities easily damage the weak houses. Community people were not found adequately aware of the possible damages floods could inflict. Before and during floods, RISDA-Bangladesh arranged a number of courtyard or open sessions on awareness and preparedness. Shelter centers are also emphasized.
- While planning for any development project in the remotest parts of the disaster-prone areas, we heard a variety of demands from the community people. Before deciding on a particular task, all the sections must be negotiated first. The concerned govt. officials should be involved in the whole process. The local govt. representatives can extend all out support provided their concerns are truly addressed. It's also important that, sometimes the influential sections want to lead projects to their interest. RISDA-Bangladesh, while planning, designing and implementing project activities at the grassroots, took much care of these factors.
- It has been found that if the people are made well aware and self-notified, they cooperate at the activities and help to implement the project activities.
- Seasonal interrupt like heavy rainfall is the most important problem to the way of project implementation, by taking proper initiatives these problems can be minimized.
- Communication is an important thing to run project implementation because it helps to run activities more effectively, efficiently and successfully.
- If project activities are not started in time it takes more time to cover the outstanding works.
- Cattle heads are one of the principal sources of livelihood of the people in the project area. During the onslaught of flood these cattle heads have to starve owing to lack of feed. The technology of processing and storage of grass under ground was unknown to the people.
- Agriculture is the principal sources of livelihood of the people in the project area. But the Modern technology of Agriculture is unknown to the people.
- Most of the people of the project area rear domestic animals like goat, duck, hen, cow, cattle etc. But a few numbers of people have knowledge and skill on the diseases and treatment of these domestic animals. Vaccines and medicines of poultry and livestock are available at govt. Livestock department. But the people could not afford this scope. At present beef fattening is a very profitable project. They people can easily run this project. Once we threw these ideas to them, they readily expressed their interest to adopt the technology. So technology and options to face the crisis should be made available to people so that they could make choice.
- Local people know better about the local problems and its solutions they have little knowledge on local resources and how to use those resources properly.
- Alternative IGA activity can reduce risk from disaster through improving livelihood especially for the disadvantaged group.

## **7.9 Limitations of the Interventions**

- The training covered a limited number of farmers from each Ward. People can hardly share with these trained farmers and get technical knowledge. During follow-up meeting, the local farmers said, since this was helpful to understand tolerant crop varieties and diversified crop cultivation, the training should have covered many more farmers for greater benefit. [Nuru, UP Member, Alamgir and other farmers of

Krishnapur Union, and the farmers of Bhasanchar Union suggested during follow-up meeting.

- Males were not helped/ given preference.
- The beneficiaries are not trained by the NGO to use the fertilizers.
- Training of planting trees was not provided by the NGO.
- There are some social, economical and traditional problems of the community people especially which the women and girls face, are not focused in the project.
- Duration of the Project period was short to achieve the goal and objectives of the project, as one year duration is not sufficient for a project for sustaining. At least three years are needed to make a project sustainable.
- Where as the project budget was also too limited in accordance with the needs of the community people as per CRA findings.
- In CRA many risks were identified but we have to work for a few, which needs long time development projects to undertake for reducing disaster risks.
- Project period was too short to achieve the goal and objectives of the project, because one year is not sufficient for a project for sustaining. At least three is needed to make a project sustainable.
- The timing of training conduction was inappropriate in some cases.
- Lack of practical demonstration.
- Delayed in starting of some of the mitigation project activities.
- If there would be office and staff at union level piloting would be easier and the outcome would be as per desire.

### **7.10 Recommendations for Sustainability**

- While selecting development projects for the areas, talks were held with community people, people's representatives, concerned government departments as well as CDMP high officials. In some areas, the concerned govt. officials wanted to add to the construction or building works side by side with the NGO intervention. [At Piaskhali point, for example, the UNO has proposed to construct a bridge to connect the newly constructed road cum shelter center]. Such pledges need to be followed-up.
- It's noted that CDMP intervention emphasizes local contribution in risk management as well as resource management, which is essential in building capacity of the local people. Since needs are many and acute in the disaster stricken areas, funds, other deliveries and projects must be monitored closely. The govt. departments as well the donor agencies need to focus on the livelihood options of these areas. RISDA-Bangladesh has observed how terribly the livelihood options are threatened. There are very limited scopes of work for the labor class, and among others, the health situation in the areas are so miserable. However, within the purview of CDMP-RISDA-Bangladesh projects, the new structures must be taken care of and extended further by the concerned government and donor agencies.
- To make the project sustainable, the following issues are recommended:
  - a) Institutional set up like UZDMC, UDMCs, etc. should be strengthened and made capable end help to undertake self-initiatives for reducing disaster risks in the community.
  - b) Mass people should be made well aware, well informed and well knowledge able about the risk s, cause, solution etc .then they well take initiatives for savings them from different disaster, which will reduce disaster risk in the community.
  - c) Infrastructural set up should be built like upraise households, educational institutions, developed kills etc. which will help the people to take shelter during disaster.

d) Self-modified and self initiated dedicated volunteers should be developed and trained up in the community, who will take initiative to motivate and educate the community people with their own initiatives.

e) Long time and integrated development project should be undertaken and implemented with the fullest participation of the community people.

f) Community involvement is very essential in the project implementation planning and administration.

g) Initiatives should be taken for permanent sustainability of the programs of the water logged community, because, small project will not fulfil the permanent needs of the people in the water logged communities.

- If the local government service provider and opinion leader be supportive to the beneficiaries, the project will bring a spread out effect with other member of the community and they will receive the message and undertake similar activities and be benefited. This is how the sustainability of the project will be achieved.
- Volunteer development: In each community of the target area volunteers should be identified and provided with basic training on Disaster Management and that will make them capable to render services to the community at the time of their need.
- UDMC and UzDMC have to be well trained in disaster management and should be well equipped and demonstrated practically on their responsibilities during disasters.
- All people of the community including UDMC, Volunteer group, NGOs and other stakeholders should work jointly to combat disasters and enable people to face it. And for that a forum has to be made with all the stakeholders.
- Posters with awareness building messages may be distributed to each household of the community.
- Regular coordination meetings with UDMC, UzDMC and Volunteers should be organized for ascertaining that the risk reduction activities are operational throughout the community.

# Chapter 8

## Structural Risk Reduction Interventions

### 8.1 Defining the Thematic Area

Any physical construction to reduce or avoid possible impacts of hazards, or application of engineering techniques to achieve hazard-resistance and resilience in structures or system are known as structural risk reduction interventions. Common structural interventions for disaster risk reduction include dams, flood levees, sea wave barriers, earthquake-resistant constructions, cyclone shelters, flood shelters, reservoirs, etc. Obvious benefits result from the structural measures. For example, reservoirs provide water during small droughts and when natural variability, such as seasonal changes, would make water scarce. Separating floodplain land from the river or sea through construction of embankments reaps rewards for development and provides productive agricultural land.

Developing countries like Bangladesh often have fragile industrial installations and infrastructure which a hazard event can easily damage or destroy. Governments can take steps to minimize losses to these facilities. Giving incentives to builders and owners should be considered. To reduce risk of loss to public facilities from floods and storms, key public works and offices should be elevated or sited in areas above flood level.

Power supplies which are essential to industry and households can be protected from floods by constructing dikes around power substations, raising substation premises and strengthening transmission and distribution facilities. Roads and highways are also critical elements of a community's infrastructure. Care should be taken when constructing roads through hills and mountains not to destabilize slopes, thereby increasing the chance of landslides. To reduce flood risk to roads and highways, roads should be raised so they cannot be easily washed away. In addition, road networks should incorporate flood control and water drainage measures.

Rural areas face many of the same risks as urban areas. Therefore, many of the risk reduction strategies applicable to urban infrastructure also apply to rural institutions. These include:

- a) Constructing drains, culverts, bridges and feeder roads in order to reduce the risk of losing roads due to flooding
- b) Building new public buildings (schools, government offices) which are above the normal flood level
- c) Locating tube wells in elevated positions
- d) Establishing realistic building codes with incentives and enforcement Mechanisms

Many hazards are localized with their likely effects confined to specific well defined areas. Floods occur in flood plains, landslides occur on steep, soft slopes, and so on. The effects can be greatly reduced if it is possible to avoid the use of hazardous areas for settlements or as sites for important structures. Most urban master plans involving land use zoning already attempt to separate hazardous industrial activities from major population centers, but urban planners also need to integrate awareness of natural hazards and disaster risk reduction into the normal planning processes for the development of a city.

Physical planning measures are easiest to implement with public sector facilities, since government has direct control over their funding and placement. The careful location of public sector facilities can play an important role in educating the public and reducing the

vulnerability of a settlement. Schools, hospitals, emergency facilities and major infrastructure elements like water pumping stations, electrical power transformers and telephone exchanges, represent a significant proportion of the core functioning of a town.

An important principle of risk reduction is reducing the concentration of essential elements at risk: services provided by one central facility are always more at risk than those provided by several smaller facilities. This principle also applies to population densities in a city: a denser concentration of people will always increase disaster potential compared to a more dispersed population. Indirect control of densities is sometimes possible through simple methods such as wide roads, height limitations and road layouts that limit the size of plots available for development. At a regional level, the concentration of population growth and industrial development in a single, centralized city is generally less desirable than a decentralized pattern of secondary towns, satellite centers and development over a broader region.

The design of service networks – roads, pipelines, and cables – also needs to be carefully planned to reduce risk of failure. The usefulness of long, linear supply lines is at risk if these lines are cut at any point. Networks that interconnect and allow more than one route to any point are less vulnerable to local failures, provided that individual sections can be isolated or circumvented when necessary. Vehicular access to a specific point in a city, for example, is less likely to be cut by road blockage in a circular ring road system than in a purely radial type.

In Bangladesh, the control of private sector land use through urban master planning and development policy guidelines is extremely difficult. It is often private sector land use, particularly the informal sectors and shanty towns that have the highest risk of disaster. Flood plains, steep slopes, and other marginal lands are often the only building sites available to lower-income communities and the most vulnerable social groups. The economic pressures that drive people, first to the city for jobs and opportunity, and second to these marginal lands to live on, must be fully understood as the context for considering their risks. Prohibitions, or other measures to clear settlers from hazardous areas, are unlikely to be successful if the underlying economic pressures are not addressed. Some indirect measures, such as making safer land available or making alternative locations more attractive, may be effective, but they can only succeed to the extent that there is strong understanding and support by the affected community

Engineering-dependent risk reduction interventions are of two types. Those that result in stronger individual structures those are more resistant to hazards, and those that create structures whose primary function is to protect against disaster – flood control structures, dikes, levees, and infiltration dams. Actions to make structures more resistant to hazards primarily involve improvements in design, construction and maintenance of buildings, achieved through institutional means such as design standards, building codes and performance specifications for facilities designed by engineers as well as local builders trained in appropriate construction techniques. Building codes based on disaster-resistance are unlikely to result in stronger buildings unless the engineers and builders who implement them accept their importance and endorse their use. In addition, engineers and builders must understand the code and the design criteria required of them. Responsible authorities must fully enforce the code by checking and penalizing designs that do not comply. Methods for achieving risk reduction through “engineering” measures also include increased training for engineers, designers, and builders; explanatory manuals to interpret code requirements and the establishment of an effective administration to check code compliance in practice. The recruitment of ten new municipal engineers, for example, to enforce an existing code may have more of an effect on improving construction quality in a vulnerable community



than proposing legislation for higher standards in existing building codes. A large number of the buildings likely to be affected by disasters are not designed by engineers and will be unaffected by safety standards established in building codes. These are houses, workshops, storerooms and agricultural buildings built by owners themselves or by craftsmen or building contractors based on their own designs. In many countries these buildings make up a large percentage of the total building stock.

Risk reduction will only come about when there is a consensus that it is desirable, feasible and affordable. In many places, life-threatening hazards are not recognized, the steps that people can take to protect themselves are not familiar, nor is the demand forthcoming for the community to have themselves protected. Planning for risk reduction should aim to develop a "safety culture" in which people are aware of the hazards they face, assume a responsibility to protect themselves as fully as they can, and continuously support public and institutional efforts made to protect their community.

## **8.2 Summary of interventions**

Under the thematic area of structural risk reduction a number of interventions/activities were implemented by different NGOs. Partner organizations DAM, CNRS, GJKS, SHAMADHAN, RDRS, POPI, RISDA, TARANGA, IDEA, IR, Shushilan, FDA, DNP, SDS, VOSD, NCDS, BDPC, MMS, NDP, Good Earth, SHARP, VERC have implemented structural risk reduction activities or options. Major activities include village mound protection, construction of connecting road, construction of embankment, maintenance of road-cum-embankment, construction of evacuation road, construction of Box/Ring culvert, construction of foot over bridge, homestead ground raising, construction of cluster village with elevated homestead ground with livelihood support, elevation of the ground of the market, institutional ground raising and tree plantation on the sides, installation of tube well on raised platforms, construction of Killa, construction of U-Drain to reduce water logging etc. These are the most common activities that the aforesaid NGOs implemented in all of the seven pilot districts by the fund of LDRRF.

## **8.3 Objectives of interventions**

The overall objective is to save lives, reduce damage and encourage sustainable development through significantly reducing vulnerability of the community from the natural hazards. Institutional ground raising has been carried out to provide shelters to human and cattle population during floods as well as to protect the community institution. The second objective is to protect crops from floods. It has been achieved by construction/reconstruction of embankments, jungles, etc. as well as excavation and re-excavation of canals. Bridges and culverts have been constructed to facilitate quick drainage of flood waters as well as to maintain communication lifeline during floods. Bridges, culverts and embankments also reduces the intensity of floods and thereby saving lives and properties.

## **8.4 Activities Undertaken by Partner Entities**

### 8.4.1 Institutional Raising

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
SUNAMGONJ	DHARMAPASHA	DHARMAPASHA	IED	Raising Ground level of Nabia Gazi Bazar and Plantation of Hizal and Tamal Trees
SUNAMGONJ	DHARMAPASHA	PAIKURATI	IED	Raising Ground level of Badshaganj Public High School (western side) to be used as seedling ground
SUNAMGONJ		FENARBAK	IDEA	Raising Harvesting Place
SUNAMGONJ	Sadar/South	Mohonpur	IR	Institutional ground raising and tree plantation on the sides
SUNAMGONJ	Sadar/South	Poschim Birgaw	IR	Institutional ground raising and tree plantation on the sides
SUNAMGONJ	Sadar/South	Poschim Pagla of South Sunamgonj	IR	Institutional ground raising and tree plantation on the sides
SUNAMGONJ	Sadar/South	Purbo Birgaon	IR	Institutional ground raising and tree plantation on the sides
SUNAMGONJ	Sadar/South	Purba Pagla	IR	Institutional ground raising and tree plantation on the sides
SUNAMGONJ	Sadar/South	Aftabnagar	IR	Madrasha Ground Raising to turn in to flood shelter (killa)
SUNAMGONJ		Gourarang	IR	Institutional ground raising and tree plantation on the sides
SUNAMGONJ		Surma	IR	Institutional ground raising and tree plantation on the sides
SUNAMGONJ		Surma	IR	Institutional ground raising and 180 nos. tree plantation
SUNAMGONJ		Patharia	IR	Institutional ground raising and 180 nos. tree plantation
SUNAMGONJ	Jonnathpur	Ranigonj union	IR	Institutional ground raising and tree plantation on the sides

		Kalkaliya	IR	Institutional ground raising and tree plantation on the sides
		Haldipur	IR	Institutional ground raising and tree plantation on the sides
		Mirpur Union	IR	Institutional ground raising and 140 tree plantation on the sides
				Raising of School Ground to turn in to Flood Shelter
				Raising of School Ground to turn in to Flood Shelter
SUNAMGONJ	Derai	Sharmongal	GJKS	Raising of Institutional Ground of Chitalia Primary School
		Sharmongal	GJKS	Raising of Institutional Ground of Dhanpur Primary School and Madrasha
		Sharmongal	GJKS	Raising of Institutional Ground of Sharmongal Primary School and Madrasha
Satkhira	Kolaroa	Joynagar	SHAMA DHAN	Raising of School Ground to turn into Flood Shelter
	Kolaroa	Jugikhali	SHAMA DHAN	Raising of School Ground to turn into Flood Shelter
	Kolaroa	Jalalabad	SHAMA DHAN	Raising of School Ground to turn into Flood Shelter
	Kolaroa	Joynagar	SHAMA DHAN	Ground Raising of Shoraskhati Satellite Clinic
				Installation of Tube well
Lalmonirhat	Hatibandha	Singamari Union	POPI	Raising School Ground of Dubni Non Govt primary school.
Lalmonirhat	Hatibandha	Bara Khata Union	POPI	Ground Raising (Killa Construction) of Paikur Tari High School to be use as temporary shelter during Flood

				situation
Lalmonirhat	Hatibandha	Bhelaguri	POPI	Raising of School ground of Uttar Jaorani Burimari Registered Non-Govt. Primary School
Lalmonirhat	Hatibandha	Bhelaguri	POPI	Raising ground of Arsia Technical College
Lalmonirhat	Hatibandha	Bhelaguri	POPI	Raising of School ground of Dhubni Government Primary School
Lalmonirhat	Hatibandha	Barakhata	POPI	Raising ground of Sardubi Primary School
Lalmonirhat	Hatibandha	Patikapara	POPI	Raising ground of West Haldia Government Primary School
Faridpur	Faridpur Sadar	North Channel	FDA	Construction of Killa
Faridpur	Faridpur Sadar	Dikrir Char	FDA	Ground raising of Dikrir Char Primary School
Faridpur	Sadar	Ambikapur	DNP	Raising Purbo Bhashanchar Amin Uddin Non-government Primary School Ground (193' X 122' X 3.5') to turn in to Flood Shelter
Faridpur	Sadar	Char Madhabdia	DNP	Raising Char Madhabdia United High School Ground (213' X 175' X 3.5') to turn in to Flood Shelter
Faridpur	Sadar	Char Madhabdia	DNP	Raising of School Ground
Faridpur	Sadarpur	Char Monair	SAMA TA	Killa construction
Faridpur	Sadarpur	Diara Narikel baria	SAMA TA	Killa Construction through earth raising
Faridpur	Sadarpur	Akuterchar,	SAMA TA	Killa Construction through earth raising
Faridpur	Sadarpur	Narikel Baria	SAMA TA	Construction of Killa to be use as temporary shelter
Faridpur	Sadarpur	Char Nasirpur	RISDA	Construction of 'killa' on school ground of

				Char Nasirpur Hakimnagar Junior High School
Faridpur	Sadarpur	Diara Narikel Baria	RISDA	Raised school ground including rebuild of school to be use as temporary shelter
	Bhanga		SDS	Construction of Killa by raising school ground
	Bhanga		SDS	Construction of Killa by raising school ground
	Char Bhadrason		VOSD	Renovation of School cum Flood shelter by constructing toilet for female, children and disables
	Char Bhadrason		VOSD	Raising School Ground to be use as temporary shelter (Killa)
	Char Bhadrason		VOSD	Raising School Ground to be use as temporary shelter (Killa)
	Char Bhadrason		NCDS	Construction of 'killa' on Abdul Hai Khan Hat Primary School ground
Sirajganj	Chawhali		BDPC	Raising of plinth of Market place for use as Flood shelter
	Chawhali		BDPC	Raising the plinth of Education Institution
	Chawhali		BDPC	Raising the plinth of Education Institution
	Chawhali		BDPC	Raising the plinth of Education Institution
Sirajganj	Kazipur		NDP	Contruction of Killa to be use as temporary shelter
	Kazipur		NDP	Contruction of Killa
	Kazipur		NDP	Contruction of Killa
	Kazipur		NDP	Contruction of Killa
	Kazipur		NDP	Contruction of Killa

	Kazipur		NDP	Construction of Killa
	Kazipur		NDP	Construction of Killa
	Kazipur		NDP	Construction of 'Killa' for safe shelter at Boira bari and Bara Bariya village
	Kazipur		NDP	School ground raising on Char Girish Primary School
	Kazipur		NDP	Construction of 'Killa' for safe shelter
Sirajganj	Sirajganj Sadar	Kaokola union	SHAR P	Construction of Killa to be use as temporary shelter
Coz's Bazar			CODE C	Use of Balli to protect roads and houses of minority communities of Hindu Para
Coz's Bazar			CODE C	Renovation of Deil Para Cyclone Shelter
Coz's Bazar			CODE C	Reconstruction of Earthen Link Road to Cyclone Shelter
Coz's Bazar			CODE C	Reconstruction of Earthen Link Road to Cyclone Shelter
Coz's Bazar			CODE C	Renovation of Paschim Gomatali Charpara Cyclone Shelter
Coz's Bazar			CODE C	Renovation of Paschim Gomatali Charpara Cyclone Shelter
Coz's Bazar			CODE C	Construction of Earthen Link Road to Cyclone Shelter
Coz's Bazar			CODE C	Renovation of Mitha Panir Chara Cyclone Shelter
Coz's Bazar			HITAI SHI	Repairing of Moddhho Rajapalong Cyclone Shelter
Coz's Bazar			HITAI SHI	Renovation of Mohasurjo Buddhist Temple for use as Cyclone Shelter
Coz's Bazar			HITAI SHI	Excavation of 1 km long canal

Coz's Bazar			RIC	Maintenance of Killa
Coz's Bazar			RIC	Construction of Foot over Bridge
Coz's Bazar			RIC	Construction of Bolli Spars (18)
Coz's Bazar			ANAN DA	Maintenance of Link Road to Cyclone Shelter
Coz's Bazar			ANAN DA	Maintenance of Link Road to Cyclone Shelter
Coz's Bazar			RDF	Construction of 2 storied Cyclone Shelter (20' X 40') at Khuruskul Rakhaing Village
Coz's Bazar			RDF	Renovation of internal roads & establishing drainage system to reduce water logging
Rajshahi	Bagha		SGS	Instutional ground raising to be use as temporary shelter
			SGS	Instutional ground raising to be use as temporary shelter
			SGS	Instutional ground raising to be use as temporary shelter
			SGS	Construction of U-Drain to reduce water logging
			SGS	Construction of U-Drain to reduce water logging
			SGS	Construction of U-Drain to reduce water logging
			SGS	Construction of U-Drain to reduce water logging
			SGS	Raising Polashi Fatepur High School Ground to be use as Flood Shelter
Rajshahi			VERC	Construction of Drain for drainage of Rain Water

### 8.4.2 Crop Protection

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
Sunamgonj	Dharmapasha	Sukhair Rajapur	IED	Maintenance of Kandi/Jangla
			IED	Maintenance of Bagbari Bader Jangle
		Pikurhati	IED	Maintenance of Haldir Bara Khal
		Maddha Nagar	IED	Maintenance of Telipara Popriakhaler Jangle
		Chamordani	IED	Maintenance of Balarampur Bader Jangle
			IED	Maintenance of Jangle at Goparia Khal Dhakkin
		Selboros	IED	Maintenance of Jangle at Kakiam Baulam Village on the Khorma River
		Bangshi Kunda (Uttar)	IED	Maintenance of Moktar Khola Haor Rakkaha Bader Jangle
			IED	Demonstration Plot on Early and Short Duration Rice Variety
	Jamalgonj	Jamalgonj Sadar	IDEA	Construction of Jangal
		Fenerbac	IDEA	Construction of Compartmental Bed-cum-Jangal
		Sachnabazar	IDEA	Re- Construction of Siddikalir Baad
		Sachnabazar	IDEA	Re-construction of Boro Dolar Baad
		Vimkhali union	IDEA	Re-construction of Gojaria Jangle
		Vimkhali union	IDEA	Re- Construction of Bonnar Beeler Baad
		Fenarbak	IDEA	Re- Construction of Compartmental Baad cum Jangal
		Tahirpur		CNRS

### 8.4.3 Construction of culverts and bridges

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
SUNAMGONG		Beheli	IDEA	Construction of Box/Ring culvert
				Construction of Foot over Bridge
Shatkhira	Kaligonj	Bisnopur	DAM	Construction of Ring culvert
		Ratanpur		Construction of Ring culvert
		Bisnopur		Construction of Ring culvert
		Dhalbari union		Construction of Ring culvert



DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
		Bhara Shimul		Replacment of Un-usable Box culvert
		Bhara Shimla		Construction of Double Box culvert
		Bhara Shimla		Construction of Ring culvert
		Bhara Shimla		Construction of Ring culvert
		Mothureshpur		Construction of Ring culvert
		Mothureshpur		Construction of Ring culvert
		Mothureshpur		Construction of Ring culvert
		Tarali		Construction of Ring culvert
		Nalta		Construction of Ring culvert
		Dhalbaria		Construction of Ring culvert
		Dhalbaria		Construction of Ring culvert
		Shreepur		Construction of Box culvert
		Dhakkhin Shreepur		Construction of Box culvert
		Champaful		Construction of Box culvert
		Mothureshpur		Construction of Box culvert
		Dhakkhin Shreepur		Construction of Box culvert
		Moutala		Construction of Box culvert
		Krishna Nagar		Construction of Box culvert
		Nalta		Construction of Box culvert
		Kushulia		Construction of Box culvert

#### 8.4.4 Construction of Embankments

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
Sunamgonj	Tahirpur	Tahirpur Sadar	CNRS	Village Mound Protection (500 meter)
		Tahirpur Sadar	CNRS	Protection of Village Mound (250 Meter)
			CNRS	Protection of Village Mound by chaillya (300 meter)
	Derai	Sharmongal	GJKS	Protection of Sharmongal Graveyard Mounds
		Sharmongal	GJKS	Protection of Jaurlia Graveyard Mounds
Shakhira		Jugikhali	SHAMADHAN	Construction of Connecting road
		Diara	SHAMADHAN	Construction of Embankment
		Joynagar	SHAMADHAN	Construction of Connecting road
		Joynagar	SHAMADHAN	Established link roar to be use as evacuation road.
		Diara	SHAMADHAN	Establish linkage between Growth Centre and Community for Evacuation of Vulnerable people

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
		Jalalabad	SHAMADHAN	Canal Re-excavation
Lalmonirhat	Sadar	Rajapur	RDRS	Maintenance of 1,100 feet long Embankment
	Hatibandha	Gaddi mari	POPI	Maintenance of Road-cum-Embankment (1.5 km)
	Hatibandha	Bara khata union	POPI	Maintenance of Road-cum-Embankment (1.5 km)
Faridpur	Sadarpur	Akuterchar	RISDA	Construction of evacuation road
Rajshahi	Agailghara	Bakal	Taranga	Construction of Evacuation road

## 8.5 Key Benefits Produced

- People have been highly benefited from the interventions of raising ground of the houses. They don't need to go to the road or flood shelter during flood or other disaster events. Now they can stay at their own elevated houses during flood.
- Due to elevation of the market ground, now market can remain operational throughout the year and villagers can sell and buy goods in all seasons.
- Due to construction of over bridge on the canal Rakhain villagers are now safer in terms of crossing the canal and going to other neighbouring villages and markets.
- Houses are stronger and safer than before.
- People had no ability to buy pillars. They had to live with bamboo pillars. Now they can reside in houses made of concrete pillars.
- People are able to protect their domestic animals and thereby saving principal capital stocks.
- People's livelihood opportunities are safer now.
- Health and sanitation situation of the community is much better now.
- Schools can be operated without interruption during floods.
- Traders can carry on their business during floods.
- Because of crop protection, people would not have to starve.
- Everyday life of villagers remain operational.

## 8.6 Case Study of Good Practices

### 8.6.1 Case Study-1: Foot Over Bridge Construction

#### Introduction

Kunalpar village is located in Ramu Upazilla of Cox's Bazar District. People of different religions of this village live in peace and harmony. There are people of various occupations and have a mixture of middle and lower middle class people. Though the literacy rate is



very low, young generation is now going to school. Kunalpar village is vulnerable for landslide and flash flood because it is surrounded by some hills and canals. The village becomes flooded in rainy season and people suffer a lot. It flows all the year round but in the rainy season the water is overflowed by the heavy rainfall. As the village is surrounded by the canal, it becomes flooded. Due to flash flood, this village often goes under water. As a result villager's movement and student's schooling are seriously hampered. Hence, as a way to move during water logging and flash flood a foot over bridge was built on the canal in 2007 with the funding of CDMP. The bridge now contributes a lot to the villagers. Even in the rainy season villagers don't face the problem they had before. Flood can not stop their daily life as before. To improve the literacy rate the bridge plays an important role indeed. Children now go to school by crossing the bridge. There is now mobility in Kunalpar village life.

### **Objectives of building the foot over bridge**

- To create drainage facilities for flood water.
- To travel easily from their village to schools, markets and hospitals during the flood.
- To make easier communication with Ramu and other adjacent villages.

### **Situation before Building the Bridge**

There was a bridge (shako) made of bamboo. That was very risky to use. Especially during flood it was too thin to cross the heavy stream of the canal. Sometimes in emergency situation, finding no other ways, villagers had to swim to cross the canal. It was quite impossible for the poor village people to build a permanent bridge here.

**Case of Sabina:** Sabina, mother of three daughters, lives in Kunalpar. Her husband Rahim Miyan is a day laborer. He cuts wood from the forest and sells them to the local market. They live in the hillside under serious threats of landslide during heavy rains. Landslide caused by heavy rains is common in this village. In heavy shower, the people living in these hills like Sabina find themselves in serious troubles. When the canal becomes overflowed they can't cross it by the bamboo bridge. They can not buy their daily necessities and have to live without food for days. Rahim, the only earner of the family can not sell wood to the market. Sabina has been suffering from high pressure. Sometimes she becomes senseless. Three years ago in the time of flood she became very sick and need to go to the hospital urgently. But in that time crossing the canal was impossible because the bamboo bridge went under water. Rahim took her to the hospital by an alternative risky long way in forest. After 7 days in hospital she returned home with her child. She was crossing the canal and some medicine was in her hand. But she drift away far for the strong current. A young boy saved her luckily but she lost her medicine of 1500 taka and was seriously injured. She became sick again as before. She was again admitted to the hospital.

### **Good Practices**

- This strategy made local people's life easier than before.
- This bridge ensured movement during all season.
- It ensured road communication with neighbouring villages and districts.
- It ensured children's school going movement.
- People now can move their patients urgently through the bridge.

### **Challenges Ahead**

- The bridge has no linking road and the soil is full of sand. In rainy season the sand is washing away which weakens the bridge day by day.

- The bridge is neither wide nor high enough. The bridge goes under water in heavy rainfall.
- It has no railing which is very risky for children, women and old people.
- Its length is very short and has no linking road. As a result no vehicle can cross over the bridge.

## **8.6.2 Case study-2: Market Ground Elevation**

### **Introduction**

Binanoi west Para Bazaar is just in the middle of the Binanoi Village. It is located at Baghtiya Union of Chowhali Upazilla. Mighty river Jamuna has separated Binanoi west Para from Shahzadpur Upazilla. The life of the Binanoi and neighboring villages is highly affected by flood and river bank erosion almost every year. It is the natural disaster that stops their daily life for months in a painful way. The nearby market goes under water during flood. Hence, villagers can not do their necessary shopping during flood. The market is situated on around two acres land. There are many trees on both side of the market. There is a mosque on the north side and a primary school on the east of the market. A canal links to Jamuna is flowing here. There is an eidgah on the west and it is also used as a playground all the year round. There is about two Kilometer long crop land heading to the west of the eidgah. Jamuna river is very closest to the market. But there is no road for villagers to come to the market. The project was started on May 2007 and completed within one month. Binanoi Pashim Para Bazaar is just in the middle of the Binanoi Village. It is tin-shaded. The project was implemented by BDPC which was funded by LDRRF of CDMP.

### **Objectives**

- The objective was to ensure easy and smooth running of the market throughout the year.
- The ground of the market was elevated to ensure that people can buy and sell their products during flood easily.
- Moreover, the elevated ground was intended to be used as a flood shelter.

### **Situation before elevating the ground of the Market**

During rainy season, this market often went under water. Hence, villagers could not do their shopping. People had to come to the market by boat. They bought goods by using boat as there was no road communication beside the market. Now they come here on foot to buy and sell necessary products. The market place was selected by the local people. A committee consisting of the members of the wards and local people monitored the activities implemented.

### **Good Practices**

- The primary school adjacent to the market can use the place as a playground.
- People can buy and sell their products easily even during heavy flood.
- The Madrasa and the Mosque sometimes use this elevated ground for prayer and different social and religious occasions.
- The ground has been elevated in the right place and community members were involved in selecting the place. Therefore, this activity is based on community participation.

- Villagers don't need to use their boat to come here.
- The members of the project implementation committee (PIC) were very active in monitoring and implementing this activity.
- People can use this place as a shelter during flood.
- Empowerment of women is reflected in the active role of the female member of PIC.

### **Challenges Ahead**

- There is no permanent road to move from the village to the market. Therefore a few roads should be constructed.

### **8.6.3 Case Study-3: Construction of *Killa***

#### **Introduction**

Durbatek village is located in the Charnasirpur Union of Sadarpur Upazilla in Faridpur district. This village located in one of the most flood prone areas of Sadarpur. This village is eleven kilometers away from Sadarpur Upazilla. The pushcart or rickshaw is the only transport to reach there. In rainy season, it rains heavily and it is the warmest in summer. The rainy season is often accompanied by floods and river bank erosion which uproot people from their homes and settlement. Agriculture is the main occupation of the villagers. Jute and nut grows well in this soil. Water logging, flood, river erosion, cyclone, drought are the part and parcel of this area. Flood and river erosion occurs almost every year. Flood-hit people are used to live in distress with their belongings and cattle-heads. Movements become disrupted. Flood takes villager's land, crops, cattle, everything. Students can't attend school as their school premises are inundated with flood water. People can only manage to save their lives. The char people face huge challenges from natural disaster. As most of villages here are low lying and people suffered mostly by the flood, constructing *Killa* has been one of the pioneer activities of the LDRRF projects. In order to use as shelter during flood, one year ago a *Killa* was constructed at the Durbatek village under the funding of LDRRF projects. The *Killa* was constructed in Hakimnagar Junior High School of Durbatek village. The ground the school has been elevated by six feet above the base level. People of Durbatek and neighboring villages take shelter in this *Killa* during flood. Even the people of the other side of river come here to take shelter during flood. Livestock can also be kept safely which is vital as cows, sheep, goats and poultry make up the bulk of most poor families' assets. Villagers can also do their daily works (e.g. drying crops etc). Children can continue their school during flood as the school ground does go under water. There is a tube well and a sanitary latrine, therefore, people get the source of drinking water and hygienic defecation. RISDA Bangladesh implemented this *Killa* construction activity. It reduces the risk of local people during flood and river erosion and it has already become a model activity for reducing disaster risk.

#### **Objectives**

- The *Killa* to be used as shelter for flood affected people of Dubbartek and neighbouring villages.
- To ensure that children can continue their school during flood.
- To make sure daily life operational during flood

### **Situation before building the *Killa***

- Every year all the houses of this village went under water. They had to pass their miserable days and nights in boat.
- They had to change their residence during flood.
- They had no shelter during flood. As a result, they could not protect their assets.
- There was a scarcity of drinking water during flood.
- Various types of diseases were prevalent during flood.
- Children had to stop their study as the school went under water.
- People were vulnerable in terms of maintaining their livelihood.

### **Good Practices**

- People can easily take shelter to the *Killa* during flood.
- Crops and livestock can also be kept safely which is vital as cows, sheep, goats and poultry make up the bulk of most poor families' assets.
- Life continues more or less as normal during flood.
- Children can continue their study now.
- The tube well helps people to get drinking water throughout the year.
- Raised earthen platforms offer greater protection against disease especially water-borne diseases.
- People from the other side of river also come here for shelter.

### **Challenges Ahead**

- There is no barricade or slipper to protect the *Killa* from soil erosion, which makes it vulnerable to damage due to heavy rainfall and flood.
- The space is not enough for all the flood-affected people of the village.

### **Learning Points for NGOs and ISS**

- A maintenance committee including the beneficiaries can serve a longer life of any construction.
- Funding should be increased to get more effective role of a *Killa*.
- There should be a discussion with villagers before the project implemented.
- There should be a check and balance in the project implementation process.

### **8.6.4 Case Study-4: Elevation of Homestead Ground**

#### **Introduction**

The program of homestead rising started on the 1<sup>st</sup> of April, 2009 in five Unions of Shahjadpur Upazilla which ended on 30<sup>th</sup> May, 2009. Even though the homestead rising project is different, the beneficiary got tube-well & a sanitary latrine along with it. Fifteen beneficiaries from each Union were brought under this project. Those who benefitted from this project are ones who were affected in the 2007 flood. Women, widows, mentally challenged/disabled people, divorced, aged & people having number of kids without income were beneficiaries of this homestead raising project. Besides they have been endowed with their individual sanitation & tube-well through cluster to some families together.

## **Situation before the activity implemented**

Before having homestead elevated, every year inhabitants of Gala village had to take shelter in others' houses during flood. Sometimes, neighbours even were showed reluctance in giving shelter to their house. Otherwise, they had to stay in water-levels up to the stomach or chest, people had to stay under that much water with kids or parents at home, or even domestic animals like cows or goods and it proved to be of great difficulty. Moreover, animal death was quite frequent. In such a situation, the males of the family could not leave their family & go out for work purpose as they were always tensed about the flood occurrence anytime. "How can we leave our wives, kids in an unsecured state and go outside? For this reason our work stops" said a 35 year old day labour of Gala village.

In addition, there was also acute problem of getting safe drinking water. It was not always feasible for them to fetch clean water from far distance and so they started drinking polluted water, used it for household chores as well. Moreover, due to unhealthy sanitation practice insanitary environment was created. As a result, they usually had to suffer from health hazards such as diarrhea, cholera, jaundice etc. Before the homestead rising, flood destroyed all their fruit & vegetable trees-resulting in food shortage & also reduced the family income. Usually there's a shortage of availability of work during flood which deteriorated the financial condition of the family. Many used to starve 2-3 days together. "Our children used to scream out of hunger, we used to understand but they couldn't comprehend the situation" said 32 years old Zarina of Gala village.

## **Good Practices**

- Due to homestead rising, beneficiary household members don't need to go outside to take shelter during flood. They can leave the home for work without any fear as there is no doubt about their houses to be inundated. "We don't have the fear of drowning in the water anymore" said Azizul of Gala village.
- In addition, villagers are planting trees, vegetables in small spaces and farming domestic animals which improved their livelihood. Tube-well & latrines installed has reduced health hazards. Villagers are now safe and drink water from tube well, use sanitary latrine. "We used to go to the bush for defecation before having this sanitary latrine" said Najnin of Gala village.
- Under the PIC committee supervision the quality of the project was up to the mark.
- "Flood used to wash away everything/belongings but due to homestead rising we can plant trees, raise/graze domestic animals. This reduces risk of lives & increase food security" Said Motee Miah of Gala village.
- For collecting tube-well water young girls had to go to other's houses & used to face problems like eve teasing. So this risk has reduced as well.

## **Challenges ahead**

- No covering/fencing around the tube-well causes trouble for the ladies bathing. "We have girls who are at their age of marriage at home"

## **8.7 Key Challenges Faced and Action Undertaken to Overcome the Challenges**

- Ensuring the participation of vulnerable group, i.e, women, elderly people, and Person with Disability monitoring of the implementation activities
- Drawing the attention of the Disaster Management Committee (DMC) members Linkage with GoB departments

- The participation of the most vulnerable group was ensured by the list provided by the DMCs. Participatory monitoring approach was introduced in the project by involving the Disaster Management Committees (DMCs) and Project Implementation Committees (PICs).
- Several interactions, both formal and informal; and interpersonal relationship were developed among the DMC members and BDPC project personnel.
- Formal and informal communication with GoB departments; development of interpersonal relationship between GoB departments and BDPC project personnel; and communication with the district and national level authorities by the BDPC project personnel.
- Considering the political situation of the country and the SIDR occurred on November 2007 the duration of the project was not adequate
- In consultation with CDMP the duration of the project was extended at no cost on the part of CDMP.

## **8.8 Lessons Learned**

### **8.8.1 Managerial**

- Financial assistance should be increased.
- More efficiency and transparency is needed.
- Awareness among village people should be increased.
- Lack of maintenance. Lack of maintenance makes the tube well vulnerable to damage.
- Lack of training, monitoring and funding.
- Those who had no land for cutting soil, faced constraints to get soil (Beneficiaries).
- More number of people could be involved (IS).
- Conflict with UP members.

### **8.8.2 Programmatic**

- Implementation process was weak.
- Funding was insufficient.
- Most projects were poorly designed and poorly implemented. For example, pillars for houses were not strong enough. Constructed Killas, embankments and raised grounds were not compacted. Consequently, these are easily washable during floods. Bridges and culverts are not adequate in terms of length and width. There were no provisions for either approach road or railings for the bridges.
- After approval of the project, there was not enough time for implementation.

## **8.9 Limitations of the Project**

- At the beginning of the project period, there was non-cooperation from the Upazilla Administration.
- Difficult geographic location impeded timely implementation.
- Political instability in the country in general, and in the project area in particular, during the period September'06 to February'07 was not helpful for project implementation.
- Flood occurred in two spells in 2007 impeding implementation.
- Poor communication system.
- Delayed in starting of some of the mitigation project activities.
- Budget constraint.
- The Cyclone SIDR occurred at November 2007 impeding implementation.
- Delayed process of approval of PIC committee.



- Delayed in starting of some of the mitigation project activities.
- Budget constraint.

#### **8.10 Recommendations for sustainability**

- The main objective of CDMP is to facilitate a paradigm shift from reactive response to pro-active risk reduction culture. Development of local disaster risk reduction action plan is an important intervention to achieve CDMP's objective. But it depends on the appropriate implementation of the developed LDRRAP, which are the responsibilities of the GoB departments and NGOs. If the local authority does not consider the LDRRAP while developing their regular development plan then the objective of LDRRAP will not be achieved. To make the GoB departments accountable in following the LDRRAP, CDMP must negotiate with the government in order to institutionalize it.
- The CRA process has identified various risks facing the community as well as risk reduction options. It is essential to implement most of the interventions if not all to make the community safer and more resilient.

## **Chapter 9**

### **Reducing Health Risks**

#### **9.1 Defining the thematic area**

Today Bangladesh faces enormous challenges from natural hazards. The historical record should be sufficient reason to increase investment in disaster risk reduction, however, risks are expected to increase due to factors such as climate change affecting the frequency and severity of hazards and settlement of risk-prone areas due to urbanization pressures as well as population pressure on land. The tragic impact of emergencies, disasters and other crises on people's health is a major imperative for action on disaster risk reduction. In 2007, a WHO global assessment of national health sector preparedness and response found that most countries had experienced a major disaster within the previous five years. Communities are confronted by emergencies of varying scales. Large-scale disasters have killed thousands of people and affected millions more. Countries also experience numerous smaller-scale hazard events that have significant impacts and cumulative effects on communities. Economic losses from all these events run into the billions of dollars, setting back social development and hard-earned health gains. The combination of hazards, community vulnerabilities and limited capacities result in an uneven distribution of risk among and within countries, with the poor often the most affected.

The true impact of disasters is often hidden by statistics that describe how many people have died or been injured. But these dry details fail to depict the full health impact or the depths of human suffering felt during such emergencies. Millions of people have experienced great personal pain and suffering from injuries, disease and long-term disabilities. They also suffer the emotional anguish from loss of loved ones and haunting memories of traumatic events. It is a huge burden for individuals, families, communities and society to bear. For the sake of people's health we need to emphasize prevention. It may be possible to build back better, but it is not possible to replace lost lives and long-lasting health impacts.

Against the backdrop of increasing risks and public health impacts of disasters and emergencies, increased cooperation, investment and action towards risk reduction is needed to achieve better health outcomes for at risk communities, as well as to make them safer and more resilient. Partnerships within the health sector and between health and other sectors are vital for developing the field of risk reduction and emergency preparedness. By working together, community partners can deal with these risks, particularly by reducing vulnerabilities and building capacities to mitigate and respond to all emergencies which they face. Leadership is also critical to provide the necessary policy direction and mechanisms for consistent and predictable levels of funding for national and community risk reduction initiatives and programmes for health and other sectors. We possess most of the know-how to make a safer tomorrow, but political commitment at the highest level will help to provide the necessary investment for better health outcomes for millions of people at risk of emergencies, disasters and other crises.

#### **9.2 Summary of Interventions**

A number of partner organizations of CDMP have been carried out different interventions and activities regarding health risk reduction under LDRRF. Under the thematic area of reducing health risk, IED, GJKS, Shamadhan, DAM, IDO, BNM, Gharoni, Shushilan, FDA, BDPC, NDP, CODEC, HITAISHI, RIC, SGS, DCH, VERC, IDEA, IR, etc. have implemented the interventions in the pilot districts of CDMP. The major activities include lifting up of Existing tube well at char areas, training on emergency health service, training on emergency health

services for mothers, child and PWD during flood, awareness raising on malaria & distribution of mosquito nets, training on first aid and rescue, renovation of existing water well and installation of tube well to connect with well water, installation of deep tube wells, construction of dug wells, construction of rain water harvesting plant, reconstruction of dug wells as source of safe drinking water, basic training for TBA, pond sand filter to ensure safe drinking water, workshop on awareness raising on affects of arsenic contamination and established rain water harvesting system.

### 9.3 Objectives of Intervention

Water borne diseases are major threat to public health during disasters. Securing safe drinking water is the primary concern for emergency planners and practitioners. It is particularly true in case of floods when all sources of drinking water get submerged and drinking water becomes scarce. This is also true in case of a cyclone accompanied by storm surge. Therefore an important objective of health risk reduction intervention is to provide safe drinking water during disasters. The second important objective is to make people particularly emergency workers trained on first aid. This is particularly important to reduce further health complications later. The third important objective is to increase awareness on health related issues, particularly the types of diseases that are threats to public health and how to effectively prevent them.

### 9.4 Activities undertaken

The details of the activities undertaken by various partner NGOs across the country has been presented below:

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
Sunamgonj	Dharmapasha	Dharmapasha, Joysree, Paikurhati, Selboros, Rajapur uttar/dhakin, Bangsikundu	IED	Installation of 10 Deep Tube wells
		Joyshee, Shukhair Rajapur South and north, Maddhanagar, Maddhanagar,	IED	Installation of 5 Deep Tube wells
		Bhimkhali, Sachna Bazar, Jamalgonj Sadar	IDEA	Tube-well Installation (13 nos)
		Sadar, Fenerbac, Bhimkhali, Sachnabazar, Behali	IDEA	Tube-well Installation (14 nos)
	Sadar/South	Jahangirnagar	IR	Construction of Dug wells (3nos)
		Jahangirnagar	IR	Construction of Rain water harvesting plant
		Jahangir Nagar	IR	Reconstruction of 4 Dug Wells as Source of Safe Drinking Water
		Jahangir Nagar	IR	Reconstruction of 4 Dug Wells as Source of Safe Drinking Water

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
		Charnerchar	GJKS	Basic Training for TBAs (24 TBA)
	Derai	Charnerchar and Rafi Nagar	GJKS	Secure safe drinking water (16)
		diara	Shamadhan	installation of tube-well
		Champaful	DAM	Pond Sand Filter to ensure safe drinking water
		Bharashimul	DAM	Pond Sand Filter to ensure safe drinking water
		Bharashimul	DAM	Pond Sand Filter to ensure safe drinking water
		Mathureshpur	DAM	Pond Sand Filter to ensure safe drinking water
		Dhalbaria	DAM	Pond Sand Filter to ensure safe drinking water
		Mathureshpur	DAM	Pond Sand Filter to ensure safe drinking water
		Krishnanagar	DAM	Pond Sand Filter to ensure safe drinking water
		Moutala	DAM	Pond Sand Filter to ensure safe drinking water
		Ratanapur	DAM	Pond Sand Filter to ensure safe drinking water
		South Shreepur	DAM	Pond Sand Filter to ensure safe drinking water
		Nalta Union	DAM	Ensure safe drinking water through Filtering of Pond water (1)
		Mothureshpur	DAM	Ensure safe drinking water through Filtering of Pond water (1)
		Ratanpur	DAM	Supply of safe drinking water through pipeline
	Kaligonj	Bishnapur	DAM	Pond Sand Filter to ensure safe drinking water
		Sanarbaria & Keralkata union	IDO	Workshop on Awareness Raising on Affects of Arsenic Contamination and established <b>18 nos</b> Rain Water Harvesting System
		Kushodanga	BNM	Installation of Rain Water Harvesting Systems ( <b>9</b> )
	Kolaroa	Koila		Installation of Rain Water Harvesting Systems (45)
		Nur Nagar	Gharoni	Rain water harvesting System ( <b>10</b> )
			Gharoni	Construction of Rain Water Harvesting Systems (18)
		Munshigonj	Shushilan	Construction of Rain Water Harvesting System (25)
		Ramjan Nagar	Shushilan	Construction of 50 Units of Rain Water Harvesting Plants
		Atulia	Shushilan	Raising of plinth height (36) with safe drinking water support
Shatkhira	Syamnagar			

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
Faridpur	Faridpur Sadar	North Char	FDA	Lifting up of Existing 13 tube well at char areas
Shirajgonj	Chowhali	Sadia Chandpur, Khaskawlia, Khaspukuria, Umarpur & Stahl	BDPC	Training for Traditional Birth Attendants (35 TBAs)
		Pourashava	NDP	Training on Emergency Health Service
	Kazipur	MonsurNagar	NDP	Training on Emergency Health Services for Mothers, Child and PWD during Flood
		Gandhail, Maijbari, Khashrajbari, Char Girish, Nishchentapur and Tekani	NDP	Installation of Tube well, Sanitary Latrine and Plantation at Earthen Killa
		Shubhogacha and Nischintapur Union	NDP	<i>Livelihood Support including support for safe drinking water</i>
Cox's Bazar	Teknaf	HoaiKhong	CODEC	Construction of Ring Well
		HoaiKhong	CODEC	Construction of Ring Well
	Ukhia	Bharuakhali	CODEC	Rain water harvesting <b>(3)</b>
	Sadar/Ukeya	Raja Palong Union	HITAISHI	Installation of Deep Tube well (4)
	Pekua & Ramu	Reduce health hazard by providing Mosquito net	RIC	Awareness raising on Malaria & distribution of Mosquito Nets
		Khunia Palong, Joarianala, Rashid Nagar	RIC	Installation of 4 Deep Tube well for safe drinking water
Rajshahi	Bagha	Covering all 9 union	SGS	Training on First Aid and rescue
		Kismat Ganakoir	DCH	Renovation of Existing Water well and Installation of Tubewellto connect with water well water
		Kismat Ganakoir	DCH	Renovation of Existing Water well and Installation of Tubewellto connect with water well water
		Joy Nagar Union	DCH	Renovation of Existing Water well and Installation of Tubewellto connect with water well water
		Joy Nagar Union	DHC	Renovation of Existing Water well and Installation of Tubewellto connect with water well water
		Joy Nagar Union	DCH	Renovation of Existing public Water well and Installation of Tubewellto connect with water well water at Md. Amjad Hossains Home

DISTRICT	UPAZILLA	UNION	NGO	Name of intervention
		Naopara	DCH	Renovation of Existing public Water well and Installation of Tubewell to connect with water well water at Purbo para Jame Masjid's Ground
		Maria	DCH	Renovation of Existing public Water well and Installation of Tubewell to connect with water well water at Md. Abed Ali's Home
		Godagari	VERC	Installation of 3 Tara-II Dev Head Hand Pump Tube Well
	Tanore/Godagari	Chanduria	VERC	Installation of TARA Pump to reduce water born disease (9 Tara pump)

## 9.5 Key Benefits Produced

- Setting up tube wells have ensured access to safe drinking water and rightly so reduced risks of water borne diseases.
- Setting up latrines has ensured healthy/hygienic sanitation and reduced health hazard risks.
- Better sanitation leading to reduced mosquitoes/fly and diseases. Previously they had to use latrines in open spaces.
- PAKKA Tube wells were constructed. Previously tube wells were at distant places, people used to drink water from nearby unhealthy sources. But after the project the overall situation has changed dramatically.
- Training of traditional birth attendants have ensured safe child birth and reduced maternal mortality.
- Deep tube wells and TARA tube wells have ensured safe water during dry season when normal tube wells fail to draw water.
- The technique of rain water harvesting has shown the vulnerable communities the most cost effective, eco-friendly and easily available source of safe drinking water.
- Raising the platform of tube wells above flood levels has ensured safe drinking water during floods.
- The technique of pond sand filtering has taught vulnerable communities how to purify surface water, if and when water from other sources was not available.
- Renovation of traditional water well (KOOP) ensures availability of safe drinking water.
- Awareness raising on mosquito bites and importance of using mosquito nets at night time has immediately increased use of mosquito nets, and this will reduce outbreak of malaria.
- Awareness raising on arsenic contamination will reduce Arsenicosis in the community.

## 9.6 Case Study of Good Practices

### 9.6.1 Case Study-1: Pond Sand Filtering

#### Introduction

Bashantapur is a remote village of Mathareshpur Union in Kaliganj Upazilla of Satkhira District. Around four thousand people live in this village. Most of the people live on



agriculture. These coastal people live a hard life here as they often cope with disasters such as water logging, storm, salinity and flood. It rains heavily in rainy season and remains warmest in summer season. Their life is full of struggle with natural calamities. Though they face many unfavorable situations in their day to day life; salinity is the main crisis of their village life.

Purification of pond water by pond sand filtering is one of the most important activities to address salinity crisis in this area. It was first started in Bashantapur and Harodda village two years ago and still it gives huge support to the vulnerable people of these areas. The system

was first put into practice by Dhaka Ahsania Mission (DAM).

Pond Sand Filter (PSF) of Bashantapur village has been established near to the Kalabina Pond. The filtered water has become a blessing for the entire population of Bashantapur and other neighboring villages. Village people, mostly women come here to collect water. Sometimes they get men's help in collecting water. Inhabitants of the village including male, female, young and elderly people, children and disabled can easily drink pure water because of this filter. They use the water in their household activities. Everyday approximately one thousand people stand in a queue to collect water from this filter. People come here to collect water in the morning just before sunrise and it continues till mid-night.

### Description of the Activity

Partner NGO	Dhaka Ahsania Mission
Location	Kaligonj, Satkhira
Project cost	BDT 50,000
Community Contribution	BDT 4,050
Total	BDT 54,050

### Objectives of Installing PSF

- To ensure safe drinking water
- To reduce the prevalence of water born diseases

### Situation before Installing the Filter

- People had been suffering from diarrhea and other water borne diseases because they often drunk unsafe water from sources like pond, river, lake etc.
- They suffered from goiter for using saline water.
- Village people had also suffered from skin diseases for drinking impure water.
- People were in a vulnerable and helpless situation having no source of potable water and easy solution to purify water.

### Outcome Produced

- Ensured the supply of pure water
- Reduce people's sufferings from salinity problem
- Saved people from various water-borne diseases and ensured a healthy life

- Reduced the sufferings of people by making an easy access and availability to potable water
- Ensured availability of water avoiding expensive alternative methods

### Good practices

- Made easy access to safe and potable drinking water.
- Reduced salinity problem of the villagers.
- Reduced the prevalence of waterborne diseases due to easy access to safe drinking water.
- Met the demand of safe water even in the summer season.
- Decreased the health care expenditure of the people.
- Strengthened villagers' social bond which in turn helps them to take quick decision during natural disaster.
- Reduced the burden of boiling unsafe water



### Challenges Ahead

- Women from different villages gather to the filter for collecting water. But sometimes they quarrel to collect water quickly. There is only one PSF which is insufficient to supply safe water quickly for a large number of people.
- PSF often becomes inactive due to lack of proper and regular maintenance.
- Stealing of different parts of the PSF increases the sufferings of village people.
- Around five hundred women have to wait in a queue here everyday for a long time to collect water.
- Women often face some family problems (e.g. domestic violence) for spending so much time here for collecting water.
- The supply of water is very low compared to the demand of the villagers, even the pipe of the filter is so thin that it pours slowly.
- There is no support service (toilet, elevated ground to stand during rainy season or flood situation) for the people remained waiting for collecting water for a long time.

*I used to come here at Kalabina Pond Filter site from three kilo meters away to collect drinking water everyday. Sometimes I even have to return without having filtered water due to huge queue.*

*Beneficiary, Kaligonj, Satkhira*

*We have to wait at least 3 hours to collect water due to long queue. If I am late to return home having drinking water, my husband often scold me and sometimes even beat me.*

### 9.6.2 Case Study-2: Rain Water Harvesting

#### Introduction

Munshigonj is located in the South Western part of Bangladesh just beside Sundarban. Salinity in the water is one of the main problems in the coastal belt. Due to increased



salinity in the surface water, there is an acute crisis of drinking water in Shayamnagar Upazilla like other Upazillas of Satkhira district. This has direct impact on human health and environment. In addition, shrimp cultivation also triggers salinity in water all over the area. In such a situation, developing alternative sources has become vital to ensure easy and less expensive access to drinking water. 'Rain water harvesting system' is such an innovative alternative option of getting drinking water. "Shushilan", a pioneer local NGO has played a vital role in implementing the rain water harvesting plant in this locality under the funding of LDRRF projects.

### Objectives

- To save the local people of coastal area from saline water and ensure pure/safe drinking water through harvesting rain water.
- To secure sound health of the coastal people by protecting them from different water borne diseases.
- To ensure the availability of drinking water during hot and humid weather.

Location	Seasons	Natural Calamity
Division: Khulna District: Shatkhira Upazilla: Shyamnagar Union: Munshiganj Village: Munshiganj sector-2	In all seasons	1.Coastal belt flood/ cyclone 2. Salinity 3. Water logging. 4. Lack of pure/safe drinking water.

### Situation before Activity Implemented

- Before the initiation of the rain water harvesting project people had to collect water from far flung areas.
- Saline water used to be collected from ponds and used for cooking and drinking purposes.
- Due to the use of pond water there was a prevalence of water borne diseases.
- It was tough as well as led to conflicts over collection of pure drinking water.

### Good Practices

- It ensures good quality drinking water during all seasons
- People no longer have to suffer during dry and humid season as they have accumulated abundant pure rain water for drinking purpose.
- Rain water is in abundance. Therefore use of this water causes decrease in health problems such as stomach pain, diarrhea and other stomach related diseases.
- Use of rain water has decreased the prevalence of saline water-borne diseases.
- Use of rain water rather than saline water reduced the health costs.
- As locals collect water from the identical place, a sense of bondage is being established and so whenever there's a disaster/hazardous situation they take collaborative action.

### Challenges Ahead

- Due to the lack of funding it was not possible to provide adequate number of "rain water harvesting filter". So the population of all spheres was not equally benefited.

- Unavailability of water in filters during dry season is a big problem.
- Conflicts take place as the owner of the filter doesn't share water with others who don't possess a filter.
- Field investigation indicates that in some cases the filter of rain water is too small to serve the family a year. Hence filter capacity should have increased up to 300 liters instead of 200.

### **9.6.3 Case Study-3: Training for TBA**

#### **Introduction:**

The village Chouhali situated in Sirajgonj district is absolutely estranged from urban arena. The mighty Jamuna River separates the remote village from the mainland. Most inhabitants of this densely populated village have no definite occupation in order to lead a better and comfortable life. In search of engaging in a definite job, they wander in different places as vagrant but very few succeed in managing work opportunities. This joblessness disappoints them. Moreover, the mighty Jamuna River continually erodes river banks that hasten the eviction of ultra poor dwellers those who could reside in the bank and now forced to migrate to another charland. Inhabitants of the village have to go to the nearest Thana to buy their daily essentials and to treat their medical conditions that frequently hampers their daily lives. This journey takes about two hours by an engine boat. Because of absence of a public hospital in Chouhali village, maternal mortality rate (MMR) is continuously rising.

#### **Objectives of the Programme**

- Underlying objective of this intervention was to provide requisite health services to pregnant women and direct or indirect aids during pre and post pregnancy period.
- To aware the potential mothers about the maternal care and safe motherhood.
- To ensure safe motherhood and deliver low cost services to the poor and under the privileged.

#### **Output Produced**

In order to reduce maternal mortality rate and future maternal health risks, a number of Traditional Birth Attendants were trained by the NGO BDPC with the support of LDRRF funding. A total of 12 birth attendants initially selected from 5 unions of Chouhali Thana. BDPC persistently trained up birth attendants, so that they can properly help illiterate pregnant women during childbirth. In addition, they also provided health knowledge and necessary aids so that women's major health risks and/or complications during pre or post pregnancy period is reduced.

#### **Good Practices**

- Most of the beneficiaries of this project are illiterate or quasi-literate rural women those who are financially insolvent. Economic paucity and religious constraints often made it impossible for them to visit MBBS doctors and get best medical care available at the nearest town. The medical and gynecological services from the easy to reach TBA have been an easy solution of many complicated health hazards.
- Trained up birth attendants directly advise about prime gynecological knowledge and frequently communicate with pregnant women so that they can reduce future health hazards in their childbearing periods. Though Traditional Birth Attendants have a little gynecological knowledge and no medical education, but common women

perceived them as professional and very capable because of their superior knowledge and abilities acquired through the training.

- Sometimes informal discussion in courtyard or any rural households are held to discuss the crucial factors related to pregnancy complexities and potential intervention options to minimize pregnancy risks.
- Ensures safe motherhood through merely supporting and providing proper medical advice to pregnant mothers by efficiently trained up TBAs.

## **9.7 Key Challenges Faced and Actions Undertaken to Overcome the Challenges**

- Time constraint was a challenge. Due to flood during the months of July, August and September, there was delay in submission of the project proposal and the approval was delayed as well. Partner NGOs had to work intensively to finish the job in time with good cooperation with the local government bodies.
- Need for development projects in the disaster stricken and disaster-prone areas is very intense. Crises in the areas are manifold. In the char (dried river bed) areas, living places are not permanently settled, livelihood options vary largely from season to season and area to area, and infrastructures for village life are also absent. A new need arises before one is met. So, when a need is fulfilled or set to be fulfilled, another is felt strongly.
- The UDMCs members were inactive and ignorant of their duties. It was challenging task to involve them in project implementation.
- Lack of leadership in the community.
- Ensuring the participation of vulnerable people i.e. Women and Persons with disability in the training sessions.
- Through motivational activities and frequent communication with the members of UDMCs, they were made pro-active.
- Participatory monitoring approach was introduced in the project by involving the UDMCs and PICs
- Several interaction both formal and informal; and interpersonal relationship were developed among the DMC members and the NGO project personnel.
- Cyclone SIDR made another challenge in regard to implementation of the project activities. SIDR made huge damage to properties and crops. Local administration, Union Parishad, UDMC, UzuDMC and NGOs worked together to help the affected people to overcome the situation.

## **9.8 Lessons Learned**

### **9.8.1 Managerial**

- Project design was faulty. It happened because of rush in preparation of the project proposal.
- Project costing were not done properly.
- Proper monitoring mechanism was not planned for in the project document.
- No mechanism was planned for to retain and utilize the trained staff after completion of the interventions.
- Had there been an office established and staff stationed at union level, piloting would have been easier and the outcome would have been as much better.

### **9.8.2 Programmatic**

- It was felt necessary to introduce community management of public dug well, tube well, pond sand filters, etc. Stealing of parts of the filters and tube wells was a big problem.
- If a PSF or RWHS was installed at the premises of anyone's house, it was treated as a private facility of the premise owner and other villagers were denied access. To avoid such a situation, it was felt that the site of the community facility should have been selected in a community meeting. Any premise owner should have made publicly acknowledge everybody's right.
- The alternative to private premise is installing the facility in a public or community property. In such a case, stealing of different parts of the system would be a problem. Community management and awareness raising by the community may reduce the risk of stealing.
- Women became victim of domestic violence, because they often have to spend a long time to fetch water from PSF or a Tube Well. Awareness raising among male population would have avoided this unfortunate development
- The interventions were totally inadequate. Number of tube wells or PSF or dug wells was far less than the community requirement. Moreover, pipes were thinner in diameter or short in depth causing reduction in water availability. More budget was necessary to intervene adequately and effectively.
- There is no support service (toilet or elevated ground to stand during rainy season or flood situation) for the people waiting in queue for collecting water for a long time.
- During meetings with UDMC, an attitude of apathy from concerned UP Chairman and Members was observed. They also expected lunch and allowance. They were very critical of our efforts. Regular (informal) communication with UP has contributed to increase mutual understanding, which eventually helps carry through the works planned.
- During the recent floods, we have understood the weak coping capacity of the people at the grassroots. Floods or other natural calamities easily damage the weak houses. Community people were not found adequately aware of the possible damages floods could inflict. Before and during floods, partners arranged a number of courtyard or open sessions on awareness and preparedness centers are also emphasized.
- Seasonal interruption like heavy rainfall is the most important problem in the way of project implementation, by taking proper initiatives these problems can be minimized.
- Communication is an important thing to run project implementation because it helps to run activities more effectively, efficiently and successfully.
- If project activities are not started in time it takes more time to cover the back locked works.
- Volunteers can play a vital role in risk reduction after phase out of the project and sustainability of the activities done under the project.

### **9.9 Limitations of the Interventions**

- There are some social, economical and traditional problems of the community people especially which the women and girls face, are not focused in the project.
- The people of the project are as are less aware of to adverse impact of changing climate, so, they are to suffer from natural hazards eventually.
- Social, economical and cultural backwardness created out of natural disaster and unexpected hazards out of natural catastrophe require initiatives to undertake for promotion of social, economic and cultural atmosphere.

- Duration of the Project period was short to achieve the goal and objectives of the project, as one year duration is not sufficient for a project for sustaining. At least three years are needed to make a project sustainable.
- Where as the project budget was also too limited in accordance with the needs of the community people as per CRA findings.
- According to needs as per CRA and the recommendations, the project implementation for short duration was not insufficient.
- As per CRA, there are needs for implementation of different initiatives for sustainable risks reduction programs in the water logging areas for community people for permanent settlement of their problems.
- In CRA many risks were identified but we have to work for a few, which needs long time development projects to undertake for reducing disaster risks.
- Project period was too shot to achieve the goal and objectives of the project, because one year is not sufficient for a project for sustaining. At least three is needed to make a project sustainable.
- Project budget was also too insufficient according to the needs of the areas according to CRA findings.
- In CRA many risk were identified but we have two works for a few, which need long time development projects for reducing disaster risks.
- According to needs of the CRA and recommendations, the project interventions were insufficient and short.
- Absence of any follow-up discussion / meeting on the training received.
- The timing of training conduction was inappropriate in some cases.

### **9.10 Recommendations for sustainability**

- Follow up actions required. Supplementary projects are also required.
- Institutional set up like UZDMC, UDMCs, etc. should be strengthened and made capable and help to undertake self-initiatives for reducing disaster risks in the community.
- Mass people should be made well aware, well informed and well knowledgeable about the risks, cause, solution etc. hen they well take initiatives for savings themselves from different disaster, which will reduce disaster risk in the community.
- Self-modified and self initiated dedicated volunteers should be developed and trained up in the community, who will take initiative to motivate and educate the community people with there own initiatives.
- Long time and integrated development project should be undertaken and implemented with the fullest participation of the community people.
- Community involvement is very essential in the project implementation planning and administration.
- Initiatives should be taken for permanent sustainability of the programs of the water logged community, because, small project will not fulfil the permanent needs of the people in the water logged communities.
- If the local government service provider and opinion leader be supportive to the beneficiaries, the project will spread out effects with other member of the community and they will receive the massage and undertake similar activities and be benefited. This is how the sustainability of the project will be achieved.
- UDMC and UzDMC have to be well trained in disaster management and should be well equipped and demonstrated practically on their responsibilities during disasters.
- All people of the community including UDMC, Volunteer group, NGOs and other stakeholders should work jointly to combat disasters and enable people to face it. And for that a forum has to be made with all the stakeholders.

- Regular coordination meetings with UDMC, UzDMC and Volunteers should be organized for ascertaining that the risk reduction activities are operational throughout the community.

# Chapter 10

## Conclusions

### 10.1 Background

The LDRRF was designed to provide access to micro capital grants for pilot projects with innovative ideas for empowering local communities with a view to reducing the devastating impacts of natural and human induced hazards. LDRRF aimed at forging strategic partnership with NGOs and CBOs, and ensuring that all risks at the local level are addressed resulting to reduced vulnerability to a greater range of hazards, increased resilience and more sustainable livelihoods. It was also an intension that Intervention of LDRRF shall strengthen the institutional capacity of NGOs/CBOs making significant contribution to leadership building qualities and encourage their involvement in community risk reduction initiatives and ensure community participation in high-risk zones with demonstrable and sustainable positive impact on vulnerability reduction and capacity building. The geographic focus of the LDRRF was limited to the pilot areas selected on the basis of vulnerability. However, the ultimate objective of LDRRF intervention was to replicate best experiences in other disaster prone areas all over the country

Consequently, LDRRF launched its funding with a call for proposal in October 2005 from the qualified agencies under the following thematic areas to be working in CDMP 7 pilot districts:

1. Developing Community Based All Hazard Early Warning Dissemination System
2. Promoting Livelihood Security, Gender Equity and the needs of Socially Disadvantaged Groups with a focus on:
  - a. Strengthening resource mobilization capacity
  - b. Mobilizing disadvantaged groups to safety during major threat situation (for example: cyclone, flood, riverbank erosion, earthquake, tsunami etc.)
  - c. Shelters for all needs and resistant to all types of hazards
3. Risk Management Framework in Local Disaster Risk Reduction Action Planning process

Initially 44 entities from a range of diversified agencies including international (FAO), academic institutions (Dhaka University, Khulna University, BUET), research and technical agencies (like CEGIS, CNRS) and national and local level NGOs received funding from LDRRF. The projects were implemented in 342 unions, 23 paurashavas of the seven CDMP pilot districts (Sirajgonj, Faridpur, Lalmonirhat, Shatkhira, Sunamgonj, Rajshahi and Cox's bazaar). Many of the agencies received 2nd offer to implement small scale community projects with the Union Disaster Management Committees.

After completion of implementation of the LDRRF projects, CDMP launched an evaluation study which aimed to achieve the following objectives:

- A. Documenting the good practices with regard to their programmatic approaches and alternative options under each thematic area (early warning, livelihood support, community/social mobilization, community preparedness, risk mitigations and so on).
- B. Capturing the organizational, management and programmatic lessons learnt (both positive and negative) in the process of implementation of the projects funded under LDRRF and
- C. Looking at sustainability issues of the interventions implemented under the LDRRF support.

Consequently, the present study is conducted in the areas wherein CDMP has operated its pilot interventions. A total of 14 upazillas (sub-districts) are selected to carry out the research from seven pilot districts – Cox’s Bazar, Faridpur, Sirajgonj, Satkhira, Rajshahi, Lalmonirhat and Sunamgonj. The summary of findings of the study is in order.

## **10.2 Thematic Areas Identified**

Through a careful examination of LDRRF interventions, the present study identifies seven thematic areas instead of initially conceived three thematic areas. In future interventions, these seven thematic areas may be pursued:

- Risk Management Framework and RRAP
- Structural Risk Reduction Intervention
- Early Warning Dissemination System
- Community Mobilization through Awareness Raising and Capacity Building
- Promoting Gender Equity and the Needs of Socially Disadvantaged Groups
- Promoting Livelihood Security
- Reducing Health Risks

## **10.3 Managerial Lessons Learned**

- CRA was a risk assessment methodology newly developed by CDMP and there were not enough experienced people available that time in the labour market. The methodology itself is very complex and requires simplification for organizations to adopt. The implementing partners were totally dependent on the TOT and the CDMP guidance and the CDMP technical support was not enough.
- CRA should have been started only after getting complete instruction from the CDMP.
- There was little or no monitoring mechanism in place to check whether the materials provided during training are being used or not.
- It was difficult for the partners to choose the interventions among the alternatives as the total LDRRF allocations were not adequate enough for the implementation of the priority risk reduction interventions identified by the community.
- There was no fund for documentation or reporting of the activities implemented.
- Project duration was very short to ensure long term sustainability of the benefits it produced.
- Assistance from GoB Officials was most essential to accomplish the targeted activities
- Program implementation was so difficult because of rainy season.
- Field level presence of the implementing agency is very much essential for understanding the on the ground situation, insuring reliability and acceptability by the community the warning messages.
- This kind of project requires inputs from experts of different disciplines; but budgetary allocation to hire experts had been bare minimum and therefore full time experts had not been possible to recruit. This also delayed completion of the project.
- During the selection of the pilot Unions and Wards it was observed that the respondents of the respective Unions and Wards wanted to select their own unit for demonstration. It was therefore a tough decision to select the correct Unions and Wards. However, the selection was properly done in the end due to the excellent skill of the facilitators.



- Frequent changes in local administration and slow decision making process influenced the pace of the project and for that project had to concede time overrun for 6 months.
- Early warning dissemination network suggested by the experts could not be fully implemented due to resource constraints.
- Guidance provided from CDMP for work progress and financial progress monitoring was same for all LDRRF projects, but the nature and activities of different projects required different strategy.
- The experience gathered by the implementing NGO would be very much helpful to implement any additional projects in the same operational areas.
- Monitoring mechanism of implementation activities should be included in project proposals.
- Frequent transfer of Government Officials at the Upazilla level significantly hinders the program coordination.
- Local level capacity building facilitates implementation.
- Inadequate support services were not considered while preparing the project resulting in cost escalation
- High cost of living at certain project areas was not considered while preparing the proposal. So the IPs faced the problem of budget over-run.
- Time to time information sharing & mutual reciprocity avoid gaps and built trust among partners.
- For the sake of smooth implementation, during preparation of schemes it is wise to discuss widely with different stakeholders through whom proposed schemes will be implemented.
- Key project personnel should not be changed in the middle of implementation.
- Project design was faulty. It happened because of rush in preparation of the project proposal.
- No mechanism was planned for to retain and utilize the trained staff after completion of the interventions.
- More involvement of local influential persons will facilitate the interventions.
- Capacity building of individuals of disaster prone area is equally important as the capacity building of the institutions dedicated to the risk reduction activities. The more the capacity of the individual, the less is the risk when disaster occurs. The whole efforts should aim at increasing capacity of individual as well as the community.
- To minimize or reduce the disaster risk local resource mobilization is necessary.
- The community also understood that relief and response are not the right answer to address the loss of life and property caused by the disasters. It is the capacity building which should be the prime objective of disaster management strategy.
- Through participation in the CRA activities the communities, local government authorities and Upazilla administration could realize that the more the capacity of the community the less will be the risk due to hazards and calamities.
- School going students can play important and active role in family preparedness if they are made aware of DRR.
- Livelihood support to the vulnerable women and their families needs to be followed up further for maintaining their economic growth and reducing vulnerable situation.
- Besides preparedness response is also an emergency work. Besides NGOs and Government response, community needs to be capable in terms of resources (materials and money) to address the need of emergency.
- A better coordination of GO-NGOs and UDMCs is important to complete for effective emergency such as this year happened.

## 10.4 Programmatic Lessons Learned

- Community Risk Assessment (CRA) is the key process of community mobilization to pre disaster management activities.
- It is an effective way to assess the community risks. CRA can also be treated as a good tool for community awareness on their risks and vulnerabilities. Through involvement in CRA process the community people, especially the poor and the at-risk communities were aware about their rights. They are now able to take their decisions themselves.
- This has also been realized that proper awareness, specific skills and prompt steps in time can reduce the losses in human and other assets during any disaster.
- Through CRA activities the members of the community could know their strength and wisdom when they worked together and they could also know if they are aware ahead of the commencement of the hazard, the extent of damage and loss of property will be less. For mitigating the disaster all time awareness and preparation for disaster is essential .The community members could realize if disaster preparedness activities are taken at right time the vulnerability of the community will be reduced .The community also could know relief and response are not the right answer to address the loss of life and property caused by the disasters. It is the capacity building which should be the prime objective of disaster management strategy.
- The project created space for involving UP and Community people for Union level development.
- CRA also helped the DMCs organized and functional in line with the Standing Orders.
- Attitude and concept of UDMC members on their roles and responsibilities have been changed in positive manner. The people of the project area are now more aware about disaster preparedness. NGO staffs become more aware and capable on disaster management.
- CRA had proved the fact that community people can be well involved in Risk Reduction Process under proper guideline and management.
- CRA activities created scope for the members of the different strata of the community for participation in preparing the Risk Reduction Action Plan (RRAP). Thus, the people themselves living in the area demonstrated the process of community empowerment with the preparation of the RRAP based on need assessment.
- People provided reliable information about their locality, hazard related risk and way of reduction, which are more effective & sustainable for LDRRAP implementation. Without the participation of community it is not possible to develop as well as to implement the LDRRAP smoothly and effectively.
- GO, NGOs and local government institutions' collaboration is essential for effective management of risk reduction activities.
- Hazard map is the base for information management in the selected areas for mitigation of disaster risk reduction
- Confidence building among the members of the community is essential for involving them to get community work done through participatory manner.
- The CRA process under the CDMP project provided ample scope to the community people to offer their problem and issues (regarding risk and vulnerability) as well as their view of probable solutions.
- The project for the first time focused on community people's livelihood protection as a way of Disaster Risk Reduction.
- Involvement of journalist, NGO representatives and other representatives of different stakeholders make the program more effective.

- In conducting CRA, Ward based small discussion could be avoided replacing the Union based medium groups categorized by livelihoods.
- At least the Secretary or any assigned UP member should be all along with the CRA functionaries in his respective Union so that, at least one from each UDMC can understand the total process of CRA involved.
- Allocated time to complete the total prescribed process in CRA guideline was inadequate.
- Knowledge earned through life experience is always more practical than the outsider's theoretical knowledge.
- Proper orientation smoothens and makes UDMC & UzDMC members more responsive.
- Participation of disabled persons was remarkable and they had provided very significant information for CRA.
- Interaction among all stakeholders is an effective way to solve difficulties.
- Funding and adjustment among different stakeholders was insufficient.
- The various government specialized agencies did not have detailed sectoral information. The sectoral officers did not provide sufficient time and their expert opinion.
- Since the participants spent the whole day for CRA discussion, the participant's honorarium needs to be increased ensuring their full cooperation in CRA outcome at the field level.
- Illegal interference by UP chairman in the intervention created problems. PIC committee was not enough supportive as they did not receive any incentives for their time spent for supervision.
- Having understood the objective of the project, the common community people extended their whole--hearted support.
- Physical presence proved more effective than communication over phone or other media but sometime it takes too much time.
- UP Chairmen and members sometimes wanted to suppress the local professional personnel. Even they wanted to take leadership during discussions.
- Local influential people tried to disrupt the sessions like rich people did not allow poor people to take part in discussion and decision making process.
- The SMS receivers up to Ward Warning Dissemination Committee (WWDC) level still have some confusion regarding the system in spite of being trained well. So, regular monitoring and training should be done for ensuring proper response.
- It was learnt from the coordination meeting at Lalmonirhat that people from relevant organizations felt the need to be involved in this programme as they found the early warning dissemination process very effective.
- For quick and efficient dissemination of disaster warning, community based network of people was found very effective. This network should include UzDMC, UDMCs and local volunteers.
- With minimum logistic support and trainings UzDMCs, UDMCs and local communities could be brought into an effective network for disseminating disaster warnings.
- Disaster Information Committees (DIC) established in each of the unions of the project area had been found very effective in coordinating warning dissemination activities.
- Local government institutions were found most effective agency for disaster warning dissemination. However, their effectiveness was found reduced due to resource constraints that they face.
- A trained set of local volunteers, equipped with modest communication device for communicating with the UzDMC and UDMC could be effective in disseminating disaster warnings.

- Pre-designed separate text message templates for different types of hazards were found to be very useful for speedy dissemination of disaster warnings.
- For disasters like arsenic contamination, salinity increase awareness building is synonymous to 'early warning'.
- The community alerting system piloted was able to quickly disseminate the early warning messages up to household level. The system was found effective to transfer information of locally generated hazards such as embankment collapse, water logging etc to the local administration.
- Cultural activities with participation of local performers had been found to be very effective mechanism for awareness building of local communities.
- Priorities of local elite and that of people at risk are different. At the end of the day, it is the priority of the elite, not of masses, that prevails. Most members of the elite such as UP members, Chairmen and local government officials preferred their own interest and they do not consider mass peoples' necessities.
- At the implementation stage, the participation of women, different types of stakeholders as well as members of UDMC, etc. should be ensured. This will develop the ownership of the program and also ensure the success of all initiatives.
- Building rapport with government officials is needed to avoid any complexity. Regular communication with local level officials contributes to increase mutual understanding which eventually helps to carryout the planned works.
- While participating in project activities, participants expected honorarium and refreshment which was not covered in the project budget but it was managed through motivation.
- Cooperation and support from all UDMCs were not equal but majority were in positive.
- UDMC members are less interested on risk reduction rather they are interested to support relief.
- Most structural interventions were poorly designed and poorly implemented. For example, pillars for houses were not strong enough. Constructed Killas, embankments and raised grounds were not compacted. Consequently, these are easily washable during floods. Bridges and culverts are not adequate in terms of length and width. There were no provisions for either approach road or railings for the bridges.
- It was felt necessary to introduce community management of public dug well, tube well, pond sand filters, etc. Stealing of parts of the filters and tube wells was a big problem.
- If a PSF or RWHS was installed at the premises of anyone's house, it was treated as a private facility of the premise owner and other villagers were denied access. To avoid such a situation, it was felt that the site of the community facility should have been selected in a community meeting. Any premise owner should have made publicly acknowledge everybody's right.
- The alternative to private premise is installing the facility in a public or community property. In such a case, stealing of different parts of the system would be a problem. Community management and awareness raising by the community may reduce the risk of stealing.
- Women became victim of domestic violence, because they often have to spend a long time to fetch water from PSF or a Tube Well. Awareness raising among male population would have avoided this unfortunate development
- The interventions were totally inadequate. Number of tube wells or PSF or dug wells was far less than the community requirement. Moreover, pipes were thinner in diameter or short in depth causing reduction in water availability. More budget was necessary to intervene adequately and effectively.

- There is no support service (toilet or elevated ground to stand during rainy season or flood situation) for the people waiting in queue for collecting water for a long time.
- Seasonal interruption like heavy rainfall is the most important problem in the way of project implementation, by taking proper initiatives these problems can be minimized.
- Communication is an important thing to run project implementation because it helps to run activities more effectively, efficiently and successfully.
- It's true that the farmers of the project area had a traditional knowledge and practice of diversification of crops and earn extra money, which is absent in many other areas in Bangladesh. During field study at the end of the project period, it was known that the technical knowledge imparted through training on tolerant crop cultivation and crop diversification had a welcoming and lasting effect in the way the local farmers cultivate their crops.
- The follow-up meeting with the participants of climate change sessions shows indication of their gained knowledge in identifying the causes of climate changes. While asked about their awareness following the sessions, they showed their activities like steps for homestead gardening, dumping garbage in a particular hole, child health care etc. They also spoke about their roles they can play to protect themselves as well as the environment
- It has been found that if the people are made well aware and self-notified, they cooperate whole heartedly and help to implement the project activities.
- Communication is an important thing to run project implementation because it helps to run activities more effectively, efficiently and successfully.
- If project activities are not started in time it takes more time to cover the outstanding works.
- Cattle heads are one of the principal sources of livelihood of the people in the project area. During the onslaught of flood these cattle heads have to starve owing to lack of feed. The technology of processing and storage of grass under ground was unknown to the people.
- Alternative IGA activity can reduce risk from disaster through improving livelihood especially for the disadvantaged group.

### **10.5 Recommendations for Sustainability**

- CRA methodology is very complex. The guideline needs further revision.
- The duration of CRA should be short in order for ensuring full participation of the CRA stakeholders in all the sessions. Through a careful review of the methodology the steps can be shortened in order to reduce the duration of CRA exercise.
- RRAPs developed through CRA need to be implemented gradually by local, regional and national level resources.
- Allocation for CRA and similar nature of works need to be realistic for all hazard related awareness at the community level and the project should be extended to cover more intervention works by the partner organizations to consolidate the community confidence.
- CRA activities need to be continued and projects to be prepared based on the findings of CRA should be implemented for sustainable development as well as community risk reduction and enhancing the capacity of the community.
- An effective monitoring system should be established to guide and support the local CRA facilitators to improve the performance.
- The effectiveness of the LDRRAP depends on the continuous supervision, monitoring and evaluation by the different level of stakeholders. It is very important to develop a community based knowledge transfer group, so that they can continually

supervise, monitor and evaluate the LDRRAP through conduction of CRA. Even they can revise the LDRRAP by evaluating its implementation status. The plan formed through CRA should be followed strictly.

- Sharing CRA output with the community people at the village level would enhance peoples awareness on their risks, vulnerabilities and their rights
- Community level gathering may organize to make people aware about LDRRAP, especially by wards, by union inviting all levels of participation.
- Confidence building among the members of the community is essential for involving them to get community work done through participatory manner. UDMCs should remain activated.
- Implementation of the LDRRAP by Union and Upazilla administration be ensured.
- Follow LDRRAP by all (GO and NGO) to implement risk reduction project in the area.
- CRA report should be updated regularly in consultation with the community people and stakeholders.
- Children be included as a separate group so as to address the challenge the children face like trauma, insecurity and trafficking, deprivation in the area of food, shelter, education and recreation as well as their used in risky work amidst unholy and unhealthy environment
- To ensure sustainability regular up gradation of the Risk Reduction Action Plans will be required.
- To make sustainable EWDS for natural hazards some vital recommendations can be optimized. These include but are not limited to the following:
  - **Continuity in operations:** An EWDS must operate continually, even though the hazard of concern may occur only intermittently. Operation and maintenance of EWS is often a bottleneck for sustainability - low cost solutions and technical assistance designs must reflect realistic budgetary commitment. Operational planning includes drills, community preparedness and programs and all components requiring maintenance and system calibration and updating by community or individual over time. These decisions and actions ultimately determine the system's success or failure.
  - **Timely warnings:** For a warning to be considered useful, it must provide enough usable lead time for those at risk to decide whether and how to react. A warning should have time for responses to the warning and to the event. This varies from hazard to hazard. For tornadoes, warning time may only be in the order of minutes; for floods it might be three to seven days; for river erosion it could be one to three months; for cold spells and droughts it may be seven to ten days. A balancing act is required of those in an EWDS because they must avoid issuing warnings that are too early or too late.
  - **Communication and dissemination:** The communication network is the heart of the EWDS. The system preferably adapts level based existing communications. The implementation of a communication system is by e-mail, fax, mobile SMS, microphones, drums, flags, etc. some of which work even when commercial power is down in cases of emergency. Community radiolink can also be used as an alternative.
  - **Transparency:** The process of early warning dissemination system, whether the system only issues a warning or is involved in the total process from warning to societal response, needs to be open to the media and public. Transparency and accountability can help to minimize the potential for political influence on the various stages of early warning and thus can ensure the sustainability of the system.

- **Integration:** An EWDS must be integrated into other parts of the warning process, including monitoring and communication; it needs to be viewed as a subsystem within the larger socioeconomic, cultural, and political system.
- **Advocacy:** The roles and responsibilities of the DMCs in the government issued SOD are clear and strong enough to make the system effective and sustainable. So, it is recommended that advocacy for the enforcement of SOD is very much important.
- **Creditability:** Changing the mind-sets of government stakeholders at different levels is important. It is necessary to work with them with the early warning system for at least two years in order to prove to them the effectiveness of early warning dissemination in terms of loss and damage reduction. In that case, they would feel encouraged to manage hazards and disasters and become accustomed to the system.
- **Push-pull system:** The applied modes of communication for warning receipt, transmission, dissemination and monitoring were found effective. But there may be information missing at different levels. During the mock exercise, the Patgram UzDMC missed 3 messages out of 4. The mode of communication was fax in that case. So, an alternative way is needed to ensure receipt of messages. In this context, the authorities may add a bottom up approach in the system. As every level receives early warning individually from the source, every committee under this approach should transmit the information to its immediate lower level of DMCs. It will ensure the receipt of message if even if missed the first time. Similarly, the government officials may also adopt this bottom up approach. For informing the upper level both DMCs and GoB officials may adopt the available and appropriate media at each level.
- **Human capacity:** Appropriate staffing is essential along with expertise suited to work with the hazard(s) of concern.
- **Logistic and fund support:** The WWDCs and DMCs expressed their need for official mobile phones as the system is much dependent on that means of communication. Besides, a substantial fund for the functioning of the committees and the warning dissemination system is essential. Unfortunately, the DMCs are unable to function as expected, especially at normal times due to inadequate logistic and fund support. Advocacy is needed for allocating funds and adequate logistics for the DMCs.
- **Use of religious logistics:** The project has another important finding that the use of the microphones at mosques was much effective at the community level. So, all the mosques that have microphones can play an important role in disseminating the warning in local language. In that case, those who cannot interpret flags or cannot see them or come out of their homes for some physical limitations will also get the warnings from the mosque, which is a very credible source for the community. So, the WWDCs should take the responsibility to ensure that warning is disseminated by using microphones at mosques.
- **Flexibility:** An EWDS needs flexibility to expand its activities to other hazards and to other functions, if and when the occasions arise.

- **Catalysts:** There is a need for a defined "triggering" mechanism; the trigger can be anything from a quantitative indicator to an anecdotal comment.
  - **Apolitical:** An EWDS needs to be apolitical in performing its functions; it is important that EWS should be viewed as an objective uninfluenced by national or international politics.
- Regular trainings and workshops should be arranged for UzDMCs, UDMCs and local volunteers to update them with information regarding new developments in this arena.
  - Arrangements should be made by the Upazilla administration for monitoring proper functioning of the DICs established in every union, primarily for coordinating disaster warning gathering and disseminating activities.
  - The project duration should be for 3 years and it could be continued for 2 phases at least for its more sustainable achievements.
  - Project sustainability would be ensured through continuous participation of community people in the process of services delivery, cost sharing and services promotion.
  - The capacity enhancement of the Disaster Management Committees under the local government collaboration to cope with the adversity of natural hazards would be effective in the long run.
  - Mobilization of community based volunteers and imparting training on search and rescue would be a key for sustainability.
  - Government and non-government organizations should come forward to implement the interventions documented in the LDRRAP.
  - Self-modified and self initiated dedicated volunteers should be developed and trained up in the community, who will take initiative to motivate and educate the community people with their own initiatives.
  - All people of the community including UDMC, Volunteer group, NGOs and other stakeholders should work jointly to combat disasters and enable people to face it. And for that a forum has to be made with all the stakeholders.
  - Need to mobilize fund at the local level or create reserve fund to support alternative income generating projects on a continuous basis
  - Self reliance should be the main mechanism of the disaster mitigation to combat disaster.



**Data Collection Tools**  
**Beneficiaries**  
**Documenting Good Practices and Capturing Learnings of the LDRRF projects**

**Job No: SR-0090904**

Implementing Partners	District	Upazila	Union	Category of Respondent	UNO	1
					PIO	2
					PIC Chair	3
					Women PIC member	4
					Beneficiaries	5
					Implementing Staff	6
Name of Respondent						
Phone Number (T&T/Mobile)						
Address in Full						
Interview Time	Start:		End:			
Date of Interview						
NAME of Interviewer						
NAME and Sign OF FS	Accompany	Back Check	Scrutiny			
	1	2	3			
NAME and Sign OF QC	Accompany	Back Check	Scrutiny			
	1	2	3			
<b>Informed Consent</b>						
<p>Good morning/afternoon/evening. My name is _____ and I am here from The Nielsen Company (Bangladesh) Ltd. an independent research firm. We would like to ask you about your experience and observation on the implementation of the intervention of _____ NGO supported by LDRRF fund by CDMP. Our conversation will take about 20 to 30 minutes. Please be assured that anything you say will be kept totally confidential and anonymous.</p> <p>Your candid feedback—that is, both your positive comments and your thoughtful criticism—will help us to understand how to make such intervention become more functional and useful for the local people.</p> <p>Would you be willing to participate in this interview?</p>						
Respondent agrees to be interviewed				1	Continue	
Respondent does not agree to be interviewed				2	Thanks and terminate	
<p>"I have read the assent form completely before the respondent and the respondent voluntarily agreed to participate in the study. I have not taken any unfair means to acquire information in the questionnaire and followed the rules precisely."</p> <p>Signature of Investigator: _____ Date: ____ / ____ / ____</p>						

**Documenting Good Practices and Capturing Learnings of the LDRRF projects  
Interview with PIC Chair and women UP member**

No.	Questions and Filters	Coding Categories	Code	Skip
1.	Have you heard about the (name of implementing partners)?  (To be asked in appropriate cases)	Yes	1	
		No	2	
2.	What are the supports the NGO provided to your community?			
3.	What you and your family received from the NGO? (multiple answer)	RWH	01	
		Training	02	
		Cow	03	
		Goat	04	
		Chicken	05	
		Duck	06	
		Poultry feed	07	
		Seed	08	
		House	09	
		House Building Materials	10	
		Latrine	11	
		Tube-well	12	
		Sewing Machine	13	
		Radio	14	
Nothing	99			
Others (specify)	98			
4.	Was the support beneficial to you and the community?	Yes	1	
		No	2	
5.	Mention the positives and the negatives (effects and the impacts) of such intervention? Positive			
	Negative			
6.	Did the intervention/support helped you in reducing your community and the family vulnerability?	Yes	1	
		No	2	
7.	Describe how?			
8.	Your opinion about what needs to be done to reduce the risks and vulnerabilities related to: 1. Flooding 2. Cyclone 3. Drinking water crisis 4. Reducing salinity			

Thank you very much for your time and input!

Implementing Partners  
Documenting Good Practices and Capturing Learnings of the LDRRF projects  
Job No: SR-0090904

<b>Implementing Partners</b>			<b>District</b>	
			<b>Upazila</b>	
			<b>Union</b>	
<b>Name of Respondent</b>				
<b>Phone Number (T&amp;T/Mobile)</b>				
<b>Address in Full</b>				
<b>Interview Time</b>	<b>Start:</b>		<b>End:</b>	
<b>Date of Interview</b>				
<b>NAME of Interviewer</b>				
<b>NAME and Sign OF FS</b>	<b>Accompany</b>	<b>Back Check</b>	<b>Scrutiny</b>	
	1	2	3	
<b>NAME and Sign OF QC</b>	<b>Accompany</b>	<b>Back Check</b>	<b>Scrutiny</b>	
	1	2	3	
<b>Informed Consent</b>				
<b>Informed Consent</b>				
Good morning/afternoon/evening. My name is _____ and I am here from The Nielsen Company (Bangladesh) Ltd. an independent research firm. We would like to ask you about your experience and observation on the implementation of the intervention of _____ NGO supported by LDRRF fund by CDMP. Our conversation will take about 20 to 30 minutes. Please be assured that anything you say will be kept totally confidential and anonymous.				
Your candid feedback—that is, both your positive comments and your thoughtful criticism—will help us to understand how to make such intervention become more functional and useful for the local people.				
Would you be willing to participate in this interview?				
Respondent agrees to be interviewed		1	Go to 1	
Respondent does not agree to be interviewed		2	Thanks and terminate	
"I have read the assent form completely before the respondent and the respondent voluntarily agreed to participate in the study. I have not taken any unfair means to acquire information in the questionnaire and followed the rules precisely."				
Signature of Investigator: _____ Date: ____ / ____ / ____				
No.	Questions	Coding Categories		Code
9.	Type of staff you employed for the implementation of the project. (put the number)	Long term staff		
		Newly recruited staff under the project		
10.	How many of the staff recruited under LDRRF Projects are currently serving your organization			
11.	Do you have any ongoing projects similar in nature?	Yes	1	
		No	2	
12.	If yes, who is funding			
13.	Activities included in the ongoing programmes: 1. 2. 3. 4. 5. 6. 7.			

Question 1: Please provide the activity-wise detail information as per the below format  
 Table -1: \* **Please include additional sheet(s), if necessary.**

Activities Implemented	Past Experience Yes/no	Output Produced	Immediate benefits	Problems Faced	How overcame	Long term benefits
<b>CRA</b>						
<b>Maintenance of Jangla/Khal</b>						
<b>Demonstration Plot on Early and Short Duration Rice Variety</b>						
<b>Nursery training/livelihood support</b>						
<b>Working with PWD</b>						

Activities Implemented	Past Experience Yes/no	Output Produced	Immediate benefits	Problems Faced	How overcame	Long term benefits
<b>Installation of Tube wells/Latrine</b>						
<b>Earth work/school ground raising/embankment</b>						
<b>Early Warning</b>						

Table-2: \* Please include additional sheet(s), if necessary.

Activities Implemented	Type of support received from				Learnings (managerial/programmatic)		How to make use of it / sustainable (suggestions & recommendations)
	CDMP	UNO/PIO/Sectoral officer	UP Chairmen, member, PIC & Community	Beneficiary	Positive	Negative	
<b>CRA</b>							
<b>Maintenance of Jangla/Khal</b>							
<b>Demonstration Plot on Early and Short Duration Rice Variety</b>							
<b>Nursery training/livelihood support</b>							
<b>Working with PWD</b>							

<b>Installation of Tube wells</b>							
<b>Earth work/school ground raising /embankment</b>							
<b>Early Warning</b>							

**Implementing Staff**  
**Documenting Good Practices and Capturing Learnings of the LDRRF projects**  
**Job No: SR-0090904**

Implementing Partners		Category of Respondent	UNO	1
			PIO	2
			PIC Chair	3
			Women PIC member	4
			Beneficiaries	5
			Implementing Staff	6
Name of Respondent				
Phone Number (T&T/Mobile)				
Address in Full				
Interview Time	Start:		End:	
Date of Interview				
NAME of Interviewer				
NAME and Sign OF FS	Accompany	Back Check	Scrutiny	
	1	2	3	
NAME and Sign OF QC	Accompany	Back Check	Scrutiny	
	1	2	3	
<p>Informed Consent</p> <p>Good morning/afternoon/evening. My name is _____ and I am here from The Nielsen Company (Bangladesh) Ltd. an independent research firm. We would like to ask you about your experience and observation on the implementation of the intervention of _____ NGO supported by LDRRF fund by CDMP. Our conversation will take about 20 to 30 minutes. Please be assured that anything you say will be kept totally confidential and anonymous.</p> <p>Your candid feedback—that is, both your positive comments and your thoughtful criticism—will help us to understand how to make such intervention become more functional and useful for the local people.</p> <p>Would you be willing to participate in this interview?</p>				
Respondent agrees to be interviewed		1	Continue	
Respondent does not agree to be interviewed		2	Thanks and terminate	
<p>"I have read the assent form completely before the respondent and the respondent voluntarily agreed to participate in the study. I have not taken any unfair means to acquire information in the questionnaire and followed the rules precisely."</p> <p>Signature of Investigator: _____ Date: ____ / ____ / ____</p>				



**Documenting Good Practices and Capturing Learnings of the LDRRF projects  
Implementing Staff**

No.	Questions and Filters	Coding Categories	Code	Skip
14.	What are the activities you are currently conducting under CDMP/LDRRF project?			
15.	What role/s you are playing to implement the intervention in this area?			
16.	Did you face any difficulties to implement the intervention activities?			
17.	What are the problems?			
18.	How did you overcome the problem?			
19.	Did you get enough support by the local people and community leaders to implement the intervention?	Yes	1	
		No	2	
20.	If yes, what are the supports?			
21.	If not, Why?			

No.	Questions and Filters	Coding Categories	Code	Skip
22.	Did the intervention was well accepted by the beneficiaries? Why? Why not?			
23.	Had you been consulted during the design and implementation of the project interventions of these NGOs?	Yes	1	
		No	2	
24.	What role(s) you played in the design and implementation of the projects?			
25.	What are the major hazards and disasters your area frequently face?			
26.	How effective was the intervention in reducing the risks and vulnerabilities related to the hazards and disasters you frequently face?			
27.	What are the positive or negative impacts of the interventions in reducing the risks and vulnerabilities?			
	Positive			
	Negative			
28.	Are these interventions sustainable?	Yes	1	
		No	2	
29.	Did the interventions focus on women and socially disadvantaged groups?	Yes	1	
		No	2	
30.	What are the strengths of the interventions?			

No.	Questions and Filters	Coding Categories	Code	Skip
31.	What are the weaknesses of the interventions?			
32.	What are your suggestions for future interventions?			

Thank you very much for your time and input!

**PIC Chair & Women PIC Member**

**Documenting Good Practices and Capturing Learnings of the LDRRF projects**

**Job No: SR-0090904**

Implementing Partners		Category of Respondent	UNO	1
			PIO	2
			PIC Chair	3
			Women PIC member	4
			Beneficiaries	5
			Implementing Staff	6
District				
Upazila				
Union				
Name of Respondent				
Phone Number (T&T/Mobile)				
Address in Full				
Interview Time	Start:		End:	
Date of Interview				
NAME of Interviewer				
NAME and Sign OF FS	Accompany	Back Check	Scrutiny	
	1	2	3	
NAME and Sign OF QC	Accompany	Back Check	Scrutiny	
	1	2	3	
<p>Informed Consent</p> <p>Good morning/afternoon/evening. My name is _____ and I am here from The Nielsen Company (Bangladesh) Ltd. an independent research firm. We would like to ask you about your experience and observation on the implementation of the intervention of _____ NGO supported by LDRRF fund by CDMP. Our conversation will take about 20 to 30 minutes. Please be assured that anything you say will be kept totally confidential and anonymous.</p> <p>Your candid feedback—that is, both your positive comments and your thoughtful criticism—will help us to understand how to make such intervention become more functional and useful for the local people.</p> <p>Would you be willing to participate in this interview?</p>				
Respondent agrees to be interviewed		1	Continue	
Respondent does not agree to be interviewed		2	Thanks and terminate	
<p>“I have read the assent form completely before the respondent and the respondent voluntarily agreed to participate in the study. I have not taken any unfair means to acquire information in the questionnaire and followed the rules precisely.”</p> <p>Signature of Investigator: _____ Date: ____ / ____ / ____</p>				

**Documenting Good Practices and Capturing Learnings of the LDRRF projects  
Interview with PIC Chair and women UP member**

No.	Questions and Filters	Coding Categories	Code	Skip
33.	Have you heard about the (name of implementing partners)?  <b>(To be asked in appropriate cases)</b>	Yes	1	
		No	2	
34.	Are you aware of the disaster risk reduction activities of the NGOs?  <b>(To be asked in appropriate cases)</b>	Yes	1	
		No	2	
35.	Had you been consulted during the design and implementation of the project interventions of these NGOs?	Yes	1	
		No	2	
36.	What role(s) you played in the design and implementation of the projects?			
37.	Did you visit any of the interventions implemented by the partner NGOs in your area?	Yes	1	
		No	2	
38.	If yes what is your opinion on those?			
39.	Did they implement it efficiently?	Yes	1	
		No	2	
40.	What are the major hazards and disasters your area frequently face?			

No.	Questions and Filters	Coding Categories	Code	Skip
41.	How effective was the intervention in reducing the risks and vulnerabilities related to the hazards and disasters you frequently face?			
42.	What are the positive or negative impacts of the interventions in reducing the risks and vulnerabilities?			
	Positive			
	Negative			
43.	Are these interventions sustainable?	Yes	1	
		No	2	
44.	Did the interventions focus on women and socially disadvantaged groups?	Yes	1	
		No	2	
45.	What are the strengths of the interventions?			
46.	What are the weaknesses of the interventions?			

No.	Questions and Filters	Coding Categories	Code	Skip
47.	What are your suggestions for future interventions?			

Thank you very much for your time and input!

## UNO & PIO

### Documenting Good Practices and Capturing Learnings of the LDRRF projects

Job No: SR-0090904

Implementing Partners		Category of Respondent	UNO	1
District			PIO	2
Upazila			PIC Chair	3
Union			Women PIC member	4
			Beneficiaries	5
			Implementing Staff	6
Phone Number (T&T/Mobile)				
Address in Full				
Interview Time	Start:		End:	
Date of Interview				
NAME of Interviewer				
NAME and Sign OF FS	Accompany	Back Check	Scrutiny	
	1	2	3	
NAME and Sign OF QC	Accompany	Back Check	Scrutiny	
	1	2	3	
<p><b>Informed Consent</b></p> <p>Good morning/afternoon/evening. My name is _____ and I am here from The Nielsen Company (Bangladesh) Ltd. an independent research firm. We would like to ask you about your experience and observation on the implementation of the intervention of _____ NGO supported by LDRRF fund by CDMP. Our conversation will take about 20 to 30 minutes. Please be assured that anything you say will be kept totally confidential and anonymous.</p> <p>Your candid feedback—that is, both your positive comments and your thoughtful criticism—will help us to understand how to make such intervention become more functional and useful for the local people.</p> <p>Would you be willing to participate in this interview?</p>				
Respondent agrees to be interviewed		1	Go to 101	
Respondent does not agree to be interviewed		2	Thanks and terminate	
<p>"I have read the assent form completely before the respondent and the respondent voluntarily agreed to participate in the study. I have not taken any unfair means to acquire information in the questionnaire and followed the rules precisely."</p> <p>Signature of Investigator: _____ Date: ____ / ____ / ____</p>				



**Documenting Good Practices and Capturing Learnings of the LDRRF projects  
Interview with UNOs and PIOs**

No.	Questions and Filters	Coding Categories	Code	Skip
48.	Have you heard about the (name of implementing partners)?  <b>(To be asked in appropriate cases)</b>	Yes	1	
		No	2	
49.	Are you aware of the disaster risk reduction activities of the NGOs?  <b>(To be asked in appropriate cases)</b>	Yes	1	
		No	2	
50.	Had you been consulted during the design and implementation of the project interventions of these NGOs?	Yes	1	
		No	2	
51.	What role(s) you played in the design and implementation of the projects?			
52.	Did you visit any of the interventions implemented by the partner NGOs in your area?	Yes	1	
		No	2	
53.	If yes what is your opinion on those?			
54.	Did they implement it efficiently?	Yes	1	
		No	2	
55.	How effective was the interventions?			
56.	What are the positive or negative impacts of the interventions?			
	Positive			

No.	Questions and Filters	Coding Categories	Code	Skip
	Negative			
57.	Are these interventions sustainable?	Yes	1	
		No	2	
58.	Did the interventions focus on women and socially disadvantaged groups?	Yes	1	
		No	2	
59.	What are the strengths of the interventions?			
60.	What are the weaknesses of the interventions?			
61.	What are your suggestions for future interventions?			

Thank you very much for your time and input!

## Documenting Good Practices and Capturing Learnings of the LDRRF projects

Job No: SR-0090904

### FGD Guideline

For: Community People

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#### Warm up

- Exchange greetings
- Introduce yourself and your organization
- Acquaint yourself with others
- Describe the objective of the discussion

#### About Norms:

- Ensure that everyone is seated comfortably.
- There is no right or wrong in this discussion.
- Respondents' opinions may differ from others. We would like to know all of their opinions. And opinions that they express will be treated as confidential.
- One by one everyone will get the chance to state his or her views but each person must speak separately.
- Take permission to use the tape recorder.

#### About GD

- This is not a test but a simple discussion.
- It's nothing more than an exchange of views.

#### Start the Discussion

Good morning/afternoon/evening. My name is \_\_\_\_\_ and I am here from The Nielsen Company (Bangladesh) Ltd. an independent research firm. We would like to ask you about your experience and observation on the implementation of the intervention of \_\_\_\_\_ NGO supported by LDRRF fund by CDMP. We expect you would share your opinion on these issues openly.

	Issues	Instruction
<b>A</b>	<b>Information on the discussion session</b>	
1.	Have you heard about the NGO ___?	<b>Probe on the following issues:</b> <ul style="list-style-type: none"><li>• Were did you hear</li><li>• Who told you?</li><li>• Do you know the Location of their office?</li></ul>
2.	What sorts of supports they have provided to your village/union?	<b>Probe on the following issues:</b> <ul style="list-style-type: none"><li>• CRA</li><li>• Maintenance of Jangla/Khal</li><li>• Demonstration Plot on Early and Short Duration Rice Variety</li><li>• Nursery training/livelihood support</li><li>• Working with PWD</li><li>• Installation of Tube wells</li><li>• Earth work/school ground raising</li></ul>

	Issues	Instruction
3.	Who received what (the households) from the NGO under CDMP/LDRRF Intervention?	<b>Probe on the following issues:</b> <ul style="list-style-type: none"> <li>• RWH</li> <li>• Training</li> <li>• Cow</li> <li>• Goat</li> <li>• Chicken</li> <li>• Duck</li> <li>• Poultry feed</li> <li>• Seed</li> <li>• House</li> <li>• House Building Materials</li> <li>• Latrine</li> <li>• Tube-well</li> <li>• Sewing Machine</li> <li>• Radio</li> </ul>
4.	Did anyone of you are consulted while selecting the interventions?	<b>Probe on the following issues:</b> <ul style="list-style-type: none"> <li>• Who consulted?</li> <li>• When?</li> <li>• What was your suggestion?</li> <li>• Did they implement your suggestion?</li> </ul>
5.	Are you satisfied with the services of the NGO?	<b>Probe on the following issues:</b> <ul style="list-style-type: none"> <li>• Why?</li> <li>• Why not?</li> </ul>
6.	Did the intervention helped you in reducing your and the community vulnerability?  (Ask the below intervention specific relevant question)	<b>Probe on the following issues:</b>
	<ul style="list-style-type: none"> <li>• PSF</li> </ul>	<ul style="list-style-type: none"> <li>• When it was installed?</li> <li>• Was there any repairing after installation?</li> <li>• How frequently you clean the PSF?</li> <li>• How many people collect water from the PSF everyday?</li> <li>• Is the water quality good?</li> <li>• Did any one take bath/wash clothes in the pond?</li> <li>• Do you think that PSF solved your total drinking water problem?</li> <li>• If not what additional needs to be done?</li> <li>• Did you form any committee for its management?</li> </ul>

	Issues	Instruction
	<ul style="list-style-type: none"> <li>• Rain water harvester (RWH)</li> </ul>	<ul style="list-style-type: none"> <li>• When it was installed?</li> <li>• What is the water storage capacity?</li> <li>• How long did you use it (months/days)?</li> <li>• For what purposes you use the water?</li> <li>• How many families use the water everyday?</li> <li>• Was there any repairing after installation?</li> <li>• How frequently you clean the system?</li> <li>• Is the water quality good?</li> <li>• What do you do in the dry season?</li> <li>• Do you think that RWH solved your total drinking water problem?</li> <li>• If not what additional needs to be done?</li> </ul>
	<ul style="list-style-type: none"> <li>• Killa/shelter/bridge/culvert</li> </ul>	<ul style="list-style-type: none"> <li>• How these are being used?</li> <li>• Quality of construction</li> <li>• Appropriate placement</li> </ul>
	<ul style="list-style-type: none"> <li>• House</li> </ul>	<ul style="list-style-type: none"> <li>• How many constructed?</li> <li>• Quality of the construction materials</li> <li>• Appropriateness of the design</li> </ul>
	<ul style="list-style-type: none"> <li>• Training</li> </ul>	<ul style="list-style-type: none"> <li>• Did anybody attended/received any training?</li> <li>• Topics discussed in the training,</li> <li>• Knowledge gained, use of training,</li> </ul>
	<ul style="list-style-type: none"> <li>• Livelihood support (cattle, goat, chicks and ducks, seeds, IGA training)</li> </ul>	<ul style="list-style-type: none"> <li>• Items/package of support provided,</li> <li>• asset retention, mortality,</li> <li>• Livelihood gains (profitability/income addition),</li> <li>• Extension service, use of income</li> </ul>
	<ul style="list-style-type: none"> <li>• Plantation (road side tree plantation)</li> </ul>	<ul style="list-style-type: none"> <li>• How many trees planted,</li> <li>• how many of the planted trees are currently alive (mortality),</li> <li>• Who is looking after the trees now?</li> <li>• Future benefit sharing arrangements</li> </ul>

**“Conclude the discussion by thanking”**

**Working Draft**

# **OPERATIONAL GUIDELINE FOR THE**

# **LOCAL DISASTER RISK REDUCTION FUND (LDRRF)**

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**April 2005**

For further information, contact:

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Disaster Management & Relief Bhaban (2<sup>nd</sup> Floor)  
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**Phone: (02) 988 0937  
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**Ministry of Food and Disaster Management  
Government of the People's Republic of Bangladesh**

**Comprehensive Disaster Management Programme**  
(BGD/01/004)

**Community Empowerment Component 3c**  
**Local Disaster Risk Reduction Fund**

**Operational Guidelines for LDRRF Fund**

**1. Objectives**

To strengthen capacities of the vulnerable communities by providing funds for undertaking community risk reduction initiatives

**2. Preamble**

The Comprehensive Disaster Management Programme (CDMP) is a collaborative effort by the Government of Bangladesh (GoB), United Nations Development Programme (UNDP), Department for International Development (DFID) and a host of disaster management stakeholders. The programme is designed to build upon critical lessons learned over the past decade. Following the devastating flood of 1988 and the most destructive cyclone associated with very high sea surges in 1991, Bangladesh decided to set up more elaborate and institutional arrangements for disaster management in a more coordinated manner at apex, regional and local level. To date, the activities of the Ministry of Food and Disaster Management (MoFDM) have been focused on short-term preparedness, public awareness, response, and recovery. These activities are valuable in responding to the immediate crisis needs of the population. But it is now being acknowledged that these initiatives are not able to satisfy demands for reducing vulnerability. What is needed in Bangladesh is a more holistic and comprehensive approach, wherein the processes of hazards identification, vulnerability analysis, prevention, mitigation, preparedness, coordinated response and recovery efforts are planned and undertaken contiguously within a risk management context to address the underlying causes of vulnerability. The approach also requires considering the importance of disaster risk management in poverty reduction, particularly the most vulnerable sector among women, and others who have limited access to productive resources. The CDMP adopts a programme approach that encompasses all aspects of risk management that aims to build upon the ongoing trend in Bangladesh, which is shifting away from a response and relief oriented system to a broad multi-sectoral strategy.

The Local Disaster Risk Reduction Fund (LDRRF) under the Community Empowerment Component 3c of CDMP aims to broaden and strengthen the coping capacities of communities to the impacts of natural and human induced hazards. In order to build the technical and institutional capacity of the most vulnerable to resist and cope with disaster threat, increase resilience and more sustainable livelihoods, this component has been designed to support small-scale innovative and strategic interventions that attempts to foster policy development and capacity building at grassroots level. The Local Disaster Risk Reduction Fund (LDRRF) is a funding mechanism for local demonstration projects in high-risk zones, research, dissemination, advocacy and capacity building programmes. The LDRRF will be implemented by UNOPS and managed by a small team of project personnel with active support and guidance from PPPDU.

### **3. Focus of the Fund**

To reduce the devastating impacts of natural and human induced hazards the LDRRF will provide access to micro capital grants for pilot projects with innovative ideas for empowering local communities. LDRRF is designed to support the programme to forge strategic partnership with NGOs and CBOs, and ensure that all risks at the local level are addressed resulting reduced vulnerability to a greater range of hazards, increased resilience and more sustainable livelihoods.

Intervention of LDRRF shall strengthen the institutional capacity of NGOs/CBOs making significant contribution in leadership building qualities and encourage their involvement in community risk reduction initiatives and ensure community participation in high-risk zones with demonstrable and sustainable positive impact on vulnerability reduction and capacity building. The geographic focus of the LDRRF shall initially be limited within the pilot areas selected on the basis of vulnerability. However, the ultimate objective of LDRRF intervention is to replicate best experiences in other disaster prone areas all over the country

### **4. Who can apply for LDRRF fund**

- State institutions (excluding MoFDM and its agencies which are supported through CDMP components)
- District, Upazila and Union Disaster Management Committees
- CBOs
- NGOs
- NGO apex organizations
- Academic institutions
- Information dissemination and research bodies
- Private sector

A format for preparing proposal is attached in **Annexure – I**.

### **5. Eligibility Criteria**

- 5.1 Agencies involved in Community Risk Assessment Process and linked to a formal hazard and risk analysis process in identifying hazards and risks of any particular area with proven track record of activities in community concerned sectors
- 5.2 Linked to either LDAPs or Community Development Plans for the area or that they have clearly identified as a gap in the existing programming emphasis
- 5.3 Financially accountable
- 5.4 Proposals with well-defined exit strategy leading to future sustainability
- 5.5 Proposals encouraging and establishing the indigenous practices as coping mechanism
- 5.6 Projects with measurable benefits with innovative livelihood adaptation strategies to cope with and reduce vulnerability to climate change factors particularly amongst women and poor communities who have the lowest capacity to adapt



- 5.7 Awareness on identification and effective utilization of existing facilities of government departments enabling people in high risk areas to adopt better lifestyle practices in the areas of health, hygiene, sanitation, nutrition, education, income generation and develop coping pattern to all disaster threats and reduce vulnerability
- 5.8 Promote advocacy and dissemination of messages for awareness raising on various impacts of natural hazards and early warning mechanism and networking between civil society organizations (CSOs), government agencies and development partners
- 5.9 Community based initiatives leading to income-generating and resources re-generating activities designed to alleviate poverty and providing opportunities for women to participate as decision makers in determining objectives and types of activities
- 5.10 Research/pilot projects identifying indigenous best practices on disaster risk reduction in the form of publication of disaster-related books, journals, materials and studies on indigenous coping mechanism and help to replicate them in other similar disaster prone areas/communities

LDRRF shall however discourage activities of the following nature:

- Projects that involves revolving funds or any types of credit/savings related activities
- Emergency relief and response activities
- Project initiated and implemented by an individual

## **6. Operational Conditions**

### **6.1 Grant Amount and Budget**

Depending on the nature and volume of activities and interventions, the grant amounts per project may vary from US\$ 10,000 to US\$ 100,000

### **6.2 Project Duration, Time Frame and Reporting**

Proposals for a maximum duration of one year shall be considered for funding. However, two years projects might be considered too and in that case, fund would be approved only for the first year and the second year funding would be made on the next year depending on the performance of the first year. Activities of all selected projects shall be divided into four quarters and be guided on the basis of quarterly and annual work plan. On completion of each quarter, implementing partners/NGOs shall submit a Quarterly Progress Report describing the activities implemented as per the quarterly work plan indicating achievements and failure. Quarterly Progress Reports shall also include a separate Financial Statement showing item wise expenditures incurred during the quarter and planned expenditures for the ensuing quarter with work plan. At the end of the Fourth Quarter, a detailed Final Report compiling project activities, short and long term impacts and sustainability along with Financial Statement must be submitted to PPPDU of CDMP

### **6.3 Mode of Fund Disbursement**

Depending on the project tenure, mode of fund disbursement shall be guided under the following schedule:

Quarter No. 1	Reporting	Fund disbursement criteria	1 year project	2 years project
	Signing of LoA	Signing Money	30%	30% (of 1 <sup>st</sup> year allocation)
1 <sup>st</sup> quarter	1 <sup>st</sup> quarterly report	Nil	Nil	Nil
2 <sup>nd</sup> quarter	2 <sup>nd</sup> quarterly report	Ensuring measurable benefits as per the work plan and submission of 2 <sup>nd</sup> quarterly report	30%	40% (of 1 <sup>st</sup> year allocation)
3 <sup>rd</sup> quarter	3 <sup>rd</sup> quarterly report	Nil	Nil	Nil
4 <sup>th</sup> quarter	4 <sup>th</sup> quarterly report/ Final report	Ensuring measurable benefits as per the work plan, submission of 4 <sup>th</sup> quarterly report/submission and acceptance of final report	40%	30% (1 <sup>st</sup> year allocation)
5 <sup>th</sup> quarter	5 <sup>th</sup> quarterly report	Upon approval of project continuation for 2 <sup>nd</sup> year, ensuring measurable benefits as per the work plan and after submission of 5 <sup>th</sup> quarterly report		40% (2 <sup>nd</sup> year allocation)
6 <sup>th</sup> quarter	6 <sup>th</sup> quarterly report	Nil		Nil
7 <sup>th</sup> quarter	7 <sup>th</sup> quarterly report	Ensuring measurable benefits as per the work plan and submission of 7 <sup>th</sup> quarterly report		30% (2 <sup>nd</sup> year allocation)
8 <sup>th</sup> quarter	Final Report	Ensuring measurable benefits as per the work plan, submission and acceptance of final report		40% (2 <sup>nd</sup> year allocation)

#### 6.4 Institutional Set-Up/Proposal selection process/Fund management Strategy

A five member *Technical Review Committee* is established for initial review and screening of proposals. Members of the Technical Review Committee shall include the Programme Component Implementation Specialist (PCIS) and working level representatives from Disaster Management Bureau (DMB), PPPDU and UNDP.

The *LDRRF Approval Committee* is the highest body to approve proposals for LDRRF funding. Headed by the Chief Technical Adviser of CDMP, the LDRRF Approval Committee shall comprise representatives from the MoFDM, UNDP, members from the civil society, PPPDU and include the Programme Component Implementation Specialist (PCIS). The structure and ToR of the Technical Review Committee and LDRRF Approval Committee is attached in **Annex – II**.

The Component may undertake some pilot projects prior finalization of the LDRRF Guidelines to initiate some project activities that are felt necessary for community risk reduction initiatives. Proposals for pilot initiatives shall however be reviewed by the Technical Review Committee and approved by the LDRRF Approval Committee.

## 7. Contractual Framework

Proposals for implementation in the selected pilot areas shall be invited through newspaper advertisement. The **Technical Review Committee** shall perform the initial review and screening of proposals and short-list proposals/implementing partners.

The **LDRRF Approval Committee** is the highest body to approve proposals for LDRRF funding. Under the guidance of the LDRRF Approval Committee, selection criteria for proposals/implementing agencies, mechanism and schedule of disbursement will be developed with a strategic focus so that funded projects for each year are building on previous year's achievements. Identification of thematic widows would be the strategy for achieving this goal.

The Programme Component Implementation Specialist of the component shall be responsible for day-to-day management of the programme implementation, visiting project sites and provide necessary technical support to LDRRF implementing partners.

***On approval of the proposals by the LDRRF Approval Committee, the proponent shall fill up the Organization Information Questionnaire (attached in annexure – IV) and sign the Letter of Agreement. PPPDU shall issue fund disbursement notice requesting UNDP to release funds to the recipient agency.***

Responsibilities (not limited to) of the project management team are as below:

- Arranging meetings of the Technical Review Committee and LDRRF Approval Committee as per schedule and on need basis and record minutes
- Invite proposals for LDRRF funding through advertisement in at least 2 Bangla and 1 English national newspapers
- Develop screening mechanism for short listing of proposals by the Technical Review Committee
- Collect Organization Information Questionnaire (OIQ) from the selected NGOs/Implementing partners before signing the Letter of Agreement (Copy attached as Annexure-II)
- Establishing (in consultation with the CTA) the Letter of Agreement (LoA) between the Component Management and the recipient entity defining activities, approval, schedule and other terms related to grant disbursement
- Managing the release of the grant as agreed and follow up disbursements on achieved performance basis
- Monitoring and evaluation of project activities and reporting to competent authority on the overall implementation of the activities, achievement of results and financial statement on quarterly and annual basis



## **8. Letter of Agreement (LoA)**

On approval of the LDRRF Approval Committee, a Letter of Agreement (LoA) shall be established between CDMP as executing agency and the Implementing partner. **Annex-III** provides the draft LoA format.

The LoA shall contain the *modus operandi* of fund utilization and terms of reference. It serves to register the commitments and results that the recipient institution has agreed to produce. The LoA shall also contain the elements that CDMP considers necessary for such type of agreement. The LoA could be adapted to the specific requirements of the designated institution. It is suggested that the LoA should focus on:

a) Special conditions to be applied for the LDRRF grant including specificity in terms of:

- Recipient entity of the grant;
- Level of funding to be provided by the designated institution;
- Duration of the grant;
- Time frame of activities;
- Contractual authorities and exit strategy and
- Specific conditions to be applied for the grant.

B) General conditions to be applied for the LDRRF grant including details in terms of validity indicating the conditions related to agreement, terminative clauses, conflict of interest situations, etc.

c) Terms and conditions including the management of the LDRRF grant, the responsibilities of each party (NGO/Implementing Partner/Component Management/CDMP), schedule and mode of payment, reporting arrangements, audit and inception.

## **9. Monitoring and Evaluation**

As part of the programme management process each recipient agency should assure continuous monitoring of their activities. The Programme Component Implementation Specialist (PCIS) of CDMP under component 3c will do the second level of monitoring by analysing routine reports received from the implementing agencies/NGOs and through field visits on regular basis to monitor progress and measure performances. In addition, an out-sourcing mechanism will also be developed to monitor and evaluate the LDRRF funded activities on an annual basis.

(Annexure – I)

**Format for Preparing the Proposals**

- 1. Abstract** (Problem, Objective, Methodology and Output – not more than ½ page)
- 2. Project Title**
- 3. Profile of the Proponent**  
Name, address, email, telephone (land & mobile)/fax/email, legal status (registration identity), field of operation, funding sources, experience in managing similar projects particularly indicating the practiced risk assessment process as a formal process of identifying hazard and risk of the project area (not more than 1 page)
- 4. Problem Statement**  
Mention the major issue/problem areas of focus as project strategy and indicate how the proposal relates to address these issues
- 5. Rationale for LDRRF support**  
Mention which LDRRF objective the project addresses, how the project output will contribute towards policy development and capacity building towards enhancement of coping mechanism for disaster risk reduction
- 6. Project Objective**  
Mention broad and specific objectives
- 7. Project Area/Target Population** (exact location–Vill./Mouza, Union, Upazila & District)  
Mention area and target population to be covered by the project
- 8. Activities/Interventions**  
Provide in brief the major activities and interventions planned with impacts on disaster risk reduction at the community level
- 9. Proposed Methodology/Implementing Procedure**  
Mention the process of the Community Risk Assessment followed and how it is linked to a formal hazard and risk analysis process in identifying hazards and risks and how the objectives will be attained
- 10. Project Output and Plan for Dissemination**  
List of outputs to be produced, indicators for assessment of the outputs as performance criteria
- 11. Sustainability/Exit Strategy**  
Exit strategy and sustainability factors
- 12. Monitoring & Evaluation Plan**  
Suggest strategies to carry out compliance and identify potential risks
- 13. Work Plan/Time Frame**  
Mention the time schedule (the project period should be limited to either 12 or 24 months)
- 14. Proposed budget**  
Provide a detailed and itemized budget. Please note that honorarium for resource persons should not exceed more than 20 percent of the budget. In case of seeking support for an on-going project, give description of donors and amount received)
- 15. Project Personnel and their Qualification (annex)**  
Provide short description of experience and qualification of key personnel

## Annexure - II

**COMPREHENSIVE DISASTER MANAGEMENT PROGRAMME**  
Policy, Programme and Partnership Development Unit (PPPDU)  
Disaster Management and Relief Bhaban  
92-93 Mohakhali C/A, Dhaka-1212  
Tel: 9890937, Fax: 9890854, e-mail: [cdmp@citech-bd.com](mailto:cdmp@citech-bd.com)

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### **Terms of Reference**

#### Technical Review Committee of CDMP component 3c

Technical Review Committee plays an important role in conducting the initial review and screening of proposals received for LDRRF award under CDMP Component 3c. The Technical Review Committee comprises representatives from DMB, UNDP, PPPDU and the Programme Component Implementation Specialist of PPPDU. The Secretary, MoFDM and National Programme Director of CDMP approves the formation of the Technical Review Committee that exercises the primary role of reviewing and screening proposals, allocations and implementation progress under the following ToR:

1. On the basis of the LDRRF Guideline and approved Thematic Windows, the Technical Review Committee conducts the initial review and screening of proposals received for LDRRF grants.
2. While reviewing and screening proposals, the Technical Review Committee shall consider 'Thematic Windows' as strategic focus at the beginning of each quarter to ensure that LDRRF funded projects for each year are build on the previous year's achievements.
3. Proper attention to be given on the Thematic Window Fund (TWF) during screening and short listing of proposals in terms of grant size and pre-requisites.
4. On the basis of LDRRF Guideline, the Technical Review Committee reviews and scrutinizes all proposals according to the approved criteria and forward short listed proposals for final approval of the LDRRF Approval Committee.
5. The Technical Review Committee regularly meets to review ongoing projects in terms of performance, fund utilization and outputs.
6. In cases of unsatisfactory and poor performing projects, the Technical Review Committee may advise LDRRF Approval Committee to withhold funding and cancel allocations for poor and unsatisfactory projects.
7. The Technical Review Committee shall meet every month to review and evaluate ongoing projects and scrutinize new proposals on quarterly basis for short listing and forwarding them to LDRRF Approval Committee for final selection.

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The long-term vision of the Government of the People's Republic of Bangladesh on disaster management is to reduce the vulnerability of people, especially the poor, to the effects of natural, environmental and human induced hazards to a manageable and acceptable humanitarian level.

## Annexure - II (Continued)

**COMPREHENSIVE DISASTER MANAGEMENT PROGRAMME**  
**Policy, Programme and Partnership Development Unit (PPPDU)**  
**Disaster Management and Relief Bhaban**  
**92-93 Mohakhali C/A, Dhaka-1212**  
Tel: 9890937, Fax: 9890854, e-mail: [cdmp@citech-bd.com](mailto:cdmp@citech-bd.com)

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### **Terms of Reference**

#### LDRRF Approval Committee of CDMP component 3c

LDRRF Approval Committee plays the vital role as the decision making body of CDMP Component 3c – Local Disaster Risk Reduction Fund. The LDRRF Approval Committee comprises representatives from MoFDM, UNDP, Chief Technical Adviser and PCIS of PPPDU including a representative from the civil society. The Secretary, MoFDM and National Programme Director of CDMP approve the formation of the LDRRF Approval Committee that will manage the Local Disaster Risk Reduction Fund (LDRRF) under the following ToR:

1. Approve a detailed LDRRF Guideline prepared by PPPDU comprising:
  - a. Selection criteria for proposals and implementing agencies
  - b. LDRRF disbursement mechanism
  - c. Schedule of fund disbursement
2. Ensure assessment and identification of 'Thematic Windows' as strategic focus at the beginning of the year so that LDRRF funded projects for each year are build on the previous year's achievements.
3. In overseeing the Thematic Window Fund (TWF), the LDRRF Approval Committee shall approve general criteria for accessing TWF in terms of grant size and pre-requisites.
4. Approve proposals for LDRRF awards, which are scrutinized and short-listed after a thorough review conducted by the 'Technical Review Committee' on the basis of the LDRRF Guidelines.
5. Ensure that the disbursement mechanisms follow the agreed principle and the schedule of disbursement is on time.
6. Oversight TWF and overall performance of funded projects in terms of fund utilization and achieved output.
7. Reviewing poor performing projects as identified by the Technical Review Committee and decide withholding and cancellation of fund allocations for poor and unsatisfactory projects.
8. The LDRRF Approval Committee shall meet at least twice per quarter to facilitate reviewing and evaluating ongoing projects and approve new projects for fund award.
9. The Committee may co-opt other member in the Approval Committee on need basis.

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The long-term vision of the Government of the People's Republic of Bangladesh on disaster management is to reduce the vulnerability of people, especially the poor, to the effects of natural, environmental and human induced hazards to a manageable and acceptable humanitarian level.



**(Annexure-III)**

**COMPREHENSIVE DISASTER MANAGEMENT PROGRAMME**

Disaster Management and Relief Bhaban  
92-93 Mohakhali C/A, Dhaka-1212

**Local Disaster Risk Reduction Fund**

**LETTER OF AGREEMENT**

(Between the Designated Institution and the Recipient Institution for the provision of LDRRF Grant)

Letter of Agreement (hereinafter referred to as the "Agreement") made between the Designated Institution [**INSERT NAME OF Designated Institution**], and the Recipient Institution [**INSERT NAME OF Recipient Institution**].

WHEREAS the Designated Institution [**NAME**] desires to provide funding to the **RECIPIENT INSTITUTION** in the context of a Project and on the terms and conditions hereinafter set forth, and

WHEREAS the **RECIPIENT INSTITUTION** is ready and willing to accept such funds from the Designated Institution [**NAME**] for the activities mentioned in the work-plan of the proposal on the said terms and conditions.

NOW, therefore, the parties hereto agree as follows:

**1. Responsibilities of the RECIPIENT INSTITUTION**

1.1 The RECIPIENT INSTITUTION agrees to: 1) Undertake the activities described in its **Work plan and Budget** (attached), and updates related to the subsequent release of funds in **tranches**; 2) Provide quarterly reports; and 3) Provide Annual Audited Statements [Income Statement and Balance Sheets] to **CDMP**. In projects where a technical contractor is providing assistance to the RECIPIENT INSTITUTION, the contractor shall be responsible for verifying the accuracy of the reports/statements.

1.2 The RECIPIENT INSTITUTION agrees to reach the performance targets as specified in the project work plan. If the RECIPIENT INSTITUTION fails to meet its responsibilities to attain at least 70% of any one-performance target for any given quarter, then this will be considered grounds for **PPPDU of CDMP** to suspend any further LDRRF grant support. The suspension shall remain in effect until the RECIPIENT INSTITUTION has achieved the target.

1.3 The RECIPIENT INSTITUTION agrees to inform **PPPDU of CDMP** about any problems it may face in attaining the objectives agreed upon.

**2. Duration**

2.1 This Agreement will come into effect on [**INSERT DATE/MONTH/YEAR**] and shall expire on [**INSERT DATE/ MONTH/YEAR**], covering the anticipated term of the project. If necessary, it can be extended by exchange of letters, noting the new expiration date.

**3. Payments**

3.1 The Designated Institution shall provide funds to the **RECIPIENT INSTITUTION** in an amount up to [**INSERT CURRENCY & AMOUNT IN FIGURES AND WORDS**] according to the schedule of the project budget set out below.

Payments are subject to the **RECIPIENT INSTITUTION** meeting the outputs as specified in the Performance Targets [Section C].

- 3.2 All payments shall be deposited into the **RECIPIENT INSTITUTION'S BANK ACCOUNT** of which the details are as follows:

**[NAME OF THE BANK]**  
**[BANK ROUTING NUMBER]**  
**[BENEFICIARY ACCOUNT NAME]**  
**[BENEFICIARY ACCOUNT NUMBER]**  
**[ADDRESS OF THE BANK]**

- 3.3 The amount of payment of such funds is not subject to any adjustment or revision because of price or currency fluctuations or the actual costs incurred by the **RECIPIENT INSTITUTION** in the performance of the activities under this Agreement.

**4. Records, Information and Reports**

- 4.1 The **RECIPIENT INSTITUTION** shall maintain clear, accurate and complete records in respect of the funds received under this Agreement.
- 4.2 The **RECIPIENT INSTITUTION** shall furnish, compile and make available at all times to the Designated Institution, any records or information, oral or written, which the Designated Institution may reasonably request in respect of the funds received by the **RECIPIENT INSTITUTION**.
- 4.3 Within forty five days after completion of project activities, the **RECIPIENT INSTITUTION** shall provide the Designated Institution with a final report with respect to all expenditures made from such funds (including salaries, travel and supplies) and indicating the progress made toward the goals of the activities undertaken.
- 4.4 All further correspondence regarding the implementation of this Agreement should be addressed to:

For the **Designated Institution**  
**[INSERT NAME OF AUTHORIZED OFFICIAL AND ADDRESS]**

For the **RECIPIENT INSTITUTION:**  
**[INSERT NAME OF AUTHORIZED OFFICIAL AND ADDRESS]**

**5. General Provisions**

- 5.1 This Agreement and the Annexes attached hereto shall form the entire Agreement between **[INSERT ACRONYM OF ENTITY]** and the Designated Institution, superseding the contents of any other negotiations and/or agreements, whether oral or in writing, pertaining to the subject of this Agreement.
- 5.2 The **RECIPIENT INSTITUTION** shall carry out all activities described in its work plan with due diligence and efficiency. Subject to the expressed terms of this Agreement, it is understood that the **RECIPIENT INSTITUTION** shall have exclusive control over the administration and implementation of the activities

- referred to above in paragraph 1.1 and that the Designated Institution shall not interfere in the exercise of such control. However, both the qualities of work and the progress being made toward successfully achieving the goals of such activities shall be subject to review by the PPPDU of CDMP. If at any time the Designated Institute and/or PPPDU of CDMP are not satisfied with the quality of work or the progress being made toward achieving such goals, they may advise the Designated Institution to: (i) withhold payment of funds until in its opinion the situation has been corrected; or (ii) declare this Agreement terminated by written notice to the **RECIPIENT INSTITUTION** and/or seek any other remedy as may be necessary. The determination of the PPPDU of CDMP as to the quality of work being performed and the progress being made toward such goals shall be final and shall be binding and conclusive upon the **RECIPIENT INSTITUTION** insofar as further payments are concerned.
- 5.3 The Designated Institution and/or PPPDU of CDMP undertakes no responsibilities in respect of life, health, accident, travel or any other insurance coverage for any person which may be necessary or desirable for the purpose of this Agreement or for any personnel undertaking activities under this Agreement. Such responsibilities shall be borne by the **RECIPIENT INSTITUTION**.
- 5.4 The rights and obligations of the **RECIPIENT INSTITUTION** are limited to the terms and conditions of this Agreement. Accordingly, the **RECIPIENT INSTITUTION** and personnel performing services on its behalf shall not be entitled to any benefit, payment, compensation or entitlement except as expressly provided in this Agreement.
- 5.5 The **RECIPIENT INSTITUTION** shall be solely liable for claims by third parties arising from the **RECIPIENT INSTITUTION'S** acts or omissions in the course of performing this Agreement and under no circumstances shall the Designated Institution (PPPDU of CDMP) be held liable for such claims by third parties.
- 5.6 Assets (Equipment) purchased by LDRRF funds to the **RECIPIENT INSTITUTION** shall be the property of PPPDU of CDMP until the end of the project, at which time PPPDU of CDMP shall determine the best use of these assets. In cases where the **RECIPIENT INSTITUTION** has met its responsibilities under this agreement, and handover of the asset would contribute to the sustainability of activities, PPPDU of CDMP would normally handover these assets to the **RECIPIENT INSTITUTION**. The assets shall be used for the purpose indicated in the Work plan throughout the period of this Agreement.
- 5.7 This Agreement may be terminated by either party before completion of the Agreement by giving thirty (30) days written notice to the other party. If such notice is issued by the Designated Institution (PPPDU of CDMP), the **RECIPIENT INSTITUTION** shall promptly return unutilized funds to UNDP/PPPDU of CDMP. When the **RECIPIENT INSTITUTION** issues the termination notice, the **RECIPIENT INSTITUTION** shall be liable to return the entire amount of fund they received from the LDRRF.
- 5.8 The **RECIPIENT INSTITUTION** acknowledges that the Designated Institution and PPPDU of CDMP and its representatives have made no actual or implied promise of funding except for the amounts specified by this particular tranche Agreement. Although programme related documents may indicate a total amount of funds that could be available for this **RECIPIENT INSTITUTION**, actual disbursements will be based upon the **RECIPIENT INSTITUTION** meeting

performance targets. If any of the funds are returned to the Designated Institution and PPPDU of CDMP or if this Agreement is rescinded, the **RECIPIENT INSTITUTION** acknowledges that the Designated Institution and/or PPPDU of CDMP will have no further obligation to the **RECIPIENT INSTITUTION** as a result of such return or rescission.

5.9 No modification of or change to this Agreement, waiver of any of its provisions or additional contractual provisions shall be valid or enforceable unless previously approved in writing by the parties to this Agreement or their duly authorized representatives in the form of an amendment to this Agreement duly signed by the parties hereto.

5.10 Any controversy or claim arising out of, or in accordance with this Agreement or any breach thereof, shall unless it is settled by direct negotiation, be settled in accordance with the UNCITRAL Arbitration Rules as at present in force. Where, in the course of such direct negotiation referred to above, the parties wish to seek an amicable settlement of such dispute, controversy or claim by conciliation, the conciliation shall take place in accordance with the UNCITRAL Conciliation Rules as at present in force.

The parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such controversy or claim.

5.11 Nothing in or relating to this Agreement shall be deemed a waiver of any privileges and immunities of the PPPDU of CDMP.

IN WITNESS WHEREOF, the undersigned, duly appointed representatives of the Designated Institution, and the **RECIPIENT INSTITUTION**, respectively, have on behalf of the Designated Institution and the **RECIPIENT INSTITUTION** signed the present Memorandum of Agreement on the dates indicated below their respective signatures.

**On behalf of Designated Institution:  
INSTITUTION:**

**On behalf of the RECIPIENT**

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## B. BUDGET

**To be prepared by the Recipient Institution on the basis of the approved budget submitted with the proposal**

### PROJECT BUDGET OF RECIPIENT INSTITUTION

Project Number: \_\_\_\_\_

Date: \_\_\_\_\_

Project Title: \_\_\_\_\_

Name of the RECIPIENT INSTITUTION: \_\_\_\_\_

Total Amount of Funds under the Agreement: \_\_\_\_\_

Date of the Agreement: \_\_\_\_\_

### PROJECT BUDGET (in Local Currency)

PERIOD COVERING FROM \_\_\_\_\_ TO \_\_\_\_\_

General Category of Expenditures	Tranche 1	Tranche 2	Tranche 3	Tranche 4	TOTAL
Personnel					
Transportation					
Premises					
Training/Seminar/Workshops, etc.					
Contracts (Audit)					
Equipment/Furniture (Specify)					
Other [Specify]					
Miscellaneous					
<b>TOTAL</b>					

\* Please note that all budget Lines are for costs related only to programme activities.

\*\* These budget categories and number of tranches are suggested guidelines. The Recipient may choose alternative table that may reflect their expense items and needs more accurately.

## C PERFORMANCE TARGET

Name of the Recipient Institution:

List of activities	Baseline	Quarterly Target	
		Proposed	Actual

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(Annexure – IV)

COMPREHENSIVE DISASTER MANAGEMENT PROGRAMME  
Local Disaster Risk Reduction Fund (LDRRF)  
Component 3c

**Organization Information Questionnaire**  
প্রতিষ্ঠান তথ্য সংগ্রহের প্রশ্নমালা

Please answer all the questions in the space provided according to the attached guideline.

অনুগ্রহপূর্বক এতদসঙ্গে সংযোজিত প্রশ্নপত্র পূরণের নির্দেশিকা অনুযায়ী নিম্ন বর্ণিত সবগুলো প্রশ্নের জবাব দিন।

**1. GENERAL INFORMATION**

সাধারণ তথ্যাবলী

1.1 Please provide background information about your organization.

অনুগ্রহপূর্বক আপনার সংস্থার প্রতিষ্ঠাকাল সম্পর্কিত তথ্যাদি প্রদান করুন।

Name of organization গংস্থার নাম	
Acronym of organization গংস্থার সংক্ষিপ্ত নাম	
Date of establishment প্রতিষ্ঠার তারিখ	
Date of commencement of program activities কর্মসূচী আরম্ভের তারিখ	
Vision/Goal of Organization গংস্থার কাঙ্ক্ষিত লক্ষ্য	
Major Objectives প্রধান উদ্দেশ্যসমূহ	

<p>Address of head office &amp; Name of Chief Executive including Phone, E-Mail.</p> <p>প্রধান কার্যালয়ের পূর্ণ ঠিকানা এবং নির্বাহী প্রধানের নাম, ঠিকানা ফোন ও ই-মেইল।</p>	
<p>Name of contact person and address.</p> <p>(if different from above),</p> <p>যোগাযোগ রক্ষাকারী ব্যক্তি ও তার ঠিকানা (যদি প্রধান নির্বাহী ছাড়া অন্য কেউ হন)</p>	
<p>Address (es) of Regional/Sub offices</p> <p>(if any)</p> <p>আঞ্চলিক/শাখা অফিস সমূহের (যদি থাকে) পূর্ণ ঠিকানা (ফোন, ই-মেইল সহ)</p>	

1.2 Please provide information on the registration status of your organization.

অনুগ্রহপূর্বক আপনার সংস্থার নিবন্ধিকরণ সংক্রান্ত তথ্যাদি প্রদান করুন।

<p>Registering Body</p> <p>নিবন্ধিকরণ কর্তৃপক্ষ</p>	<p>Registration Date and Place</p> <p>নিবন্ধিকরণের তারিখ ও স্থান</p>	<p>Registration Number</p> <p>নিবন্ধিকরণ নম্বর</p>
<p>NGO Affairs Bureau</p> <p>এনজিও বিষয়ক ব্যুরো</p>		
<p>Women's Affairs Directorate</p> <p>মহিলা বিষয়ক অধিদপ্তর</p>		
<p>Directorate of Social Services</p> <p>সমাজ সেবা অধিদপ্তর</p>		
<p>Co-operative Department</p> <p>সমবায় অধিদপ্তর</p>		
<p>Youth Development Directorate (Affiliated)</p> <p>যুব উন্নয়ন অধিদপ্তর</p>		
<p>Other</p> <p>অন্যান্য</p>		



## 2. GOVERNANCE, PLANNING AND MANAGEMENT

পরিচালনা, পরিকল্পনা এবং ব্যবস্থাপনা

### 2.1 Place provide details about the members of the executive committee of your organization.

আপনার সংস্থার নির্বাহী পরিষদের সম্পর্কে বিস্তারিত তথ্য দিন।

Name of Members সদস্য/সদস্যের নাম	Male / Female পুরুষ/মহিলা	Age বয়স	Principal Occupation প্রধান পেশা	Numbers of years on EC নির্বাহী পরিষদের সাথে কত বছর জড়িত	Relationship to Chief Executive নির্বাহী প্রধানের সাথে সম্পর্ক

### 2.2 Please describe the selection process of executive committee.

অনুগ্রহ করে নির্বাহী পরিষদের নির্বাচন প্রক্রিয়া বর্ণনা করুন।

How often does the EC meet?

কতদিন পর পর নির্বাহী পরিষদের সভা হয় ?

Are minutes produced after each Executive Committee meeting? Yes \_\_\_\_\_ No \_\_\_\_\_

নির্বাহী পরিষদের প্রতিটি সভার কার্যবিবরণী লিপিবদ্ধ করা হয় কি? হ্যাঁ \_\_\_\_\_ না \_\_\_\_\_ ।

Do you have any constitution & organogram of you organization? Yes \_\_\_\_\_ No \_\_\_\_\_

আপনার সংস্থার কোন গঠনতন্ত্র এবং সাংগঠনিক কাঠামো আছে কি? হ্যাঁ \_\_\_\_\_ না \_\_\_\_\_ ।

Does your organization have written policies & procedures for the following?

নিম্নবর্ণিত বিষয়সমূহ সম্পর্কিত লিখিত নীতিমালা ও নিয়মাবলী আছে কিনা তা উল্লেখ করুন।

Subject / বিষয়	Yes / হ্যাঁ	No / না
Financial Management (অর্থ ব্যবস্থাপনা)		
Administrative Management (প্রশাসনিক ব্যবস্থাপনা)		
Human resources Management (মানব সম্পদ ব্যবস্থাপনা)		
Credit program operation (ঋণ কর্মসূচী পরিচালনা)		
Monitoring and Evaluation(পরিবীক্ষণ ও মূল্যায়ন)		
Reporting system (প্রতিবেদন প্রনয়ন ও দাখিলের নিয়ম/ পদ্ধতি)		
Gender Policy (জেন্ডার সংক্রান্ত নীতিমালা)		
Audit system (হিসাব নিরীক্ষণ পদ্ধতি)		

Does your organization have annual operational plan for program activities?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, please describe the process of this planning.

আপনার সংস্থার কার্যক্রমের উপর কোন বার্ষিক পরিকল্পনা করা হয় কি? হ্যাঁ \_\_\_\_\_ না \_\_\_\_\_। যদি করা হয় তাহলে কিভাবে করেন অনুগ্রহ করে তা বর্ণনা করুন।

### 3. HUMAN RESOURCES

মানব সম্পদ

3.1 Please give details about human resources of your organization.

অনুগ্রহপূর্বক আপনার সংস্থার মানব সম্পদ সম্পর্কিত তথ্যাদি পূর্ণ বিবরণ দিন।

Position (e.g. Project Coordinator, Area Manager, Field Supervisor etc.) পদমর্যাদা (যেমন- প্রকল্প সমন্বয়কারী, এলাকা ব্যবস্থাপক, মাঠ পরিদর্শক ইত্যাদি)	# Male Staff পুরুষকর্মীর সংখ্যা		# Female Staff নারী কর্মীর সংখ্যা		Total মোট
	Regular নিয়মিত	Temporary/ Contract সাময়িক/চুক্তিভিত্তিক	Regular নিয়মিত	Temporary. /Contract সাময়িক/চুক্তিভিত্তিক	
Overhead Staff অফিস পরিচালনার সহযোগী কর্মকর্তা/ কর্মচারী					

Project Staff প্রকল্প বাস্তবায়নে সহযোগী কর্মকর্তা / কর্মী					
Total / মোট					

#### 4. COVERAGE AND TARGET POPULATION

প্রকল্পভূক্ত / সংগঠনভূক্ত এলাকা এবং লক্ষিত জনগোষ্ঠী

4.1 Please provide information about the geographical areas and number of participants your organization is currently working with/targeting.

অনুগ্রহপূর্বক আপনার সংস্থার অর্ন্তভূক্ত এলাকা ও লক্ষিত জনগোষ্ঠী।

Name of Districts জেতার নাম	Name of Upazila উপজেলার নাম	# of Unions ইউনিয়নের সংখ্যা	# of Villages গ্রামের সংখ্যা	# of Groups (if applicable) দলের সংখ্যা (যদি পযোজ্য হয়)			# of targeted beneficiaries অংশগ্রহনকারীর সংখ্যা	
				Male পুরুষ	Female নারী	Mixed মিশ্র দল	Male পুরুষ	Female নারী

4.2 Please describe the target population of your organization.  
আপনার সংস্থার লক্ষিত জনগোষ্ঠী সম্পর্কে বর্ণনা করুন।

What criteria do you use to select your beneficiaries?  
কোন কোন নির্ণায়কের সাহায্যে প্রকল্পের অংশগ্রহনকারীদের নির্ধারণ থাকেন তা উলেখ করুন ?

4.4 Do you have any specific strategy to address minority groups (e.g. tribal / adibashi)?  
Ye \_\_\_\_ No \_\_\_\_\_. If yes, Please describe.  
বিভিন্ন সংখ্যালঘু গোষ্ঠীকে (আদিবাসী, উপজাতি ইত্যাদি) প্রকল্পভুক্ত করার কোন সুনির্দিষ্ট কৌশল / নীতিমালা আছে কি ?  
হ্যাঁ \_\_\_\_\_ না \_\_\_\_\_। যদি হ্যাঁ হয় তবে এই কার্যক্রমের সংক্ষিপ্ত বর্ণনা দিন।

**5. PROGRAMME**  
কর্মসূচী / কার্যক্রম

5.1 Please mention name of existing projects except disaster management and/or climate change projects and the working areas (district, upazila and unions number) of your organization.  
অনুগ্রহপূর্বক আপনার সংস্থার চলতি প্রকল্প (দুর্যোগ ব্যবস্থাপনা পরিবেশ এবং/অথবা জলবায়ু পরিবর্তন ব্যতীত) এবং কর্মএলাকা (জেলা, থানা, ইউনিয়ন সমূহের সংখ্যা লিখুন)

Name of Project/Activities প্রকল্পের নাম / কর্মসূচী	District, Upazila and Unions number জেলা, উপজেলা ও ইউনিয়নের সংখ্যা
<b>Health, Nutrition and Family Planning</b> স্বাস্থ্য, পুষ্টি, পরিবার পরিকল্পনা	
A	
B	
C	
D	
<b>Education / Information collection and dissemination</b> (শিক্ষা / তথ্য সংগ্রহ ও বিতরণ)	
A	
B	
C	
D	

<b>Credit</b> (ঋণ)	
A	
B	
C	
D	
<b>Skill Development</b> (দক্ষতা উন্নয়ন)	
A	
B	
C	
D	
<b>Legal Right / Advocacy</b> (আইনগত অধিকার / অধিপরামর্শ)	
A	
B	
C	
D	
<b>Agriculture</b> (কৃষি)	
A	
B	
C	
D	
<b>Others</b> (অন্যান্য)	
A	
B	
C	
D	

5.2 Please provide detail information about the disaster management and / or climate change activities of your organization.

অনুগ্রহপূর্বক আপনার সংস্থার দুর্ভোগ ব্যবস্থাপনা এবং অথবা জলবায়ুর পরিবর্তন বিষয়ক কার্যবলীর বিস্তারিত বিবরণ প্রদান করুন।

Type of activities কার্যবলীর ধরন	Name of Districts জেলার নাম	Name of Upazila উপজেলা নাম	Name of Unions ইউনিয়নের নাম	# of Villages গ্রামের সংখ্যা	# of Groups দলের সংখ্যা (যদি প্রযোজ্য হয়)			# of Participants অংশগ্রহনকারীর সংখ্যা	
					Male পুরুষ	Female নারী	Mixed মিশ্র দল	Male পুরুষ	Female নারী



6.3 Please provide details of the other income funding sources not mentioned above (fees, income generating activities, rent, training etc)

উপরে উলিখিত হয়নি এমন অন্যকোন আয়ের উৎস (যেমন- আয় বৃদ্ধিমূলক কর্মকান্ড, ঘরভাড়া, প্রশিক্ষণ ইত্যাদি)

Sources উৎস	Amount per year (Tk) প্রতি বছরের পরিমান (টাকা)
Total amount (Tk) / মোট (টাকা)	

6.4 Please provide information about financial audit of your organization.

অনুগ্রহ করে আপনার সংস্থার হিসাব নিরীক্ষা সম্পর্কিত তথ্যাদি প্রদান করুন।

## 7. MONITORING AND EVALUATION (M&E)

পরিবীক্ষণ ও মূল্যায়ন

7.1 Please describe the Monitoring and Evaluation system in your organization.

আপনার সংস্থার পরিবীক্ষণ ও মূল্যায়ন পদ্ধতি / নীমিমালো বর্ণনা করুন।

7.2 Is there any person assigned for M&E? If yes, please mention the designation.

এ কাজের জন্য দায়িত্বপ্রাপ্ত কোন কর্মী আছে কি? থাকলে তার পদমর্যাদা উল্লেখ করুন।

## 8. NETWORK

অন্যান্য সংস্থার সদস্যভুক্তি

8.1 Please give information about membership of forums and networks of your organization.

আপনার সংস্থা কোন ফোরাম বা নেটওয়ার্ক এর সাথে সংশ্লিষ্ট থাকলে তার বর্ণনা দিন।

Name of Forum/Network ফোরাম / নেটওয়ার্কের নাম	Position of your organization আপনার সংস্থার পদমর্যাদা	Purpose of Involvement সংশ্লিষ্টতার উদ্দেশ্য

## 9. OTHERS

অন্যান্য

9.1 Please mention the strengths that your organization has which you consider as useful to implement risk reduction projects effectively

আপনার মতে আপনার সংস্থার এমন কি কি উল্লেখযোগ্য দিক আছে যেগুলো নোফ ব্লক নিরসন প্রকল্পের সফল বাস্তবায়নে সহায়ক হবে।

9.2 In which areas do you think your organization will benefit from partnership with Comprehensive Disaster Management Programme ?

সিডিএমপি'র ব্লক নিরসন প্রকল্পের সাথে অংশীদারিত্বমূলক সম্পর্ক হলে আপনার সংস্থা কোন কোন ক্ষেত্রে উপকৃত হবে বলে আপনি মনে করেন ?

4.5 In what ways do you think Comprehensive Disaster Management Programme will benefit from partnership with your organization?

আপনার সংস্থার সাথে অংশীদারিত্বমূলক সম্পর্ক থেকে কিভাবে সিডিএমপি সার্বিক ভাবে উপকৃত হবে বলে আপনি মনে করেন ?



## 10. DECLARATION

অঙ্গীকার

I confirm that the information contained in this questionnaire is complete and correct

আমি নিশ্চয়তা প্রদান করছি যে, এই প্রশ্নমালায় বর্ণিত সমস্ত তথ্যাদি সম্পূর্ণ এবং সঠিক।

Signed by the Chief

Executive \_\_\_\_\_ Name \_\_\_\_\_

নির্বাহী প্রধানের নাম

নাম

Position \_\_\_\_\_ Date \_\_\_\_\_

পদমর্যাদা

তারিখ

### Organization's Stamp/Seal

সংস্থার সীলমোহর

Thank you for completing the questionnaire. Please return to the address below by date 00.00.2005

প্রশ্নমালাটি পূরণ করার জন্য ধন্যবাদ। পূরণকৃত প্রশ্নমালাটি -----তারিখের মধ্যে নিম্ন বর্ণিত  
ঠিকানায়ে পৌঁছানোর ব্যবস্থা করার জন্য অনুরোধ করছি।

Contact Address:

Local Disaster Risk Reduction Fund  
Policy, Programme and Partnership Development Unit (PPPDU):  
Comprehensive Disaster Management Programme (CDMP)  
Disaster Management & Relief Bhaban (2<sup>nd</sup> Floor)  
92-93 Mohakhali C/A  
Dhaka-1212

Details of the Partner Organizations

SL No	Name & Address of the Organization	Contact Person	Phone & Fax No.	E-mail	Working Area
01	IDEA House # 2, Road # 9, Block-A Shahajalal Uposahar Sylhet-3100	Mr. Nazmul Haque Chief Executive	0821-761928 Fax: 0821-760332	idea@btsnet.net	Jamalgonj of Sunamgonj
02	RDRS House # 43, Road # 10, Sector-6 Uttara, Dhaka-1230	Mr. Kamaluddin Akbar Executive Director	8954384-6 8959380-81, 8959383 Fax: 8954391	rdrs@bangla.net	Sadar, Aditmari, of Lalmonithar
03	SAMADHAN Upazila Road, Keshabpur Jessore-7450	Mr. Rezaul Karim Director	04226-56549, 04226-56377 Fax:56377 Ext.106 Mob: 0171-131250 0178-208458	samadhan@bttb.net.bd	Kalaroa of Satkhira
04	Community development Center (CODEC) House- 47/H, Road-1 Ispahani Park, South Khulshi Chittagong	Mr. Khurshid Alam Ph.D Executive Director	: 031-2853824, 031-612972  031-610607 (PABX)	khursid@spnetctg.com codec@spnetctg.com codecprg@spnetctg.com	Sadar, Ukeya and Teknaf of Cox's Bazar
05	FAO House # 37, Road # 8 Dhanmondi R/A, Dhaka-1205	Ms. Bui Thi Lan FAO Representative in Bangladesh	8118015-8 Fax: 8113446	FAO-BD@fao.org	Kaligonj, Patgram of Lalmonirhat and Charghat, Bagmara of Rajshahi,
06	SHUSHILAN House # 157, Road # 1 Muzgunni R/A Boyra, Khulna-9000	Mr. Mostafa Nuruzzaman Director	041-860329 Mob: 0171-329278	sushilan@khulna.bangla.net shushilan@shushilan.org	Symnagar of Satkhira
07	SAMATA 9/5, Iqbal Road Mohammadpur Dhaka-1207	Mr. Md. Abdul Kader Executive Director	9131058, 8124914 Fax: 9132351	samata@citechco.net snpac@accessstel.net	Sadarpur of Faridpur
08	BDPC House # 52 (4 <sup>th</sup> Floor) Road # 13/C, Block-E Banani, Dhaka-1213.	Muhammad Saidur Rahman Director	8815074/ 8816296 Fax: 8810211	bdpc@glintel.com	Cowhali of Sirajgonj
09	IED House # 52, Road # 8A Dhanmondi R/A, Dhaka-1209.	Mr. Numan Ahmed Khan Executive Director	8158248/8111323 / 8124899 Fax: 8114099 9120633	ied@bangla.net	Dharampasha of Sunamgonj
10	VOSD 8/8, Lalmatia, Block-A, Dhaka-1207.	Mr. AKM Mostafizur Rahman Executive Director	9126278, 9142663, 8150773 Fax : 8127629	vosd@dhaka.agni.com	Charbhaudrasan of Faridpur

11	Islamic Relief (IR) House-24, (2 <sup>nd</sup> & 3 <sup>rd</sup> Floor) Road-5, Block-K, Baridhara, Dhaka-1212.	Dr. Ahmed T.A Nasr or Nurul Amin Bagmer Programme Manager Emergency & Preparedness	9893458, 8819392 Fax: 8825119	info@islamicrelief-bd.org	Sadar nfd Jagannatpur of Sunamgonj
12	National Development Programme (NDP) NDP Bhaban, Bagbari Shahid Nagar, Kamarkhanda Sirajganj-6700	Mr. Md. Alauddin Khan Director	Phone & Fax : 0751-89111	ndp@citechco.net	Kazipur of Sirajgonj
13	Southern Gonounnayan Samity (SGS) Flat # C2, House # 12 Road # 126, Gulshan-1, Dhaka-1212.	Mr. Sk. Delwar Hossain Executive Director	0171-5362980 0171-6150343	sgsbangladesh@yahoo.com	Bagha of Rajshahi
14	Dhaka Community Hospital (DCH) 190/1, Bara Maghbazar Wireless Railgate, Dhaka-1217.	Mr. Md. Javed Yousuf Project Director	9351190-91 8314887 Fax: 9338706	dch@bangla.net	Durgapur of Rajshahi
15	Resource Integration Centre (RIC) 9/2 (2 <sup>nd</sup> & 3 <sup>rd</sup> Floor), Block-D, Lalmatia, Dhaka.	Mr. Abul Haseeb Khan Director	8118475 Fax : 8114034 Mob: 01711-548790	ricdirector@agni.com	Pekua, Ramu of Cox's Bazar
16	Village Education Resource Center (VERC) B-30, Ekhlas Uddin Khan Road Anandapur, Savar, Dhaka-1340	Mr. Shaikh A. Halim Executive Director	7710412, 7714214 Fax: 7710779	verc@bangla.net	Tanore and Gudagari of Rajshahi
17	Centre for Natural Resource Studies (CNRS) House-14, Road-13/C Block-E, 2 <sup>nd</sup> Floor, Banani, Dhaka- 1213.	Mr. M. Anisul Islam Executive Director (Acting)	9886700 Fax : 9886700	cnrs@dominox.com cnrs@bdmail.net	Tahirpur of Sunamgonj
18	FIVDB House # 77, Road # 7A Dhanmondi R/A, Dhaka-1209. Doloipara, Khadimnagar, Sylhet-3103.	Mr. Zahin Ahmed Executive Director	8118903, 9122207 Fax: 8112118	fivdbdhk@cgscomm.net fivdbdhk@citechco.net	Biswamberpur of Sunamgonj
19	Shariatpur Development Society (SDS) Sadar Road, Shariatpur-8000.	Mr. Mozibur Rahman Executive Director	0661-55554, 55434	sds@accesstel.net	Bhanga of faridpur
20	POPI 5/11-A, Block-E, Lalmatia, Dhaka- 1207.	Mr. Murshed Alam Sarker Executive Director	9121049, 9137769, 9122119, Fax: 9121049	popi@bdmail.net	Hatibandha of Lalmonirhat
21	Dhaka Ahsania Mission House-19, Road-12 (New) Dhanmondi R/A, Dhaka-1209.	Mr. Ehsanur Rahman Deputy Executive Director	8119521, 9123420 9123402, 8115909 Fax: 8113010, 8118522	dambgd@bdonline.com	Kaligonj of Satkhira
22	Manab Mukti Sangstha (MMS) Vill. Khash Bara Shimul PO: Banga Bandhu Bridge Sub Code # 6703 Sirajganj Sadar, Sirajganj.	Mr. Md. Habib Ullah Bahar Director	0751-89106 M: 01713-002850, 01711- 352185 01716-854510	hb_mms@yahoo.com mmstesri@btbb.net.bd	Shajadpur of Sirajgonj

23	GHARONI House-35/7, Road-11 P.C Culture Housing Society (Shekhertek), Mohammadpur, Dhaka-1207	Ms. Roushan Ara Rekha Executive Director	8153226 M: 01713-002389	info@gharoni.org admin@gharoni.org	Symnagar of Satkhira
24	Bhagni Nivedita Manchya Bus-Stand Road, Keshabpur, Jessore	Ms. Ratna Chandra Executive Director	04226-56561 M: 01711-000612	bnm_org@hotmail.com	Kalaroa of satkhira
25	Faridpur Development Agency (FDA) Tepurakandi, Bakigonj Faridpur Dhaka Office: House # 75, Road # 7/A Dhanmondi R/A. Dhaka-1209	Mr. Md. Azharul Islam Director	9116848 (Dhaka) M: 01711-898831 01711-808463 (o)	fda@bttb.net.bd	Sadar of Faridpur
26	Daridrya Nirashan Prochesta (DNP) Ambikapur, Faridpur.	Md. Shahajahan Mondal Executive Director	0631-62712 Fax: 0631-64457	dnp_fpur@yahoo.com dnpfpur@bttb.net.bd	Sadar, faridpur
27	OMI 6/9, Block-D, Lalmatia Dhaka-1207.	Ms. Gulshan Ara Chowdhury Executive Director	8115793 M: 0152-463983	omi@hrcworks.com	Jamalgonj, Biswamberpur and dharampasha of Sunamgonj
28	Urban and Rural Planning Discipline Khulna University Khulna-9208.	Dr. Shamim Mahabubul Haque Disaster and EW Expert & Team Leader	041-720171-3 Ext. 255 Fax: 731244 M: 01199-136653	mahabubul04@yahoo.com	Ashasuni, Satkhira
29	Department of Civil Engineering BUET, Dhaka.-1000	Ashutosh Sutra Dhar, PhD Assistant Professor	9665650-80 8614640-44 Ext. 7390 Fax: 8613026	ashutoshdhar@ce.buet.ac.bd	All Upazila under Cox,s Bazar
30	North Char Development Society (NCDS) Baniapara Road, Lakepar Tepakhola, Faridpur-7800	Mrs. Nurunnahar Begum President	M: 01718-000260 01712-162713	ncds-f@bttb.net.bd	Charbhaudrasan of Faridpur
31	ANANDO 13B/10B, Babar Road (1 <sup>st</sup> Floor) Mohammadpur, Dhaka-1207	Mr. Dominic Gomes Executive Director	8119760 Fax: 8119759	anando@citecho.net	Moheskhal of Cox's Bazar
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33	The Good Earth Hasney Tower (2 <sup>nd</sup> Floor) 3/A, Kawran Bazar C/A Dhaka-1215.	Md. Rafiqul Islam Executive Director	8121941, 9126652 Fax: 9131335	info@thegoodearthbd.org	Belkuchi of Sirajgonj
34	Hitaishi-Bangladesh 26, Nayapaltan, 2 <sup>nd</sup> Floor Dhaka-1000. E-mail:	Mr. M.A Majid Executive Director	93315158, 8318420 Fax: 8318924	hitaishi@dhaka.net	Sadar and Ukeya of Cox's Bazar
35	Integrated Development Organization (IDO) Sagardari, Keshabpur Jessore-7450.	Mr. Md. Mizanur Rahman Executive Director	04226-56723 M: 01716-790824	idobd1993@yahoo.com	Kalaroa of satkhira
36	SHARP Kazipur Road, Fokirtala (beside Polytechnic Institute) Khokshabari Sirajgonj-6700	Md. Showkat Ali Director	0751-64312	sharp_bd@yahoo.com	Sadar of Sirajgonj
37	Foundation for Human Development (FHD) 59, Moneswar Road Zikatola, Dhanmondi R/A Dhaka-1209.	Mr. Alhaj Mohiuddin Ahmed Executive Director	8618979, 8617221 Fax: 8611905	fhd@dhaka.agni.com	Gudagari of Rajshahi
38	Grameen Jono Kallyan Sangsad (GJKS) Derai, Sunamgonj	Mr. Jamil Chowdhury President	0871-55287 55378-88	gjkssyl@yahoo.com gjkssy@xirus.net	Derai of Sunamgonj
39	Risda Bangladesh	Mr. Hemayet Hossain House # 3, Road # 4, Block # a, Section -6 Mirpur, Dhaka	8013935	risda@bdlink.com	Sadarpur of Faridpur
40	Center for Environmental and Geographic Information Services (CEGIS)	Mr. Giasuddin Ahmed Chy Executive Director House # 6, Road # 23/c, Gulshan -1 , Dhaka 1212	8821570-2 8817648-52	cegis@cegisbd.com	
41	Urban and Rural Planning Discipline, Khulna University (URP-KU)				Ashasuni, Satkhira
42	Department of Civil Engineering BUET,				All Upazila under Cox,s Bazar
43	International Centre for Diarrhoeal Diseases, Bangladesh (ICDDR,B)				Motlab, Chandpur
44	Department of Geology, DU				Sunamgonj

**Comprehensive Disaster Management Programme (CDMP)  
Component 3c: Local Disaster Risk Reduction Fund (LDRRF)  
Summary of Risk Reduction Initiative with LDRRF Fund**

SL#	Name of Partner NGOs	Working Area	Project Title	Duration	Major Activities/achievements
1.	Institute for Environment & Development (IED),	Dharampasha Upazila under Sunamgonj District	Reducing Disaster Risk through Community Mobilization	April'06 to March'08	<ul style="list-style-type: none"> <li>▪ Developed Risk Reduction Action Plans for 10 UDMCs of Dharampasha of Sunamganj by conducting CRA</li> <li>▪ Reduced vulnerability of community people by constructing 8 Jungels to protect crops from early flood, installed 25 Tube Wells as source of safe drinking water, raised Market Place above flood levels, raised common ground from seedling and organized training on Early &amp; short duration crops for farmers and established 40 demonstration plots</li> <li>▪ Undertaking capacity building initiatives</li> </ul>
2.	Organization for Mother and Infants (OMI)	Dharampasha, Jamalgonj, Biswamvarpur Upazila under Sunamgonj District	Community Based All Hazards Early Warning Dissemination System and Promotion of Behavioral and Attitude Change Communication on Preparedness	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ Develop Risk Reduction Action Plan of 3 Unions of Biswambarpur Upazila through CRA</li> <li>▪ Preparation of multi hazard map.</li> <li>▪ Developed community based early warning dissemination system</li> <li>▪ Change in community behavior and attitude in implementing all hazard early warning</li> </ul>
3.	Institute of Development affairs (IDEA)	Jamalgonj Upazila under Sunamgonj District	Community Mobilization for Risk Reduction in Flood prone Haor areas of Jamalgonj	April'06 to August'08	<ul style="list-style-type: none"> <li>▪ Develop RRAP for 5 UDMCs of Jamalgonj Upazila by conducting CRA</li> <li>▪ As risk reduction interventions against RRAP, raised homestead grounds to protect 25 houses from flash flood, installed 12 tube wells to provide safe drinking water among vulnerable families, raised a common harvesting place, and constructed a box/ring culvert to reduce the risks crop damage by controlling flood water and WERLAND plantation of 5,000 saplings.</li> <li>▪ Sensitized communities and developed consensus between DMCs and government departments on risk reduction issues</li> <li>▪ Capacity building of DMCs</li> <li>▪ Immediate and long term risk reduction measures identified</li> </ul>
4.	Centre for Natural Resource Studies (CNRS)	Tahirpur Upazila under Sunamgonj District	Promoting Livelihood security, Gender Equity and the Needs of the Socially Disadvantaged Groups in coping with the effect of Disaster in Tahirpur U/Z of Sunamgonj	Aug'06 to Aug'08	<ul style="list-style-type: none"> <li>▪ Develop RRAP for 7 UDMCs by conducting CRA involving community people</li> <li>▪ Implemented 3 village mount protection wall to save villages from flash flood erosion, organized 12 training sessions for farmers on short variety of rice cultivation demonstrating 81 plots, conducted training on TPM for 20 farmers and on Murta Cultivation for another 20 farmers.</li> <li>▪ Removing discrimination against the socially disadvantaged groups by prioritizing their opportunity for rescue &amp; relief operation.</li> <li>▪ Reducing the livelihood threats by the natural calamities.</li> <li>▪ Capturing the outcome of the intervention and dissemination</li> <li>▪ Develop community based early warning dissemination on flash flood in haor areas</li> </ul>

SL#	Name of Partner NGOs	Working Area	Project Title	Duration	Major Activities/achievements
5.	Islamic Relief (IR)	Sadar & Jagannathpur Upazila under Sunamgonj District	Reducing Vulnerability of local communities through Local Disaster Risk Reduction Action Plans	Aug'06 to Oct'08	<ul style="list-style-type: none"> <li>▪ Develop RRAP for 17 UDMCs under Sadar Upazila and 10 UDMCs under Jagannathpur Upazila by conducting CRA.</li> <li>▪ As risk reduction interventions against RRAP, so far raised homestead ground of 81 houses, 9 institutional ground to turn them use as 'Killa', Trained 180 vulnerable persons on poultry rearing with poultry support and also conducted Disaster Preparedness training for 48 participants.</li> <li>▪ Vulnerable communities in the targeted areas are aware and capable through increased knowledge.</li> <li>▪ UDMCs and other stakeholders are prepared and establishing networks with various stakeholders and conducting advocacy campaigns.</li> </ul>
6.	Friends In Village Development Bangladesh (FIVDB)	Biswamvarpur Upazila under Sunamgonj District	Disaster Risk Reduction Livelihood, Equity and Shelter for Disadvantages Groups.	Aug'06 to Sep'07	<ul style="list-style-type: none"> <li>▪ Conducted CRA in 2 Unions of Biswambarpur Upazila and developed RRAP</li> <li>▪ Organized training on Income Generation Activities with material support among 30 most vulnerable women, training for 50 participants on Disaster Preparedness and raised 2 institutional grounds to use them as 'Killa' during flood situation</li> </ul>
7.	Grameen Jana Kallyan Sangsad (GJKS)	Derai Upazila under Sunamgonj District	Risk Management Framework in LDRRAP Process	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ Revisited RRAPs of 9 Unions and 1 Pourashava to identify risk reduction options</li> <li>▪ Organized an intensive training for TBAs offering 21 days training with TBA kit Box for each participants organized in close collaboration with Upazila Health &amp; Family Planning Officer and their field staff, installed 16 tube wells as source of safe drinking water and completed roadside plantation of 6,000 Karach Plants to reduce the risk of erosion during flash flood in haor areas</li> <li>▪ Members of all Disaster Management Committee (DMCs) are trained on Community Risk Reduction Process</li> </ul>
8.	RDRS-Bangladesh	Sadar & Aditmari Upazila under Lalmonirhat District	Community Capacity Building and Developing Local Level Network for Disaster Risk Reduction Project	April'06 to Dec'07	<ul style="list-style-type: none"> <li>▪ Developed RRAP for 10 UDMCs in Lalmonirhat Sadar Upazila and 8 UDMCs in Aditmari Upazila by conducted CRA</li> <li>▪ Involvement of DMCs in the LDRRAP development process enhance confidence of community people to address disaster risks</li> <li>▪ Risk reduction interventions implemented against RRAP includes, maintenance of 1 embankment to reduce risks of river bank erosion, raised plinth height of 108 vulnerable families in char areas, organized training on IGA for livelihood with material support among 165 persons, organized training on tailoring among 72 persons at community level to reduce community risks</li> <li>▪ Identification of vulnerable communities and knowledge on disaster preparedness.</li> </ul>
9.	Peoples Oriented Program Implementation (POPI)	Hatibandha Upazila under Lalmonirhat District	Livelihood Security and Gender Equity	Aug'06 to Oct'08	<ul style="list-style-type: none"> <li>▪ Community maps developed and identify multi hazards</li> <li>▪ Developed RRAP for 10 Unions of Hatibandha Upazila by conducting CRA</li> <li>▪ Implemented risk reduction interventions against RRAP includes maintenance of 2 road-cum-embankments covering 3 km and also raised 4 Institutional Grounds for use as 'Killa' during flood situation</li> </ul>
10.	CEGIS	Lalmonirhat	Community Based All Hazards Early Warning Dissemination System Development Project in the Pilot Area in Lalmonirhat	June'07 to May'08	<ul style="list-style-type: none"> <li>▪ Reconnaissance in all areas of Lalmonirhat</li> <li>▪ GIS based Multi Hazard Risk Index</li> <li>▪ Early Warning Baseline Assessment</li> <li>▪ Development of Early Warning Information Package</li> <li>▪ Development of Participatory Early Warning Dissemination Network Platform</li> <li>▪ Multi hazard Mapping tools development</li> </ul>

SL#	Name of Partner NGOs	Working Area	Project Title	Duration	Major Activities/achievements
11.	FAO in partnership with DaE	Kaligonj & Patgram Upazila under Lalmonirhat District Charghat & Bagmara Upazila under Rajshahi District	Local Level Capacity Building for Disaster Risk Management in Agriculture	April'06 to	<ul style="list-style-type: none"> <li>▪ Conducted CRA to develop RRAP with special emphasis on agricultural sector and capacity development of farmers in 3 Unions under Kaliganj Upazila, 2 Unions under Patgram Upazila in Lalmonirhat, 2 Unions under Charghat Upazila &amp; 3 Unions under Bagmara Upozila of Rajshahi district</li> <li>▪ DAE staff and local DMC members trained on disaster risk reduction issues and location specific technical options for disaster risk mgt. in agriculture, livestock and fisheries.</li> <li>▪ Pilot testing of agricultural adaptation options.</li> <li>▪ Developed training materials, IEC materials including awareness building aids and disseminated them at the field level</li> </ul>
12.	SGS	Bagha Upazila under Rajshahi District	Community based disaster Risk Reduction	Aug'06 to Oct'08	<ul style="list-style-type: none"> <li>▪ Developed RRAPs for 7 Unions of Bagha Upazila bu conducting CRA</li> <li>▪ Vulnerable communities of char areas are capable of identifying risk and necessary options for reducing their risks</li> <li>▪ As part of enhancing capacity of communities to cope with hazards, imparted training on first aid for 63 volunteers</li> <li>▪ Implementation of risk reduction interventions includes raising of homestead ground with livelihood support among 35 families of most vulnerable minority community, raised 4 institutional grounds for community use as "killa" for shelter of people and their livestock during flood, Construction of 2 U-Drains to facilitate movement of rain water to reduce the risks of water logging and plantation of 4,800 saplings to protect river banks from erosion</li> </ul>
13.	Dhaka Community Hospital (DCH)	Durgapur Upazila under Rajshahi District	Risk management framework in Local Disaster Risk Reduction Action Plan	Aug'06 to Aug'07	<ul style="list-style-type: none"> <li>▪ Conducted CRA to develop RRAP of 8 Unions under Durgapur Upazila</li> <li>▪ Community people and Disaster Management Committees are aware of community risks and risk reduction measures</li> <li>▪ Implemented 2 awareness raising programme, established 7 Dug Wells as source of arsenic free safe drinking water to reduce the risks of arsenic contamination, distributed saplings for plantation of 3,900 fruit bearing trees at the community level.</li> <li>▪ Establishment of network between communities and relevant service providers</li> </ul>
14.	Village Education Resource centre (VERC),	Godagari & Tanore Upazila under Rajshahi District	Capacity development of DMCs for safe life and reducing vulnerability of community from the natural disaster.	Aug'06 to Oct'08	<ul style="list-style-type: none"> <li>▪ Developed RRAP for 11 Unions of Godagari Upazila and 9 Unions of Tanore Upazila by conducting Community Risk Assessment</li> <li>▪ Encouraged DMCs to operationalize the Risk Reduction Action Plans</li> <li>▪ As part of risk reduction interventions, conducted training on duck and goat rearing among 350 vulnerable members with duck and goat support for rearing, organized training for 160 farmers on IPM and use of improved agricultural technology to reduce the risk of crop loss and raised plinth height of 9 houses above flood level to reduce the risk of inundation with support for homestead plantation to reduce the risk of river bank and flood erosion.</li> </ul>
15.	Foundation for Human Development (FHD)	Godagari Upazila under Rajshahi District	Reduction of Vulnerability Through Improving of Livelihood	Dec'06 to February'08	<ul style="list-style-type: none"> <li>▪ Identified a number of prioritized actions through re-visiting the Action Plan to reduce livelihood risks at household level</li> <li>▪ As part of risk reduction initiatives, organized 15 days long training on livelihood with material support for IG activities among 80 most vulnerable women, organized training on fodder production and techniques of storage among 200 vulnerable women, organized training on modern agricultural technology among 225 marginal farmers to reduce the risks of crop damage, distribution of compass among 60 boatmen for piloting during foggy weather, training on duck and goat rearing with duck/goat support among 200 women for rearing and thereby enhancing family income and organized training on tailoring for 90 women with sewing machine support to each participants to start sewing trade and thereby enhance family income.</li> </ul>



SL#	Name of Partner NGOs	Working Area	Project Title	Duration	Major Activities/achievements
16.	SAMADHAN	Kalaroa Upazila under Satkhira District	Ensuring Risk Management Framework in LDRRAP process in Kalaroa	April'06 to June'09	<ul style="list-style-type: none"> <li>▪ Conducted CRA to develop RRAPs for 13 Unions under Kalaroa Upazila</li> <li>▪ DMCs and community people are aware of the importance of Risk Assessment for development planning at local level</li> <li>▪ As part of implementation of risk reduction interventions against RRAP, raised 32 community houses above flood level to reduce risk of inundation during flood, construction of 1 evacuation road-cum-link road by earth work, re-excavation of 1 canal to facilitate water passage during rainy season to reduce community risks from water logging and raised 1 institutional ground above flood level to use as "Killa" for shelter during flood for human beings and live stock. More risk reduction interventions are being identified as part of the RRAPs and planned for intervention to be continued.</li> <li>▪ Participation of vulnerable people in decision making process.</li> </ul>
17.	Integrated Development Organization (IDO),	Kolaroa Upazila under Satkhira District	Disaster Risk Management and Reduction Programme	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ Revisited Risk Reduction Action Plans developed through CRA to identify projects for reducing community risks</li> <li>▪ As risk reduction initiatives, constructed 12 Rain Water Harvesting System for communities to harvest rain water, Organised 12 workshops on Awareness Building on Arsenic Contamination, conducted training on Tailoring among 50 women participants with sewing machine support to start tailoring, organized training for 50 women on duck rearing with duck support for rearing and thereby enhance family income and developed and distributed 1,500 posters, 1,500 hand manuals on awareness raising on arsenic contamination.</li> <li>▪ Community people are well aware of impacts of all hazards, capable of identifying potential risks.</li> <li>▪ Vulnerable groups have increased capacity to manage risks through adapting various alternative livelihood options and coping mechanism</li> </ul>
18.	Bhagni Nivedita Manchya (BNM)	Kolaroa Upazila under Satkhira District	Disaster Risk Management and Reduction Programme in Disaster Prone areas of Kalaroa Upazila	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ By revisiting the CRA process, identified interventions for improvement of livelihood at community level</li> <li>▪ As risk reduction interventions, implemented projects on livelihood support by providing training on running small business and provided necessary support among 9 persons with disability to run small shops at local level, Constructed Rain Water Harvesting Plants at 9 spots for communities to fetch safe water for drinking, organized training on poultry and duck rearing for 90 beneficiaries with 25 duckling support for each beneficiaries to rear poultry/duck and contribute to enhance family income.</li> <li>▪ Numbers of adaptation strategies developed for community practice to reduce risks of livelihood security</li> </ul>
19.	SHUSHILAN,	Shymnagar Upazila under Satkhira District	Capacity building of UDMC to reduce vulnerability of the community in Symnagar upazila	Apr'06 Oct'08	<ul style="list-style-type: none"> <li>▪ Conducted CRA to develop RRAPs for 12 UDMCS under Shyamnagar Upazila</li> <li>▪ As part of risk reduction options from RRAP, Shushilan has made awareness raising campaign on disaster management by performing 3 Pot Songs and distributing 1,500 posters at the community level, Plantation of 4,500 trees beside embankment to save them from erosion and also constructed 45 Rain Water Harvesting System for communities for alternative source of safe water</li> <li>▪ Awareness of community people about their roles and responsibilities on disaster management</li> </ul>

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20.	Gharoni	Kolaroa Upazila under Satkhira District	Security for Shelter and Livelihood for the Disadvantage People before, during and after Disaster	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ Revisited RRAPs to identify various options on disaster risk reduction</li> <li>▪ As risk reduction interventions, constructed 10 Rain Water Harvesting System to reduce community risks of contaminated water, constructed 5 durable houses for demonstration and renovated 10 weak houses to demonstrate community as disaster resistant house building, organized training on goat rearing as livelihood support with distribution of goats among 100 vulnerable poor participants and also organized poultry rearing training for 160 participants with poultry support for rearing and thereby enhance their family income</li> <li>▪ Disaster Management Committees at Union level are functional and takes initiative to combat disaster risks at local level</li> </ul>
21.	Dhaka Ahsania Mission (DAM)	Kaliganj Upazila under Satkhira District	Promoting Community Based Livelihood Security, Gender Equity and Identification of the needs of Socially Disadvantaged Groups.	Aug'06 to Oct'08	<ul style="list-style-type: none"> <li>▪ Conducted CRA to develop RRAPs for 12 Unions under Kaliganj Upazila</li> <li>▪ As part of risk reduction interventions at community level, established 3 pond filters to provide safe water among community people and completed plantation of 1,000 saplings.</li> <li>▪ More risk reduction interventions are being identified and implementations of risk reduction options are ongoing.</li> <li>▪ Enhanced capacity of communities to reduce mobilization and cope with all hazard</li> <li>▪ Increase awareness &amp; initiative for risk assessment process.</li> <li>▪ Build up linkage among stakeholders and increased application of best practices.</li> </ul>
22.	URP- Khulna University	Ashasuni Upazila under Satkhira District	Developing an Effective Community Based All Hazards Early Warning Dissemination System (EWDS) Considering Local Community's Disaster Vulnerability	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ Disaster risk maps are produced for understanding of the magnitude and spatial distribution of disaster events</li> <li>▪ Disaster vulnerability and risk indicators are being developed</li> <li>▪ In consultation with DMCs and community people, a clearly understandable disaster warning messages are being developed</li> <li>▪ Efforts are being undertaken to enhance DMC's capacity to disseminate disaster warning to reduce community risks</li> <li>▪ Capacity building of local volunteers/change agents for effective dissemination is underway</li> <li>▪ EW gathering and dissemination network will be established by the end of the project</li> </ul>
23.	Rakhaing Development Foundation (RDF),	Khuruskul & Chowfaldandi Union of Sadar Upazila under Cox's Bazar District	Safety Measures for Vulnerable Ethnic Minority People to Cope Against Natural Hazards	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ Conducted CRA to develop an effective RRAP of 2 villages of Rakhaing Communities under Khuruskul and Chowfaldandi Unions</li> <li>▪ As part of risk reduction initiatives, one 2 storied Cyclone Shelter is under construction, reconstruction with drainage system is complete in Khuruskul Rakhaing village to reduce the risks of water logging during rainy season, training on disaster risk reduction among fishermen, religious leaders with equipment support like, transistor radio, mikes for quick dissemination of early warning and forestation to save village boundary from sea wave erosion</li> <li>▪ Local people's capacity and facilities increased to combat risk situation</li> </ul>
24.	Hitoishi-Bangladesh	Sadar & Ukhia, Upazila under Cox's Bazar District	Local Disaster Risk Reduction Project	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ Revisited RRAPs to identify appropriate risk reduction options through consultation with communities and DMCs</li> <li>▪ Among identified options, organized awareness raising training on disaster management among 90 participants selected from each Unions under the working Upazilas, Completed roadside plantation of 2,000 plants on 2 km earthen road in Palongkhali, renovated 2 Cyclone shelters to make them useful for community people during Cyclone/Tsunami hazards, Construction of approach roads to Cyclone Shelters are under process.</li> </ul>

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25.	Community Development Centre (CODEC),	Sadar, Ukhia, Teknaf Upazila under Cox's Bazar District	Mobilization of Community Based Organizations and Union Parishad to Promote Livelihood Security and Gender Equity	Apr'06 to April'08	<ul style="list-style-type: none"> <li>▪ Developed RRAP involving DMCs and community people through CRA for 11 UDMCs of Sadar Upazila, 5 UDMCs of Ukhia Upazila and 7 UDMCs of Teknaf Upazila.</li> <li>▪ As risk reduction interventions against RRAPs, renovated 1 Cyclone Shelter, constructed 3 link/evacuation roads with existing Cyclone Shelters, organized 1 disaster management preparedness training, constructed 4 Rain Water Harvesting Systems at community level as source of safe drinking water and also constructed 2 Ring Wells for communities to reduce the risks of water contaminated diseases.</li> </ul>
26.	ANANDO	Moheshkhali Upazila under Cox's Bazar District,	Vulnerability and Risk Reduction Through Community Participation	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ Conducted CRA to develop RRAPs for 9 Unions under Moheshkhali Upazila</li> <li>▪ As part of the risk reduction interventions, renovated link roads to existing 2 Cyclone Shelters to facilitate community people to take shelter during cyclone/Tsunami hazards</li> </ul>
27.	Resource Integration Centre (RIC)	Ramu, Pekua Upazila under Cox's Bazar District	Strengthen Capacities of Coastal Vulnerable Communities through Disaster Risk Reduction Management	Aug'06 to Oct'08	<ul style="list-style-type: none"> <li>▪ Organized community people and DMCs to develop RRAPs for 11 UDMCs of Ramu Upazila and 7 UDMCs of Pekua Upazila under Cox's Bazar district</li> <li>▪ Against developed RRAP, constructed a 'Killa' with community facilities at the coastal area of Pakua Upazila, Organized Awareness raising campaigns on Malaria and distributed mosquito nets among 110 poor and vulnerable participants. More risk reduction interventions are being planned and implementation is underway</li> </ul>
28.	Dept. Of Civil Engineering, Bangladesh University of Engineering Technology (BUET),	All Upazila under Cox's Bazar District	Development of a Disaster Preparedness Programme for Earthquake and Tsunami Hazards in Cox's Bazar	Dec'06 to June'08	<ul style="list-style-type: none"> <li>▪ Microzonation maps for earthquake and cyclones and inundation map for tsunami are developed</li> <li>▪ Awareness raising on Earth Quake and Tsunami among school children and Teachers are conducted</li> <li>▪ Surveys of existing infra-structures are done to identify suitable structures for use as shelter</li> <li>▪ System being developed to pilot an effective early warning system for Cyclone and Tsunami hazards</li> </ul>
29.	SAMATA,	Sadarpur Upazila under Faridpur District	Disaster Risk Reduction of Sadarpur	Apr'06 to Dec'07	<ul style="list-style-type: none"> <li>▪ Developed RRAP through CRA for 9 UDMCs of Sadarpur Upazila</li> <li>▪ As risk reduction interventions against RRAP, Organized an Advocacy Campaign for a community road connecting most vulnerable char areas of 3 Unions, Constructed 3 Killas to use as Shelter for communities during flood situation, Organized training on duck rearing for 400 vulnerable women and provided support with ducklings for rearing and thereby contributing towards their family income, Organized training on goat rearing for 300 participants and distribution of goats among each participants for rearing thereby helping them to contribute increase family income and thereby reduce their livelihood risks</li> </ul>
30.	RISDA-Bangladesh	Sadarpur Upazila under Faridpur District	Risk Management Framework in Local Disaster Risk Reduction Action Plans (LDRRAP) Process	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ Revisited RRAPs to identify appropriate risk reduction options identified through CRA</li> <li>▪ As part of risk reduction initiatives, organized training on crop diversification and flood tolerant crop variety with the help of Upazila Agriculture Extension Officer for 81 Farmers and developed demonstration plot for further dissemination, Constructed connecting roads-cum-flood shelter by earth work, construction of 1 'Killa' and raising of 1 institutional ground above flood level to use as shelter during flood situation</li> <li>▪ Disaster Management Committees (DMCs) are pro-active and more concerned about risk reduction issues</li> <li>▪ Increased awareness on disaster management among the community people.</li> </ul>

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31.	Volunteer Organization for Social Development (VOSD),	Charbhadrason Upazila under Faridpur District	Disaster Risk Reduction and Appropriate Disaster Preparedness and Management Technology Innovation Programme in Charbhadrason u/z of Faridpur	Aug'06 to Oct'08	<ul style="list-style-type: none"> <li>Developed RRAP through CRA for 4 UDMCs under Char Bhadrason Upazila</li> <li>As risk reduction interventions against RRAP, conducted awareness raising training in 20 most vulnerable villages and distributed 1,000 posters and 5,000 leaflets on disaster preparedness, renovated 1 school-cum-flood shelter and constructed separate toilets for women and children while community people take shelter during flood situation and raised plinth height of 20 households in cluster above flood level to reduce risks of flood inundation during flood</li> </ul>
32.	North Char Development Society (NCDS)	Charbhadrason Upazila under Faridpur District	Comprehensive Disaster Preparedness and Management Programme	Dec'06 to March'08	<ul style="list-style-type: none"> <li>Revisited RRAPs to identify the most appropriate risk reduction options for implementation</li> <li>As part of risk reduction initiatives against RRAPs, organized training on disaster risk reduction and rally for awareness raising among community people, Assisted at least 60 most vulnerable houses to be re-structured with cement pillars so that the houses are not damaged during flood and thereby reduce the risk of home damage and also constructed 1 'Killa' to use as shelter for people and their livestock during flood situation.</li> <li>More options are being identified to address for reducing community risks and they are all ongoing</li> </ul>
33.	SDS	Bhanga Upazila under Faridpur District	Establishing Community based disaster Preparedness system to Reduce Vulnerability.	Aug'06 to Jan'08	<ul style="list-style-type: none"> <li>Developed RRAP through CRA for 13 UDMCs of Bhanga Upazila</li> <li>As risk reduction interventions against RRAP developed through CRA, SDS organized disaster preparedness training for 630 participants from all unions, plantation of 12,000 saplings are complete to reduce the risks of river bank erosion and flood, raised plinth height of 26 houses above flood level with plantation of trees and grass to avoid erosion and constructed 2 Killas to use as shelter for people and livestock during flood situation.</li> </ul>
34.	Faridpur Development Agency (FDA),	Sadar Upazila under Faridpur District	Disaster Risk Reduction Programme in the Disaster Prone Areas of Sadar Upazila of Faridpur	Dec'06 to March'08	<ul style="list-style-type: none"> <li>Developed RRAP for 12 UDMCs under Sadar Upazila of Faridpur District by conducting CRA involving UDMCs and Community People</li> <li>Disaster risk at vulnerable areas of Sadar Upazila is reduced considerably</li> <li>Community is well aware of impacts of all hazards, capable of identifying risks and necessary options to reduce community risks</li> <li>Plinth height of 25 most vulnerable houses at North Char Union is being raised above flood level with training and livelihood support, plantation of trees on the raised ground</li> <li>More options for risk reduction are being identified and are being implemented to reduce community risks</li> </ul>
35.	Daridrya Nirashan Prochesta (DNP)	Sadar Upazila under Faridpur District	Disaster Risk Management and Reduction Programme	Dec'06 to	<ul style="list-style-type: none"> <li>Revisited RRAPs to identify the most appropriate risk reduction options to reduce community risks as identified through CRA</li> <li>Vulnerable communities at union level have increased awareness on possible hazard risks through awareness raising campaign conducted among 180 vulnerable community people</li> <li>Raised 2 institutional ground level above flood level to turn them in to 'killa' for sheltering people and their livestock during flood situation</li> </ul>
36.	Bangladesh Disaster Preparedness Centre (BDPC)	Chowhali Upazila under Sirajgonj District	Operationalization of an effective Local Disaster Risk Reduction Action Plan	April'06 to Dec'07	<ul style="list-style-type: none"> <li>Conducted CRA involving UDMCs and community people to develop RRAPs for 7 UDMCs under Chowhali Upozila</li> <li>As part of risk reduction interventions against RRAP, BDPC has implemented a community based flood warning dissemination system, Raised plinth height of 30 houses above flood level to reduce their risks of inundation during flood, raised 3 institutional grounds above flood level to use them as 'Killa' during flood to provide safe shelter for community people and their live stocks, Raised 1 market place, organized training on livestock management among 90 vulnerable persons, training on disaster management for 30 Change Agents, organized training on disaster resilient cultivation among 450 farmers with direct</li> </ul>

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					involvement of Upazila Agriculture Extension Officer and also organized training for TBAs with support of TBA kits with Upazila Family Planning Officer.
37.	National Development Programme (NDP)	Kazipur Upazila under Sirajgonj District	Community Empowerment in Disaster Risk Reduction	Aug'06 to Nov'08	<ul style="list-style-type: none"> <li>▪ Developed RRAP for 13 UDMCs under Kazipur Upazila by conducting Community Risk Assessment process</li> <li>▪ As per RRAPs developed through CRA, organized training disaster management among community people covering 180 persons from all unions, Constructed 10 'Killa's for shelter of community people and their live stocks during flood situation, organized training on Flood Tolerant Crop Cultivation in collaboration with Agricultural Extension Officer among 1,080 farmers and also organized training on Health Hazards for 270 youths to ensure their support during flood situation.</li> <li>▪ More risk reduction interventions are already identified to address soon.</li> </ul>
38.	Manob Mukti Sangstha (MMS)	Shahjadpur Upazila under Sirajgonj District	Disaster Risk Reduction and Livelihood Empowerment in char areas mainstreaming persons with disabilities and gender equity.	Aug'06 to Oct'08	<ul style="list-style-type: none"> <li>▪ Conducted CRA in 13 Unions under Shahjadpur Upazila to develop RRAP for 13 UDMCs</li> <li>▪ By involving in the CRA process, communities are aware about the impact of all hazards</li> <li>▪ As part of the risk reduction interventions against RRAP developed through CRA, MMS has raised 40 homestead above flood level , Provided livestock support among 50 most vulnerable families to raise them and thereby reduce livelihood risks, plinth height of another 50 houses were raised in cluster and each family were give sanitary latrines and tube wells as safe water source.</li> <li>▪ More risk reduction interventions are already identified and they are under implementation.</li> </ul>
39.	SHARP	Sadar Upazila under Sirajgonj District	Vulnerability and Risk Reduction through Community Participation	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ RRAPs are developed for 11 Unions by conducting CRA involving community people and UDMCs</li> <li>▪ SHARP has organized training for 25 participants on poultry rearing and provided poultry support for rearing and enhancing family income, Raised plinth height of 34 families above flood level to reduce their risks of inundation during flood situation, Raised pinth high of 64 households in cluster and provided fruit bearing trees, sanitary latrines, tube wells poultry for rearing and thereby enhancing family income to reduce family risks from all hazards</li> </ul>
40.	The Good Earth	Belkuchi Upazila under Sirajgonj District	Local Disaster Risk Reduction Action Plans Under Risk Management Framework	Dec'06 to March'08	<ul style="list-style-type: none"> <li>▪ TheGoodEarth has developed RRAP for 7 Unions through CRA involving UDMCs and community people</li> <li>▪ From among RRAPs, TheGoodEarth implemented roadside plantation of 2,000 saplings to reduce the risks of erosion, Organized extensive training on tailoring for 15 most vulnerable women and provided them with Sewing Machines to start sewing activities and thereby enhance their family income, organized training on IPM for 30 farmers, in close collaboration with Upazila Livestock Officer, organized training on livestock management for 25 persons and provided livestock support, raised plinth height of 21 houses above flood level in cluster, provided sanitary latrines, tube wells, tree plantation and poultry support.</li> </ul>
41.	TARANGO	Agoijjhara Upazila under Barisal district	Vulnerability and Risk Reduction through Alternative Livelihood Development	Dec'07 to Nov'08	<ul style="list-style-type: none"> <li>▪ Conduct awareness raising training focusing on prevention of disaster related problems.</li> <li>▪ Formation of Volunteer group</li> <li>▪ Provide training on alternative option related to risk reduction options</li> <li>▪ Provide technical assistance for selecting livelihood options with the assistance Local Government.</li> </ul>

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42.	ICDDR,B	Motlob Upazila under CHandpur District	Ensure safe water by a sustainable water treatment strategy. A community Based Climate Change Adaptation Initiative	Nov'07 to Nov'08	<ul style="list-style-type: none"> <li>▪ Awareness raising about impacts of climate change, risk and vulnerability to human health and enhancing the adaptive capacity of the community to reduce vulnerability regarding safe drinking water availability</li> <li>▪ Provide water treatment reagents to the targeted households</li> </ul>
43.	Department of Geology, DU	Sunamgonj district	Flash Flood Study of Sunamgonj District for the Development of an Early Warning System, Bangladesh	Nov'07 to Nov'08	<ul style="list-style-type: none"> <li>▪ Reconnaissance survey in the study area and surrounding areas.</li> <li>▪ Development of Flash Flood zoning map.</li> <li>▪ Deriving an early warning system methodology using flash flood zoning map based on intensity and damages of flash flood.</li> </ul>
44.	SAMADHAN	Monirampur, Keshabpur and Avoy Nagar Upazila under Jessore District	Reducing Livelihood Risks of Poor and Marginal People in Bhabadha Catchment Areas of Southwest Bangladesh in the context of Water Logging, Flooding and Long Term climate Change Impacts	Dec'07 to June'09	<ul style="list-style-type: none"> <li>• Organize training on open water fish culture, duck rearing, ring based vegetable cultivation, vaccination training for vaccinators, bamboo crafts training for minority communities, livestock development, hatchery operation &amp; management training for hatchery technicians and training on marketing for beneficiary leaders</li> <li>• Establish rural duck project, ring based vegetable cultivation at the field level, fish cultivation in open water, develop women vaccinator, develop handicraft projects, duckling hatchery etc.</li> </ul>

