Community Based
Disaster Risk Management
(CBDRM)

Best Practices & SOPs
2019 Document

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Contents

Acronyms

- NDRMF

  National Disaster Risk Management Fund

- DRM

  Disaster Risk Management

- CBDRM

  Community Based Disaster Risk Management

- PRCS

  Pakistan Red Crescent Society

- IRP

  Islamic Relief Pakistan

- AKFP

  Agha Khan Foundation Pakistan

- DM

  Disaster Management

- HFA

  Hyogo Framework of Action

- SFDRR

  Sendai Framework for Disaster Risk Reduction

- HVCA

  Hazard Vulnerability Capacity Assessment

- SWOT

  Strengths, weaknesses, opportunities, threats

- M&E

  Monitoring and Evaluation

- WASH

  Water, Sanitation and Hygiene

- UC

  Union Council

- IEC

  Information, Education and Communication

- UCDMCs

  Union Council Disaster Management Committees

- UCERTs

  Union Council Emergency Response Teams

- EQAAs

  Earthquake Affected Areas

- CBOs

  Community Based Organizations

- SAR

  Search and Rescue

- NGOs

  Non-Governmental Organization

- DMCs

  Disaster Management Committees

- ERTs

  Emergency Response Teams

- NDMA

  National Disaster Management Authority

Preamble

Since the 2005 earthquake and the 2010-11 floods, DRM has received an increased attention in Pakistan. In particular, the development actors have shown a growing interest in CBDRM as an effective way to build people's resilience against disasters. There have been a number of CBDRM initiatives in the country since 2005, however very few have been meaningfully assessed. The lack of documentation, the implementation of CBDRM initiatives in isolation, and limited appraisals make it difficult to identify and highlight the good practices. It is in this context that ADB ventured to document CBDRM Best Practices in Pakistan, based on secondary as well as primary research to ensure consistency, efficiency, effectiveness and sustainability in NDRMF's CBDRM component.

NDRMF's Consultative Workshop on CDRM Best Practices in Pakistan

On 27th June, 2019, NDRMF organized a day long consultative workshop (in Islamabad) which was participated by its CBDRM implementing partners (PRCS, IRP and AKFP). The objective behind this intellectual endeavor was the collection of primary data through a form/questionnaire that was initially circulated amongst these key stakeholders and later filled collectively by participants of the workshop who were in fact representatives of the same organizations.

Prior to the group work the participants were given a fair comprehension of DRM basic terminologies and concepts, DM, DRM & CBDRM Cycles by the consultant in an interactive manner. The HFA and SFA were also discussed to establish their relevance with CBDRM.

As far as the secondary data is concerned it was obtained from the following documents:

- Instructor's Guideline on CBDRM in Pakistan (National Disaster Management Authority / Japanese International Cooperation Agency)
- Critical Guidelines CBDRM (Asian Disaster Preparedness Centre)
- CBDRM Good Practice (Mercy Corps Nepal)
- Training Manual for Disaster Risk Management Systems at Community Level – CBDRM (Vietnam Red Cross)
- Participant's Workbook – CBDRM for Local Authorities (Asian Disaster Preparedness Centre)
- Helpdesk Research Report – CBDRM in Pakistan (Emilie Combaz - Applied Knowledge Services)
- Training Curriculum CBDRM (Department of Disaster Management, Bhutan)
- Good Practices in CBDRM (Government of India -UNDP DRM Programme)

Besides (the primary and secondary data), a case study of DRM project (first one of its kind in Pakistan) launched by Earthquake Reconstruction and Rehabilitation Authority (ERRA) was also undertaken.

ERRA's DRM Project – A Case Study

The 2005 Earthquake in Pakistan, served to highlight the inadequacy of Pakistan's disaster management capacity and the total lack of resilience against disasters. The devastation wrought by the quake also underlined an urgent need to create awareness about natural disasters and how best to mitigate human and infrastructural losses in their wake. The Earthquake Reconstruction and Rehabilitation Authority (ERRA), with an obligation to "Build Back Better", pursued sustainable development in the nine earthquake affected districts by integrating DRR component as a cross-cutting theme in all its reconstruction efforts. ERRA also launched a dedicated Disaster Risk Management Programme to enhance resilience against disasters at a grass roots level in the affected districts. The three main components of the programme, which directly address the Hyogo Framework of Action priority areas, are as follows.

a) *Hazard Mapping*
b) *Community Based Disaster Risk Management (CBDRM)*
c) *Mainstreaming DRR*

At the outset, the DRM programme was launched as a pilot project in two districts, Mansehra and Muzaffarabad from 2007 to 2009 which was later extended to the remaining EQA districts; Abbotabad, Battagram, Shangla and Kohistan in KP, and Rawalakot, Neelum and Bagh in AJ&K, for a period of two years from July 2009 to May 2011. The programme was funded by the World Bank with technical support from UNDP.

Though coated as a success story in international circles, the programme could not achieve sustainability because of the lack of its institutionalization. Nevertheless it proved to be the forerunner of many good practices for any future reference in Pakistan.

CBDRM Best Practices and SOP Document

This document is the amalgamation of secondary and primary research on CBDRM practices in Pakistan and elsewhere translated into operational advice, reference material and a guideline for development agencies, foundations, international NGOs and other people working in the field of disaster risk management. Objective is to improve the quality and usefulness of DRM practices in general and CBDRM practices in particular.

However, the main focus of this handout is to assist the implementing partners of NDRMF, to build resilience at a grass roots level through "Community Based Disaster Risk Management".

HFA and its relevance with DRM

HFA is known as a paradigm shift in attitude towards disaster management because the focus shifted from "reactive" to "proactive" approach. This voluntary agreement was signed in 2005 with five priority areas:

I.   Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation.

II.   Identify, assess and monitor disaster risks and enhance early warning.

III. Use knowledge, innovation and education to build a culture of safety and resilience at all levels.

IV.   Reduce the underlying risk factors.

V.   Strengthen disaster preparedness for effective response at all levels.

Through this agreement the focus shifted from the reduction of "loss" caused by a disaster to the reduction of "risk" posed by a hazard, and with this "paradigm shift" the Disaster "Risk" Management attained the prominence.

What is DRM & CBDRM?

Disaster risk management covers the entire range of disaster prevention, mitigation, preparedness, response and recovery measures designed to avoid, lessen or transfer the adverse effects of hazards. CBDRM is an extension of DRM wherein the disaster prevention, mitigation, preparedness, response and recovery measures are developed by members of a vulnerable community, based on their needs, capacities and perceptions of risk.

In CBDRM the communities "at risk" are actively engaged in the identification, analysis, treatment, monitoring, and evaluation of disaster risks, in order to reduce their vulnerabilities and enhance their capacities. This means that people are at the heart of planning and implementing DRM activities.

DRM Cycle

The DRM cycle is not the same as the Disaster Management cycle. The latter comprises the Prevention/Mitigation, Preparedness, Response and Recovery (Rehabilitation and Reconstruction) phases; whereas, the Disaster Risk Management cycle consists of the following four phases.

- Disaster risk **assessment**
- DRR **planning**
- **Implementation** of DRR plan(s)
- **Monitoring and evaluation** of DRR plan(s)

DRM is a continuous process since it works in a cycle which means that it comes back to the point from where it started, and restarts in a better manner in light of the previous experience.

1) Disaster Risk Assessment

2) Disaster Risk Reduction Planning

3) Implementation

4) Monitoring & Evaluation
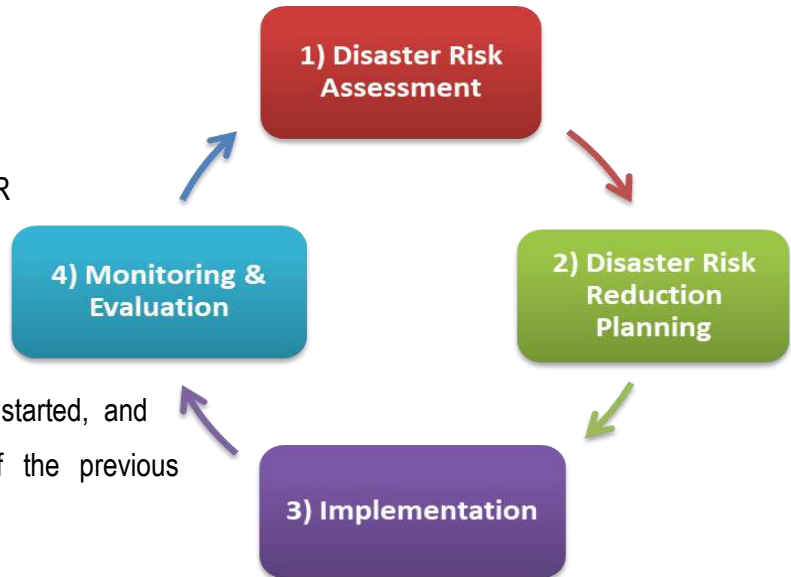
CBDRM Cycle

DRM Cycle has an inbuilt mechanism of *monitoring* and *evaluation* to safeguard *efficiency* and *effectiveness* respectively, but to ensure *sustainability* it needs to be executed in a participatory manner by involving the "community" in all its four phases. And when executed in a participatory manner, the DRM Cycle transforms into the CBDRM Cycle which consists of:

- Participatory Disaster risk **assessment**
- Participatory DRR **planning**
- Participatory **Implementation** of DRR plan(s)
- Participatory **Monitoring and evaluation** of DRR plan(s)

1) Participatory Disaster Risk Assessment

2) Participatory Disaster Risk Reduction Planning

3) Participatory Implementation

4) Participatory Monitoring & Evaluation
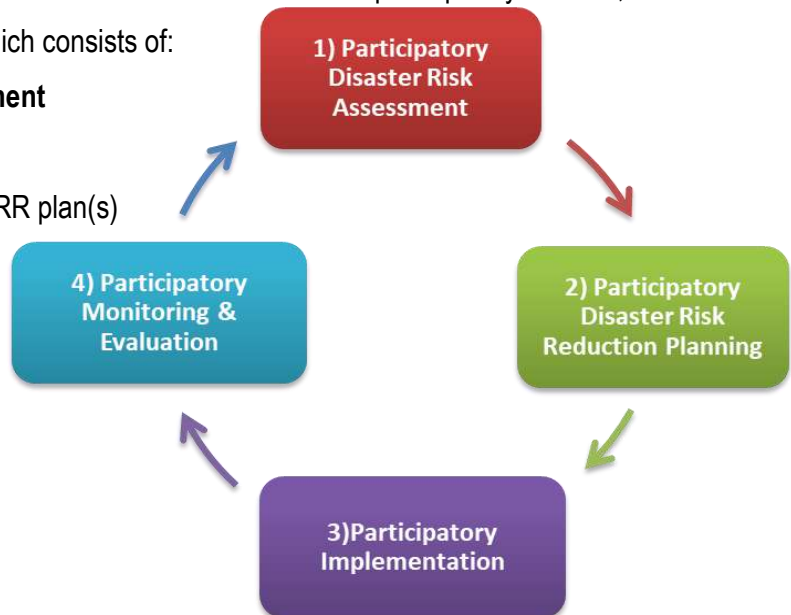
The Significance of the DRM & CBDRM Cycles

The DRM cycle is of paramount importance in launching any Community Based Disaster Risk Management initiative. It underscores the need for a holistic approach. For example, an Awareness Raising campaign may be a popular DRM activity but its success is heavily dependent on whether the information being imparted is relevant; well received by the target audience resulting in wide participation; and, among other things, are the methods used in line with local customs and cultural norms? These variables must be accounted for and, the only way to do so is by following the CBDRM cycle when designing a DRM activity. The relevance of an activity can be ensured through community profiling and participatory risk assessment. Involving the target community in planning and implementing the activity will ensure that the initiative is inline with local norms and customs thus drawing wide participation.

In the following sections each step is explained in the context of Community Based Disaster Risk Management.

COMMUNITY PROFILE AND PARTICIPATORY RISK ASSESSMENT

Purpose

- To identify and profile the community and collect general background information about the community and hazards it is vulnerable to.
- The community will identify, analyze and rank disaster risks by quantifying them through HVCA.

Steps

1. Identify and profile the target community
    a. Vulnerable communities could request assistance OR
    b. Disaster management organizations could identify them through a set of criteria such as:
        i. Most disaster prone area in general
        ii. Most vulnerable to a particular hazard
        iii. Poor areas / least served by the government and/or NGOs
        iv. Possibility of effects of the program spreading to neighboring communities, etc.
2. Establish contact and relationship with stakeholders such as:
    a. Representatives from government authorities'/ line departments
    b. Representatives from community such as the village headman, the local councilor etc.
    c. Local people (community-based groups)

d. Vulnerable groups (the people likely to be victimized by the anticipated disaster/s)

3. Establish risk assessment team with representation from community.

4. Train the risk assessment team for skills to work with the community and undertake HVCA.

5. Conduct HVCA; participatory Assessment of Hazards, Vulnerability, Elements at Risk and Capacity.

6. Information is collected though assessment tools shown in the table that follows.

7. Organize assessment results and share with communities

After the HVCA, the team organizes a meeting with the community to keep them informed and to solicit feedback. In this meeting, identified risks will be ranked by communities themselves on basis of the HVCA. Results from risk assessment will be inputs for DRR planning (the second phase) and will also provide indicators for M&E (the fourth phase) to evaluate changes in vulnerability and capacity of the community. These should be shared among communities, local government agencies and other stakeholders.

Tools

	Risk Assessment Tool	Purpose / Expected Results
1	Historical profile	To collect relevant information about past events in order to help local people to be more aware of the changes that occurred in their community
2	The hazard map	To make a comprehensive overview of the main features of an area and to identify the hazards, elements at risk, safe areas and available resources that can be used in disaster management.
3	Hazard and seasonal calendar	To underline the periods of stress and identify what people do in these periods, what are their coping strategies and mechanisms? And what is the gender specific division of work in times of disasters and normal times.
4	Transect walk	To visit community members from different areas and get a picture of zones of danger, sites of evacuation, land use zones, and seek problems and opportunities in disaster management.
5	Livelihoods analysis and Household Wealth Ranking	To understand livelihood strategies, decisions, capacities and vulnerabilities of households from different socio-economic backgrounds.
6	Health and nutrition assessment	An assessment of the general health of the population will underscore vulnerabilities in this regard and also help gauge capacities
7	Gender resource mapping	To identify the roles that women can play in DRM and their scope.

The above mentioned tools can be made use of on the basis of

1. Secondary data collection
2. Direct observation
3. Semi-structured interviews
4. Group discussion

ERRA - Hazard Mapping and HVCA

Information about prevailing hazards in target areas was used as the base line for launching ERRA's Disaster Risk Management programme. Hazard Maps were developed and disseminated to district authorities. These maps served as a basis for mainstreaming DRR and creating awareness amongst development planners at the local level. Besides seismic risks, other types of hazards that could endanger lives and buildings in target areas were also taken into account. An assessment of the most common natural hazards, such as landslides, debris flow, floods and snow avalanches, was undertaken and the preparation of hazard susceptibility maps established as a separate component of ERRA's DRM programme.

To serve the purpose ERRA's DRM team also prepared an "Event Register" based on an analysis of past events in an area. The event register provided a historical profile of hazards and associated losses for the affected districts. Over 150 events over the last 20 years were recorded. This exercise was undertaken in consultation with locals and therefore qualifies as a <u>participatory risk assessment</u> tool.

Initially, hazard maps were prepared for Mansehra and Muzaffarabad. To avoid duplication of efforts and ensure economy, key stakeholders decided to assign the task of hazard mapping to NDMA. Debris Flow and Snow Avalanche vulnerability maps were produced with the technical support of the Institute of Geometrics and Risk Analysis, University of Lausanne, Switzerland. Although the scientific nature of hazard mapping and the advanced technical equipment needed to undertake it meant that communities couldn't be engaged throughout the process; nevertheless, preliminary risk assessment teams did consult the locals at the outset.

At a grass roots level, with the help of Participatory Risk Assessment tools, community volunteers prepared UC-specific Social Hazard Maps. They identified prevailing hazard risks and existing vulnerabilities. Detailed Hazard, Vulnerability and Capacity Assessment (HVCA) exercises were also conducted in groups in hundreds of villages.

PRIMARY RESEARCH

Primary research material (questionnaires circulated by NDRMF amongst implementing partners) reveals considerable importance being given to the development of a local vulnerability atlas after thorough Hazard Vulnerability Capacity Assessment exercises. Hazard mapping, social mapping and HVCA were all given an exceptional rating of 25 out of 25 signifying that such exercises were

relevant, effective, efficient, sustainable, and created a discernible impact (degree of change). Risk assessment with the active participation of vulnerable groups in target areas was also given a rating of 25 out of 25.

PARTICIPATORY RISK REDUCTION PLANNING

Purpose

- To develop a disaster risk reduction plan through a participatory process with the targeted community
- Integrate disaster risk reduction into local development planning

Steps

1. Set vision and mission
2. Encourage community members to envision and express their dream for a "safe and resilient community". Community members, authorities and other stakeholders must reach a consensus about what they want to achieve through disaster risk management.
3. Identify disaster risk reduction measures
4. Community members can now identify and prioritize measures to reduce vulnerability and increase capacity that will help attain their vision of a safe and resilient community. Activities can be categorized as those to be implemented before – during – after a disaster. There can be structural and nonstructural measures. Initiatives may be grouped into the following (and more) areas of concern: early warning, capacity building, child protection, livelihoods, water and sanitation, environment, and evacuation/ temporary shelters.
5. Develop the main plan
6. Contents of main plan:

    a. Background Information (socioeconomic, livelihood, infrastructure, WASH and health conditions)
    b. Situational Analysis (SWOT) and summary of risk assessment
    c. Objectives
    d. Beneficiaries (direct as well as indirect)
    e. Assets / properties likely to be saved
    f. CBDRM Action Plan (Time frame, Resources needed within and outside communities, Preparedness and Response measures, Roles and Responsibilities)

PRIMARY RESEARCH

The development of contingency plans was a recurring recommendation. As part of an ideal evacuation plan the following elements were considered - the development of specific evacuation procedures according to different types of emergencies; designation of an evacuation team and coordinator; designation of primary and secondary evacuation routes and emergency exits; procedures for assisting people with disabilities; and, coordination with local authorities. Similar steps were identified for different aspects of a contingency plan (shelter, food, water and sanitation, etc.) as discussed in "Contents of a CBDRM Plan".

Integrate and mainstream CBDRM into UC and district plans

The CBDRM planning process should take place through a participatory process at the village level. After village plans are developed they should be compiled and used as the basis of Union Council CBDRM plans. The UC planning process should involve a series of meetings with village representatives to formalize overall objectives. For the implementation of the plan, resources (human, time, finance, etc.) within and outside the target communities should be identified. Targets can be collectively identified based on village priority lists.

PRIMARY RESEARCH

Under the thematic area of "CBDRM Planning" as it appeared in the questionnaire that was circulated, the preparation of local level plans and their consolidation at a larger level was again given a perfect score of 25. This shows the importance of a regional approach to DRM based local needs and capacities so that objectives can be met collectively.

Risk Reduction Measures

From risk assessment results, communities can identify appropriate disaster risk reduction measures. These measures include:

1. What to do before, during and after disasters
2. Structural and non-structural measures

The table identifies some risk reduction measures to be taken before, during and after a disaster. This list is not exhaustive.

1. Before a disaster	2. During a disaster	3. After a disaster
i. Policy and strategy: Development of action plan on disaster prevention and mitigation in line with local DRR strategic direction. ii. Infrastructure: implementation of building code including retrofitting and reinforcement. iii. Communication system: Development of early warning systems and communication networking for search and rescue. iv. Support livelihood activities: development of crops and harvest calendar to avoid disasters; change to safer production choices. v. Training and awareness: establishment of rescue team and simulation; imparting knowledge about disasters and building capacities in disaster preparedness for communities. vi. Other disaster preparedness activities: storage of supplies such as seeds/harvest above flood levels, stocking food, water and medical supplies. Earmarking buildings that can serve as shelters in the event of a disaster.	i. Emergency response: activate emergency response plan; mobilize search and rescue teams. ii. Evacuation: evacuation of people to safe places; assistance to elderly, children, women and disabled to reach safety. iii. Health care: availability of hospital, doctor, medicine and proper food.	i. Rehabilitation to ensure basic services for communities: temporary houses, food, transportation, etc. ii. WASH: access to safe water, adequate sanitation and proper hygiene. iii. Reconstruction to Improve infrastructure: repair, improvement of bridges, roads, etc. iv. Communication: awareness raising, disease prevention and hygiene

Structural and Non Structural Measures

4. Structural Measures	5. Non Structural Measures
Infrastructural measures at the village level: • Flood/drought control: small scaled river bank improvement, water system, irrigation, and sanitation. • Transportation: improvement of inter-village roads and bridges. • Building disaster resilient houses and shelters. • Building safe schools. • Disaster resilient public buildings may be built as	• Contingency Planning: Development of evacuation plans, search and rescue procedures, communication and logistics planning, etc. Some of the plans are discussed in the following section. • Capacity Building for Communities: trainings and awareness raising for village members; disaster management integrated into education programme for students.

possible shelters.
 • Building disaster resilient critical facilities: -
     ❖ Emergency facilities whose operation is crucial immediately before, during, or after a disaster.
     ❖ High-density occupancy structures whose failure would result in numerous deaths and injuries.
     ❖ Facilities required for public safety and security.
	• Communication Equipment: Provide equipment (loud speaker system, radio, hand speakers). Development of Operation and Maintenance Procedures for Disaster Preparedness and Response Equipment.
	 • Subsequent training of relevant village personnel.

ERRA – Structural and Non Structural Risk Reduction Measures

ERRA pursued DRR as a cross cutting theme in all its reconstruction efforts. As a result seismically resistant construction techniques were applied to all projects. Amongst other achievements, over 600,000 seismically safe houses were rebuilt under ERRA's Rural Housing Reconstruction Programme. The revised building code of Pakistan with advanced seismic provisions was being applied ensuring that all newly built structures were safe. These efforts were in fact structural measures to enhance resilience in the earthquake affected areas. To complement these structural measures, ERRA's dedicated DRM Programme focused on non-structural measures including a disaster awareness and preparedness campaign as well as capacity building activities as stipulated in Priority Action-5 of the Hyogo Framework of Action i.e. "Strengthening Disaster Preparedness for Effective Response at all Levels". These non-structural measures were referred to as the CBDRM component of the programme. The main purpose of this component was to enhance the response capacities of local authorities and communities across the disaster management spectrum, including activities like search and rescue, emergency first aid, firefighting, logistical arrangements etc. In addition to skill development and awareness building; establishing stockpiles of emergency response tools and equipment at the union council and regional level was also given due consideration. Specific activities undertaken in this regard included:

- *Orientation & Coordination Meetings*
- *Social Mobilization*
- *Development of Selection Criteria for Volunteers*
- *Development of Training Curriculum*
- *Organization of Trainings*
- *Building Stockpiles of Emergency Response Tools*

- *Handing and Taking Over of Stockpiles and signing of MoUs for Safety, Security & Maintenance*

PRIMARY RESEARCH

Participants of the survey undertaken at NDRMF emphasized non-structural measures vis-a-vis structural measures. All participants stressed the importance of HVCA exercises at the village level; DRM awareness raising sessions for all; the establishment and activation of local DRM institutions including DMCs and ERTs; DRM capacity building trainings for community based organizations; the development and dissemination of IEC material; the provision of emergency response tools; and, the development of an early warning system and emergency response plan.

Content of a CBDRM Action Plan

Normally, a CBDRM plan comprises number of specific plans and would include the following components:

A. The roles and responsibilities of each stakeholder
B. Disaster preparedness and response activities

Raising public awareness plan

It may be prepared under two headings:

a) *Specific awareness plan* (to facilitate the execution of CBDRM action plan) -
   i. Raise awareness of all people of preparedness activities by informing them of the disaster preparedness plan.
   ii. Arrange small rehearsal trainings for "shock brigade teams".

b) *General awareness plan* (to raise awareness on six types of vulnerabilities/ "underlying risk factors") -

   i. Raise awareness on attitudinal, social, physical, financial, climatic and educational vulnerabilities.

   ii. Organize awareness sessions on how to reduce the risk by reducing the vulnerabilities.

ERRA – Raising Awareness

ERRA simultaneously launched a Disaster Awareness and Preparedness Campaign in 303 affected union councils. The sessions organized to impart disaster management and emergency response training to UCDMCs and UCERTs were also used to raise awareness about local hazards and possible steps that can be taken to minimize their adverse impact on people and property. Although the membership of UCDMCs and UCERTs was limited to 15 and 50 respectively, many other community members were encouraged to

participate in these sessions. In line with the HFA Priority Action 3, the importance of educating teachers, students and the community as a whole, in the field of disaster risk management, was realized after the death of 18,000 students and more then 800 teachers during the 2005 Earthquake. ERRA's DRM team launched DRR awareness raising campaigns in different government schools as a no cost activity. Special awareness sessions for teachers and students were organized in the EQAAs.

PRIMARY RESEARCH

Participants gave DRR Awareness Raising Sessions and the development and dissemination of related IEC material an overall score of 25 out of 25, an indication that "Raising Awareness" was relevant, effective, efficient, and sustainable besides supporting positive change in areas where they are implemented.

Early warning systems plan

An effective early warning system contributes much to the reduction of the effects of disasters and risks that people are exposed to. For this purpose, it is necessary to:

- Identify the means of communication. It is essential that local people will know what to do when they hear or see the warning signals.
- Identify the staff, responsible for early warning, and those, responsible for accessing to the information even when the public means of communication do not work.
- Identify the preparedness and response activities for life protection during the disaster and people responsible for organizing and monitoring these activities.

PRIMARY RESEARCH

The participants stressed the importance of good communication for a multi hazard early warning system. The formation and training of Early Warning Management Committees and the need for a robust coordination mechanism between these committees, Civil Society Organization and District Line Agencies was suggested as the foundation of an effective and efficient early warning system.

Evacuation plan

Loss of life will be minimized if evacuation tasks are carried out as required in a timely manner. The following must be identified in the evacuation plan:

- Where and who/what to evacuate (according to each type of disaster)?
- How to evacuate?
- Where to evacuate to (according to each type of disaster)?

- The safe ways to the evacuation places?

- The person (s) in charge of the evacuation tasks?

Search and rescue plan

Good implementation of search and rescue can reduce risks and the loss of life. In the local plan, the following must be ensured:

- Well trained search and rescue teams are in place.

- Provision of basic equipment to teams involved in search and rescue and evacuation.

- Comfort, information and facilitation to the relatives of the people who are missing or who have died in the disaster.

First Aid and medical assistance plan (including establishment of triage)

Minimizing the suffering of casualties depends on timely and effective First Aid. The following must be addressed:

- Which groups/how many people will take part in search and rescue activities? Are they trained and ready? Do the people and local government recognize their role?

- Who will be responsible for establishment of triage?

- Are the local medical care facilities ready? (Such as the staff on duty in the office at the disaster affected areas, essential medicines/equipment available and operational? Are there appropriate means of transport available?)

- What potential diseases/epidemics may occur in the aftermath of a disaster? How are communities prepared for such eventualities?

Shelter plan

In some situations, it is necessary to provide temporary shelter for people whose houses were destroyed or are no longer safe. Houses may need to be repaired, plastic sheets and bamboo distributed for people to make temporary shelters in safe places. The following should be considered:

- Who/which organizations are responsible for this? The persons in charge of this aspect of response in various organizations

- How to contact suppliers? How to get to people whose houses are located in safe areas? How to provide basic water and sanitation facilities?

- How many households need to be provided with temporary shelters? Where will these shelters be located?

WASH plan

In an emergency situation, fresh water is often in short supply and people may resort to drinking dirty water. Key concerns in water/sanitation plan include the provision of fresh drinking water, areas for human defecation, areas for animal shelter and garbage disposal. The plan should identify:

- People in charge of water/sanitation within the local authorities/other organizations
- Safe water sources; guidance for people on how to store, preserve and clean water sources, e.g. the use of alum, chlorine and water filters
- Treatment methods for waste and the disposal of bodies of animals.
- The readiness of the local health units in terms of human resources, medicines and means to assess the situation, treat water sources and provide temporary sanitation arrangements.

Food and foodstuff supply plan

- Who within the local authorities/ other organizations is responsible for assessing the need for food (for people) and foodstuff (for animals) when a disaster strikes?
- What food is available in the local area? What foodstuff/fodders are available?
- The distribution plan:

  ❖ What capacity is there to distribute?
  ❖ Who/which organization prepares it?
  ❖ Who will implement/monitor it?
  ❖ It is ideal to know the price of each kind of supply (a list of kind of foods, quantity, prices, suppliers contact details, etc. should be attached)
- How to mobilize the support from the local people?
- How do the local people prepare food reserves themselves? How do they stock fodder/foodstuff for livestock?

Communication plan

Efficient communication during disasters is vital since the information exchange is important for good coordination in disaster response activities.

- What problems are likely to occur in a worst-case scenario wherein lines of normal communication maybe cut temporally?

- What coping solutions for these problems should be outlined in advance so that the higher authorities/other organizations outside the disaster areas can be regularly updated on the situation?

Logistics plan

A logistics plan is important to ensure well functioning response activities. Therefore, the following relevant issues need to be taken into consideration:

- Warehouses: where will those be established?
- Means of transport and access: what means of transport can be mobilized from people or easily accessed for search and rescue, emergency relief supply and evacuation? what about beforehand negotiation with the owners by the local CBOs for ensuring their availability
- Which are the other CBOs/NGOs that can assist in the supply of relief items needed?

Disaster Risk Management Planning Tools

Planning tools help to develop a more logical and structured plan that ensures the achievement of the DRM vision and objectives whilst supporting monitoring and evaluation activities. Planning tools include

a) **Logical Framework (LogFrame)** - It is a table summarizing main elements of one project and their logic linkages (inputs, activities, outputs, objectives, indicators, and means of verification).

b) **Gantt Chart** - a graphical illustration of a schedule that helps to plan, coordinate, and track specific tasks in a project

c) **Action Plan** - Action plan typically includes deciding who is going to do what and by when and in what order, with how much resources, for an organization/a project to reach its strategic goals.

PARTICIPATORY IMPLEMENTATION OF DISASTER RISK REDUCTION PLANS

Purpose

- To enable vulnerable communities to take leadership in reducing disaster risks faced by them
- The community participates in implementing and monitoring activities with effective support and assistance from governmental agencies and outside stakeholders

Steps

1. Create / identify / consolidate community disaster management committees:

It is necessary to create or strengthen appropriate community organization committees with clear responsibilities for disaster management. A wide range of organizations built on people's participation include:

- A community based "Disaster Management Committee" / Project Management Committee
- "Emergency Response Teams" to execute the above mentioned CBDRM Plans (one team may carry out two or more plans depending upon sensitivity and load of work)

ERRA – Institutionalizing CBDRM

To build disaster resilience at the Union Council level, ERRA helped local communities organize themselves into Union Council Disaster Management Committees and Union Council Emergency Response Teams. Each UCDMC comprised 15 members and the each UCERT consisted of 50 members. These communities based organizations were not only mobilized but also trained in relevant skills.

PRIMARY RESEARCH

According to an analysis of data collected through primary research, the establishment of village level Disaster Management Committees again received an overall score of 25 out of 25, signifying that the institutionalization of CBDRM at a village level was not only relevant, effective, efficient and sustainable but that it also helped create a visible impact in terms of enhancing local resilience against disasters.

Most participants also advocated full representation in these committees of vulnerable and otherwise marginalized groups including women. The establishment of School Disaster Management Committees was suggested as an important part of institutionalizing DRM locally.

2. Build Capacity:

It is essential to *provide resources, impart skills and ensure enabling environment for efficient utilization of resources and skills*. This includes but is not limited to the following:

- Training disaster management committees in participatory project management, financial management, contract awarding, resources mobilization and allocation etc.
- Imparting specialized training to emergency response teams in respective tasks.

- Training communities, particularly vulnerable groups to enhance their capacity to prepare for, cope with and mitigate against the adverse effects of disasters.

ERRA – Raising Awareness and Building Local Capacities

Over 19,000 individuals including around 3,000 women were trained in 303 Union Councils of the earthquake affected areas. 5,000 volunteers were trained as members of Union Council Disaster Management Committees and the remaining 14,000 were trained as members of Union Council Emergency Response Teams. These training included the following modules.

First Aid	*Search and Rescue / Casualty Handling*	*Fire Fighting*
First aid objectives, definitions, instructions	*SAR (Definition, Importance, Types)*	*Fire definition*
DRs-ABC	*Operational Safety*	*Classes (A-F)*
Wounds and bleedings	*Types of Collapsed Structures*	*Extinction procedures and principles*
Fractures (types)	*SAR Basic principles, equipment use*	*Use of fire extinguishers (PASS method)*
Snake bites	*Victim Handling*	*Improvised methods for fire suppression (i.e. use of blanket, sand etc.)*
Fainting	*Rope Management*	
Chocking	*River crossing*	
Triage	*Ascending and descending*	*Safety tips (before, during and after)*
Burns and shocks	*Class demonstrations and practical exercise*	

PRIMARY RESEARCH

Participants showed a hundred percent support for capacity building measures including training sessions for DMCs and ERTs as well as provision of tools.

The capacity building of School DMCs was also advocated alongside role plays, poster contests and disaster awareness and preparedness exercises for school going children and the youth of the community.

The inclusion of vulnerable groups in capacity building activities was pointed out as an important factor in building local resilience. Some participants were of the view that the disaster risk management capacities of organizations working locally including NGOs and local government authorities should also be built.

3. Mobilize and allocate resources:

This step should involve the mobilizing and allocation of human, physical/material, natural and financial resources to ensure the implementation of disaster risk management measures. Technical and financial resources can be mobilized from external partners and stakeholders as well as local communities.

ERRA – Technical Resources for Emergency Response

To strengthen the response capacities of district authorities and local communities, ERRA established Union Council, District and Regional Level stockpiles of emergency response equipment in the earthquake affected areas. Training on maintenance and operation procedures was also imparted and quality ensured. The following equipment was distributed:

▪ *Handheld*	▪ *Axe*	▪ *Hammer*
▪ *Torch*	▪ *Shovel*	▪ *Bolt cutter*
▪ *Bucket*	▪ *Pick*	▪ *Pliers*
▪ *Working Gloves*	▪ *Safety Helmet*	▪ *Stretcher*
▪ *Mega Phone*	▪ *Electric tester*	▪ *First Aid box*
▪ *Crowbar*		

PRIMARY RESEARCH

Building capacities of local DMCs and ERTs was strongly supported by participants of the survey. In this context, besides training, the provision of tools was greatly emphasized as a necessary enabler. In fact, "provision of tools" scored 25 out of 25, indicating that this factor was not only relevant, effective, efficient, and sustainable but that it would bring about a positive change by empowering locals.

4. Manage implementation procedures/regulations:

It is necessary to put in place a transparent process of tendering and procurement of necessary material, such as civil work contracting and bidding. Besides, procedures for capacity building and awareness raising activities must be agreed and clearly documented.

PARTICIPATORY MONITORING AND EVALUATION

Purpose

Progress is reviewed collectively to support decision making and make improvements. Participatory monitoring & evaluation has the following purposes:

- To develop a feedback system that encourages regular learning and sharing among communities and stakeholders for better implementation in the future.

- "Monitoring" is done to observe that the timelines are met, the budgetary provisions are not violated, and the prescribed quality is maintained?

- "Evaluation" is carried out to see that the ultimate objectives/ goals of the project are achieved?

Steps

1. Design M&E plan and set up the M&E system

   This entails identifying:

   - What information needs to be collected given available human and financial resources?
   - How will this information be collected?
   - Who will collect, analyze, and use the information?

   Setting up the M&E system with a participatory approach builds stakeholders' understanding and trust about the project and starts creating a learning environment.

2. Collect data and information

   Select appropriate methods and tools to gather information, qualitative and quantitative and individual versus group based. The choice of M & E tool depends on the nature and scale of the project, the type of information required, and the frequency, ease and cost of collection. Some of the tools are mentioned at the subsequent section.

3. Analyze data

    Process, consolidate and analyze qualitative and quantitative data.

4. Document and share the findings

    This includes reflecting critically (on experience and information) to improve action. Lessons are drawn and best practices are shared with various stakeholders within communities, government, and NGOs to promote the CBDRM process and approach.

Tools

M&E tools include:

1. Direct observation
2. Interviews with key persons
3. Focus Group Discussions
4. Questionnaires and surveys
5. Monitoring with specific indicators
6. Log Frames have built in indicators for monitoring and evaluation

RECOMMENDATIONS

1. TOT's on *CBDRM Best Practices and SOP's* may be organized for the implementing partners of NDRMF with the provision of complete training toolkits to include;
    a. Training plan
    b. Trainer's manual
    c. Participant's workbook
    d. Pre/post training assessment tests
    e. Simulation exercises
    f. PowerPoint presentations
2. A suitable mechanism may be devised to provide performance-based salary/ stipend to the members of "Emergency Response Teams" even after completion of the NDRMF's CBDRM project, so that it may not come across the same fate as ERRA's DRM project did.