



## UNJP/VIE/037/UNJ

*“Strengthening Capacities to Enhance Coordinated and Integrated Disaster Risk Reduction Actions and Adaptation to Climate Change in Agriculture in the Northern Mountain Regions of Viet Nam”*



## **Training Manual for Disaster Risk Management Systems at the Community Level - CBDRM**

Vietnam Red Cross  
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## **Table of Contents**

### **I. Community–based DRM: The process**

1. What is CBDRM
2. Who could use this manual?
3. Vulnerability, hazard and capacity linkage in CBDRM
4. Community–based Organizations and Community–based DRM  
Exercise 1

### **II. Assessment for CBDRM**

1. Why the assessment for CBDRM?
2. What is the principle of assessment?
3. Who should be involved in the process?
4. What to be produced during assessment?
  - 4.1 Vulnerability context at the commune level**
    - 4.1.1 The community hazard profile and vulnerability context*
    - 4.1.2 Community hazard risk and vulnerability mapping*
    - 4.1.3 Seasonal calendar and seasonal vulnerability hazard risk planning*
  - 4.2 Commune institutional set-up and capacities for DRM**
    - 4.2.1 Existence of local DRM institutions and/or access to DRM services (Venn Diagram)*
    - 4.2.2 Performance of local DRM institutions and/or services (SWOT Analysis)*
    - 4.2.3 Filled-in monitoring sheets*

### **III. Planning for CBDRM**

1. Why CBDRM planning?
2. What ensures that the CBDRM plan is undertaken?
3. Content of a CBDRM plan

Annex 1. Glossary of Terms

## I. COMMUNITY-BASED DRM: THE PROCESS

### 1. What is Community-based Disaster Risk Management?

Community-based disaster risk management (**CBDRM**) is a range of disaster preparedness, mitigation and response activities that are developed by members of a vulnerable community, based on their needs, capacities and perceptions of risk. The CBDRM includes:

- Understanding the real life situation of community
- Community Participatory disaster risk assessment
- Community Participatory DRM planning
- Community managed implementation of the DRM plan(s)
- Commune Participatory monitoring and evaluation of the DRM plan(s)

### 2. Who could use this manual?

The technical staff of local government departments/agencies in the Northern mountainous provinces, engaged in designing and/or evaluating DRM systems at district and community level.

DRM practitioners, disaster managers (Red Cross) and policy makers at community level

### 3. Vulnerability, hazard and capacity linkage in CBDRM

Disasters of all kinds happen when hazards seriously affect communities and households and destroy the livelihood security of their members. A disaster results from the combination of hazard risk conditions, societal vulnerability, and the limited capacities of households or communities to reduce the potential negative impacts of the hazard. Therefore, during the CBDRM process, the recognition of vulnerability in the risk context of a commune has been accompanied by understanding and enhancing the positive capacities of people in that commune to cope with the impact of hazards. *The existence or absence of appropriate socio-economic and institutional systems (to mitigate or respond rapidly to hazards) determine a society's or a community's susceptibility or resilience to the impacts of hazards.* In other words, the coping capacities ensured by these systems translate directly into enhanced resilience.

### 4. Community-based Organizations (CBOs) and Community-based DRM (CBDRM)

The CBDRM process gathers people and representatives of community-based organizations (CBOs) of one community in a meeting to solve a common problem (hazard risk) or pursue a common desire (Disaster Risk Management).

#### Who are the CBOs?

*“Community-based organization”* (CBO) is a generic term applied to all organizations controlled by a community. There are various types of **community-based organizations**:

- Village development committees (VDCs): organizations such as People's Committee or Cooperative's management who are responsible for collective governance and for organizing collective actions relevant to all the members of the community.

- Common interest groups (CIGs): organizations of some members of the community who come together to achieve a common purpose. Example: seed production group (SPG), women association, youth association, farmers association etc.
- Users associations (UAs) are CIGs established to operate and maintain a facility constructed with public and/or private funds, with resources mobilized from the members of the association. (example. SPG, irrigation group)
- Micro-finance institutions (MFIs) are community-level CIGs specialized in savings, lending and other financial services. (example. Revolving fund)

### **Why are the CBOs in CBDRM?**

- Provide essential goods and services to vulnerable groups, particularly in the absence of well-functioning markets, local governments and safety nets.
- Functioning effectively, they can be strong catalysts for livelihood development, enhancing prevention and mitigation, providing rapid assistance during emergencies, and stimulating and supporting resilience after a disaster.
- Make a crucial contribution to the design and implementation of comprehensive local DRM plans. Such participation is essential to ensure the local community's ownership of the DRM process and the adaptation of DRM principles and programme to local realities and needs.

This Manual addresses the two key components of the process of Community-based Disaster Risk Management (CBDRM):

#### **Assessment for CBDRM**

#### **Planning for CBDRM**

### **Exercise 1.**

Regroup the class into groups of 10 people from the same commune (area). Select a group leader to moderate your group discussion/ work presentation. From now on, you will stay learning and working in the same group(s) till the end of the course

Answer the following questions by using whatever of your own knowledge, combining with what you have learnt from the session

- A. List types of hazards that often occur in your commune/area. Any comment do you have about their negative impact (severity, frequency, damage caused)? Any explanation do you have about such phenomena?
- B. What do you understand by the term: "community-based disaster risk management" (CBDRM)?
- C. Who are the community-based organizations (CBOs) in your commune? What are their roles and functions?
- D. Why should the CBOs take part in CBDRM process?
- E. Why do we need to promote the commune's people's participation in disaster risk management process?

## II. ASSESSMENT FOR CBDRM

### 1. Why the assessment for CBDRM?

Obtain a snapshot of the 'real live' risk situation at the community level, i.e. what is *actually* done for DRM locally as compared to what *could* be done;

Understand the local perceptions of risk and risk coping requirements for increasing resilience that the community considers important;

Identify the different types of organizations (CBOs) present at the community level, their roles, their core competencies and capacities for DRM, and identify possible gaps in addressing DRM; and

Assess if structures and processes foreseen in the national DRM planning context actually exist at local level, or if they have been modified by communities in order to reflect their local requirements.

### 2. What is the principle of assessment?

The assessment at community/village level is based on Participatory Rural Appraisal (PRA) methodology and be interactive and flexible with participation of below mentioned stakeholders. The issues/problems and solutions will be addressed/identified during the discussions by using the leading questions

### 3. Who should be involved in the process?

Although it is unlikely to gather all the people in the commune, but the assessment at community level should, nevertheless, try to obtain the views of a variety of stakeholder groups, particularly the most vulnerable who are often excluded in traditional, top-down DRM institutional assessments. This requires gathering the information during the 2 – 3 village walks and the crucial contribution (views) in the study/discussing process of following people who are actually the key informants:

- Leaders of villages (and hamlets) with admin, political and/or religious functions: People's Committee, Leaders of ethnic groups etc.
- Commune/hamlet disaster management committees, Red Cross staff at the commune
- Leaders of CBOs (farmers' association, women's association etc.)
- Representatives of cooperatives (including plant protection, agriculture extensionists) and micro-finance groups
- Representatives of vulnerable groups.
- Representatives of the school, the commune medical/health station, power technicians
- Representatives of traders/agro-material distributors/shops in the community etc.

### 4. What to be produced during assessment?

During the assessment at the commune, we have to obtain information about **A. Commune's Vulnerability Context:** (1) community hazard profile (2) multi-hazard vulnerability map (3) seasonal calendar **B. Commune's Institutional set-up and capacity for DRM:** (4) summary chart (Venn diagram) (5) strength and weakness chart (SWOT analysis) of the commune DRM system and (6) filled-in monitoring sheet.

## Exercise 2.

Select the best fit answer for the following questions:

### 1) Why do we have to assess for CBDRM?

- a) Obtain a snapshot of the 'real live' risk situation at the community level.
- b) Understand the local perceptions of risk and risk coping requirements for increasing resilience that the community considers important;
- c) Identify the different types of organizations (CBOs) present at the community level, their roles, their core competencies and the gaps in their capacities for DRM
- d) To see if CBOs structures and processes fit to the commune requirements for DRM.
- e) Neither of the answers / or all (a),(b),(c),(d) are correct.

### 2) What is the Participatory Rural Appraisal (PRA) principle of assessment?

- a) Walk around 2 – 3 villages, observe and discuss with inhabitants
- b) Get all inhabitants of the commune in the meeting(s) for discussion
- c) Get certain number of key informants of key stakeholders groups involved in discussion. (name them).
- d) Combining (a) and (b) is correct
- e) Combining (a) and (c) is correct

### 3) What do we have to prepare as the results from the assessment?

## 4.1. Vulnerability context at the commune level

### 4.1.1. *The community hazard profile and vulnerability context*

The commune's profile/context can be identified by using the following questions for information dig-out and understanding the main pattern(s) of vulnerability:

- What is the size of the commune's population? How many ethnic groups are there in the commune/hamlet? How many households are there? Where are they located?
- What and how often do hazards/disasters hit the community and what are the main causes of vulnerability? (flood/inundation, flashflood, landslide, whirlwind, hails/frost, drought, forest fire, epidemic diseases/pest or rat invasion). Is the incidence growing? (Ranking by the recent frequency).
- How do people perceive of the risk of natural hazards/disasters (higher frequency, longer lasting, stronger damaging impact)? Is the perception the same amongst different people/ethnic groups?

#### 4.1.2. *Community hazard risk and vulnerability mapping*

This activity will help obtaining the overall picture of the commune situation and its hazard profile

##### **Hazard exposure of the most vulnerable groups**

- Which are the main vulnerable households/peoples in the community? Where are they located?
- Where do the different ethnic groups live?
- To which natural hazards are they particularly vulnerable and why?

##### **Hazard exposure of livelihood assets**

- What are the main crops in the commune? (Rank by cash/income generating importance). What is the size of rice cultivating land? How many hectares are with hybrid and/or varieties? Are they mainly located in the low/flat area or terrace-fields?
- What is the size of land for forest production? Where are the seed and seedling nurseries located?
- Where are the fish ponds, animal shelters, machinery, irrigation systems, wells, cooperative storage for seed/fertilizers facilities etc. located within the community's geographical area?
- Which groups in the community have access to the above mentioned assets? Which groups do not and why? If not, how do they manage their need?
- To what degree are the above resources and/or productive assets exposed to hazard impacts (differentiated by hazard, e.g., flood or inundation, drought, landslide)?

##### **Disaster preparedness, rescue and emergency response infrastructure and facilities**

- What community infrastructure and equipment are available to save lives and livelihoods during a disaster and/or to provide temporary shelter and emergency supplies (e.g. schools, materials store, wells, fire fighting equipment, power station, commune health service station)? Where are they located? How are they maintained?
- What agriculture facilities are available for DRM? (cooperative threshing floor and warehouse, seed drying oven and seed storage, seed production field belonging to SPG, and seedling nursery, hamlet wells) Where are they located? How are they maintained and share-used?
- From where do the farmers source the seed for starting new cropping season? Can they secure sufficiently seed? Do people spare seed for the crop season following?

- What varieties or hybrids do people use for rice/corn (etc.) cultivation? Why are they suitable for DRM farming (e.g. resistance to frost/disease/drought/inundation)?
- What livestock facilities are available? (fodder storage, livestock shelters, cattle/poultry feed storage). Where are they located? How are they maintained and share-used?
- How do people restock their animal herds?

### **Exercise 3.**

Describe the commune hazard profile

- i. Its population
- ii. Types and frequency of hazards that often attack the commune
- iii. Perception of the commune's people of the risks of hazards occurring in the commune area

Commune hazard risks and vulnerability mapping

- i. Question each other participants for determining the hazard exposure of the most vulnerable groups (Using key words such as Who? Where? To what are they exposed to?). **Denote them on the commune map.**
- ii. Question each other participants for determining the hazard exposure of livelihood assets in the commune (cultivating sizes and locations of main crops, cultivating land, seed and seedling nurseries, animal shelters, machinery, irrigation systems, wells, cooperative storage, their location? How are they exposed to the hazards?). **Denote them on the commune map.**
- iii. Discuss about the commune's infrastructure and facilities for disaster preparedness, rescue and emergency response.
  - ✓ Infrastructure and equipment for livelihood rescue? Their location and maintenance. Stocking goods for First Aid and medicines?
  - ✓ Agriculture facilities available for DRM? (cooperative threshing floor and warehouse, seed drying oven and seed storage, seed production field belonging to SPG, and seedling nursery, hamlet wells). Their location, shared-use and maintenance. Agrochemicals stocking?
  - ✓ Seed and seedling resourcing/stocking? Varieties preferred and their features
  - ✓ Livestock facilities available? (fodder storage, livestock shelters, cattle/poultry feed storage). Their location and usage? How do people restock their animal herds? Vet medicine stocking?

**Denote them on the commune map if appropriate**

### 4.1.3. Seasonal calendar and seasonal vulnerability hazard risk planning

#### Seasonal hazard risk calendar

By questioning “*When do hazards usually occur?*”, “*How long?*”, we can prepare a seasonal hazard risk calendar and fill in the following table/calendar (example)

Hazard Risk	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Flood/flashflood								X	X	X		
Landslide								X	X	X		
Hails/frost	X	X										X
Whirlwind							X	X				
Drought										X	X	X
Inundation								X	X			
Forest fire											X	X
Pest/disease break												

#### Cropping calendar

By discussing with farmers, commune agriculture extension staff, we can prepare cropping calendar of the commune and fill in the following table/calendar (example in Yen Bai province)

Key crops	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Rice		X	X	X	X	X	X	X	X	X		
Corn		X	X	X	X	X	X	X	X	X		
Cassava		X	X	X	X	X	X	X	X	X	X	
Soybean			X	X	X	X	X	X				
Gourd, cabbage			X	X	X	X		X	X	X	X	
Tea		X	X	X	X	X	X	X	X	X	X	

Note: Red highlighted means harvest period

#### Planning

Combining the above two calendars, we then go to identification of *potential risks and possibilities for future planning* such as:

- Do hazards coincide with peak working seasons? And do the hazards threaten peak production and/or harvest period?
- Could the vegetable be alternative culture if the hazard risk (flood) causes us missing the second corn season? Similarly, what else we can grow instead of second rice season?
- What are the viable farming techniques/technologies for DRM available at the local level?
- What does the commune have as coping strategies/services for each hazard type? What services then be available and provided by/to whom?

#### **Exercise 4.**

Establish seasonal hazard risk calendar (Types of hazards/ period of occurrence)

Establish cropping seasonal calendar (Crops, farming/harvesting period)

Comparing the two calendars and identify potential risks and possibilities for future planning: Hazard coincidence with peak working and harvesting season? Any idea or suggestion for alternative farming crops/technologies/services for DRM available?

#### **4.2. Commune institutional set-up and capacities for DRM**

This part of studies will help manual's user understand the *institutional set-up* at the community level, tasks and responsibilities as well as capacities available, i.e., *the human resources related issues* at the commune for DRM.

The community institutions here are actually the *rules* that govern intangible "institutions" such as: kinship, marriage, inheritance and sharing of oxen/parcels of land/tea garden at community level, as well as *organizations* that operate at community level and are controlled by their members (farmers association, women's association, youth association, seed production group – SPG, plant protection group, money lenders or saving group, irrigation group, etc.).

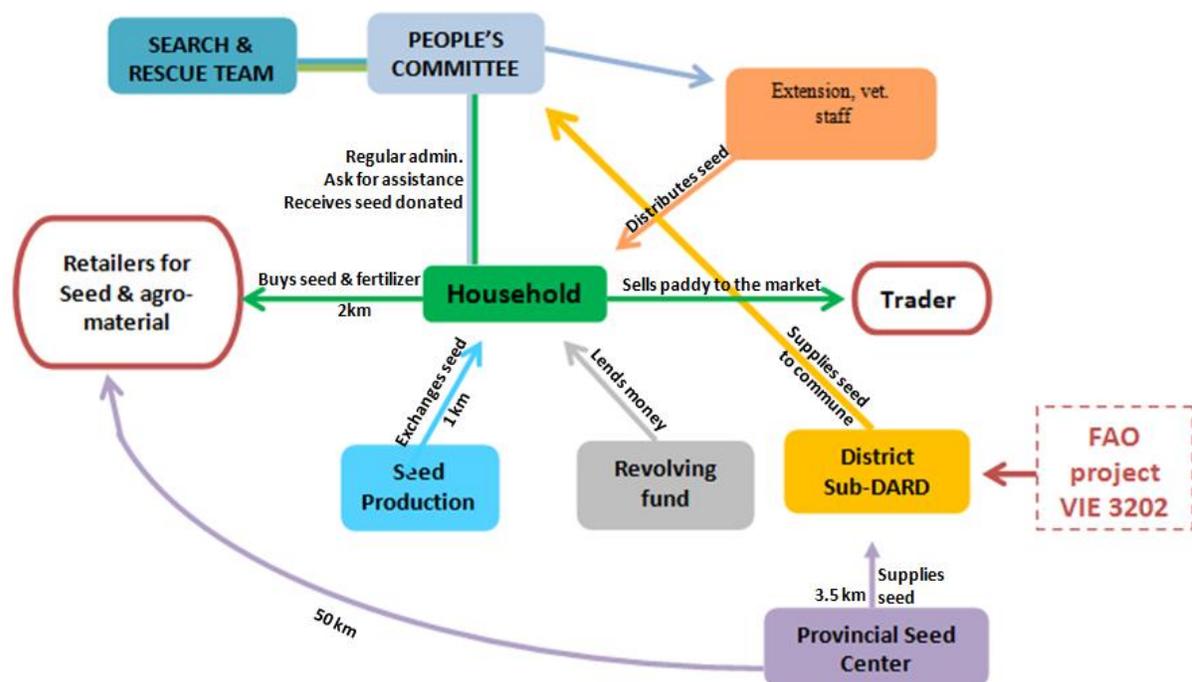
##### *4.2.1. Existence of local DRM institutions and/or access to DRM services*

Their different mandates, roles and responsibilities are briefly indicated in a summary chart (**Venn diagram**) which is helpful and practical tool for illustration of organizational issues, structure, capacities, coordination and linkages

Leading questions for this part of assessment are:

- What formal and informal institutions and associations exist in the community?
- Whether and how they control/influence on the ownership/access to the commune resources for livelihood and resilience after a disaster?
- Is there a local early warning system and who is responsible for it? Do people know where to go for safety if a disaster warning is issued?
- Is there DRM committee in each hamlet or just at the commune level? What are their roles? Who coordinates and who implements local rescue and rehabilitation efforts?
- After the disaster, can saving group provide financial support? Can the SPG supply the seed to other households for resuming the production?
- How many staff are there in the commune's health service station? Do they have any special facilities to cope with emergencies and epidemics?
- How many veterinary/ plant protection/ extension staff are there in the commune? Do they have any special facilities to cope with emergencies and epidemics? Have they been retrained with new farming techniques?

- What assistance is available, if any, for developing risk coping mechanisms or technologies (seed, breed, procedures)? Who provides this assistance?
- How do people in the commune think about the practicality and effectiveness of the support received from the commune/district/province level with regard to development in general and to DRM in particular (e.g. financial assistance, technical advice, service delivery, infrastructural investments and maintenance, and early warning systems).
- Are the provincial seed center and extension center involved in supporting the commune in DRM (seed supply, technological guidance/recommendation, product marketing etc)?



Example Venn diagram illustrating a household's transaction with CBOs for rice seed secure after flood and frost in Northern provinces in winter 2008 in Dai Phac commune (Yen Bai province) – **FAO project VIE 3202**. Dash line means seed supply was seriously disrupted. Hence the concept “Seed Production Group” servicing as seed buffer for the commune and to be one of measures for DRM applicable in the UNJP VIE 037 UNJ was .

#### 4.2.2. Performance of local DRM institutions and/or services

Their strengths and weaknesses in the actual performance are summarized through a **SWOT** analysis which is a useful tool to discuss and assess four main categories of issues:

- What goes well? (**S**trengths)

- Where are the gaps to be filled and what should be strengthened? (**Weaknesses**)
- What **O**pportunities exist? and
- Which **T**hreats are influencing the functionality of the commune's DRM system

Guiding questions for this activity could be like:

- Is there any local DRM plan? Which organizations are key players in this programme? Are their responsibilities determined?
- What DRM services (such as rescue, transport, power and water supply, emergency food, medical and veterinary supplies, markets, agricultural extension, seed and seedling supply, health, education) available?
- How satisfied are local people with the existing DRM-related service providers (especially activities of extension staff, seed and breed suppliers)? Are there alternative service providers available which the villagers think could offer more effective DRM services?
- Which local institutions would be the best entry point(s) for DRM interventions (seed production group, extension team, hamlet cooperative etc.)? Which of these do poor households trust most?
- What kind of support (capacity-building, equipment, finance, awareness-raising) would key local institutions require in order to implement a DRM programme?
- Does the community participate in the provincial/district seed programme? Does the programme facilitate the community's implementation of a DRM programme?
- By answering the questions, the disaster manager/staff and local people will identify their perception and opinions about the role and responsibilities of the commune actors in CBDRM and hence their views/opinions about the roles/actions of other actors/agencies from district (and provincial level probably). The example is described in the table below

## SWOT Analysis

Main actors	What is done (or not done) in			
	Normal year	Preparing for rainy season	Responding to storm, flood and landslide	Recovering from storm, flood and landslide
<b>Farmer household</b>	<ul style="list-style-type: none"> <li>• Normal rainy season preparation.</li> <li>• Exchange the seed or selling the paddy</li> </ul>	<ul style="list-style-type: none"> <li>• Enhance household preparation</li> <li>• Identify additional needs to enhance preparedness</li> </ul>	<ul style="list-style-type: none"> <li>• Escape from impacted area</li> <li>• Relocate animals and agro-products</li> <li>• Create water discharge channel</li> </ul>	<ul style="list-style-type: none"> <li>• Field clearance and looking for additional seed/seedling</li> <li>• Transplanting with new seedling.</li> <li>• Engage shorter term crop</li> </ul>
<b>SPG</b>	<ul style="list-style-type: none"> <li>• Labour pooling for joint field production</li> <li>• Joint post harvest processing and some incidental marketing</li> </ul>	<ul style="list-style-type: none"> <li>• Enhance storage facility for equipment</li> <li>• Pooling labour for seed processing and storage</li> </ul>	<ul style="list-style-type: none"> <li>• No definite plans and specific target specified</li> </ul>	<ul style="list-style-type: none"> <li>• Distributes and exchange seed with other affected households</li> </ul>
<b>Red Cross team</b>	<ul style="list-style-type: none"> <li>• Map the flooded areas</li> <li>• Raise the public awareness of the flood hazard</li> <li>• Reinforce houses with simple materials, assist in building safer houses</li> <li>• Encourage people to relocate houses away from terrace field and to be involved in flood preparedness and prevention</li> </ul>	<ul style="list-style-type: none"> <li>• Build up/upgrade the broadcasting system</li> <li>• Give training on flood preparedness to each household</li> <li>• Establish an evacuation plan</li> <li>• Closely monitor the weather situation</li> </ul>	<ul style="list-style-type: none"> <li>• Search and rescue</li> <li>• Give First Aid</li> <li>• Distribute water filters, WPTs,</li> <li>• Fresh water and food supplies</li> <li>• Control disease and epidemics</li> </ul>	<ul style="list-style-type: none"> <li>• Observations, summaries, analysis, consolidation</li> <li>• Aid social and political survey</li> </ul>
<b>Revolving fund</b>	<ul style="list-style-type: none"> <li>• Provides credit to farmers for production</li> </ul>	<ul style="list-style-type: none"> <li>• No definite plans and specific target specified</li> </ul>	<ul style="list-style-type: none"> <li>• No definite plans and specific target specified</li> </ul>	<ul style="list-style-type: none"> <li>• No reasonable ideas specified</li> </ul>
<b>Extension staff</b>	<ul style="list-style-type: none"> <li>• Summarize commune's seed demand for each season and forward to Seed Center</li> <li>• Receive seed from Center and redistribute to farmers as seed "retailer"</li> </ul>	<ul style="list-style-type: none"> <li>• No definite plans/advice for farming activities</li> </ul>	<ul style="list-style-type: none"> <li>• No definite plans and specific target specified</li> </ul>	<ul style="list-style-type: none"> <li>• Receive seed supplied from the state and distributes to farmers.</li> <li>• Unable to recommend substitute crops for farming activities</li> </ul>

<b>Cooperative</b>	<ul style="list-style-type: none"> <li>Local shop retails agro-material</li> </ul>	<ul style="list-style-type: none"> <li>Involve people in maintenance and</li> <li>Protection of dykes/ dams</li> <li>Enhancement of common assets: warehouse,</li> </ul>	<ul style="list-style-type: none"> <li>No definite plans and specific target specified</li> </ul>	<ul style="list-style-type: none"> <li>Organize restocking scheme, if applicable</li> </ul>
<b>Commune's People's Committee</b>	<ul style="list-style-type: none"> <li>Identify the affected areas</li> <li>Reinforce houses, build houses, roads of resilient materials</li> </ul>	<ul style="list-style-type: none"> <li>Forewarn the areas that are likely to be affected</li> <li>Install and upgrade the information system in the communities</li> <li>Update/develop evacuation plans in the village and commune</li> <li>Establish and train the shock brigade and volunteer teams in disaster preparedness measures</li> <li>Closely monitor the weather situation</li> </ul>	<ul style="list-style-type: none"> <li>To organize search and rescue activities.</li> <li>Monitor Red Cross activities.</li> <li>Build up temporary settlement area.</li> <li>Ensure fair distribution of external assistance and relief</li> </ul>	<ul style="list-style-type: none"> <li>Observations, summaries, analysis, consolidation</li> <li>Aid social and political survey</li> <li>Submit request for further assistance to district authority</li> </ul>
<b>District's People's Committee and Sub-DARD</b>	<ul style="list-style-type: none"> <li>Provide regular and lawful administration</li> <li>Implement policies relevant to local conditions</li> </ul>	<ul style="list-style-type: none"> <li>Announce relevant weather forecast to communes.</li> <li>Prepare district's DRR plans and check plans of vulnerable commune.</li> <li>Inform and request the province for potential assistance</li> </ul>	<ul style="list-style-type: none"> <li>Implement DRM plan</li> <li>Mobilize local resource for search and rescue</li> <li>Receive external input for distribution</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring recovering process after the disaster.</li> <li>Searching for seed/breed sources for restocking</li> </ul>

### Exercise 5.

To simplify the group work, each group select a subject activity: either livestock activities OR cultivating activities.

Identify the CBOs available in our commune/district/province who might be related to daily living, production/trading activities within your subject: animal husbandry or cultivating. Describe their roles, functions, linkage and activities.

Identify a farmer household with activities related to your subject

Denote them on the diagram where the farmer household to be the center of the diagram (Venn Diagram).

When discuss within the group about the linkage/functioning/activities of stakeholders in the commune, think about their capacity (*staff, instruments?*), activities (*what to do?*), responsiveness (*how?*) in 4 stages: normal period, before hazard occurrence, when disaster occurs and after the hazard occurrence. Fill in the SWOT analysis table. Try to analyze for identifying:

- what are the strengths/weaknesses of each stakeholders?
- Where are the opportunities for our interference? (using the assumption words “what/what about ... if..”)
- What could be the threats (risks)? (using the assumption words “what/what about ... if..”)

Summarize the results of SWOT analysis which can be used later on as input material when come to CBRDM planning section

#### 4.2.3. Filled-in monitoring sheets

At the end of community-level assessment, all the outcomes and findings from interviews, PRA sessions with key informants should be presented in a checklist called “Monitoring sheets”.

Analysis of these monitoring sheets and presenting the findings for discussion in a synthesis session with all stakeholders will help building the consensus on priorities and key recommendation which to serve as input for CBRDM planning.

The format of monitoring sheets is presented hereunder.

### Monitoring sheet of key processes in DRM systems at the community level

Key processes & instruments (related to the DRM framework)	Indicators <sup>(1)</sup>	Status <sup>(2)</sup>	Name of institutions Involved with		Measures and capacities for implementation <sup>(3)</sup>			Remarks
		Availability	Lead responsibility	Supporting role	Staff	Technical skill	Financial resources	
1. Disaster risk assessment	* Commune has been involved in risk assessment exercises							
	* Community hazard and vulnerability maps prepared and regularly updated							
	* Livelihood profiles of vulnerable groups identified							
	* Livelihood assets at risk identified							
2. Disaster risk management planning and monitoring	* Community DRM committee and volunteers exist							
	* Community DRM plan addressing major hazards exists							
	* At-risk groups involved in the planning process							
	* Hazards monitoring technology available and procedures defined							
3. Disaster mitigation and prevention	* Disaster risk reduction practices are carried out at village level (e.g. late sowing and late transplanting)							
	* Community/village is included in district hazard-/sector-specific mitigation plan							
	* Advisory services on disaster mitigation are available at commune/village level							
	* CBDRM methods are practiced and understood properly by CBOs/CSOs and the community members							
4. Awareness raising and dissemination of risk information	* Awareness raising campaign undertaken at village level							
	* Local media programme targeted to DRM awareness-raising prepared/disseminated							
	* Community is aware of alert signals for different types of disasters							
	* Mechanism exist to communicate hazard risk to community level							
	* Community-based awareness approaches implemented (field days, orientation meetings, folk songs, dramas, demonstration rallies, exchange visits etc.							
5. Community level early warning system	* Early warning messages are received at the community							
	* Mechanisms exist to communicate hazard risk to the community							
	* Systems to ensure outreach of EWS to the most vulnerable people in place (including, if relevant, translation of							

	messages into local languages								
	* Indigenous knowledge incorporated in EW system (e.g. local calendars, local measures, almanac etc.)								
6. Preparedness	* Community preparedness plan exists								
	* Roles and responsibilities allocated and names and inventories of equipments for use in emergency available								
	* Shelters and high grounds available to save lives and livelihoods								
	* Warehouses for emergence food and other supplies available in the area								
	* Volunteers trained to provide support in case of emergency								
	* Evacuation routes identified and local people informed								
	* Regular mock evacuation exercises conducted at community level								
7. Providing immediate response and/or relief assistance	* Social capital networks to support neighbours and relatives exist								
	* Search and rescue teams available at the community level								
	* Mechanisms/procedures for community-level emergency food distribution exist								
	* Mechanisms/procedures for organizing emergency shelter in place								
	* Emergency relief has been targeted to the most vulnerable households								
	* Community mechanism to coordinate the response in place								
8. Assessing damage and loss	* Damage and loss assessment teams consulted with community representatives								
	* Damage and loss assessments include vulnerability and livelihood profiles								
9. Reconstruction of settlements, infrastructure and services	* Community rehabilitation plans exist (formulated with community consultation)								
	* Reconstruction, resettlement and sector rehabilitation take into consideration “building back better” principles								
	* Rehabilitation plans take into consideration local livelihood strategies								
	* Community has been benefited from national compensation schemes								
	* Community has been benefited from international assistance for rehabilitation								

<b>10.</b> <b>Rehabilitation</b> <b>economic and</b> <b>social recovery</b>	<b>* Mechanism to prepare plans for rehabilitation and economic recovery exist</b>							
	<b>* Funding mechanisms supporting rehabilitation exist</b>							
	<b>* Evidence of provision of key production inputs needed for livelihood recovery (e.g. farming implement, seeds and fertilizers)</b>							
	<b>* Micro-financing institutions contribute to rehabilitation</b>							
	<b>* Plans to re-build area-specific livelihoods exist</b>							
	<b>* Guidelines for local institutions and informal groups to help affected communities exist</b>							
	<b>* DRM elements incorporated into livelihood restoration/development programme to build resilience to future hazards</b>							

**NOTE:**

- (1) Indicators help to identify the institutions with specialized institutional and technical capacity in each element of the DRM framework and to identify future opportunities for intervention
- (2) Proposed assessment categories: NE - Non existent; ENO: existent but non operational; O: operational
- (3) Proposed assessment categories: G: Good; S: Satisfactory; I: inadequate

### III. PLANNING FOR CBDRM

#### 1. Why CBDRM planning?

A detailed and relevant CBDRM plan helps community to prepare for and respond to a disaster:

- Quickly, in a timely and effective manner
- By mobilizing all resources both human and material
- And ensuring good cooperation between the communities and other important stakeholders

The success of these activities will help to reduce the risk of disasters. A CBDRM plan can be best effective if it is based on the specific plans of each village and household, i.e., depending on the situations and realities of each locality, nature and characteristics of the hazards occur. There is no plan which can be applied to all disasters and different localities.

Also, the plan is not suitable as the economic, social situation changes. Especially, in the context of global climate change, the occurrence of natural hazards is becoming more unpredictable, longer lasting with more detrimental impacts. Therefore, a CBDRM plan should not only be locally adopted but:

- It must be frequently reviewed and updated.
- It's implementation must be under the regular monitor and supervision.
- It's effectiveness must be evaluated after the disaster.
- Lessons learnt should be shared with all related parties/CBOs and used for the new CBDRM plan.

#### 2. What ensures that the CBDRM plan is undertaken?

- ✓ Community participation in planning ensures the feasibility and sustainability of the plan, and then raising awareness and capacity of the community.
- ✓ Accurate defining of the hazards that occur frequently, the impacts and which areas are at risk (Drawn from outcomes of Part 2 – Assessment of systems for CBDRM)
- ✓ Identification of the available resources and existing capacity to most effectively cope with a disaster (Drawn from outcomes of Part 2 – Assessment of systems for CBDRM)
- ✓ Full use of and mobilization all the local resources.
- ✓ All community members should be informed about their roles and responsibilities to fulfill the plan.

### **3. Content of a CBDRM plan**

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

#### **3.1. Roles and responsibilities of CBOs and community members**

- The Communist Party and the commune's People's Committee
- The mass organizations (Women Assoc., Farmers' Assoc., Youth Assoc., Seed production Group, Revolving Fund), Red Cross Team, shock brigades.
- Extension team
- Leadership of each village/hamlet and living area
- Each household

The roles and responsibilities of each member listed above in the organization and implementation of the plan is presented, referring to Venn Diagram, to show interrelationships.

#### **3.2. Disaster preparedness and response activities**

##### *3.2.1. Raising public awareness plan*

- Raise awareness of all the people of the preparedness activities by informing them of the disaster preparedness plans
- Organize training courses for shock brigade teams(organize small rehearsal training)

##### *3.2.2. 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.

##### *3.2.3. Essential risk reduction activity*

Following questions should be answered during the determination of the essential risk reduction activities which should be based on the outcomes from assessment presented in Part 2.

- What are the basic needs after a disaster (e.g. water and sanitation, food, clothes, medical equipment and medicine, seed and seedling, fodders and foodstuff, vet medicine) and do we have enough resources to meet these needs?
- What tools and means do we have to assess the effects of disasters (affected areas and names of affected villages, the severity, affected/most affected households, specific damage in the locality etc.) and humanitarian need

assessment (according to the detailed criteria in the relevant Red Cross booklets)?

- What risk reduction measures identified by the community need to be undertaken between hazards?
- What disaster preparedness activities are prioritized by community to be implemented? (e.g. late sowing and plastic sheets coverage to protect seedling from frost, fodders storage for cattle, dredging the canal and water discharge system, consolidate shelters for people and animals, etc.)
- What are the resilient measures aftermath the disaster? (e.g. spare seed of short term growth varieties for sowing after the long flood/inundation, using alternate culture, beforehand financial arrangement with revolving fund for restocking the seed and breed etc.)

#### *3.2.4. Evacuation plan*

Loss of life will be minimized if we carry out evacuation tasks as required in a timely manner. So, in the evacuation plan, we should identify:

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

#### *3.2.5. Search and rescue plan*

Good implementation of search and rescue can reduce risks and the loss of life. In the local plan, we need:

- The search and rescue teams be in place which have been trained well and mastered the principles and practices for search and rescue and First Aid
- To provide basic equipment to the teams involved in search and rescue and evacuation
- To comfort the relatives of the people who are missing or who have died in the disaster

#### *3.2.6. Water and sanitation plan*

In an emergency situation, fresh water is often in short supply. This shortage may cause serious health problems, as people may have to drink dirty water. Obviously people can withstand the lack of food more than the lack of water; therefore the supply of fresh drinking water should be prioritized in emergency situations.

Key concerns in water/sanitation plan include the provision of fresh drinking water, areas for human defecation, areas for animal shelter and garbage disposal. Our 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, WPTs 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, provide temporary sanitation arrangements, etc.

### 3.2.7. *Shelter plan*

In some situations, it is necessary to provide temporary shelter for people and animals of households whose houses were destroyed or are no longer safe. We also need to repair houses, distribute plastic sheets or bamboo for them to make temporary shelters in safe places. The following should be considered:

- The person in charge of this aspect of response in the various organizations, e.g. the People's Committee, the Red Cross, etc.
- How to contact suppliers? How to get to people whose houses are located in safe areas? How to provide basic water and sanitation facilities?
- Who/which organizations are responsible for this?
- How many households need to be provided with temporary shelters? Where will these shelters be located?

### 3.2.8. *Food and foodstuff supply plan*

- Who within the local authorities/the Red Cross/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? What capacity do we have to distribute? 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)
- The distribution plan: Who/which organization prepares it? Who will implement/monitor it?
- How to mobilize the support from the local people? What is the pre-arrangement with saving/revolving fund?
- How do the local people prepare food reserves themselves? How do they stock fodder/foodstuff for livestock?

### 3.2.9. *First Aid and medical assistance plan*

Casualties are unavoidable in disasters. Minimizing the suffering of casualties depends on timely and effective First Aid. We have to consider the following questions:

- Which groups/how many people will take part in search and rescue activities? Are they ready? Have they received appropriate training? Do the people and local government recognize their role?
- Are the local medical care facilities ready? (e.g. 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? Are we prepared for such eventualities?

### *3.2.10. 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 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?

### *3.2.11. Logistics*

Logistics is also included in the “ 4 on-the spot policies”. It is important to ensure well functioning response activities. Therefore, the following relevant issues need to be taken into consideration: *Warehouses, 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 CFSC/CBOs for ensuring their availability
- Which are the other CBOs/NGOs that can assist in the supply of relief items needed?

### *3.2.12. Other activities*

Other activities can be added according to the real situation in the locality, relating to strengthening the resilient capacity.

### *3.2.13. Dissemination activities*

Launch the propaganda/awareness raising campaign for commune people about the foreseeable natural hazards in the local area which can be consequences of climate change.

Promote/recommend as options for commune people amongst farming activities mentioned in the groups below

### *3.2.14. Seed and food security activities*

Establishment/strengthening the seed production group, using good varieties for production on the land of the size of 1-2 hectares in safest location. This will secure the seed source for the commune for cropping resume aftermath the disaster.

Introduction of new good yield and quality varieties with resistance to drought/disease/pest suitable for the area for food security purpose.

### *3.2.15. Technological and economical capacity strenthening activities*

Planning for alternative cultures for recovering farming activities after a long lasting disaster, e.g. off-season vegetable growing, weed cultivation for cattle on the land which is suitable for only 1 rice season per year.

Adoption of slope technology for sustainale cassava cultivation

Establishment of long term linkages between the cooperatives and businesses for product marketing for maximizing the income for farmer on size-limited land.

### 3.3. Action plan

All activities planned for our CBDRM should be presented in a most easily visual tool for monitoring called “action plan”. The following table can be used for such purpose

**Commune**

**District**

**Province**

**ACTION PLAN FOR DISASTER PREPAREDNESS FROM.....TO .....**

No	Activity	Person in charge	Time	Condition	Note

#### **Exercise 6.**

Why must a disaster preparedness plan be made? Can we make a “perfect-for-ever” CBDRM?

Who should be involved in disaster preparedness planning? Please list down the names of responsible CBOs in your community, their strengths and weaknesses

Make an outline of a plan to prepare for a specific hazard (e.g. drought, frost, storm and landslide) that often occurs in your locality. What are the most important points in your plan that people should be aware about? Why?

What should the commune’s leadership and people consider as long term agriculture preparedness measure for the hazard in your plan?

## Annex 1. Glossary of terms<sup>1</sup>

**Capacity:** The combination of all the strengths, attributes and resources available within a community, society or organization that can be used to achieve agreed goals. Capacity may include infrastructure and physical means, institutions, societal coping abilities, as well as human knowledge, skills and collective attributes such as social relationships, leadership and management.

**Climate change:** A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use

**Coping capacity:** The ability of people, organizations and systems, using available skills and resources, to face and manage adverse conditions, emergencies or disasters. Coping capacities contribute to the reduction of disaster risks

**Disaster:** A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources. A disaster is a function of the risk process. It results from the combination of hazards, conditions of vulnerability and insufficient capacity or measures to reduce the potential negative consequences of risk.

**Disaster Risk Management:** The systematic process of using administrative directives, organizations, and operational skills and capacities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster.

**Early Warning system:** The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organizations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss.

**Hazard:** A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

**Natural hazards:** can be classified according to their geological (earthquake, tsunamis, volcanic activity), hydro-meteorological (floods, tropical storms, drought, whirlwind, hails, landslide) or biological (epidemic diseases and pest invasion) origin. Hazards can be induced by human processes (climate change, fire, mining of non-renewable resources, environmental degradation, and technological hazards.) Hazards can be single, sequential or combined in their origin and effects.

**Public Awareness:** The extent of common knowledge about disaster risks, the factors that lead to disasters and the actions that can be taken individually and collectively to reduce exposure and vulnerability to hazards.

**Resilience:** The capacity of a system, community or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is

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<sup>1</sup> Definitions from ISDR Terminology version 2007 ([www.unisdr.org/terminology](http://www.unisdr.org/terminology))

capable of organizing itself to increase its capacity for learning from past disasters for better future protection and to improve risk reduction measures.

**Risk:** The probability of harmful consequences, or expected losses (deaths, injuries, property, livelihoods, economic activity disrupted or environment damaged) resulting from interactions between natural or human-induced hazards and vulnerable conditions.

**Vulnerability:** The conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.

The most prevalent natural hazards in the Northern mountainous provinces are:

**Flood:** Usually occur during the storming/rainy season and cause casualties, epidemics, property damage, assets (Livestock, farm tools, seeds and crop failure and subsequent food, shortage due to inundation), environmental pollution, scarcity of fresh water supplies. The causes usually are long lasting heavy rains, destruction of rain forests or construction works that obstruct the natural flow of water etc. By types, there are **flash floods** (occur within a short time) and **river floods** (slow build-up, usually seasonally in river systems). Damage caused by floods can be increased due to: location of communities, lack of awareness of flood hazard, weak houses and unprotected food stocks, standing crops and livestock.

**Drought:** Occurs due to shortage of rain for a long time which is recently caused by changes in global climate (climate change), lack of investment in irrigation system and over exploitation of ground water resources. The drought causes yield reduction and increase in the price of agricultural products, deterioration of nutritional status, and in case of long lasting , it might cause outbreaks of epidemics, reduction in drinking water sources, loss of livestock/crop production and eco-system imbalance.

**Landslides:** Resulting from natural seismic vibrations, when the soil is saturated and slides down due to heavy rains (especially after deforestation or fire) or floods, or due to an additional weight on a slope (like building works), due to people's actions (cultivating on terrace field which cause water accumulation or changing the flow of water resource). Landslides are more common than any other hydro-meteorological event. Landslides may cause death or injury of people and animals, damages to property/assets and infrastructure, destroy farming land which cannot be reclaimable. So, the detriments derived are due to the lack of understanding of landslide hazard, unplanned exploitation of resources (slashing the trees and deforestation in the upland areas for cassava plantation), settlements built on steep slopes or at the base of steep slopes (terrace field), at the mouth of streams in mountain valleys.

**Storm/typhoon:** When storms strike, strong winds, especially heavy rains cause damage with flooding and landslides.

**Whirlwinds:** These funnel shaped columns of swiftly circulating air, occurring unexpectedly can cause injury and death to people and livestock as well as destroying houses, crops and trees.

**Damaging coldness and hails:** while almost freezing and long lasting of temperature in the winter period causes death to the herds (buffalows, cattle, goats etc.) which stay without fodder, the hailstorms can destroy crops and damage trees, the large hail can cause injuries or even death of people and livestock if they do not take refuge.

The impacts of those hazards, induced by the human processes (climate change, fire, mining of non-renewable resources, environmental degradation, and technological hazards), are getting more severe, at higher frequency and lasting longer.