Ministry of Agriculture
and Rural Development

United Nations
Development Programme

COMMUNITY-BASED DISASTER RISK ASSESSMENT GUIDELINES

(Commune level – 2nd edition)

Developed and compiled by: Disaster Management Center (DMC)

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FOREWORD

Natural disasters are becoming more extreme due to the impacts of climate change and because of this, the Vietnamese Party, State and people have identified natural disaster prevention and control as one of the priority areas in the socio-economic development process. Aside from investing financial and human resources in building natural disaster prevention works and systems over several years, the State has also been concentrating on strengthening institutions, building capacity, and raising community awareness in natural disaster prevention and response. The promulgation of the National Strategy for Disaster Prevention, Response and Mitigation to 2020, the Law on Natural Disaster Prevention and Control, and related programmes and projects have demonstrated clearly the efforts of the Vietnamese State and people in natural disaster prevention and response work.

The programme "Community Awareness Raising and Community-Based Disaster Risk Management" was approved by the Prime Minister in Decision No.1002/QĐ-TTg on 13 July 2009 with the specific objective to ensure that by 2020 all relevant officials will have participated in training and their capacities and knowledge in natural disaster prevention and response have increased. In addition, 70 per cent of the population in disaster-prone areas will be provided with knowledge and information on natural disaster prevention and response. Through this process, people will actively participate in risk assessments, identifying resources and developing natural disaster prevention and control plans focusing on the "four-on-the-spot motto".

The Ministry of Agriculture and Rural Development's (MARD) Water Resources Directorate (WRD), through the Disaster Management Center (DMC), shall assume the prime responsibility for, and coordinate with, related agencies, non-governmental organizations and donors in researching, summarizing and developing guidelines on "Community-based Disaster Risk Assessment". This will provide local commune and village authorities with specific instructions on how to identify natural disaster risks, vulnerabilities and resources 'on the spot', and how to develop suitable solutions for natural disaster prevention and response.

Based on the extensive experience of the Standing Offices for Flood and Storm Control at all levels, as well as organizations, managers and national and international experts who have implemented activities related to natural disaster risk assessments, this guideline provides detailed instructions on methodology, tools, examples, and easy and detailed templates which can help officials and local people implement community-based natural disaster risk assessments easily. This will help the community to actively participate in developing natural disaster prevention and control plans and raise the community response capacity during disasters.

The guideline includes the following four parts:

Part 1: Introduction to Community-based Disaster Risk Assessment (CBDRA). Explanation of Key Terminologies/Concepts and Methodologies Used.

Part 2: Summarizing Steps for Implementing a CBDRA.

Part 3: Guidance on How to Use CBDRA Tools.

Part 4: CBDRA Report Template. Assessment groups will put results from part 3 into this template. This part also provides examples of assessment tools, lists potential solutions for natural disaster prevention and response, and includes some tips when conducting assessments with vulnerable groups.

During the implementation process, DMC received support and direction from the Vice Minister of MARD and General Director of WRD Ph.D. Hoang Van Thang and related agencies under WRD. The guideline was developed with the support of UNDP and Australian Aid though the project *Strengthening Institutional Capacity for Disaster Risk Management in Viet Nam, Including Climate Change Related Disasters Phase II (SCDM II).* As the focal agency DMC organized several workshops with the participation of representatives from relevant agencies, organizations, experts and DMC staff in order to finalize this guideline.

The DMC editorial board would like to express their sincere thanks to the following individuals and organizations who contributed technical support: SCDM II project staff including Ph.D. Dang Quang Tinh – Project Technical Advisor, Ms. Nguyen Anh Son – Project Manager, Mr. Nguyen Huynh Quang – Project Coordinator, Mr. La Quang Trung, Mr. Vu Tuan Anh – Project Staff; UNDP staff including Ms. Bui Viet Hien – Programme Officer, Ms. Stacey Sawchuk – Disaster Risk Reduction & Climate Change Adaptation Facilitator; consultants including Ms. Nguyen Phuc Hoa – Head of Consultant Group, Ms. Do Van Nguyet – Community Awareness Raising Expert and staff of Live & Learn and the community; DMC staff including Former Director of DMC & SCDM II – Ph.D. Nguyen Huu Phuc and Deputy Director in charge of DMC & Director of SCDM II – Mr. Dang Quang Minh, and other staff; co-implementing partners including the Vietnam Women's Union, the Vietnam Red Cross Society (VNRC) and Oxfam Great Britain; officials of VNRC and the Red Cross Society of Quang Tri, Nghe An and Can Tho; and provinces who participated directly in developing this guideline.

This guideline follows the community-based disaster risk management set of documents that have been approved by WRD of MARD as follows:

1. Implementation guidelines on "Community Awareness Raising And Community-Based Disaster Risk Management"
2. Training material on disaster risk reduction and climate change adaptation
3. Community-based disaster risk management (CBDRM) monitoring and evaluation guidelines
4. CBDRM materials (commune level)
5. CBDRA guidelines (commune level)

This guideline is to be used for implementing the Vietnamese Government's CBDRM programme. Any other purpose must be first approved by DMC under WRD of MARD.

In the first edition in April 2014, there were 1,200 copies printed for a series of pilot trainings at provincial and commune levels in 51 communes across 20 provinces. After completing the pilot training the Editorial Board received a lot of feedback from trainees, trainers and staff of different NGOs that needed to be addressed, including some design and printing errors and some key points which needed clarification. In this second edition, the Editorial Board tried to address

design and printing errors, as well as revise some of the key content to provide detailed explanations for trainers and trainees, especially commune officials. Despite our best efforts, there might still be some errors and DMC welcomes feedback and comments in order to further improve this guideline.

Please kindly send any comments to: Editorial Board – Disaster Management Center, 3rd floor, No. 54, lane 102, Truong Chinh Street, Dong Da district, Ha Noi city. Tel: 04. 37 33 56 86. Fax: 04. 37 33 66 47.

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ABBREVIATIONS

CBDRA	Community-based Disaster Risk Assessment
CBDRM	Community-based Disaster Risk Management
CBG	Community-based Group
CPC	Commune People's Committee
DMC	Disaster Management Center
MARD	Ministry of Agriculture and Rural Development
NDPCP	Natural Disaster Prevention and Control Plan
TAG	CBDRM Technical Assistance Group
WRD	Water Resources Directorate

INTRODUCTION

Objectives

The overall objectives of the Community-based Disaster Risk Assessment (CBDRA) Guidelines are:

- To guide commune and village level officials and local communities to organize and implement the CBDRA.
- To support the CBDRM Technical Assistance Group (TAG), commune-level CBDRM implementing groups (group members to be selected by the community) and local authorities to develop natural disaster risk maps, propose potential solutions, and develop and implement natural disaster prevention and control plans in their local area.

Target Audience

This guideline targets the following audiences:

- Government authorities at all levels, especially at commune and village level;
- CBDRM TAG and commune-level CBDRM implementing groups (group members to be selected by the community), also called CBDRM community-based groups (CBG);
- Commune social and political organizations;
- Local communities;
- Other related individuals and organizations.

Content And Structure

The guideline consists of the following parts:

- **Part 1: Introduction to CBDRA.** Explanation of key terminologies/concepts used, introduction to and requirements of CBDRA.
- **Part 2: CBDRA Process.** Introduction to the steps for implementing a CBDRA.
- **Part 3: How to Use CBDRA Tools.** Description of the common tools used to carry out a CBDRA and example templates.
- **Part 4: Annexes and Templates.** Practical examples, templates, some further notes when implementing CBDRA, and a reference list of potential solutions for natural disaster prevention and response.

Part I.
Introduction to CBDRA

Explanation of key terminologies/ concepts used

Introduction to CBDRA

Requirements of CBDRA

Part II.
The CBDRA Process

Step 1. Preparation

Step 2. Assessment

Step 3. Analysis and synthesis

Step 4. Verification by local community

Step 5. Development of CBDRA report

Part III.
How to Use CBDRA Tools

Information Collection Tools:

- Secondary Data Collection
- Historical Timeline
- Seasonal Calendar
- Risk Map

Information Analysis Tools:

- Strengths and weaknesses in the disaster prevention and response work
- Synthesis of natural disaster risks
- Ranking
- Cause analysis
- Synthesis of solutions for natural disaster prevention and response

Part IV. Annexes and Templates

PART I: INTRODUCTION TO COMMUNITY-BASED DISASTER RISK ASSESSMENT

Photo 1: Introduction of CBDRA to community in Chieng Xom commune, Son La city, Son La province (Source: Ms. Bui Thi Mai)

1. Explanation of key terminologies/concepts used

Natural disasters[1] *mean abnormal natural phenomena, which may cause damage to human life, property, the environment, living conditions and socio-economic activities. Natural disasters include typhoons, tropical low pressure, whirlwind, lightning, heavy rain, flooding, flash floods, inundation, landslides and land subsidence due to floods or water currents, water rise, seawater intrusion, extreme hot weather, drought, damaging cold, hail, hoarfrost, earthquakes, tsunamis and other types of natural disasters.*

Natural disaster risk[2] *means damage which natural disasters may cause to human life, property, the environment, living conditions and socio-economic activities.*

For example, natural disaster risks caused by flooding could include unroofed or collapsed houses, deaths or injuries, damage to fishing boats, fallen trees and crop damage.

Level of natural disaster risks[3]**:** *Natural disaster risks are classified into levels, which serve as a basis for the warning, direction and command of, response to and remediation of the consequences of natural disasters.*

The criteria for classification of natural disaster risk levels include the intensity of the natural disaster, the scope of potential effect and possible damage to human lives, property, infrastructure and the environment.

The Prime Minister shall provide detailed information on natural disaster risk levels.

Climate Change: *A change of climate, which is attributed directly or indirectly to human activity, that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.*

For example, a large amount of greenhouse gases are emitted from industry, agriculture and transportation into the atmosphere, as well as fossil fuels (coal fired, diesel, gas), smoke and dust from thermal power plants, brick fireplaces, motor vehicles, straw burning, deforestation and focused waste dumps.

Vulnerability[4]**:** *The characteristics and circumstances of a community, system or asset that makes it susceptible to the damaging effects of a hazard.*

For example, building houses in areas susceptible to a landslide or flash flooding poses a risk, areas with a lot of temporary structures are at high risk of damage and fishermen working without safety equipment are at high risk of death.

[1] Law on Natural Disaster Prevention and Control No. 33/2013/QH13
[2] Law on Natural Disaster Prevention and Control No. 33/2013/QH13
[3] Law on Natural Disaster Prevention and Control No. 33/2013/QH13
4 United Nations Office for Disaster Risk Reduction (UNISDR)

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.*

For example: Response capacity (timely evacuation, mock drills, organization of emergency response groups, search and rescue teams); infrastructure capacity (reinforced buildings, irrigation systems); and community capacity (awareness, experience and skills).

Vulnerable Group[5] *means a group of people who, due to their characteristics and circumstances, are likely to suffer more adverse impacts of natural disasters than other groups in the community. Vulnerable groups include children, elderly people, pregnant women, women nursing under-12-month children, people with disabilities, people suffering from dangerous diseases and poor people.*

The relationship between disaster risk, vulnerability and capacity in disaster risk prevention and response

When a disaster occurs, the scale of its negative impact depends on different factors such as characteristics of the disaster and the vulnerability and capacity for disaster prevention and response.

- The risk (potential negative impacts) ***increases*** if the disaster hits a community with high vulnerability and low capacity.
- The risk (potential negative impacts) ***decreases*** if that community has better knowledge of, and experience in, disaster prevention and control.

The relationship between disaster risks, vulnerability and capacity is demonstrated below:

Level of natural disaster & vulnerability

Disaster risk ↔ ----------

Capacity for disaster risk prevention and response

Therefore, to reduce disaster risks a community could implement a number of activities to reduce their vulnerability and increase their disaster risk prevention and response capacity.

For example, in the case of a typhoon, the relationship between disaster risks, vulnerability and capacity is demonstrated below:

5 Law on Natural Disaster Prevention and Control No. 33/2013/QH13

Typhoon level & vulnerability

Risk caused by typhoon ↔ ----------

Capacity in typhoon risk prevention and response

2. Introduction to community-based disaster risk assessment

2.1 Concept

CBDRA is a process of information collection, synthesis and analysis involving the participation of the local community to identify the types of natural disasters affecting the community and the community's current capacities and vulnerabilities in order to identify levels of risk.

The CBDRA is implemented by the Technical Assistance Group (TAG), with assistance from the commune CBDRM implementing group, called the community-based group (CBG) (group members to be selected by the community), together with the local community.

2.2 Objectives

CBDRA aims to support local authorities, the community, TAG and CBG to:

- Identify types of natural disasters that have already happened and may occur in the community in the future;
- Identify community vulnerabilities that make them more susceptible to the damaging effects of natural disasters;
- Identify community capacities for natural disaster prevention and response;
- Identify disaster risks and priorities to develop appropriate solutions in which vulnerable people are taken into account.

The CBDRA results will:

- Provide necessary information for developing a Natural Disaster Prevention and Control Plan (NDPCP) and for integrating into local

Photo 2. Disaster management experience in flooded areas (Photo Credit: Ho Van

development plans, for example the national New Rural Development Target Programme and socio-economic development plans.

- Increase awareness and capacity of local officers and communities in natural disaster prevention and response.

3. Requirements of CBDRA

3.1 Participants

- Representatives from commune authorities;
- Representatives from commune socio-political organizations;
- CBDRM TAG and CBDRM CBG *(Refer to Annex 1: Technical Assistance Group and Community-Based Group Roles and Responsibilities)*;
- Community: Representatives from the community must include men and women of different ages, economic status, livelihoods, religions and geographical locations from across the commune. There should be participation from representatives of the different population groups and vulnerable groups (such as the elderly, children, women, people with disabilities, poor and ethnic minorities).

3.2 When to conduct a CBDRA

- Annually prior to disaster season;
- Prior to the development of the commune NDPCP or socio-economic development plan.

3.3 Principles of a CBDRA

- Assessment must ensure the mobilization and active participation of local authorities and local community members;
- Every idea/opinion is acknowledged;
- Assessment must take into account impacts from climate change;
- Information collection must be conducted from village to commune level;
- Assessment must ensure gender equality and the participation of vulnerable groups;
- All information must be verified and cross-checked with the local community;
- The TAG shall assume the prime responsibility for assisting, in coordination with the CBG, the local community to contribute information and ideas, to discuss, assess, analyze and identify local priorities and solutions, and at the same time raise community awareness on natural disaster prevention and response.

Photo 3: People with disabilities participating in a CBDRA (Source: Malteser)

3.4 CBDRA Content

A CBDRA includes the following: (i) assessment of types of natural disasters and ranking levels of risks, (ii) assessment of vulnerabilities, (iii) assessment of capacities in natural disaster prevention and response, and (iv) assessment of community awareness in natural disaster risk.

a. Assessment of Types of Natural Disasters and Ranking Levels of Risk

An assessment of types of natural disasters and ranking levels of risk is a process of information collection, synthesis and analysis on the type of natural disasters, considering their impacts on the local community over the last 5-10 years using a disaster historical timeline.

The information which must be collected, synthesized and analyzed includes:

- Identify the types of natural disasters and their impact on the local area;
- Analyze the characteristics of each type of natural disaster according to: when they occur, their warning signs, frequency, degree of impact, abnormal phenomena, causes, increasing/decreasing trends and levels of risk, considering climate change impacts;
- Predict future trends of natural disasters.

b. Assessment of Vulnerabilities

Vulnerability assessment is a process of information collection, synthesis and analysis on each type of natural disaster on local residents, infrastructure, social, cultural and economic activities that are vulnerable to damage.

- Analyze basic (direct, indirect, objective and subjective) and root causes of vulnerability;
- Identify important infrastructure (dyke systems, reservoirs, roads, stations, bays, etc.);
- Identify vulnerable areas (temporary housing, unenforced public works, etc.);
- Identify vulnerable activities (fishing without safety equipment, wood collection from river beds during flooding, staying in fishermen huts during a typhoon, etc.).

c. Assessment of Capacities in Natural Disaster Prevention and Response

Capacity assessment for natural disaster prevention and response is a process of information collection, synthesis and analysis of existing resources (human, financial, material), and structural and non-structural measures being used in the local area.

- Assess existing skills and previous experience of individuals, families and the local community that can be used before, during and after disasters (following the four on-the-spot motto);
- Identify where the resources are located, who is responsible for managing them, how to use and mobilize them.

d. Assessment of Community Awareness on Natural Disaster Risk

Assessment of community awareness in natural disaster risk is a process of information collection, synthesis and analysis of the existing knowledge of the community on natural disaster prevention and response activities and previous experience responding to natural disasters.

NB: *A natural disaster risk assessment must collect, synthesize and analyze information according to three sectors: i) community safety; ii) health, sanitation, environment; and iii) livelihoods.*

Vulnerability and capacity for natural disaster prevention and response *must be assessed considering three aspects: i) material; ii) organizational/societal; and iii) awareness, experience, attitude and motivation (refer to Annex 3).*

3.5 CBDRA Tools

There are nine tools to use in the CBDRA process, including: **Tool 1**: Secondary Data Collection; **Tool 2**: Historical Timeline; **Tool 3**: Seasonal Calendar; **Tool 4**: Risk Map; **Tool 5**: Strengths and Weaknesses; **Tool 6**: Synthesis of Natural Disaster Risks; **Tool 7**:

Ranking; **Tool 8**: Cause Analysis; and **Tool 9**: Synthesis of Solutions for Natural Disaster Prevention and Response.

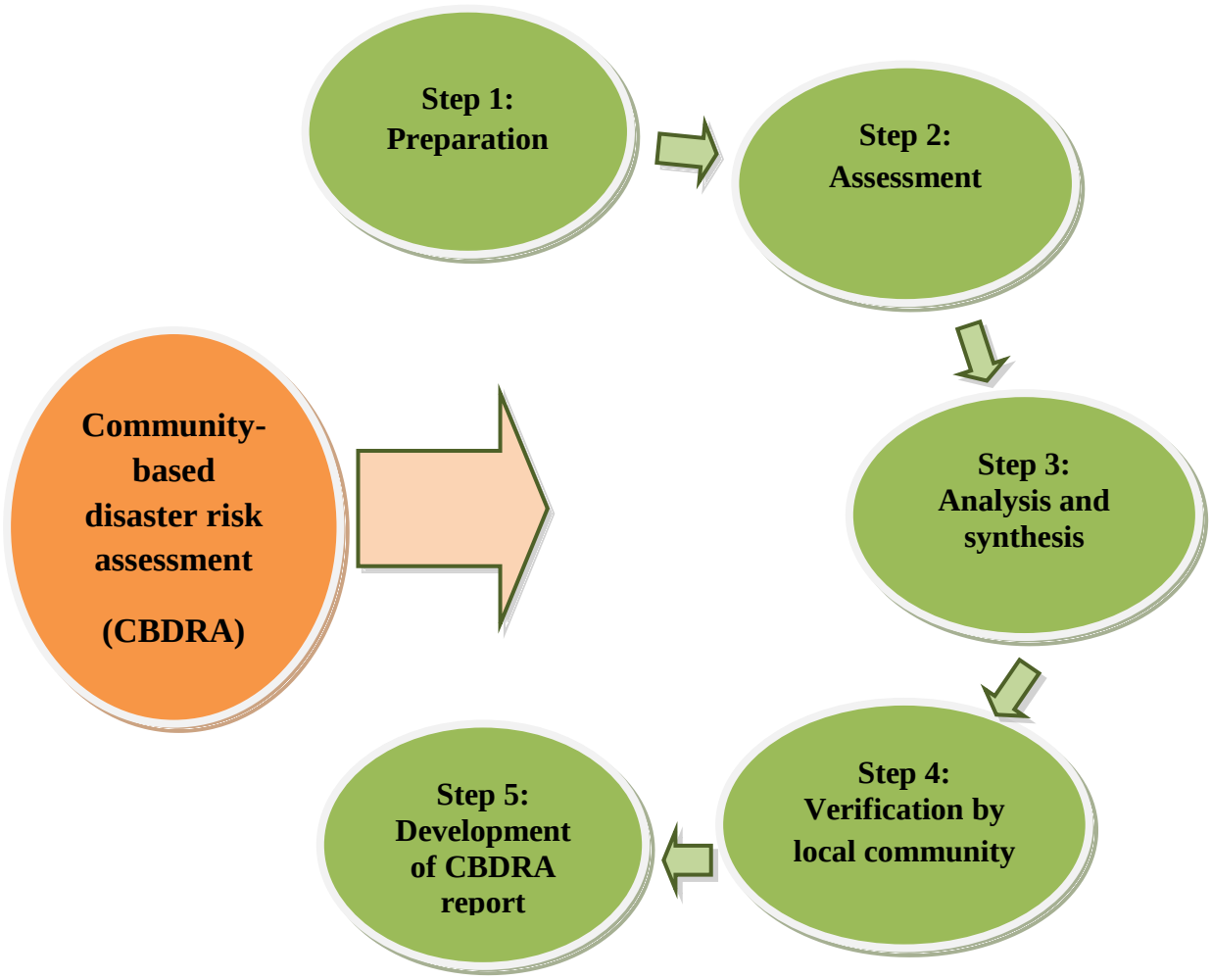
CBDRA Tools

No	Tools	Purpose
1	Secondary Data Collection	Collect, synthesize and analyze information from existing reports and data on disasters that have happened previously in the commune and any other relevant information.
2	Historical Timeline	Collect information from the local community about disasters over the last 5-10 years and historical disasters, noting losses, trends and local experiences in natural disaster prevention and response.
3	Seasonal Calendar	Collect information from the local community about the timing of socio-economic and livelihood activities, disaster seasons and disaster trends in the context of climate change. Based on this information, identify the impact of natural disasters to the activities and note the experiences of the local community on disaster prevention and response activities.
4	Risk Map	Identify high risk and safe areas in the local area for each type of disaster.
5	Strengths and Weaknesses	Collect information from the local community on their strengths and weaknesses in natural disaster prevention and response activities.
6	Synthesis of Natural Disaster Risk	Synthesize natural disaster risks into one table using the results of the information collection tools to synthesize and analyze disasters, trends, vulnerabilities, capacities and risks. *(Detailed information in Table 6.1)*
7	Ranking	Identify the risks, problems, priority actions and solutions of the local community.
8	Cause Analysis	Identify the root causes of risks, problems and priority actions that were identified using the previous tools.

9	Synthesis of Solutions for Natural Disaster Prevention and Response	Synthesize solutions of natural disaster prevention and control into one table through identification of solutions that are suitable for the local area. *(Detailed information in Table 9.1)*

Use all of the above tools for each type of natural disaster to ensure that sufficient information is collected to conduct the information analysis.

PART II: STEPS OF COMMUNITY-BASED DISASTER RISK ASSESSMENT



1. Step 1: Preparation

1.1 Expected results

- The TAG and CBG are trained in CBDRA and responsibilities are clearly assigned to both TAG and CBG;
- CBDRA delivery plan is developed, approved by the Commune People's Committee (CPC) and announced to the local community.

***1.2 Time*:** three weeks before assessment

1.3 Specific activities

- Conduct training for TAG and CBG:
  - The CPC organizes training on the objectives and content of the CBDRA, including tools, skills to collect, analyze and synthesize information, and facilitation skills to support the community to identify and analyze risks, choose solutions and develop the NDPCP.
- Prepare and agree on CBDRA preparation plan:
  - Select participants for the CBDRA in villages that are affected by a disaster (*refer to Part I, 3.1: Participants*): 20-30 people who are representative of local organizations and the community, including both women and men (at least 30 per cent should be women), and representatives of vulnerable groups (elderly, children, women and poor people).
  - Identify the time and location for implementing the assessment: a suitable time for the local community, a convenient place and a good space for discussions.
  - Assign specific responsibilities to members of the TAG and CBG. Each CBDRA in the village requires at least two people from the TAG, with assistance from the CBG. Each CBDRA tool requires two people: a facilitator and a secretary/note-taker *(refer to Annex 4)*.
  - Prepare content for the assessment and tools in detail, paying special attention to the needs of vulnerable groups *(refer to Annex 5).*
- The CPC approves the CBDRA preparation plan.
- The CPC, TAG and CBG inform the local community about the CBDRA preparation plan and process.
- Prepare tools and logistics for the CBDRA:

  Prepare logistics (Papers A0 and A4, markers, pens, chalk) and some sample assessment templates (Refer to Part III: Tables 2.1 through 9.1)

2. Step 2 – Assessment

2.1 Expected results

- Local community actively participated in the natural disaster risk assessment;
- Information on natural disasters, capacities, vulnerabilities and risks of the local community are collected using CBDRA tools.

2.2 Duration: at least two days in villages

2.3 Specific activities:

- Refer to *Basic Information Template* (Annex 6): Using the basic information template collect information from existing documents related to disaster risk prevention and response.
- Organize meetings with the local community to get their participation in the CBDRA to collect information on natural disasters, vulnerabilities, capacities and community awareness:
  - *Introduce the objectives and content of the CBDRA (plenary meeting, at least 60 minutes);*
  - *Conduct the Historical Timeline Tool (plenary meeting, at least 90 minutes);*
  - *Divide into groups (representative and vulnerable groups) to conduct information gathering tools: Seasonal Calendar and Risk Map (at least 60 minutes/group). Each group presents their results and the other groups give comments (at least 30 minutes);*
  - *Conduct the Strengths and Weaknesses Tool on natural disaster prevention and response (plenary meeting, at least 90 minutes).*

Conduct household interviews (at least 10 households per village) to supplement information from the meeting.

3. Step 3 – Synthesis and analysis of assessment information

3.1 Expected results

- The information is collected, collated, analyzed and compared in order to identify solutions and develop the NDPCP;
- Local community participates in ranking risks, identifying causes and proposing solutions.

3.2 Duration: at least one day in villages

3.3 Specific activities:

- TAG and CBG synthesize the information collected and identify potential solutions:

- *Synthesize results of discussions on natural disasters, disaster trends, vulnerabilities, capacities and disaster risks. Complete the Synthesis of Natural Disaster Risks Table (Table 6.1), (30 minutes for each tool and 60 minutes for synthesis).*
- *Develop first draft of potential solutions; refer to Natural Disaster Prevention and Response Measures (Annex 7).*

- Discuss and rank community risks:
  - *Introduce the Synthesis Of Natural Disaster Risk Table.*
  - *Conduct the Ranking Tool. Divide into groups (representative and vulnerable groups) and guide participants on how to rank their disaster risks by priority (at least 30 minutes/group). Each group presents their results and the other groups give comments (plenary meeting, at least 15 minutes).*
  - *Identify root causes of risks and propose potential solutions for the commune NDPCP.*
  - *Divide into groups and guide participants on how to use the Cause Analysis Tool (at least 45 minutes/group). Each group presents their results and the other groups give comments (plenary meeting, at least 15 minutes).*
  - *Guide community on how to propose, develop and rank potential solutions for natural disaster prevention and response (plenary meeting, 90 minutes). Solutions will be proposed based on shifting from vulnerabilities/causes to capacities/solutions. Based on this, develop the Synthesis of Solutions for Natural Disaster Prevention and Response Table.*

4. Step 4 – Consultation and verification with wider community

4.1 Expected results

- CBDRA report results are discussed openly with the wider community, including people who did not participate in the CBDRA process.

4.2 Duration: at least half a day in villages

4.3 Specific activities:

- Organize a community meeting to present the CBDRA results and explain the next steps to draft the NDPCP.
  - *Invite 20-30 representatives of households who have not previously participated in the CBDRA (one person per household, preferably women and vulnerable people) to participate in the meeting. Note: this activity is to verify information in order to ensure the summary of results is an accurate reflection of the wider community needs, so these community members must not have participated in the*

assessment. This meeting must ensure the participation of local residents with special attention to vulnerable groups (refer to Annex 5).

- *Present results of the CBDRA, the Synthesis of Natural Disaster Risk Table and Solutions for Natural Disaster Prevention and Response.*

- Invite participants to give more comments on the results of the assessment and solutions. Update the Commune Synthesis of Solutions for Natural Disaster Prevention and Control *(refer to Tool 9).*

5. Step 5 - Development of CBDRA report

5.1. Expected results:

- Commune CBDRA report is completed through the participation of local authorities, socio-political organizations, stakeholders and village representatives.

5.2. Duration: 1-3 weeks after CBDRA

5.3 . Specific activities:

- TAG develops commune CBDRA report based on assessment information:
  - *Based on the village assessment results, the commune TAG synthesizes information collected from villages to develop the commune CBDRA report (refer to Annex 8).*
  - *Prepare to present the CBDRA report and results to local authorities, socio-political organizations, stakeholders and village representatives.*
- Present the draft report and collect comments from commune leaders, socio-political organizations, stakeholders and village representatives.
- Finalize the CBDRA report (*Annex 8*).
- Approval of report: the CPC signs, seals and shares the CBDRA report with relevant departments, authorities and other stakeholders, and uses this report as the foundation for the commune NDPCP development and mainstreaming into commune socio-economic development plans.

Photo 4: CBDRA results discussion in Ban Ho, Sa Pa, Lao Cai province (Source: Live & Learn)

CBDRA Implementation Process

Step	Location	Time	Participation/ Responsible for implementation	Outputs
1. Preparation				
Training Technical Assistance Group	CPC Office	2-3 weeks before assessment	TAG, CBG & CPC	TAG and CBG have skills to implement CBDRA tools
Prepare and Consolidate CBDRA Implementation Plan	CPC Office	1-2 weeks before assessment	TAG, CBG & CPC	Detailed assessment plan is completed
Inform Community on CBDRA Process and Implementation	Villages	1-2 weeks before assessment	Community/CPC and village leaders	CBDRA implementation plan and CBDRA content is shared with the community (especially

Plan				people who are invited to participate)
Prepare Tools and Logistics	CPC Office	1-2 weeks before assessment	TAG & CBG	Tools, materials and logistics are fully prepared
2. Assessment				
Collect Secondary Data	CPC Office, Villages	Before and during assessment	TAG	Fully complete Tool 1
Organize Community Meeting To Collect Information	Villages	1.5 days	Community, TAG & CBG	Collect information to complete Tools 2, 3, 4, & 5
Conduct Household Survey	Villages	0.5 days	Households & TAG	Synthesize information into vulnerable group interview table
3. Synthesis of assessment results				
Synthesize Information and Research Potential Solutions	Villages	0.5 days	TAG & CBG	Fully complete Synthesis of Tool 6, 8 & 9
Identify Disaster Risks and Rank in Prioritized Order. Identify Root Causes and Propose Potential Solutions. Rank Potential Solutions	Villages	0.5 day	TAG, CBG & community	Complete Synthesis Table of Tool 6 and Tool 7 Complete Synthesis Table of Causes (Tool 8) Complete Synthesis Table of Solutions and Rank (Tool 9 & 7)
4. Consultation and Verification with Community				
Verification by Community Representatives from	Villages/CPC Office	0.5 day	Representatives of the community who have not participated in	Synthesis tables on ranking, causes and solutions Table of Solutions and

Villages/Commune			the information collection process/TAG & CBG	Action Plan
5. Development of CBDRA Report				
Synthesize Information, Prepare Report	CPC Office	1 week after completing assessment at village level	TAG	Synthesize information from synthesis tables of tools and use information in CBDRA report
Present Results of CBDRA Assessment and Collect Comments from Commune Leaders and Relevant Organizations	CPC Office	2 weeks after completing assessment at village level	Representatives from commune authorities, socio-political organizations, stakeholders and representatives of villages and TAG	Report is completed and shared with representatives from commune to collect additional feedback
Complete CBDRA Report	CPC Office	3 weeks after completing assessment at village level	Commune leaders	CBDRA report is completed and approved
Approve CBDRA Report	CPC Office	2 weeks before developing annual NDPCP	Commune leaders	Report is approved and shared with Steering Committee for natural disaster prevention and control at district and province level

PART III: HOW TO USE COMMUNITY-BASED DISASTER RISK ASSESSMENT TOOLS

Below is a list of the tools used for collecting, synthesizing and analyzing community-level information. Note: When using the tools follow the order provided in order to collect, synthesize and analyze information systematically.

No.	Tool	Synthesis of information collected by assessment tools				
		Disaster	**Disaster Trends**	**Vulnerabilities**	**Capacities**	**Disaster Risks**
1	Secondary Data Collection	x	x	x	x	x
2	Historical Timeline	x	x	x	x	x
3	Seasonal Calendar	x	x	x	x	x
4	Risk Map	x		x	x	x
5	Strengths and Weaknesses			x	x	
6	Synthesis of Natural Disaster Risks	x	x	x	x	x
7	Ranking	x		x		x
8	Cause Analysis			x		
9	Synthesis of Solutions	x	x	x	x	x

Tool 1 - Secondary Data Collection

Objectives:

Collect, synthesize and analyze information available from official reports and existing data on disasters that have happened in the community, and any other related information. This information will provide local context and will help establish the relationship between results, collected from the other tools.

Time required:

Before and during the CBDRA

Materials required:

- Paper or notebook, pens. Prepare Basic Information Template (Annex 6)

Implementation steps:

Secondary data may be collected as follows:

1. Develop a plan including key content/information which must be collected. This should not be limited to resources/documents within the community. It needs to consider outside resources related to the content of the assessment. This may be risk maps or information on climate change or changes in land use that may have adverse impacts on river flows, related development plans and infrastructure.
2. Identify diverse information sources from the commune and district People's Committee and Standing Office for Natural Disaster Prevention and Control, community library, newspapers and other resources, offices of mass organizations, NGOs and technical agencies, as well as relevant knowledgeable individuals.
3. Review existing community data and identify what information needs to be supplemented. Analyze this data and identify what additional information needs to be collected from the community during the CBDRA process. The secondary data needs to be verified in the field.
4. Share existing information in community meetings at village level and the meeting with the CPC in order to verify the authenticity and accuracy of the information.

NB: Make sure to:

- Identify the number of vulnerable people in the community, including their age and gender.
- Collect information on vulnerable people's activities, current support facilities and needs.

NB: Pay special attention to climate change:

- Combine secondary data with information collected from the local community during the process of CBDRA in order to show a clear picture of the relationship between global climate change and its impact on the local area.
- Identify important information regarding the weather and impact of natural disasters and climate change on the district and province of the CBDRA commune in order to collect and analyze related documents such as newspapers, research reports, etc. This information might emphasize impact trends on agriculture, water resources, other livelihoods, etc.
- Scientific documents can forecast trends and identify possible impacts of climate change in the region. Maps, geographical diagrams and socio-economic diagrams. **PLS REVIEW THIS BULLET POINT!!**

NB: Pay special attention to urban, mountainous, coastal and island contexts ALSO REVIEW THIS POINT, MEANING NOT CLEAR

- Secondary data may provide a good overview about the formation, migration, density and population distribution. This information can be collected from local authorities at commune and district levels.

Tool 2 - Historical Timeline

Photo 5: Historical Timeline Tool (Source: Doan Minh Cuong)

Objectives:

To collect information on previous disasters that have occurred over the past 5-10 years, losses caused by disasters, their trends and the experience of the local community in disaster prevention and response.

Tentative time:

About 90 minutes to collect information from participants and 30 minutes to synthesize and analyze information by TAG and CBG.

Material required:

Big board or large sheets of paper, pens, chalk and ruler. Prepare Table 2.1.
(Refer to Historical Timeline Tool and Historical Timeline Synthesis Table in Annex 9.1).

Table 2.1: Historical Timeline

Year (month)	**Type of Natural Disaster**	**Characteristics and Trends of Natural Disasters**	**Areas Damaged**	**Kind and Extent of Damage? *(Community safety, livelihoods, sanitation environment, impacts on people, etc.)***	**Causes of Damage *(Material, organization/ society, awareness, experience, attitude and motivation, etc.)***	**What Did the Community do to Prevent and Respond? *(Structural transformation of cultivation, renovation of natural disaster prevention and control works, community awareness raising, etc.)***
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**

Implementation steps:

1. **Preparation:**

Find a suitable venue where you can conduct group work. Draw the Historical Timeline (Table 2.1) on A0 paper.

2. **Introduction:**

Explain to participants the objective of the historical timeline.

3. **Participants identify local disasters that have occurred in the past and related information:**

    - What disasters have occurred? In which year (month)? Fill in column (1) and (2).
    - For each type of natural disaster identified, collect detailed information as follows:

      Characteristic of each type of natural disaster (rainfall, temperature, wind speed, water level, time, etc.)? Are there changes to the trends of the natural disaster? Fill in column (3).

      What did the disaster impact? Fill in column (4).

What damages/losses were caused by the disaster (considering community safety, livelihoods, sanitation and the environment)? What was the extent of human loss (including men, women and vulnerable groups)? Which households were the most affected? Fill in column (5).

What were the causes of the damage (consider material, organizational/societal, awareness, experience, attitude and motivation)? Fill in column (6).

What did local people and authorities do to prevent and respond to the natural disasters (consider pre, during and post disaster). NB: Answers should focus on specific experiences implemented during disasters, not general experience. Fill in column (7).

4. Synthesize results of the discussion on the history of disasters

Based on the results of the discussion, synthesize information into Table 2.2 as follows:

Table 2.2: Historical Timeline Synthesis

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
(1)	**(2)**	**(3)**	**(4)**	**(5)**

The way to synthesize information from Table 2.1 into Table 2.2 is as follows:

- **Column (1) – Disaster**: Based on column (1) and (2) of Table 2.1, list the most frequent or most serious types of disasters. Fill in information in column (1) of Table 2.2.

  For example: Typhoons have occurred 3 times; drought occurred 3 times; flooding occurred 2 times; whirlwind occurred 3 times. The information that is synthesized into the disaster column is: typhoons (3 times); drought (3 times); flooding (2 times); whirlwind (3 times).

- **Column (2) – Disaster Trends**: Synthesize information from column (3) of Table 2.1 and put it in column (2) of Table 2.2.

  For example: Typhoons occur unpredictably, they are shorter but have stronger intensity; prolonged droughts occur; frequency of floods decreased but occurrence is difficult to predict; whirlwinds in recent three years were unusual, prolonged extreme hot weather.

- **Column (3) – Vulnerabilities:** The content in column (6) of Table 2.1 is on the

causes of damage. TAG and CBG must consult and discuss with participants about which causes have been resolved. Synthesize unsolved issues into column (3) of Table 2.2 according to three aspects: i) material, ii) organizational/societal, and iii) awareness, experience, attitude and motivation.

For example: For a typhoon, based on causes such as "there is no means to travel to school when the road is inundated", "people do not secure houses before a typhoon hits", "lack of members in the response team, especially young people", discuss with the community what causes were resolved and which were not. Based on this, determine vulnerability as follows:

- Regarding "material" vulnerabilities: There are no means to go to school when the road is inundated.
- Regarding "organizational/societal" vulnerabilities: Lack of people on the response team, especially young people.
- Regarding "awareness, experience, attitude and motivation" vulnerabilities: People do not secure houses before typhoons hit.

- **Column (4) – Capacities**: Similar to the above: take information from column (7) of Table 2.1 and synthesize it into column (4) of Table 2.2.

  For example: When a damaging cold occurs the community has experience of "using canvas to cover cattle barns". Thus, they have capacity in awareness and experience: "experience in covering cattle barns when a damaging cold occurs".

- **Column (5) – Disaster Risks**: The content in column (5) of Table 2.1 relates to damages that have occurred. TAG and CBG must consult and discuss with participants if these damages could occur in the future or not. If the damages could occur again, they will be a disaster risk. Based on this, synthesize information and put it into column (5) of Table 2.2. Keep the order as follows: community safety, health, sanitation and livelihoods.

  For example: When whirlwinds occurred they caused "32 unroofed houses", typhoons and floods impacted "100% of rice and 295ha of crops failed as they were not harvested in time", "environmental and water resources were polluted due to waste and dead animals". Similar losses may happen in the future, so the content of column (5) Table 2.2 will be as follows:

- In the "community safety" sector: unroofed and damaged houses
- In the "health and sanitation" sector: polluted environment and water resources
- In the "livelihoods" sector: reduced crop yield

Tool 3 - Seasonal Calendar

Photo 6: Community participants develop local seasonal calendar (Source: Doan Minh Cuong)

Objectives:

Collect, synthesize and analyze information on the period of time of socio-economic activities, disaster seasons and disaster trends, considering the impacts of climate change. Based on this information, recognize the impacts of disasters on the activities and experiences of the local community in natural disaster prevention and response.

Time required:

Plan on having about 60 minutes to collect information from participants and 30 minutes to synthesize and analyze information by the TAG and CBG.

Materials required:

Big board or large sheets of paper (A0), pens, long ruler. Prepare Table 3.1.
Refer to an example Seasonal Calendar tool and Seasonal Calendar Synthesis Table in Annex 9.2

Implementation steps:

1. **Preparation:**

Find a suitable venue for group work. It may be drawn on the ground, floor or A0 paper. Support the community to draw a 14 column table including: column (1) on socio-economic activities and disasters; followed by 12 columns for the 12 months of the year, and the last column for disaster impacts and trends. As follows:

Table 3.1: Seasonal Calendar

Disasters	**Month**												**Disaster Trends**		
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**			
Socio-economic activities	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**Impacts on socio-economic activities**	**Why?**	**Experience in prevention and response?**

The results of the Seasonal Calendar discussion, including socio-economic activities and local disasters, will be synthesized into Table 3.1 and unified as one type of calendar (lunar or solar).

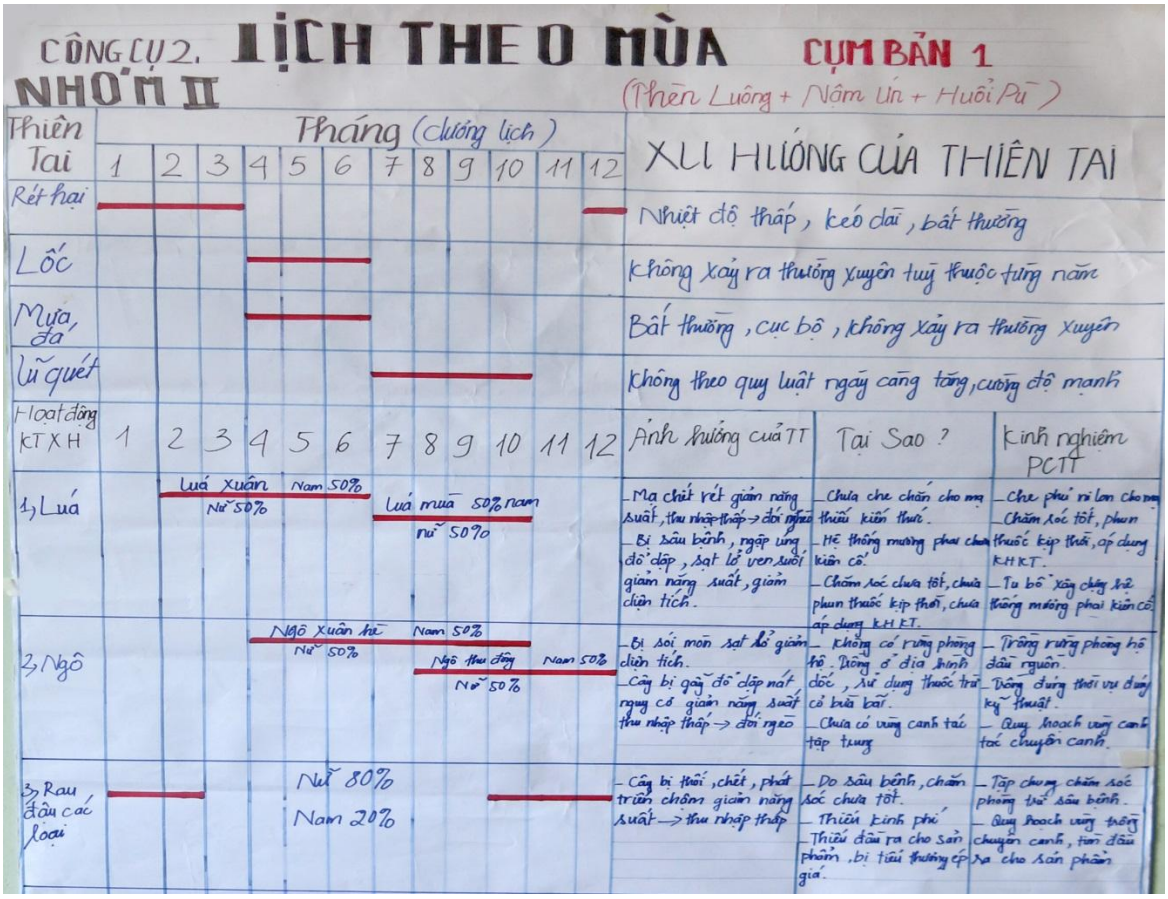


Photo 7: Seasonal calendar in Then Luong village, Nam Un, Huoi Pu, Chieng Dong commune, Yen Chau district, Son La province (Source: Luong Nhu Oanh – Oxfam Great Britain)

Photo 8: List of socio-economic activities and disasters and discussion on seasonal calendar in Loc Vinh village, Phu Loc district, Thua Thien Hue province (Source: Pham Thi Doa –

DMC)

2. **Introduction**

   Explain to participants the objective of the seasonal calendar tool. Use a calendar suitable to the local community (lunar, solar or other suitable).

3. **Identify the calendar of socio-economic activities and discuss with participants the following questions:**

   What are livelihood activities in the local area (cultivation, breeding, aquaculture, services, etc.)? After that, for each type of livelihood activity identify the stage of production, who implements the main activities and mark the time when conducted on the calendar.

   For example: Winter-spring rice cultivation has several stages: sowing (female labor) in January, weeding (female labor) in March, and harvesting (male & female labor) in May; breeding of livestock and poultry (male & female labor) throughout the year; aquaculture and fishing (male labor) in October.

   List the main local social activities (for example festivals and school semesters) and mark the respective month.

   For example: Cau Ngu festival occurs on April full moon (lunar) (according to the solar calendar the festival occurs in May).

   List all issues of the local community such as disease outbreaks and food shortages, and mark the respective month.

   For example: Food shortages often occur in April.

4. **Identify the time when disasters occur and their trends due to the impact of climate change, discuss with participants the following questions:**

   Suggest participants list the types of disasters that usually occur in the local area (refer to the list in Tool 2: Historical Timeline).

   For each type of disaster ask participants about the time when they usually occur. Mark the time column, noting the peak month.

   Ask participants to share their observations on trends of disasters and climate: is there any change compared with the past? (Type of disasters, unusual weather, frequency (more or less), timing (earlier, later or unpredictable), degree of impact (more or less)). Fill in information in the column: Disaster Trends.

   For example: Typhoons occur earlier, for longer periods of time and are more difficult to predict, they are stronger in intensity and cause flooding. The period of time between different typhoons is closer together. Extreme hot weather: prolonged hot weather periods with higher temperatures.

5. **Identify impacts of disasters on socio-economic activities, discuss with participants and identify which socio-economic activities are affected by which types of disasters. Some questions to ask include:**

- What stage of the socio-economic activities were affected by which disasters?
- How were these activities impacted? What damages may occur (considering the different sectors: community safety, livelihoods, health, sanitation and environment)? Why do they occur (consider the aspects: material, organizational/societal, awareness, experience, attitude and motivation)?
- Describe impact of disasters on men, women and vulnerable groups. Identify when the community is the most vulnerable (food shortages, lack of income, insufficient water for production, disease outbreaks, migration, etc.)
- List experiences from women, men and youths when disasters occur and when trends of disasters have changed.
- What are the impacts on socio-economic activities caused by the changing disaster trends due to climate change? For example: How has rice cultivation, fishing and tourism changed if temperatures and rainfall have changed?

6. **Synthesis results of discussion on seasonal calendar:**

Fill in Table 3.2 from the results of the discussion as follows:

Table 3.2: Seasonal Calendar Synthesis

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
(1)	(2)	(3)	(4)	(5)

The way to synthesize information from Seasonal Calendar Table 3.1 into Table 3.2 is as follows:

- **Column (1) – Disasters:** Synthesize information on disasters in the first column of the seasonal calendar table.

  For example: Type of disaster: extreme hot weather, flooding, damaging cold, etc.

- **Column (2) – Disaster Trends:** Synthesize information on disaster trends from the last column of the seasonal calendar table.

  For example: An “extreme hot weather” type disaster might have a “prolonged

length and higher temperatures" trend.

- **Column (3) – Vulnerabilities**: Synthesize the results of the discussion on causes of damages for socio-economic activities when disasters occur and classify them according to different aspects: material, organizational/societal, awareness, attitude, experience and motivation into the vulnerabilities column.

  For example: For a flooding type of disaster the vulnerabilities associated with this are material aspects such as "warehouse storage of households is located in low-lying area and there is no drying equipment leading to mold and damage to goods".

  Column (4) – Capacities: Synthesize the results of the discussion on response experience of women, men and youths when disasters occur into the capacity column. Classify according to the different aspects: material, organizational/ societal, awareness, attitude, experience and motivation.

  For example: For a "damaging cold" type of disaster the capacities associated with this are organizational/societal aspects such as "Farmers' Union mobilizes people to sow quick growing seed". For awareness, attitude, experience and motivation it is "human resources were mobilized to sow seed".

- **Column (5) – Disaster Risks**: Synthesize information in the last column on the impacts of disasters on socio-economic activities. Note the main risks in the livelihoods, health, sanitation and environment sectors.

  For example: For an "extreme hot weather" type of disaster the disaster risks for the livelihoods sector include "low productivity", and in health, sanitation and environment it is "disease outbreaks in human and cattle populations".

Tool 4 – Disaster Risk Map

Photo 9: Community participates in developing a disaster risk map (Source: Nguyen Duc Thien)

Objectives:

Identify high-risk and safe areas in the commune for each type of disaster. Based on this, identify the strengths, weaknesses and resources of the community in natural disaster prevention and response activities.

Tentative time:

You should plan on having about 60 minutes to collect information from participants and 30 minutes to discuss within the TAG and CBG.

Materials required:

Administrative map of the commune, board, A0 paper, ruler, colored chalk, colored pens, colored paper (at least two different colors)

Refer to an example Disaster Risk Map (it can also be called a commune base map) and Risk Map Synthesis Table, which synthesizes results from the disaster risk map discussion in Annex 9.3.

Implementation steps:

1. **Preparation:**

Find a suitable location for group work and prepare required material.

2. **Introduction:**

Introduce the objective of the disaster risk map tool. Ask participants to nominate one or two people to draw the outline of the risk map. The other participants will contribute detailed comments. Choose a secretary to take notes of all the information discussed.

3. **Agree on the map legend (symbols and colors to be used as identifiers):**

Agree on the symbols and colors to be used as identifiers on the map and the content of the legend, including the symbols of the background map and information on disaster risks.

A red color may be used to mark dangerous/vulnerable places, blue for safe places and green for trees. Remarks can also be put on the map with sticky colored paper or symbols.

4. What to do:

Prepare the background map based on the commune administrative map.

If the commune does not have an administrative map you can draw a background map as follows:

- Identify north, east, south and west: *Ask participants the direction of sunrise and sunset to help them identify direction. For example: When people stand and see the direction of sunrise, east will be in front of them, behind is west, the left is north and the right is south. Note north on the map.*
- Draw the commune administrative area including: *roads, bridges, culverts, schools, health centers, cultural houses of villages, markets, kindergartens, temples/churches, rivers, streams, etc.*
- Draw in detail: *boundaries of villages, houses, farms, forests, etc.*

5. Mark on the map specific areas which may be affected by disasters:

Ask participants about each type of disaster and mark on the map specific areas that may be affected by those disasters (areas where flooding, drought, landslides, etc. easily occur). Note or mark in color the affected areas (for example: pink color for areas that are affected by flooding, gray for areas affected by drought, etc.)

6. Identify safe and unsafe areas on the map:

Ask participants to clearly show safe and unsafe areas on the map and take detailed notes of the following information:

Unsafe areas:

- Ask the community to clearly show areas that have unsafe characteristics using colored paper to mark the background map (for example a red color).
- Ask for detailed information (for example: What? Where? How? Why?) about the unsafe area. The secretary should take detailed notes to synthesize information (information will go in column 3 on vulnerabilities of Table 4.1). Note the following:
  - Houses, farms or livestock that are at risk of being impacted;
  - Unsafe buildings (temporary/weak bridges, schools, water and electricity systems, and areas easily secluded due to natural disasters);
  - Danger areas without warning signs, temporary housing, houses built near rivers or streams, lack of disaster prevention facilities;
  - Areas where vulnerable people live (elderly, children, people with disabilities, women, single parent households);

- Areas where there is a lack of union activities and response team.

Safe areas:

- Ask participants to clearly show areas that have safe characteristics using colored paper to mark the background map (for example a green color).
- Ask for detailed information (for example: What? Where? How? Why?) about the safe areas. The secretary should take detailed notes to synthesize information (information will go in column 4 on capacities of Table 4.1). Note the following:
  - Evacuation centers (secure/reinforced offices, schools, hospitals, high ground, roads, evacuation routes, wind-break trees, etc.);
  - Buildings and equipment (dikes, canals, embankments, water and electricity systems, etc.);
  - Warning systems (loudspeakers, gong, radio, television, etc.);
  - Stable production areas that are not impacted by natural disasters;
  - Families/people who have experience in natural disasters prevention and response and who can help others;
  - Areas that have active union organizations and who can support communities in natural disaster prevention and response.

7. Based on the map, encourage participants to discuss what further information is needed or needs to be changed on the map; discuss what risks exist due to the vulnerable characteristics of the community.

8. Synthesize the results of the risk map discussion:

Based on the results of the discussion, synthesize information collected into Table 4.1 as follows:

Table 4.1: Risk Map Synthesis

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
(1)	**(2)**	**(3)**	**(4)**	**(5)**

The way to synthesize information is as follows:

- **Column (1) – Disaster**: List type of disasters occurring in the local area which were discussed in the previous tools into column (1) – Disaster.
- **Column (3) – Vulnerabilities**: Synthesize results of the discussion on unsafe

areas and characteristics into column (3) – Vulnerabilities.

For example: With landslides material vulnerabilities include "that 30 per cent of houses are located near streams and at the foot of the mountain, warning sign systems have collapsed", etc.

- **Column (4) – Capacities**: Synthesize results of the discussion on safe areas and characteristics into column (4) – Capacities. Classify according to the three aspects: material, organizational/societal, awareness, attitude, experience and motivation.

  For example: With typhoons material capacities include "each village has four to eight permanent houses which can be used as shelter; the CPC has just built a high building which can be used as shelter". Awareness, attitude, experience and motivation capacity is "households in coastal areas have experience in typhoon prevention and response such as stocking food and medicine supplies; businesses have experience in moving goods to higher locations before typhoon season," etc.

- **Column (5) - Disaster Risks**: Synthesize results of the discussion on risks that may happen when disasters occur in the local area into column (5).

  For example: With landslides some disaster risks include community safety aspects: "high-risk villages (list the name); damaged or collapsed houses; and human losses (the number of households, the number of people who live in areas prone to landslides);" and livelihoods aspects: "reduced productivity of rice and crop yields."

NB:

- Only draw an outline diagram of the commune.
- Use the results of the historical timeline tool to discuss types of natural disasters.
- You can organize a site visit to collate detailed information for the map: low-lying areas, rivers, different soil zones, agricultural production areas, aquaculture, markets, houses, roads and bridges. After the site visit have a group discussion to supplement information to complete the disaster risk map synthesis table.

Photo 10: Disaster risk map of Tan Viet Tan Viet commune, Van Lang district, Lang Son province (Source: Pham Thi Van – Oxfam Great Britain)

Tool 5 - Strengths and Weaknesses in Natural Disaster Prevention and Response Activities

Photo 11: Discussion amongst the women on capacities and vulnerabilities (Source: Live & Learn)

Objectives:

To collect, synthesize and analyze information on the strengths and weaknesses of the local community at individual, household and institutional levels, focusing on the "four on-the-spot motto": leadership on-the-spot, human resources on-the-spot, materials on-the-spot and logistics on-the-spot.

Time required:

You should plan on having about 60 minutes to collect information and 15 minutes for discussion within the TAG and CBG.

Materials required:

Big board or large sheets of paper, pens, chalk, ruler.

Refer to an example of Strengths and Weaknesses and Strengths and Weaknesses Synthesis in Annex 9.4.

Implementation steps:

Preparation:

Locate a suitable place for group work. Draw the Strengths and Weaknesses Tool on a large sheet of paper as follows:

Table 5.1: Strengths and Weaknesses

Stakeholders **(Local authorities, community, mass organizations, etc.)**	**Strengths**	**Weaknesses**

Introduction:

Explain the objectives of the Strengths and Weaknesses Tool to participants.

Assessment

Collect information and experiences from participants regarding community and related mass organizations' natural disaster prevention and response activities. Encourage participants to consider different stakeholder groups according to careers, vulnerable groups, etc.

Collect specific information on experience pre, during and post disasters and activities which are implemented according to the "four on-the-spot motto": leadership on-the-spot, human resources on-the-spot, materials on-the-spot and logistics on-the-spot.

For each type of disaster, what did participants do to prevent and respond to the natural disasters (before, during and after disasters)? What are the strengths and weaknesses? Why?

What organizations are relevant to the natural disaster prevention and response activities in the local area (for example response teams, the Red Cross, other mass organizations, the Standing Office for Natural Disaster Prevention and Control, etc.)? For each stakeholder, discuss in detail the following:

What is good or not good? Why?

How does the organization support the community (information, logistics, equipment, etc.)?

Who participated in development of the NDPCP? Does the community know about this plan?

What mechanisms are in use for information exchange, coordination between organizations and the community before, during and after disasters occur?

Other information related to natural disaster prevention and response.

Synthesis of discussion:

Based on the discussion synthesize information into Table 5.2 as follows:

Table 5.2: Strengths and Weaknesses Synthesis

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
(1)	**(2)**	**(3)**	**(4)**	**(5)**

The way to synthesize information from Table 5.1 into Table 5.2 is as follows:

Column (1) – Disaster: The TAG lists the types of disasters to supplement those already listed in column (1).

Column (3) – Vulnerabilities: Synthesize results of the discussion on weaknesses according to the three aspects: material, organizational/societal and awareness, attitude, experience and motivation.

For example, for typhoons the vulnerabilities broken down according to the three different aspects could include for material vulnerabilities: lack of means and equipment used for natural disaster prevention and response (such as loudspeakers and rescue equipment). For awareness, attitude, experience and motivation vulnerabilities it could include: many households are not ready to relocate to safer locations or do not know about the commune NDPCP.

Column (4) – Capacities: Synthesize results of the discussion on strengths according to the three aspects: material, organizational/societal, awareness, attitude, experience and motivation.

For example, for a drought the capacities broken down according to the three different aspects could include for material capacities: communities are proactive in preparing food for storage, disease prevention for pets and providing mutual assistance. For awareness, attitude, experience and motivation capacities it could include: the Farmers' Association is well coordinated with villages to prepare drought-resistant crop varieties.

Photo 12: Discussion on strengths and weaknesses of natural disaster prevention and response activities (Source: German Red Cross)

Tool 6: Synthesis of Natural Disaster Risks

Photo 13: CBDRA results presentation (Source: Live & Learn)

Objective:

Synthesize and analyze collected information to identify disasters, trends, vulnerabilities, capacities and risks.

Tentative time:

About 60 minutes for the TAG and CBG to synthesize and analyze the information, which was collected from the assessment tools.

Materials required:

Big board, large sheets of paper, pens, chalk, ruler.

Refer to an example of the Synthesis of Natural Disaster Risks in Annex 9.5.

Implementation steps:

1. Preparation:

Develop Synthesis of Natural Disaster Risks table as follows:

Table 6.1: Synthesis of Natural Disasters

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
(1)	**(2)**	**(3)**	**(4)**	**(5)**

2. Synthesis of information:

The TAG synthesizes all collected information into columns of the table based on the synthesis table of each assessment tool (Tables 2.2, 3.2, 4.1 and 5.2).

- **Column (1) – Disasters**: List the types of disasters based on the historical timeline tool (Table 2.2)
- **Column (2) – Disaster Trends**: Synthesize information from the historical timeline tool and seasonal calendar tool (Table 2.2 and 3.2)
- **Column (3) – Vulnerabilities**: Synthesize information from all tools. Classify information according to the three aspects: material, organizational/societal, and awareness, attitude, experience and motivation.
- **Column (4) – Capacities**: Synthesize information from all tools. Classify information according to the three aspects: material, organizational/societal, and awareness, attitude, experience and motivation.
- **Column (5) – Disaster Risks**: Classify information according to the three sectors: community safety, health, sanitation and environment, and livelihoods.

If information is contradictory then TAG and CBG will discuss further with participants.

Tool 7: Ranking

Photo 14: Female participants rank disaster risks (Source: Luong Nhu Oanh - Oxfam Great Britain)

Objective:

Identification and prioritization of risks, issues and concerns of local people.

Time required:

90 minutes

Material required:

A0 paper, colored paper, pens. Prepare Table 7.1.

See an example of a Ranking Table in Annex 9.6.

Implementation steps:

1. **Preparation**:

Find a suitable venue for group work. Prepare Table 7.1 on A0 paper.

Identify ranking criteria for each risk/solution to be ranked and list the criteria on large paper (A1 or A2).

Table 7.1: Ranking (according to village)

RANKING TABLE Village:……... Commune:……. No of participants: …… male:…….. female:……..				
Risks/Solutions	**Score**		**Total Score**	**Ranking**
	Male	**Female**		
(1)	(2)	(3)	(4)	(5)
Risk/Solution 1				
Risk/Solution 2				
Risk/Solution 3				
Risk/Solution 4, etc.				

2. Introduction:

Organize a community meeting and explain to participants the objective of the ranking activity.

Discuss the criteria and information needed to rank the risk/solution.

3. List the risks/solutions that need to be ranked and explain the criteria:

The information needed to prioritize risks/solutions may include the frequency with which disasters occur, the causes of extensive damage, risks, issues and potential solutions of local people, or any other priorities.

Ranking criteria: For disaster risks the criteria could be intensity, severity, scale, scope, etc. For solutions the criteria could be urgency, feasibility, capacity to mobilize resources to implement, beneficiaries, etc.

4. Ranking methodology:

Each village is divided into separate male and female groups.

A number of votes is distributed to each person. The number of votes corresponds to the number of risks/solutions that will be ranked.

Using a scale of 10 write votes for each risk/solution that requires ranking. Ten points is given for the highest priority/urgency and vice versa:

+ The highest score is for the highest priority/most urgent risk/solution (maximum 10 points);

+ The lowest score is for the least priority/least urgent risk/solution;

+ One point is for the lowest priority/least urgent;

+ Can allocate the same score for different risks/solutions with the same priority/urgency;

In order to vote each risk/solution must include enough information for participants to be able to prioritize.

Each person votes or writes their vote in Table 7.1. Men vote in male groups, women vote in female groups.

The facilitator synthesizes the votes and writes the total score in column 2 for the male group and column 3 for the female group in Table 7.1.

Sum the total score of the male group in column 2 and the female group in column 3 into column (4) Total Score.

Complete ranking: Based on the scores in column 4, chose the priorities in the order from highest to lowest score. Risks/solutions with the highest score will be ranked first and then follow the same methodology to complete the rest of column 5.

In cases where the total score in column 4 is equal to more than one risk/solution, facilitators may use a direct vote to arrange the order of the competing priorities.

5. Synthesize ranking of the whole commune:

From Table 7.1 which lists results from villages, synthesize information into Table 7.2 for the whole commune, as below:

Table 7.2: Ranking Synthesis

Commune ……. Synthesis Table												
Risks/Solutions	**Score**								**Commune Total**			**Ranking**
	Village 1		**Village 2**		**Village 3**		**Village 4**					
	M	F	M	F	M	F	M	F	M	F	Total score	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Risk/Solution 1												
Risk/Solution 2												
Risk/Solution 3												
Risk/Solution 4, etc.												

- List all the risks/solutions from the villages (Table 7.1) into column 1 of Table 7.2;

- Copy the score of male groups in column 2 and female groups in column 3 from Table 7.1 into male and female columns corresponding to their villages;
- Sum the score of all villages according to male and female into column 10 and 11 respectively;
- The total score of the whole commune in column 12 equals the score of column 10 plus the score of column 11;
- Based on the total score of column 12, determine the priority from highest to lowest. Risks/solutions with the highest score will be ranked at number 1. Continue allocating the priority ranking until column 13 is completed;
- In cases where the total score in column 13 is equal to more than one risk/solution, facilitators may use a direct vote to arrange the order of the competing priorities.

Tool 8: Cause Analysis Tool

Objectives:

To identify root causes, problems and potential solutions.

Time required:

About 60 minutes to analyze information with participants and 15 minutes to synthesize information within TAG and CBG.

Materials required:

Board, big paper, pens, colored paper.

See an example of a Cause Analysis Tool in Annex 9.7.

Implementation steps:

1. Preparation:

Locate a suitable venue for group work. Prepare Table 8.1.

2. Introduction:

Introduce the objectives and process of the Cause Analysis Tool.

3. Identify causes:

Based on the results collected in the other assessment tools identify the problems of greatest concern and note disaster risks and related vulnerabilities.

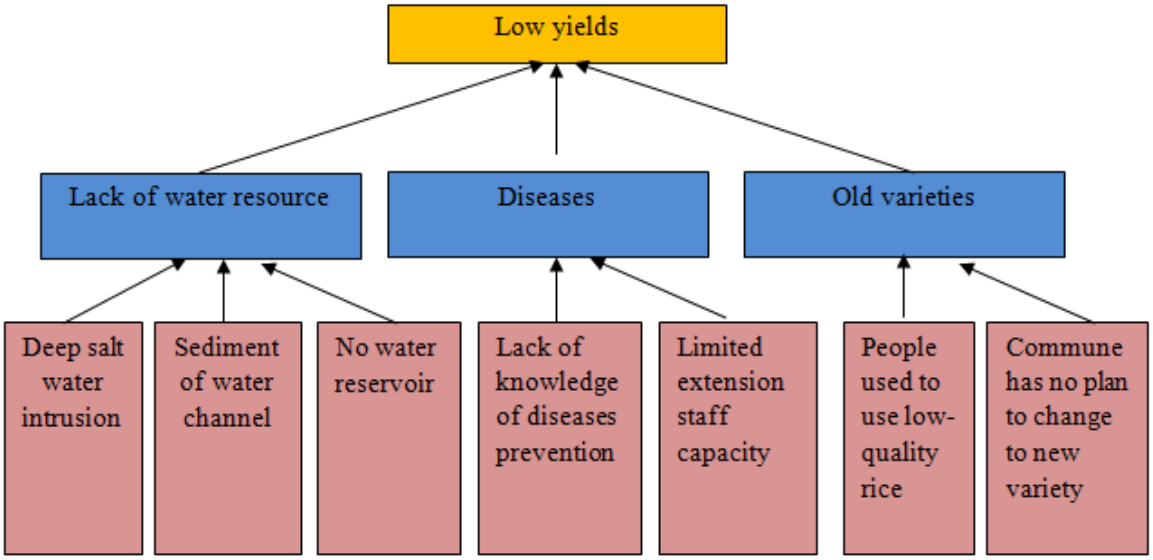
Ask a series of questions to identify the root causes of each problem.

4. Cause analysis:

Analysis to be completed considering the three aspects: material; social/organizational and awareness, experience, attitude and motivation.

Example: Low yields caused by:

- Material causes*: Lack of water resources, insufficient irrigation system, low quality seed and fertilizer.*
- Social/organizational causes*: Limited Extension Officer capacity, commune has no plans to replace new seed varieties.*
- Awareness, experience, attitude and motivation causes*: People lack sufficient knowledge of disease prevention, people prefer to use low-quality rice.*



- Organize the issues discussed to show the relationship between cause and effect. Write each issue on a paper and invite participants to arrange issues into a hierarchical relationship of causes and effects.
- Synthesize the information into the Cause Analysis Synthesis table: Column (1) - Order of priority (according to the ranking results of Tool 7); Column (2) - The disaster risk; Column (3) – Vulnerabilities; Columns (4) - Causes; and Column (5) - Solutions to overcome the root cause of problem in column (4). Further details are provided in Section 3, Tool 9.

Table 8.1: Cause Analysis Synthesis

No	Disaster Risks	Vulnerabilities	Causes	Solutions
(1)	**(2)**	**(3)**	**(4)**	**(5)**

- Using the Ranking Tool (Tool 7) rank solutions identified in column 5 of Table 8.1.

Tool 9. Synthesis of disaster risk reduction measures

Objectives:

Synthesize information and propose disaster risk reduction solutions taking into consideration the different needs of groups within the community: women, men, poor people, children, the elderly, ethnic minorities and the disabled.

Time required:

About 90 minutes

Materials required:

Board, A0 paper, pens, ruler

Implementation steps:

1. Preparation:

Find a suitable location for group work. Use the results from the Cause Analysis (Tool 8) to prepare Table 9.1.

2. Organize community meeting:

A community meeting is organized to share potential solutions and assessment results which will be discussed and commented on by other community members. The comments and additional inputs will be considered.

3. Develop potential disaster prevention and response solutions:

TAG and CBG develop potential solutions and complete the solutions column (5) of Table 8.1 on Cause Analysis Synthesis:

- Measures of disaster prevention and response are based on disaster risk reduction through the transfer of vulnerabilities and related causes into capacities in disaster prevention and response.

  For example: A disaster risk is "damaged houses" with the vulnerability and cause being "no reinforcement of house", while the solution is to "raise awareness and disseminate information on how to reinforce houses".

- Refer to the list of disaster risk reduction measures before, during and after natural disasters and the structural/non-structural disaster preparedness measures in Appendix 7.

4. Ranking:

Rank the problem and priorities of the local community according to different community groups (women, men, youth, etc.). Use the Ranking Tool (Tool 7) to select the priority problem, according to the potential measures and eligibility criteria. For example, measures that should take priority are solutions implemented by local people and solutions supported by the commune and outside organizations.

5. Develop Synthesis of Disaster Risk Reduction Measures:

From the solutions selected the TAG discusses with participants detailed information, according to Table 9.1 as follows:

- Proposed measures: What to do? (Column 2)
- Location and beneficiaries: For whom, where? (Column 3)
- The specific activities needed to implement the solution: How to do it? (Column 4)
- Duration (short-term - less than 1 year, medium-term - 1-3 years, long-term - over 3 years): What to do? (Column 5)
- Budget: mobilize local and/or external support? (Column 6)

Table 9.1: Synthesis of Disaster Reduction Measures

No.	Proposed Measures	Location and Beneficiaries	Specific Activities	Duration	Budget		
					State	Local	External
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

PART IV: ANNEXES AND TEMPLATES

ANNEX 1: TECHNICAL ASSISTANCE GROUP AND COMMUNITY-BASED GROUP ROLES & RESPONSIBILITIES

(Based on Decree No.666/QD-TCTL-DD dated 22 August 2011 of the WRD approved implementation guideline on "Community-based awareness raising and disaster risk management")

1. Technical Assistance Group

1.1 Organizational structure

- Based on the specific situation in the community, the People's Committee at all levels will decide to organize the TAG, in which membership, roles, missions and collaboration mechanism between members are clearly defined.

- The TAG includes representatives from related departments. In order to make use of the experience and expertise of all local organizations and institutes, the TAG must include local organizations such as the Fatherland Front, the Red Cross Chapter, the Women's Union, the Farmer's Union, the Youth Union, enterprises and local NGOs, emphasizing gender inclusion and social relationships between target groups.

- The leader, vice-leader(s) and members of the TAG include:

    - Leader: for the provincial level, the leader of the TAG should be the chief or deputy chief of the Standing Office of the Committee for Disaster Prevention and Control. For the district level, the leader of the TAG should be the head or deputy head of the Department of Agriculture and Rural Development, and for the commune level the commune's vice leader will be the leader.

    - The vice-leader(s) are responsible for the technical aspects according to assignments from the leader. The vice-leaders should be chosen from organizations with a lot of experience working in the community.

1.2 Responsibilities of Technical Assistance Group

1.2.1 Overall responsibilities

- Consult with the Standing Office of Disaster Prevention and Control (CPC at the commune level) to implement CBDRM activities in the community.

- Cooperate with local authorities to:

    - Provide technical guidance for TAGs at lower levels and CBGs to implement assigned technical tasks.

    - Take responsibility in monitoring, guiding and organizing CBDRM activities in the community, while ensuring the objectives and activities are carried out effectively.

1.2.2 Specialized tasks

Training and communication

- Assess needs for CBDRM training from authorities at all levels and local community.
- Consult with the authorities at all levels on programme and training development.
- Collaborate and participate in developing training materials on CBDRM.
- Organize and take charge of community training for CBDRM staff at the provincial, district and commune level and for local people.
- Develop training assessment report and recommend measures to improve training quality such as the content of training materials, skills and suitable training methods.

Disaster risk assessment

- Organize CBDRA in the community, commune, district and province.
- Organize data collection for CBDRA and database development.
- Provide consultation to the authorities at all levels to develop annual provincial/district/communal plan.
- Collaborate and participate in the development of training materials on CBDRA.
- Collaborate, organize and be the trainer of community training and staff for CBDRA at the provincial, district, communal and village level and for local people.
- Develop CBDRA report.

Monitoring and evaluation

- Monitor and evaluate the results and progress of activities in the local annual and five-year plan.
- Consult with authorities at all levels in programme development, monitoring and evaluation of the plan.
- Participate in the development of a set of indicators, assessment and guidance for the local community.
- Collaborate, organize and be the trainer of community training and staff of CBDRA at the provincial, district, communal and village level and for local people.
- Develop quarterly, annual and five-yearly reports on monitoring and evaluation of activities and recommend measures to improve monitoring and evaluation quality and ensure progress.

1.2.3 Roles of the leader and vice-leader(s) of technical assistance group

Leader

- Based on the direction given by the standing offices at all levels, develop plan and consultation to present to the authority to identify detailed direction and plan.

- Organize regular and ad-hoc meetings among the group to review implementation progress of CBDRM activities.
- Assign tasks to vice-leaders and members in the group; monitor, guide and support technical assistance and CBGs at lower levels in terms of technical knowledge.
- Synthesize and present a regular report every six months and one year and as necessary to the standing office levels to support the People's Committee at all levels to direct the implementation of activities.

Vice-leader(s)

- Assist the leader in the above tasks.
- Assume the role of the leader when s/he is occupied.

2. Community-Based Group

2.1 Organizational structure

- Based on the specific situation in the community, the People's Committee will decide to organize the community group, in which membership, roles, mission and collaboration mechanism among members as well as between the CBG and TAG are clearly defined.
- The members of the CBG will be nominated by the local community based on knowledge, experience, etc., paying special attention to gender and social relationships between groups.
- The leader of the group is a village leader.

2.2.2 Specialized tasks

Communication staff

- Assess community needs for CBDRM training.
- Work with technical support group at commune level to consult the CPC in developing a communication and training plan.
- Coordinate and participate in developing training materials and communication materials on CBDRM.
- Organize training for the community.
- Provide comments on the training assessment report and recommend measures to improve quality of training such as the content of materials, skills and suitable training methods.

Disaster risk assessment

- Participate in the CBDRA in the community.
- Participate in data collection for the CBDRA and database building.
- Organize training for the community.

- Provide comments on the CBDRA report.

Monitoring and evaluation

- Participate to monitor and evaluate the results and progress of activities in the local annual and five-year plan.
- Assist the TAG at commune level in providing advice for the People's Committee in the development of a set of indicators for assessment and monitoring and plan for assessment and monitoring.
- Cooperate and provide feedback on the monitoring and evaluation process.
- Provide feedback to quarterly, annual and five-yearly reports on monitoring and evaluation of activities and recommend measures to improve monitoring and evaluation quality and ensure progress.

2.2.3 Roles of the leader

- Work with the TAG at the commune level to develop plans and advise the CPC to identify detailed directions and plans.
- Organize regular and ad-hoc meetings among the group to review implementation progress of CBDRM activities.
- Assign tasks for group members and support for the TAG to implement activities in the community.
- Participate in synthesizing the annual and six-monthly report to the CPC.

ANNEX 2: CAPABILITY (RESOURCE) ASSESSMENT OF DISASTER PREVENTION AND RESPONSE

No.	Items	Unit	Total in commune	Villages					Notes
				1	2	3	4	etc	
I	***People***								
1	Committee at level Members:	People							
2	Mobile forces Members:	People							
3	Youth vanguard forces Members:	People							
4	Reserve forces Members:	People							
5	Militiaman forces Members:	People							
6	Rescue forces Members:	People							
7	Medical forces	People							
	Other								
II	***Infrastructure***								
1	Concrete roads, safe evacuation roads	Km							
2	Permanent housing as a safe shelter	House							
3	Dykes and embankments system	Km							
	Other								
III	***Supplies, vehicles, equipment, logistics***								
1	Rescue equipment								
	Car	Car							
	Machine boat	Boat							
	Rescue boat	Boat							
	Life vest	Life vest							

	Life preserver	Life preserver							
	Other								
2	Communication system								
	Radio station	Radios							
	Loudspeaker	Speakers							
	Communication phone	Phones							
	Other								
3	Reserve supplies								
	Bamboo	Trees							
	Sacks of sand, steel cages	Sacks							
	Canvas	Roll							
	Rope	Roll							
	Sand, stone, gravel	Ton							
	Other								
4	Reserves of food								
	Rice	Kg							
	Water	Lt							
	Noodles	Barrel							
	Other								
5	Medical Supplies								
	First-aid kit	Kit							
	Other								

ANNEX 3: SECTORS AND ASPECTS OF COMMUNITY-BASED DISASTER RISK ASSESSMENT

Community safety sector consider the following:

Material Aspects	Social/organizational Aspects	Awareness, Experience, Attitude and Motivation Aspects
✓ Housing (location, quality related to the impact of natural disasters) ✓ Public works (electricity, roads, schools, health services) ✓ Vehicles, equipment and rescue equipment; warning system / communication	✓ Disaster prevention and control committee at commune and village level. Response team (the organization, the number of male and female participants and capacity, etc.) ✓ Disaster prevention and control plan and cooperation for implementing plan of communes and villages (people, Women's Union, Youth Union, etc.)	✓ Experience and knowledge on disaster prevention and response ✓ Knowledge and experience of people in disaster prevention, response and recovery ✓ People's awareness of disaster prevention and response (accept the evacuation orders, supplies, manpower, mobilization of local authorities, etc.)

Production and economic sectors consider the following:

Material Aspects	Social/organizational Aspects	Awareness, Experience, Attitude and Motivation Aspects
✓ Production infrastructure (agricultural land, water surface areas for maritime products, equipment for agriculture, forestry and fishing, tools for fishing and agriculture, capital, seeds, livestock, handicraft production materials, etc.) ✓ Infrastructure for production and the economy (irrigation system, dams,	✓ Farmer's Union, agricultural extension organizations, cooperatives, local professional organizations, etc. ✓ Policies, programmes, and guidelines to support production and income generation ✓ Support for production (training on disease prevention, insurance, product	✓ Knowledge and experience in production and business ✓ Community awareness on changing production and businesses to adapt to climate change ✓ Plans to change livelihoods, types of seeds and livestock, suitable to climate change and disasters

reservoir, roads, market, factory, etc.)	consumption, etc.) ✓ Gender participation in production and economic activities	

Health, water, sanitation, hygiene and environment sectors consider the following:

Material Aspects	Social/organizational Aspects	Awareness, Experience, Attitude and Motivation Aspects
✓ Local healthcare infrastructure (electricity, roads, schools, clinics, clean water supply, medical equipment, etc.) ✓ Environment and hygiene infrastructure conditions (toilets, kitchens, animal shelters, etc.) ✓ Conditions of waste collection and processing, drainage systems	✓ Policies and guidelines on health, sanitation, hygiene and environment (environmental protection procedures, waste disposal, etc.) ✓ Environmental protection and healthcare activities (public healthcare network, forest/water protection group, waste collection, etc.)	✓ Community experience and awareness on disease treatment (using herbs, community clinics, etc.) ✓ Community awareness on environmental protection ✓ Healthy habits, good water consumption and waste disposal practices

ANNEX 4: GUIDANCE NOTES FOR TECHNICAL ASSISTANCE GROUP

The TAG is divided into small groups to implement the CBDRA tools. Each tool requires at least one facilitator and one secretary.

Facilitator	
Roles	• Guide participants in using the tools and encourage discussion to achieve initial goals. • Assign detailed tasks to participants.
Activities	• Introduce the assessment tools to participants. • Guide and provide the discussion questions. • Facilitate discussion to ensure all participants contribute their opinions, especially vulnerable people. • Describe the community's opinion to ensure that facilitator understands correctly. • Integrate awareness raising to the community during discussion. • Manage time.
Attitude, skills	• Being flexible, patient, encouraging and humorous is an advantage. • Create a comfortable atmosphere. • Avoid using complicated terminology, should use local words. • Be a guide instead of leader, encourage community participation. • Listen carefully to all opinions from participants; do not impose own opinions on participants without clearly discussing.

Secretary	
Roles	• Take notes on all important information and related comments during assessment.
Activities	• Bring necessary equipment to organize the assessment. • Observe and take notes on information discussed during the meetings and inform the facilitator about important information. • Support the main facilitator to encourage discussion. • Support participants working in groups to take notes and comment on paper/map, ensure information is correct and logical, keep to time and help with venue.

Attitude, skills	• Be a good note-taker and observer. • Ability to present information in a logical manner and synthesize information

ANNEX 5: GUIDANCE NOTES FOR ASSESSING VULNERABLE GROUPS

For specific vulnerable groups such as children and the disabled, please refer to tools and assessment notes from expert organizations such as for children Live & Learn, Plan, Save the Children and the German Red Cross, and for the disabled Malteser and DRD.

Target Group	Factors Contributing to Vulnerabilities	Capacities	Recommendations for Community-Based Disaster Risk Assessment
Children	✓ Do not have adult's physical strength ✓ Curiosity can lead to risky situations ✓ Do not have experiential knowledge that adults may have ✓ Less able to control emotions and may experience psychological effects due to distressing situations	✓ Can contribute considerably to support family and community during initial impacts and after a natural disaster ✓ Older children can take care of younger children ✓ Support network for peers ✓ Can organize volunteer groups to promote protection and safety of children in school and communities ✓ Ability to learn fast ✓ Naturally are more flexible to think outside of the box compared to adults	✓ Collect information on the number of children by age and gender (children have specific needs depending on gender and age) ✓ Children see things from a different perspective to adults given the different ways they interact with their environment and the nature of social networks. Therefore, CBDRA activities with children are likely to yield additional information ✓ CBDRA with children should be age specific. Younger children might need more guidance, such as for drawing pictures. Children of 10 years and older may be able to participate in group discussions or even a workshop to investigate vulnerability and capacity ✓ Mapping is a very effective tool for children because they often spend more time in their neighborhood than adults in certain areas (especially urban areas) ✓ Focus group discussions with children often provide useful information on social issues that may not be perceived as such by adults ✓ Children, adolescents and young adults are going to experience the most change out of anyone in the community during their lifetimes. It is important to gather not only

			information from them but also ensure that they participate both in discussions about change and the chosen strategies to deal with it
Women	✓ Physical factors: pregnancy, physical strength, clothing ✓ Reproductive health needs (pregnancy, child birth) ✓ Cultural devaluation of women/girls in some regions ✓ Social exclusion of single women (e.g. widows and female household heads) ✓ Different employment opportunities and lower pay than men ✓ Less opportunity and experience to raise their concerns ✓ Less access to information	✓ During and after natural disasters women play an important, impassive role in response and recovery ✓ Families with a female head are not necessarily the poorest or most vulnerable ✓ Women are not financially dependent; they are e.g. laborers and social workers and have their own income ✓ Women have a unique gender perspective that is vital in decision-making	✓ Mobilize women and men equally in CBDRA ✓ Encourage focus group discussions with a female facilitator with women in the community ✓ Collect data on gender (total number of women, including data on pregnancy and breast-feeding mothers) ✓ Identify and assess gender needs ✓ Identify and support women's contributions to propagate disaster information as well as disaster prevention and preparedness in schools and households, as well as community solidarity, community awareness, first aid, etc.
Elderly	✓ Physically weak and poor health ✓ Financially insecure ✓ Might not want to leave their homes ✓ Lack of access to information	✓ Have traditional knowledge and experiences about natural disasters ✓ Respected and influential in the community (may play an important role	✓ The elderly have an important role when discussing and using the Historical Timeline and other tools ✓ The elderly provide experience and historical information, which may help to identify future trends (especially impacts of climate change) ✓ Using these tools is also a good

	✓ Do not want to be a burden to their children and so they may not easily accept help	for CBDRA) ✓ Historical knowledge	opportunity to share historical information with younger members of the community
People with disabilities	✓ No access to or less ability to access supported resources ✓ Social exclusion ✓ Limited livelihoods options ✓ Limited access to evacuation (and information) during a disaster ✓ Difficulties in life, especially economic ✓ Lack or no access to their rights and policies for people with disabilities (part of society unaware of the rights of people with disabilities) ✓ Low self-esteem and complex ✓ Isolation from family and community	✓ Can be mobilized in awareness raising and dissemination of information ✓ Can play a vital role in disaster response and rescue actions (such as support staff, etc.) ✓ May participate to maintain social networks ✓ The experiences of people with disabilities can be drawn on when planning safer communities (an inclusive community is safer for all inhabitants)	✓ There are different types and degrees of disability (physical, hearing/speech, visual, intellectual, mental illness). This has implications when conducting the CBDRA ✓ Need to mobilize people with disabilities in the CBDRA ✓ Always consider how to eliminate obstacles for people with disabilities when participating in community activities ✓ During natural disasters, the people who assist people with disabilities may also need support ✓ Group discussions with people with disabilities should be held to ensure they have the opportunity to present their views and ideas ✓ Encourage people with disabilities to participate in mapping (to ensure that everyone can understand and use evacuation routes) ✓ Communicate directly with people with disabilities because they are the best source of information regarding their needs ✓ Prepare to implement the assessment with alternative communication tools (drawings, symbols, body language, etc.). Ensure messages and tools are communicated through multiple formats and are suitable for people with disabilities
Ethnic	✓ Lack of access to education and	✓ Good community	✓ Investigate indigenous capacities

minorities	safe skills in disasters ✓ Often live in isolated and dangerous areas with poor infrastructure ✓ Little understanding by others of ethnic minority customs and traditions ✓ High levels of poverty ✓ Income depends on weather and environmental conditions ✓ Lack of understanding of common languages	support to each other ✓ Good natural shelter ✓ Culture and tradition are passed on from generation to generation ✓ Knowledge on how to use local ingredients and materials ✓ Mobilize strengths of the community ✓ Indigenous knowledge on coping with disasters	to cope with disasters ✓ May provide important information on the impacts of climate change when using Historical Timeline and other related tools ✓ Prepare an interpreter when there is a language barrier
Poor	✓ No stable job, low income ✓ Temporary housing ✓ Mostly internal migrants ✓ Low level of access to education ✓ Lack capital funds and often have to work excessive hours ✓ Health problems due to lack of access to medical treatment ✓ Live in poor environmental	✓ Diversity in livelihoods leads to capacity to recover quickly ✓ Willing to support others in the community ✓ Flexible in seeking livelihoods ✓ Adapt quickly to new living environment	✓ Arrange suitable time to mobilize participation from poor population in each area ✓ Investigate the root causes of poverty, which are also the causes of vulnerability to natural disasters

	conditions ✓ Often have to care for many children ✓ Low social cohesion amongst new migrant populations ✓ Susceptible to social negatives and inequalities in society ✓ Difficulty in accessing social and public services such as hospitals, schools, etc. ✓ Agriculturally dependent, leading to high vulnerability to natural disasters		

Vulnerability Table

No	Vulnerable Items	Unit	Total in commune	Village					Notes
				1	2	3	4	etc	
I	***People***								
1	Children	Person							
2	Elderly	Person							
3	People with disabilities	Person							
4	Pregnant women or women with children less than 12 months old	Person							
5	Single women	Person							
6	Poor households	Household							
7	People with chronic illnesses	Person							
8	Number of people evacuated before disaster	Person							
	etc.								
II	***Infrastructure***								
1	Temporary houses	House							
2	Houses near rivers, low lying areas	House							
3	Houses near mountains, hillsides, slopes	House							
	etc.								
III	***Production***								
1	Flood-prone areas	Ha							
2	Drought-prone areas	Ha							
	etc.								

ANNEX 6: BASIC INFORMATION COLLECTION TEMPLATE

1. Geographic profile

(Summarize information on commune's geographic location, landscape and border)

2. Population situation

2.1 Population situation

Population	Commune/village		
	Total	Male	Female
Number of households			
Number of people			
Number of poor households			
Working age population (18-60 years)			
Vulnerable populations:			
Elderly			
Children			
People with disabilities			
Pregnant women or women with children less than 12 months old			
People with chronic conditions			

2.2 Population distribution

No	Village	No. of house holds	No. of people	No. of poor households	Vulnerable people				
					Elderly	Children	People with disabilities	Women	People with chronic conditions
1.									
2.									
3.									
4.									

5.									
6.									
7.									
8.									
	Total								

3. Usage of land, water, forests (natural resources)

No	Type of land	Area (Ha)	Type of production
	Total area of natural land		
	Available land		
	Agricultural land		
	Rice plantations		
	Plantation of long-term plants		
	Forest		
	Aquaculture		
	etc		
	Other		

4. Production and economic activities

No	Production, economic activities	Area/scale	Per cent of households participating	Average income (person/year)
1	**Agricultural production** - *Land* - *Crops* - *Industrial plants*			
2	**Forestry production**			
3	**Small-scale handicrafts**			
4	**Small-scale commerce**			

5	**Aquaculture production**			
6	**Services**			
7	**Other**			

5. Infrastructure

No	Infrastructure	Year of building	Quantity/quality	Notes *(Specify current conditions)*
1.	Electricity			
2.	Transportation – roads			
3.	Schools - Primary - Secondary - Technical			*(For each level, list the number of schools, classes, students – whether they meet the national standards? Buildings?)*
4.	Kindergarten			*(For example, whether they are degraded or overloaded)*
5.	Medical center			*(Whether they meet the national standards?)*
6.	Public offices - Commune People's Committee office - Village People's Committee office			*(Do they meet the national standards?)*
7.	Multi-purpose shelter			
8.	Market			
9.	Water station			
10.	…			

6. Housing

No	Village	Number of households	Stable house (level 1, 2, 3)	Semi-stable house (level 4)	Temporary housings
1					
2					
	Total				

7. Clean water, health, sanitation, hygiene and environment

Village	No. of households	Source of clean water				Toilet		
		Well	Tank	Public water station/pump	No. of container	Flush	Makeshift	None
Total								

8. Healthcare (common local diseases related to natural disasters)

Types of diseases	Target *(indicate number of people and year)*					
	Children	Women	Men	Elderly	People with disabilities	People with chronic conditions
Malaria						
Respiratory infection						
Dermatology diseases						
Other						

9. Natural disaster prevention and control measures

Describe:

- *The provincial natural disaster prevention and control measures*
- *Cooperation amongst organizations and institutions in disaster prevention and response*
- *Disaster prevention and search and rescue plans*
- *Disaster prevention infrastructure and equipment:*
    - *Equipment used during disasters (boat, lifesavers, cart, etc.)*
    - *Equipment (loudspeaker, telephone, telecommunication, television, etc.)*
    - *Disaster prevention infrastructure (dyke, embankment, boat, warning signals)*

ANNEX 7 LIST OF DISASTER RISK REDUCTION MEASURES

List of disaster risk reduction measures before, during and after natural disasters

Before Disaster	During Disaster	After Disaster
✓ Construction: build disaster preparedness construction, reinforce and repair houses and important infrastructure, etc. ✓ Information system: develop early warning system, communication, rescue and evacuation plan; etc. ✓ Policy and strategy: develop related policy, develop annual NDPCP etc. ✓ Livelihoods activities: develop harvest calendar to avoid impacts from natural disasters; change the crop and livestock schedule to suit changing weather, etc. ✓ Training to raise community awareness: organize search and rescue, and mock drill groups; disseminate knowledge and build capacity for the community, etc. ✓ Other disaster preparedness activities: store food, water, medicine and seeds, etc.	✓ Emergency aid: launch emergency plan; search and rescue ✓ Evacuation: Evacuate the community to a safe place, etc. ✓ Healthcare: provide healthcare, provide emergency food aid; etc. ✓ Hygiene and sanitation: ensure clean water and hygiene level, etc.	✓ Support recovery after natural disaster to ensure basic community services: accommodation, health, sanitation, hygiene, environment, transportation, production, etc. ✓ Infrastructure recovery: repair, reinforce dams, roads, etc. ✓ Communication: raise awareness and preparation against diseases; hygiene and sanitation, etc.

List of structural/non-structural disaster preparedness measures:

INFRASTRUCTURE	NON-INFRASTRUCTURE
Infrastructure implemented at the village level: ✓ Anti-flood infrastructure: small construction for riverbank reinforcement, small irrigation and drainage, etc. ✓ Clean water, sanitation and hygiene construction ✓ Transportation: improve dirt tracks, inter-village bridges, etc.	✓ Necessary storage: food and clean water, medicine, savings, etc. ✓ Health, sanitation, hygiene and environment: training on common diseases, water filters, water treatment pills, waste treatment, etc. ✓ Livelihoods: consult and train on diversifying crops, agricultural extension, livelihoods, credit support, etc. ✓ Information systems and disaster preparedness

✓ Accommodation: build shelters, People's Committee offices cum evacuation points, reinforce makeshift housing, renew anti-typhoon houses, etc. ✓ School: build kindergarten, etc. ✓ Healthcare: develop and reinforce medical stations, etc. ✓ Communication system: reinforce equipment and communication system (village broadcast, radio, loud speaker), etc.	planning: develop map of flood and risk areas, early warning system for the community, etc. ✓ Prepare equipment: telephone (including cell phone), boats, lifesavers, radio, etc. ✓ Capacity building for the community: develop evacuation plans, rescue teams, training for commune staff and rescue teams, develop communication plans and programmes, integrated education programmes and extra-curricular activities for students, training, awareness-raising for the community and in school, etc.

ANNEX 8: CBDRA REPORT TEMPLATE

Commune **SOCIALIST REPUBLIC OF VIETNAM**

Number..... **Independence – Freedom – Happiness**

Commune … date … month … year …

REPORT

COMMUNITY-BASED DISASTER RISK ASSESSMENT

Commune ….District… Province ….

I – COMMUNE INTRODUCTION

II – DISASTER RISK ASSESSMENT RESULTS

A – BASIC INFORMATION

(Information taken from basic information collection template, Annex 6)

1. Geographical profile
2. Population
3. Usage of land, water, forests (natural resources)
4. Production and economic activities
5. Infrastructure
6. Accommodation
7. Clean water, health, sanitation, hygiene and environment
8. Healthcare (diseases related to disasters)
9. Disaster prevention and control activities

……

B – ASSESSMENT OF NATURAL DISASTERS, VULNERABILITIES, CAPACITIES AND AWARENESS OF PEOPLE ON DISASTER RISKS

1. Assessment of natural disasters in the local community

- General assessment:
- Historical Timeline (Table 2.1)

2. Assessment of vulnerabilities

- General assessment:
- Summary of vulnerabilities (Table 6.1, column 3)

3. Assessment of capacities

- General assessment:
- Summary of capacities (Table 6.1, column 4)

4. Assessment of awareness of people of disaster risks

C – SYNTHESIS OF DISASTER RISKS AND DISASTER PREVENTION AND CONTROL MEASURES

1. Synthesis of disaster risks

- Comments: *(based on the disaster risk assessment tool, comment on the disaster risks in the local area, according to the three sectors: community safety; production and economic; and health, sanitation, hygiene and environment. From the ranking tool, summarize priorities and concerns of the community according to the different community groups).*
- Synthesis of Disaster Risks and Ranking (Table 6.1 – column 5 and Table 8.1 – column 1 and 2).

2. Synthesis of disaster prevention and control measures

- Synthesis of disaster prevention and control measures (Table 8.1 – column 5 and Table 9.1)

D – CONCLUSION AND SUGGESTIONS

- At the village level: *(summarize concerns, suggestions and priority measures at the village level)*
- At the commune level: *(summarize concerns, suggestions and priority measures at the commune level)*
- Suggestions to the authorities and stakeholders: *(summarize suggestions to the authorities and stakeholders to consider for support and cooperation)*

REPRESENTING THE COMMUNE'S PEOPLE'S COMMITTEE

(Commune leader)

Annexes attached to CBDRA report:

Annex 1. Introduction to the goals and method of assessment

Annex 2. List of participants in CBDRA

Annex 3. Assessment schedule in the local community

Annex 4: Results of assessment

ANNEX 9: CBDRA COMPLETED TOOL EXAMPLES

9.1. Historical Timeline Tool

Time: 2003 – 2013
Commune: Nghi Thai

Date (Year/ Month)	Type of Natural Disaster	Characteristics and Disaster Trends	Areas Damaged	Kind and Scale of Damage	Cause of Damage	What Did the Community do to Prepare and Respond
2003 (April - May)	**Mid-summer flood**	Sudden, after three days of heavy downpour, the first time in seven years	Whole commune	• 294 ha of rice and crops area not harvested in time • Rice prematurely develops seedlings • Crops (peanuts, corn, etc.) in low-lying fields are spoiled	• Fields are at low level • Youth and men do not work at home, thus there are not enough workers • Flood is too abrupt and the crop cannot be harvested in time	
2004 (July)	**Typhoon**	Winds at level 9-10, lasting two hours	Thai Cat, Thai Quang, Thai Binh	• 32 houses in three coastal villages had their roofs blown off	• Solitary households are unable to reinforce their roofs • Some households with metal roofs were complacent and did not reinforce their roofs	• Mobilized local forces to help rebuild houses

Date (Year/ Month)	Type of Natural Disaster	Characteristics and Disaster Trends	Areas Damaged	Kind and Scale of Damage	Cause of Damage	What Did the Community do to Prepare and Respond
2006 (July - August)	**Drought**	Happened late, high temperatures 39-40^{o}C	Whole commune	• Conjunctivitis (children, women) • Lack of water for everyday use • Lack of water for plants, reduced crops yields by 50% compared to previous year	• No awareness how to store water (70% of households do not have water containers) • 100% of the irrigation system is made from soil, losing water easily	• No solution currently, only 45 ha of winter-spring rice crops watered actively • Each household found or bought clean water from nearby communes
2007 (September)	**Typhoon, flood**	Happened late, high winds accompanied by strong downpours lasting seven days, causing flooding	Whole commune	• Students had to stay at home for one week • Three fishermen died • Three houses in Thai Hoc village collapsed and 18 other houses were damaged • Rice died after planting (60-70%), reduced winter crop yield (96 ha) • Environmental pollution	• Road was flooded with 0.5m, unable to travel, no boat to travel • Lack communication with fishing boats • Weak houses, no reinforcement • Low-lying rice field and no water drainage system	• Bought fertilizer and re-planted crops • Households helped each other in recovery, cleaning and spraying disinfectants
2009 (December -	**Cold**	Three cold waves, starting earlier and	Whole commune	• Many elderly people and children were sick	• Elderly people with few offspring lack	• Some households sheltered their

Date (Year/ Month)	Type of Natural Disaster	Characteristics and Disaster Trends	Areas Damaged	Kind and Scale of Damage	Cause of Damage	What Did the Community do to Prepare and Respond
February)		ending later, temperature of 10-14^{o}C		• Livestock caught foot and mouth disease. 100% of poultry caught the plague and had to be burnt. Crop yield reduced by 30% compared with previous year	amenities • No vaccinations. No shelter for animals. Lack shelter technique for crops	animals • Most households had spare food for animals
2010 (July - September)	**Typhoon, flood**	Early typhoon, winds stronger than level 12, strong downpours lasting two weeks and two floods	Whole commune (Flooding in Thai Cat, Thai Quang and Thai Binh)	• Two primary schools had roofs blown off • Students had to stay at home • 30 houses had their roofs blown off • Crops lost (100%)	• Outdated school buildings, no reinforcement before typhoon • Road to school is low-lying and flooded, unable to travel • Houses are not reinforced • Crop fields are low-lying and lack proper drainage system	• Coastal families prepared with food and medicine, reinforced houses before typhoon • Mobilized local force to rebuild roads
2010 (November -	**Cold**	Happened exceptionally early,	Whole commune	• Seedlings died, crop yield reduced by 80%	• Lack measures against cold	• Made nylon covers for rice seeds

Date (Year/ Month)	Type of Natural Disaster	Characteristics and Disaster Trends	Areas Damaged	Kind and Scale of Damage	Cause of Damage	What Did the Community do to Prepare and Respond
December)		long lasting, temperatures of 8-10^{o}C.		• Plague outbreak amongst animals • Lack of food for livestock	• Animal sheds are not sheltered completely, no food storage for animals	
2011 (March - July)	**Drought**	Happened early and ended late, lasted for a long time, temperature of 39-40^{o}C	Whole commune	• Conjunctivitis and gastrointestinal diseases (children) • Lack of water for production and everyday use • Plague, poultry died in large numbers • Lack of food for animals	• Lack of awareness on disease prevention • Irrigation system made of soil, leads to loss of water • No drought-resistant crops • Did not store food for animals due to complacency	• The commune had encouraged local people to vaccinate and store food from the beginning of the year
2013 (April)	**Whirlwind, heavy rain**	The first time in many years and accompanied by heavy rains causing flooding	Thai Cat, Thai Quang and Thai Binh	• Ten houses had their roofs blown off • Rice yield reduced by 30%	• Local people were surprised and did not reinforce houses • Crops were uprooted and flooded	• Households helped each other in recovery

Synthesis results from historical timeline tool

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
Typhoon	Typhoons are unpredictable. Often accompanied by heavy rain, strong winds and flood.	**Physical aspects:** • Degraded houses of poor people and solitary households • Degraded primary schools • Lack of communication with ships **Awareness, experience and attitude/motivation aspects:** • Many households are complacent and do not reinforce houses • Complacent to not harvest earlier **Social/organizational aspects:** • Warning is not in time • Solitary households just have women and children at home. Youth and men work far from home, lack of people to support before a typhoon	**Awareness, experience and attitude/motivation aspects:** • Coastal households are experienced in typhoon preparedness **Social/organizational aspects:** • Mobilize forces and neighbors to support with rebuilding houses after a typhoon • Households help each other in recovery, cleaning and spraying disinfectants	**Community safety aspects:** • Loss of lives • Damaged houses and schools • Students have to stay at home **Production and economic aspects:** • Lost or reduced yields of crops and rice • Deaths of animals (poultry and livestock)
Flood (two floods)	Accompanied typhoon	**Physical aspects:** • Roads to schools in low-	**Awareness, experience and attitude/motivation aspects:**	**Community safety aspects:** • River bank erosion

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
		lying areas are flooded, unable to travel • Lack of boat to travel in flood season • Crops and breeds dependent on weather • Fields in low-lying areas, lack of drainage system	• Active to fertilize and replant areas which can be saved • Households help each other in recovery, cleaning and spraying disinfectants	• Casualties • Students have to stay at home **Production and economy:** • Low yield, loss of crops and food due to flood **Health, sanitation, hygiene and environment aspects:** • Pollution
Drought	Start early and end early, lasting longer, high temperatures of 39-40^{o}C.	**Physical aspects:** • People lack drought-resistant seeds • 100% in-field irrigation system made from soil and easy to lose water **Awareness, experience and attitude/motivation aspects:** • Not proactive in storing water • Not proactive in storing food for animals • Lack knowledge in disease prevention and lack experience in dealing with drought • People lack drought-	**Physical aspects:** • There are about 45 ha of winter-spring paddies watered by pump **Awareness, experience and attitude/motivation aspects:** • Households find or buy clean water from communes nearby **Social/organizational aspects:** • The commune encouraged people to vaccinate and store food from the beginning of the year	**Community safety aspects:** • Lack of water for everyday use **Production and economy:** • Lack of water for production **Health, environment sanitation and hygiene aspects:** • Conjunctivitis and gastrointestinal diseases in children • Diseases in animals

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
		resistant seeds.		
Cold (two times)	Sudden, starts early, temperatures of 8-10^{o}C	**Awareness, experience and attitude/motivational aspects:** • Many households are complacent and did not vaccinate or store food for animals • Do not provide shelter for animals (50% people) • Lack of knowledge on anti-cold measures for animals and crops	**Awareness, experience and attitude/motivational aspects:** • Some households apply anti-cold measures and store food for animals • People know to use nylon covers over seeds	**Community safety aspects:** • Elderly and children are sick **Production and economy aspects:** • Reduced yield production and breeding
Mid-summer flooding	Sudden	**Physical aspects:** • Most rice and crop areas are located in low-lying fields **Awareness, experience and attitude/motivation aspects:** • Lack workforce to harvest because youth work in faraway places		**Production and economic aspects:** • Loss of yield for winter-spring rice and seasonal rice plants

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
Whirlwind, heavy rain (two times)	Sudden after many years and heavy rain causes flooding	**Physical aspects:** • Many households live in simple housing **Awareness, experience and attitude/motivation aspects:** • People are caught by surprise and cannot reinforce houses on time	**Social/organizational aspects:** • Households help each other in recovery	**Community safety aspects:** • Damaged houses **Production and economic aspects:** • Reduced yield of winter-spring rice

9.2. Seasonal Calendar

Legend: *(i) Season* *(ii) Thiên tai trước đây* *Disaster trend.....*

Events/ Activities	Month (Solar calendar)												Effects/Trends of social and economic activities. Why? Experiences in disaster prevention and response?
	1	2	3	4	5	6	7	8	9	10	11	12	
Winter-spring rice plantation	*Plant*	*Women: tending, fertilize, weeding. Men: spraying pesticides, field visit*			*Harvest* *Women reap and men transport*								**Cold snap:** 50% reduced yield due to dying seeds, women have to plant again. Infrequent field visits to detect diseases in time. 70% of households trained in tending to crops in cold weather (making nylon houses, using stove residue or rice husk, etc.) but many households did not follow procedures. **Drought**: 75 ha winter-spring rice plantation lack water, depend on rain. There are 45 ha watered by water pump. **Mid-summer flooding:** Did not harvest on time because of lack of workers when flooding happened suddenly. Mobilized local forces to protect property.
Seasonal							*Plant*				*Harvest*		**Drought:** 69 ha rice fields lack water,

rice plantation												dependent on rain. 45 ha watered by water pump. **Typhoon, flood:** 60 ha rice affected (reduced yield) due to low-lying location and lack of drainage.
Summer – autumn rice plantation						*Plant*			*Harvest*			**Drought:** Yield reduced because 50 ha rice dependent on rainwater **Typhoon, flood**: 40 ha rice reduced yield, flooded due to low-lying location and lack of drainage. No tool for drying leads to seedlings prematurely developing in rice Farmer's Union encourages people to use fast growing seeds. The district provides new seeds.
Spring – summer crops (peanut, corn)		*Plant*			*Harvest*							**Cold snap**: 30% of seeds died, bad growth, reduced yield due to lack of experience against cold and inappropriate seeds. There are around 20 households that implemented the anti-cold procedures correctly.
Summer – autumn crops (peanut, corn, sesame)						*Plant*						**Typhoon, flood:** 20 ha crops flooded, spoiled; yield reduced due to low-lying field. **Drought:** 200 ha lack water. Lack of drought-resistant seeds.
Autumn – winter									*Plant*			*Harvest* **Typhoon, flood:** 60 ha crops flooded, crops spoiled, yield reduced due to

crops													low field.
Pasturing													**Cold snap**: 50-100% poultry caught disease; livestock slow development due to lack of vaccination, shelter and food. 70% of people are not equipped with necessary skills in pasturing and anti-cold measures. **Drought**: Diseases and lack of food **Typhoon, flood**: Floating, death, plague, lack of food.
Extra work													Youth travel to other places to find more income.
School year													Students have to stay at home at the beginning of the school year due to typhoon and flooding.
Festival													
Disaster	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***	***9***	***10***	***11***	***12***	**Trends**
Typhoon							*Peak*						Starting earlier. Ending later and becoming unpredictable. Shorter intervals.
Flood								*Peak*					Starting earlier. Prolonged rain (10 days instead of three days previously).
Drought				*Peak*									Starting earlier (March-June) and ending earlier (July-August). Temperatures of 39-40^{o}C.
Cold	*Peak*												Starting earlier. Low temperatures (8-

													10^{o}C instead of 10-14^{o}C).
Mid-summer flood				*Peak*									Unpredictable and irregular.
Whirlwind					*Peak*								Irregular.

Seasonal Calendar Synthesis

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
Typhoon, flooding	Typhoons coming earlier, ending later and unpredictable, strong, intense and accompanied by floods. Closer intervals. Floods coming earlier, prolonged rain (10 days) caused flooding. Often accompanied by heavy rain, strong winds and flood.	**Physical aspects:** • 120 ha of low-lying areas are flooded. • No tool for drying, seedlings prematurely developing in rice.	**Awareness, experience and attitude/motivation aspects:** • Mobilize forces to replant. **Social/organizational aspects:** • Farmer's Union mobilizes people to use fast growing rice seed. • The district supports rice seed.	• Seed rot caused by prolonged flooding. • Late crop due to replanting (costs labor and expenses to buy seeds). • Lost or reduced rice and crop yields.
Drought	Come earlier (February/June) and end earlier (July/August), high temperatures of 39-40^{o}C.	**Physical aspects:** • 400 ha (120 ha spring-winter rice; 50 ha autumn-summer crops (corn and peanut)) lack sufficient water, dependent on rainwater. • 100% in-field irrigation system made from soil. **Awareness, experience and attitude/motivation aspects:** • People lack drought-resistant seeds. • Not proactive in storing food for animals.	**Physical aspects:** • There are about 45 ha of winter-spring paddies watered by pump, which was invested by the village. • There is a project to develop an irrigation channel for 70% of the area.	• Reduced rice and crop yields due to lack of water.
Cold snap	Come earlier. Lower	**Awareness, experience and**	**Awareness, experience and**	• Seed prematurely develop in

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
	temperatures of 8-10^{o}C (previously 10-14^{o}C).	**attitude/motivation aspects:** • Irregular field visits lead to late detection of diseases. • Many households are complacent and did not apply anti-cold procedures (open nylon houses on sunny days). • Do not provide shelter to animals, vaccinate or store food for animals.	**attitude/motivation aspects:** • Some households apply anti-cold measures such as using stove residue and rice husks, covering seeds with nylon, etc. **Social/organization:** • 70% of people equipped with pastor skills and anti-cold measures.	rice due to not harvesting in time.
Mid-summer flood	Irregular	• Lack workforce to harvest because youth work in faraway places.	• Mobilize local people to harvest and protect property.	• Loss of yield for winter-spring rice and seasonal rice plants.

9.3. Disaster Risk Map

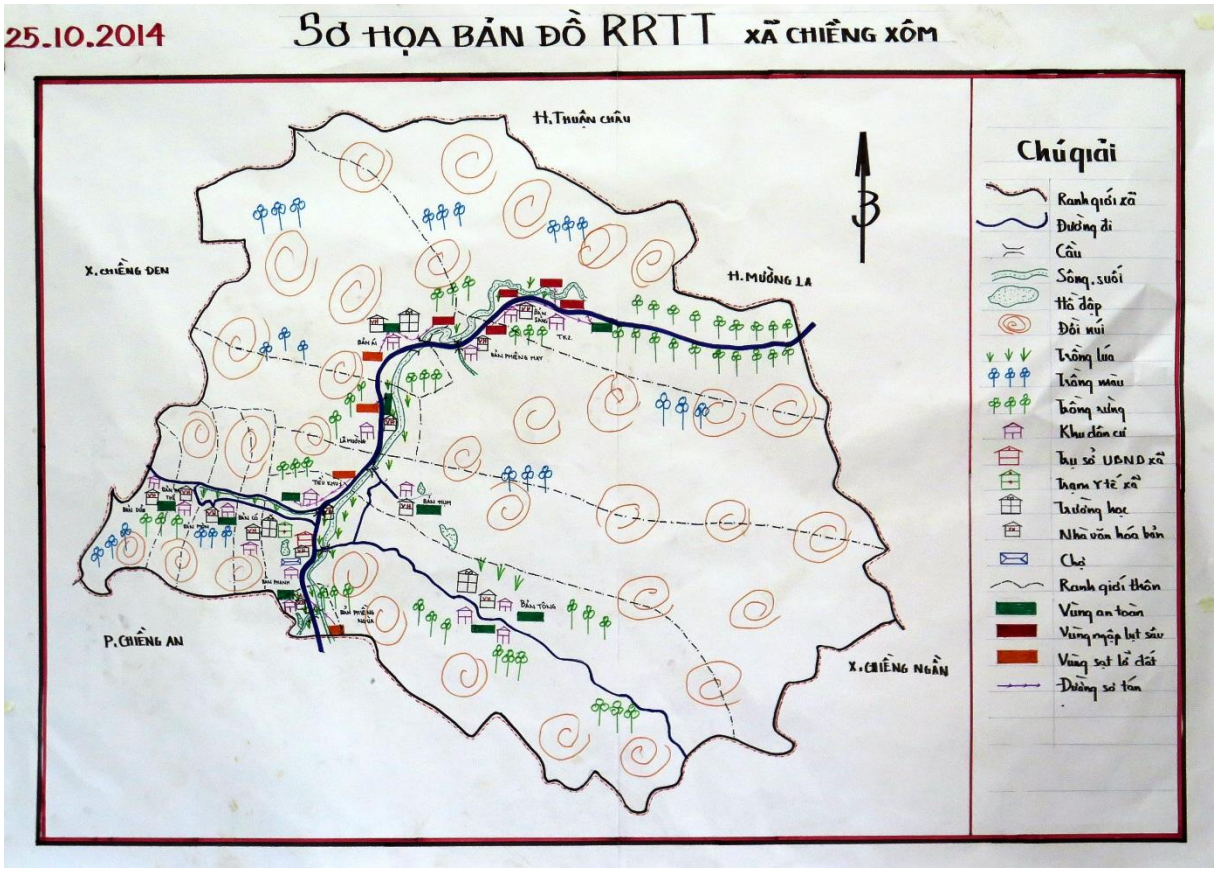


Photo 15: Disaster risk map of Chieng Xom commune, Son La city, Son La province (Source: Nguyen Duc Thien)

Disaster Risk Map Synthesis - Nghi Thai Commune

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
Typhoon		**Physical aspects:** • 30% degraded houses of poor and solitary households. • Two degraded primary schools: glass windows and weak metal roof. • Communication system from commune to village is damaged and not fixed, thus warnings do not reach people. **Awareness, experience and attitude/motivation aspects:** • Complacency regarding disaster preparedness. • There are more than 400 children under six years old and 75 people with disabilities. • Majority of labor force work far from home, elderly, women and children stay at home.	**Physical aspects:** • Each village has 4-8 stable houses to provide shelter. • The CPC office is newly built and can provide shelter. **Awareness, experience and attitude/motivation aspects:** • Coastal households are experienced in typhoon preparedness: storing food, medicine, reinforce houses.	• High risk village: Thai Cat, Thai Quang, Thai Binh. **Community safety aspects:** • Damaged houses. • Casualties (households that live in weak houses and fishermen).

Flood		**Physical aspects:** • 120 ha rice and crops located in low-lying fields. • Roads from low-lying villages to schools are not upgraded. • Warning signs at four dangerous locations are damaged. • Lack of drainage system.	**Social/organizational aspects:** • All villages have task forces trained in first aid. • Many youth concentrated in Thai Quang and Thai Hoc villages.	• High-risk area is 120 ha field in low-lying area between the village and school. **Community safety aspects:** • Women and children risk drowning. **Production and economic aspects:** • Loss of productive land due to landslides. • Low yields, loss of crops and food due to flood.
Drought		**Physical aspects:** • 100% in-field irrigation system made from soil. • 400 ha of rice and crops lack water. • 168 children from three villages use water from wells.	**Physical aspects:** • The commune has a clean water system and about 55% of households at central village level use water from pipes.	• Impacts all communes, particularly Thai Thinh, Thai Hoc, Thai So and Thai Phuc villages. **Community safety aspects:** • Lack of water for everyday use for households in highland areas. **Production and economic aspects:** • Reduced yields of rice and crops due to lack of water.

9.4. Strengths and Weaknesses in Natural Disaster Prevention and Response

Stakeholder	Strengths	Weaknesses
Local people	• Have experience in flood prevention and response: 60% houses reinforced and store food before disaster season. • People help each other with disaster prevention and control activities. • The association of fellow-countrymen and people who originate from the community often support households in difficult situations.	• 40% of households are complacent and dependent before disaster season. • Some solitary households and elderly are unable to cope with floods and typhoons. • High number of poor and semi-poor households. • Over 50% still have limited experience in preparing for drought and cold snaps. • Fishing households do not access information in time. • Most women and girls do not know how to swim.
Commune Committee for Natural Disaster Prevention and Control and other organizations	• The People's Committee and the commune committee for disaster prevention and control annually review the previous year's activities and develop detailed NDPCPs and present them at the commune/village meetings. There are clear assignment of tasks to each village and members. • Organizations: the Fatherland Front, Farmer's Union, Veterans' Union, Communist Youth Party and Women's Union in the commune and village always pay attention to disaster preparedness. • The authorities and schools cooperate well in case of flooding. • The CPC office is newly built and suitable to provide shelter.	• Limited funding. • Lack of equipment such as electricity generator, loudspeaker, large boats, etc. • Broadcast system from the commune to village is damaged and not fixed. • Lack of experience exchange regarding production during drought and cold snaps. • Many warning signals are damaged.
Village Task Force	• All villages have task forces and they are trained on	• Youth work far from home.

	rescue skills.	
Firms based in the commune		• Lack of cooperation with the authorities and community.

9.5. Synthesis of Natural Disaster Risks

Disaster	Disaster Trends	Vulnerabilities	Capacities	Disaster Risks
Typhoon	- Typhoons are unpredictable. Come earlier and end later. - Closer intervals. Length of a typhoon is longer. - Often accompanied by heavy rain, strong winds and flooding.	**Physical aspects:** • 30% degraded houses of poor and solitary households. • Two degraded primary schools: glass windows and weak metal roof. • Communication system from commune to villages is damaged and not fixed, thus warnings do not reach people. • Lack of people to harvest winter-summer rice crops when there is a typhoon. • Lack communication with fishing vessels. **Awareness, experience and attitude/motivation aspects:** • Complacency regarding disaster preparedness (not reinforcing houses). • There are more than 400 children under six years old and 75 people with disabilities.	**Physical aspects:** • Each village has 4-8 stable houses to provide shelter. • The CPC office is newly built and can provide shelter. **Awareness, experience and attitude/motivation aspects:** • Coastal households (60%) are experienced in typhoon preparedness: storing food, medicine, reinforcing houses. **Social/organizational aspects:** • Households help each other in recovery, cleaning and spraying disinfectants. • People originating from the community often come back to help families in difficult situations. • The People's Committee and Disaster Control Committee in the commune annually review the previous year's activities and develop detailed disaster control plans and present them at the	**Community safety aspects:** • Loss of lives. • Damaged houses and schools. **Production and economic aspects:** • Reduced yields of summer-autumn rice crops and winter crops. • Death of animals (poultry and livestock).

		• Fishing households do not have timely access to information. **Social/organizational aspects:** • The breadwinner is often away; mainly the elderly, women and children remain at home.	commune/village meetings. There are clear assignment of tasks to each village and members. • The authorities and schools cooperate well in case of flooding.	
Flood	- Come earlier. - Prolonged rain over 10 days (three days previously).	**Physical aspects:** • 120 ha rice and crops located in low-lying fields. • Roads from low-lying villages to schools are not upgraded. • Warning signs at four dangerous locations are damaged. • Lack of drainage system. • Lack of drying equipment, rice develops seedlings after harvest. **Awareness, experience and attitude/motivation aspect:** • Most women and girls cannot swim.	**Awareness, experience and attitude/motivation aspects:** • Mobilize human resources to re-plant rice. • Households help each other in recovery, cleaning, spraying disinfectants. **Social/organization** • Farmer's Union encourages people to use short-term seeds. • The commune provides new seeds. • All villages have task forces trained in first aid. • Many youth concentrated in Thai Quang and Thai Hoc village. **Social/organizational aspects:** • Fatherland Front, Farmer's Union, Veteran's Union, Communist Youth Party and Women's Union in the commune and	**Community safety aspects:** Women and children risk drowning. **Production and economic aspects:** • Loss of productive land due to landslides. • Low yield, loss of crops and food due to flood. **Health, environment sanitation and hygiene aspects:** • Pollution.

			villages always pay attention to disaster preparedness.	
Drought	- Come earlier (February/June) and end earlier (July/August) - Higher temperatures of 39-40^{o}C.	**Physical aspects:** • 100% in-field irrigation system made from soil and easy to lose water. • 400 ha (including 120 ha winter-spring rice, 50 ha summer-autumn rice, crops (corn and peanuts)) lack sufficient water, dependent on rainwater. • 168 children from three villages use water from wells. **Awareness, experience and attitude/motivation aspects:** • People lack drought-resistant seeds. • Not proactive in storing food for animals. • Lack knowledge in disease prevention and lack experience in dealing with drought (50% of people). **Social/organizational aspects:** • Lack experience in information	**Physical aspects:** • The commune has a clean water system and about 55% of households at central village level use water from pipes. • 45 ha of agricultural land is watered by a pump bought by the commune. • There is a plan to build an irrigation system that would meet 70% of water demand in 2013**.** **Social/organizational aspects:** • The commune encouraged people to vaccinate and store food from the beginning of the year.	**Community safety aspects:** • Lack of water for everyday use in households in remote areas (Thai Thinh, Thai Hoc, Thai So and Thai Phuc villages). **Production and economic aspects:** • Reduced yields of rice and crops due to lack of water. **Health, environment sanitation and hygiene aspects:** • Conjunctivitis and gastrointestinal diseases in children. • Diseases in animals.

		exchange about production options in drought.		
Cold snap	- Come earlier. - Lower temperature of 8-10^{o}C (previously 10-14^{o}C).	**Awareness, experience and attitude/motivation aspects:** • No regular field visit to discover diseases. • Many households do not apply anti-cold measures as a procedure (open nylon when it is sunny). • Lack knowledge in disease prevention and lack experience in dealing with drought (50% of people). **Social/organizational aspects:** • Lack of experience exchange regarding cold snaps.	**Awareness, experience and attitude/motivation aspects:** • Some households apply anti-cold measures such as using stove residue and rice husks, covering seeds with nylon, etc. **Social/organizational aspects:** • 70% of people equipped with pastor skills and anti-cold measures.	**Production and economic aspects:** • Reduced yield of winter-spring rice and winter crops. **Health, environment sanitation and hygiene aspects:** • Increased diseases in humans. • Animals catch diseases and die.
Mid-summer flood	Irregular	**Physical aspects:** • Most rice and crop areas are located in low-lying fields. **Awareness, experience and attitude/motivation aspects:** • Lack workforce to harvest because youth work in faraway places.	**Awareness, experience and attitude/motivation aspects:** • Mobilize local people to harvest as soon as possible.	**Production and economic aspects:** • Loss of yield for winter-spring rice and seasonal rice plants.
Whirlwind	Irregular	**Awareness, experience and attitude/motivation aspects:**	**Social/organizational aspects:** • Households help each other in recovery.	**Community safety aspects:** • Damaged houses.

		• Many households live in makeshift housing. • People are caught by surprise and cannot reinforce houses in time.		**Production and economic aspects:** • Reduced yield of winter-spring rice.

9.6. Ranking

RANKING **Village:…… Commune:……** **Number of participants: 16 men; 15 woman**				
Concerns/Risks	**Ranking for concerned risk**		**Total mark**	**Ranking**
	Male	**Female**		
Damaged houses and schools	135	104	239	3
Loss of/reduced yield of rice and crops	138	140	278	2
Students have to stay at home	111	99	210	5
Polluted environment	105	98	203	6
Diseases in humans	107	94	201	7
Diseases in plants and animals	98	135	233	4
Loss of productive land	81	75	156	9
Lack of potable water	93	98	191	8

Casualties	148	140	288	1

9.7. Cause Analysis

No.	Disaster Risks	Vulnerabilities	Causes	Solutions
1	Casualties	• Fishermen have no access to information. • Most woman and children do not know how to swim.	• Lack of communication with fishing boats. • Communication systems from commune to remote villages damaged and have not been fixed, people have not received warning information. • Low-lying roads from village to school have not been upgraded. • Warning sign of four dangerous areas are damaged.	• Increase the community awareness for fishermen to upgrade communication systems on boats. • Develop household disaster prevention and response plan to ensure the human resources or support with the participation of women and children. • Upgrade roads from low-lying village to school. Maintain and clear drainage system for road. • Equip students that live in the low-lying areas with life vests. • Repair the warning signs of dangerous areas. • Teach women and children how to swim.
2	Loss of/ reduced yields of rice or crops	• Most of the rice and crops are in low-lying fields. • Lack of drainage system. • Lack of labor to harvest winter-spring crops before a typhoon	• Irregular field-visits lead to late detection of diseases. • Many households are complacent and did not apply anti-cold procedures (open nylon houses on sunny days). • Do not share experiences of production options when drought occurs. • No tool for drying leads to seedlings	• Mobilize community to protect property. • Raising awareness and information sharing on production, treatment and coping with natural disasters, particularly drought and cold weather: technical measures, shelters, vaccination and food reserves. • Develop irrigation system. • Prepare drought resistant rice seed.

		comes.	prematurely developing in rice. • Lack workforce to harvest because youth work in faraway places, only women and children stay at home.	• Develop family disaster prevention and response plan to ensure the human resources or support with the participation of women and children.
3	Damaged houses and schools	• Many households have simple houses. • Two primary schools have deteriorated: weak glass windows and roof.	• People suddenly could not reinforce houses.	• Active to reinforce houses. • Support poor households to upgrade houses.

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