

COMMUNITY-BASED DISASTER RISK MANAGEMENT FOR LOCAL AUTHORITIES



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of reducing disaster risks
in Asia and the Pacific



The Partnerships for Disaster Reduction - South East Asia Phase 3 (PDRSEA3) program is jointly implemented by (ADPC) and the UNESCAP with funding support from the European Commission Humanitarian Aid Department (ECHO) under its 'Fourth DIPECHO Action Plan for Southeast Asia'. The one-year project, which commenced in February 2005, aims to establish an improved, enabling environment for CBDRM through promoting ownership in national programs and local entities, enhancing the capabilities of CBDRM practitioners and the expansion of new and strengthening of existing partnerships in Southeast Asia particularly in the target countries Cambodia, Indonesia, Lao PDR, Timor Leste and Vietnam.

The Asian Disaster Preparedness Center (ADPC), established in 1986 is a regional, inter-governmental, non-profit organization and resource center based in Bangkok, Thailand. ADPC is mandated to promote safer communities and sustainable development through the reduction of the impact of disasters in response to the needs of countries and communities in Asia and the Pacific by raising awareness, helping to establish and strengthen sustainable institutional mechanisms, enhancing knowledge and skills, and facilitating the exchange of information, experience and expertise.

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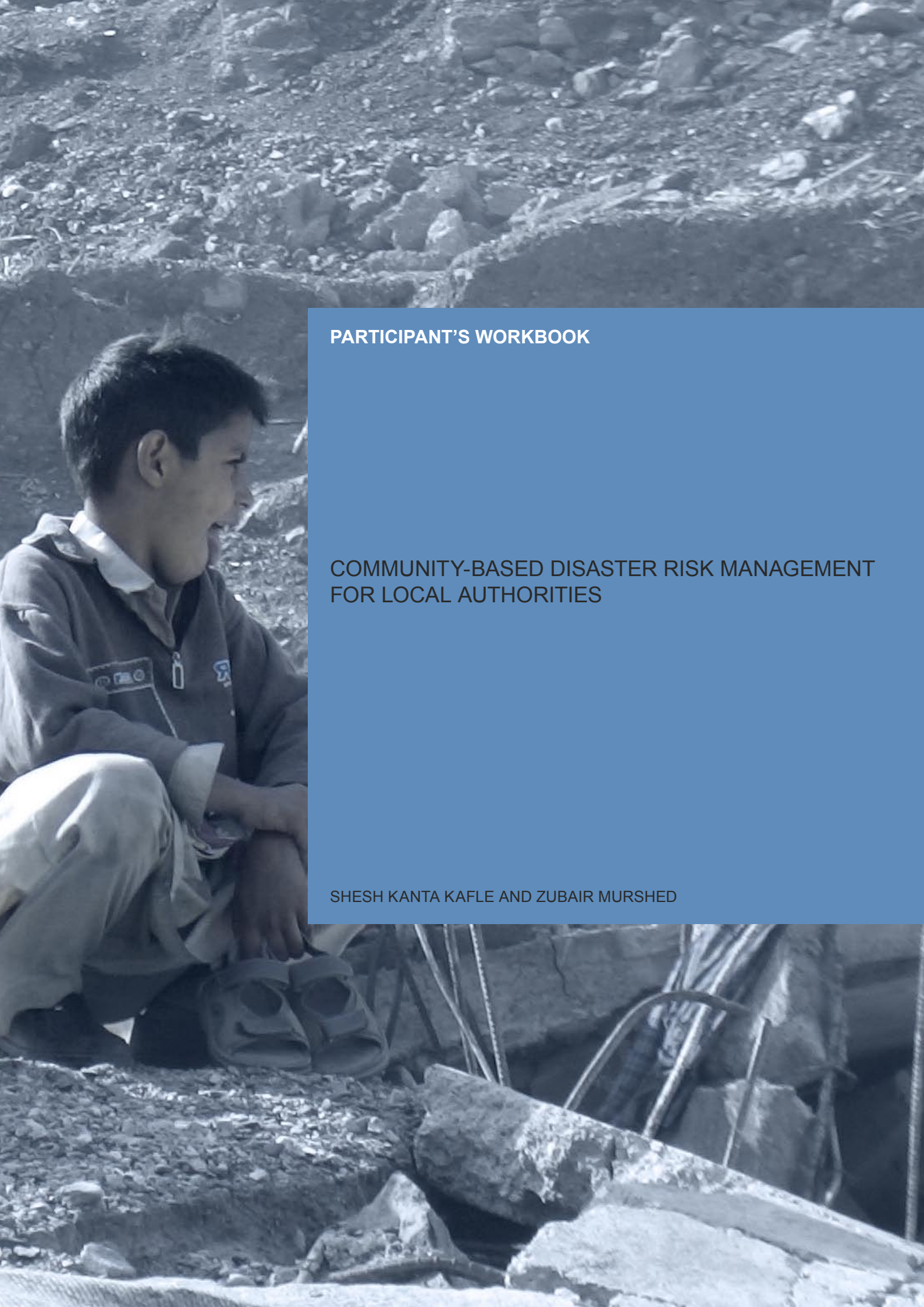
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PARTICIPANT'S WORKBOOK

COMMUNITY-BASED DISASTER RISK MANAGEMENT FOR LOCAL AUTHORITIES

SHESH KANTA KAFLE AND ZUBAIR MURSHED

**PARTICIPANT'S WORKBOOK
Community-based Disaster Risk Management for Local
Authorities**

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preface

*20 years of commitment to safer communities and
sustainable development through disaster reduction*

years

The Asian Disaster Preparedness Center celebrates its 20 year anniversary in 2006. I would like to take this opportunity to express my sincere appreciation to all its partner institutions, national governments, numerous UN organizations and other international organizations for their collaboration and support to ADPC during the past two decades. The work of all stakeholders in disaster management, including ADPC staff and alumni have contributed to making communities and countries better prepared, safer, and more resilient in face of disasters. ADPC is proud to have been a pioneer in some of the significant changes-in paradigm, concepts, and practices paving the way to reduction of the impacts of natural disasters.

ADPC was established in 1986 under late Colonel Brian Ward's illustrious leadership to address the disaster management needs of countries in Asia. In its twenty years ADPC responded dynamically to the paradigm shift in disaster management, readily and actively adjusting its operational strengths to address the evolving developments in disaster risk management by structuring its technical focus on climate risk management, disaster management systems, urban disaster risk management and public health in emergencies. This vigorous and comprehensive approach is further reinforced by ensuring that ADPC's projects and programs enhance institutional capacities, apply community-based disaster risk management practices, and promote and support mainstreaming of disaster management into the development processes. These activities complement ADPC's involvement in building national and provincial disaster management systems, identifying disaster risk management needs, and developing strategic solutions. ADPC's standing and twenty years of experience in the region is confirmed by the substantive encouragement and support from various multi-lateral and bi-lateral development and donor agencies; as manifested in the implementation of our extensive array of projects and programs.

As it moves forward beyond its twenty years of operations, ADPC will continue to build upon its operational and technical strengths and to evolve in its role as a regional resource center, and to act as a regional early warning center. ADPC will further pursue operational partnerships and collaborations with all stakeholders in disaster risk management into sustainable development policies and practices throughout the Asia and Pacific regions.

In closing, permit me to express my gratitude to our staff and consultants who have shared commitment, dedication and loyalty to ADPC's goals and mission.

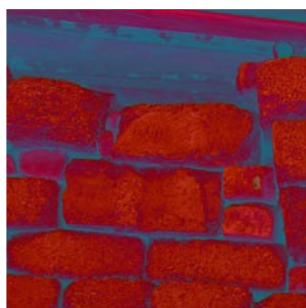
As its Executive Director, it is my honor to be part of this fine organization. I am confident that ADPC will continue to be responsive to the priorities of our key stakeholders in governments and the international community overcoming challenges to serve the region and beyond.

Message From Dr. Suvit Yodmani
Executive Director, Asian Disaster Preparedness Center

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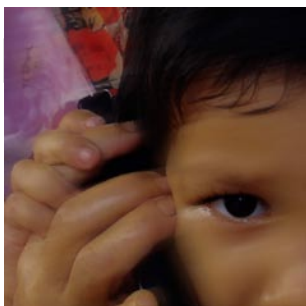
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The curriculum development workshop was facilitated by Ms. Zenaida Delica-Willison, of the UNDP South-South Cooperation; and Ms. Mayforth Luneta, from Center for Disaster Preparedness (Philippines). Based upon the feedback from the workshop, the curriculum was revised by Shesh Kanta Kafle and Zubair Murshed of ADPC.

introduction

> Purpose and Scope

The purpose of this workbook is to facilitate the capacity building of local government officials on Community-based Disaster Risk Management (CBDRM) in PDRSEA target countries including Cambodia, Indonesia, Lao PDR, Timor L este and Vietnam. It is expected that the workbook will be adapted and used by National Disaster Management Offices (NDMO) and NGOs in the countries of South East Asia for training the local government officials.

Target Users

The workbook is primarily intended for those who will train the lowest government political structure and those who will facilitate the implementation of CBDRM at the communities; e.g. district authorities giving training to village authorities. They can also be:

- NDMOs
- Trainers at district, provincial and commune levels
- Provincial government officials
- District government officials
- NGOs/CBOs
- Line Ministries
- International organizations; e.g. IFRC, National Societies

The primary beneficiaries of this workbook will be the local government officials who will do CBDRM activities. Secondary beneficiaries will include NGOs and other non-government organizations. This workbook is for the participants during a training course, and is not a manual of operations.

Methodology

The following steps were adopted while preparing the workbook:

- Review of existing training manuals and curricula in the region
- Discussion amongst ADPC staff members about the contents of the workbook
- Regional workshop on curriculum development for local authorities
- Revision on the basis of feedback from the Regional workshop

Training Modules

There are altogether 5 training modules and 20 training sessions in this workbook. The following topics have been covered:

Module 1: Introduction and Overview of Key Concepts

Module 2: Community Risk, Needs and Damage Assessment

Module 3: Disaster Risk Reduction Planning

Module 4: Community Managed Implementation

Module 5: Participatory Monitoring and Evaluation

Each module is structured as:

1. Learning objectives of the session
2. Key concepts
3. Reference materials: content of the session
4. References

Training Methods

This workbook can be used for both in-house training with field exercises and self-study. At the end of each session, note page for 'New Learning and Reflection' have been included.

Reference materials

The following publications were extensively consulted while preparing this handbook:

- ADPC, *CBDRM-11 Course Materials*, 2003.
- Abarquez, Imelda. and Zubair Murshed, *Community-based Disaster Risk Management: Field Practitioners' Handbook*, ADPC, 2005
- Kafle, Shesh Kanta. and Govinda, Koirala, *Chitwan District: Disaster Management Action Plan*, UNDP/UNOCHA/DDC Chitwan. Nepal, 2004
- *Disaster Preparedness Manual*, Vietnam Red Cross Society, September 2000.
- UNDP/CECI, *Trainers' Guide on CBDRM*, CECI Vietnam
- *Sustainable Community-based Disaster Management Practices In Asia, A User's Guide*, UNCRD, Kobe, Japan, December 2004
- *Citizenry-based Development Oriented Disaster Management in the Philippines*, CDP, Manila

module one

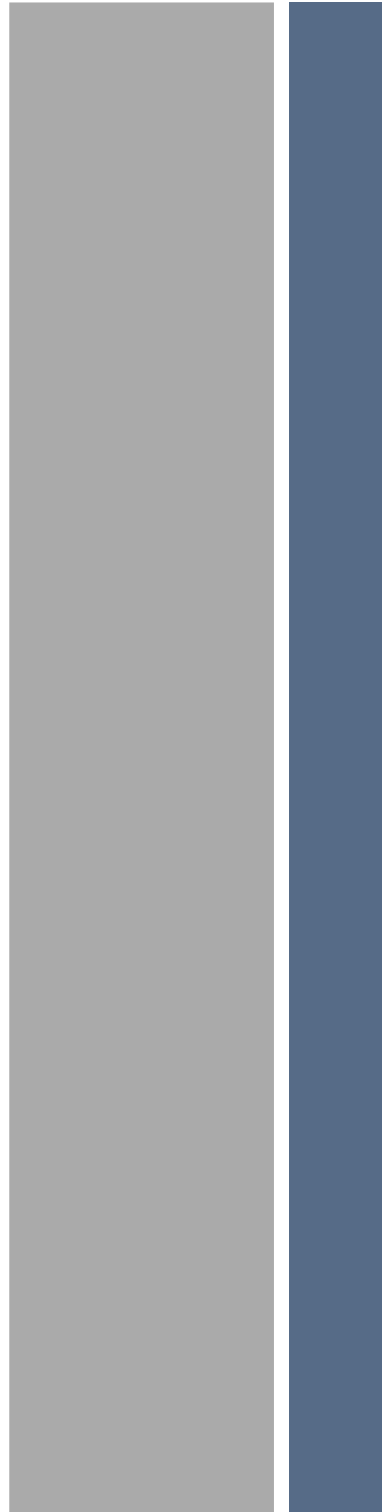
Module Objectives

At the end of the Module, you should be able to:

- Discuss the key hazards, vulnerabilities and capacities at the local level
- Describe the administrative, political, social and economic structure of the area
- Explain the rationale and process of community-based disaster risk management
- Define the key terms and concepts like hazard, vulnerability, capacity, risk, disaster, disaster risk reduction
- Describe the role of local authorities in Community-based Disaster Risk Management
- Discuss the Disaster Risk Management System in your country

No of Sessions

1. Disaster risks in the local area (district, municipality or commune)
2. Basic concepts
3. CBDRM: Rationale and process
4. Overview of the local authorities
5. Role of local authorities in CBDRM
6. National Disaster Risk Management System



INTRODUCTION AND OVERVIEW OF KEY CONCEPTS



*session 1**disaster risk in the local area***Learning Objectives**

At the end of this session, the participants should be able to:

- Enlist the major disasters that occurred in your district, municipality or commune over the past 10 years;
- Describe the impact of such disasters upon the life, livelihoods, economy and environment in the locality;
- Define the most vulnerable social groups in the local area, and describe the reasons for their vulnerability;
- Discuss the local resources and capacities to cope with and recover from the disasters;
- Enumerate challenges faced and lessons learnt by different stakeholders;

Key Concepts

- A local area might be exposed to a number of disaster risks. It will be necessary to understand the nature, and impact of these disasters in order to better prepare for future;
- A range of social groups may exist in a district, municipality or commune. The vulnerability of different groups may differ from each other. It is important for local authorities to understand the reasons for vulnerability of different groups;
- The communities, local authorities and civil society groups may have multiple resources and capacities to deal with disasters; e.g. indigenous knowledge, policies, disaster reduction programs, technical institutions, machinery and equipment, and social networks;
- Local authorities must identify the challenges faced and lessons learnt from the past experiences of responding to disasters;

Reference Materials

Disaster Risks in the Local Area

> Introduction

This session intends to discuss the status of hazards, vulnerabilities and historical overview of disaster occurrences in the district, municipality or commune. The session will be organized in a discussion manner. A district, municipality or commune might be exposed to a range of natural or man-made hazards. The communities, their livelihoods, local economy and infrastructure and the environment might be exposed to multiple risks from such hazards. Natural hazards may include typhoons, floods, droughts, fires (forest and urban fires), avalanches, earthquakes, tsunamis and landslides. Man-made hazards include social conflicts, industrial and chemical hazards, road and air accidents, nuclear accidents, environmental pollution etc. Different hazards have diverse impact upon the people, their livelihoods, environment and economy and infrastructure. It is important to understand the kind of impact a hazard can have upon the communities in the locality.

A review of the past disasters would allow the local authorities to identify the vulnerable locations and communities. The local authorities can gather information about the past disasters from various sources; e.g. government relief records, local newspapers, research reports in the universities and technical institutions, reports of the relevant government bodies; e.g. the meteorological department, or volcanology department. The analysis of the impact of past disasters on various communities and social groups will help understand the relationship between the nature of hazard and the kind of impact they can have upon various at-risk-elements. Through this analysis the local authorities can also identify the high impact hazards; e.g. those which kill the most people, or those which affect severely the local economy and infrastructure.

The population in a district, municipality, commune or village may be comprised upon multiple social groups. The vulnerability of each group to disasters would be different. It is important the local authorities have knowledge about various social groups and their vulnerabilities. The people living near the hazard sites might be more vulnerable than the one living far. Social groups whose livelihoods are located in dangerous areas would also be more vulnerable; e.g. the fishers, sea gypsies, terrace farmers etc. It will also be useful to analyze the resources and capacities which people used to cope with and recover from the previous disasters.

During this session, the participants and the resource persons can discuss the topics given in the following checklist in order to understand disaster risks in the local area.

1. Past Disasters in the Local Area

- What disasters were experienced in the area over the past 10 years?
- In which parts of the district or municipality the disasters were occurred?
- What is the recurrence period of the relevant hazards?
- What was the severity of various disasters?
- What was the duration of stay of the hazards?
- What other hazards might occur in the local area?

2. Impact of disasters

- Which social groups were severely affected by the various disasters?
- What kind of impact, disasters had upon people?
- Which social and economic development sectors were severely affected?
- What kind of impact, the disasters had upon the development sectors?
- What was the impact of disasters upon the environment?

3. Most vulnerable communities and groups

- Which social groups were severely affected by the disasters?
- What were the reasons, which made these groups more vulnerable?

- What are their sources of livelihoods?
- What is their socio-economic status?
- What is the percentage of these groups out of the total population size?

4. Local level resources and coping mechanisms

- What capacities and resources communities used to deal with the disasters and recover from them? (Please consider the knowledge, material and financial resources, technical resources, social networks and behaviors that helped people cope with the disasters)
- Which key stakeholders were involved in disaster response and recovery?
- What resources local authorities used to respond to the disasters and organize recovery? (Please consider the resources of local authorities in terms of disaster reduction and response policies, organizational arrangements, technical and research institutions, equipment and machinery disaster preparedness, and recovery program etc.
- What resources the local NGOs and civil society organizations; e.g. women union, youth union, elderly union deployed to respond to disasters?

5. Challenges and lessons learnt

- What problems and challenges did the vulnerable groups face, to deal with the disasters?
- What problems and challenges did the local authorities, NGOs, mass organizations and other stakeholders face, in responding to the disasters?
- What lessons did the above stakeholders learn, in dealing with disasters in an effective manner in future?

References

Murshed, Z., Bangkok, ADPC, 2006

New Learning and Reflections

*session 2**basic concepts***Learning Objectives**

At the end of this session, the participants should be able to:

- Explain the basic concepts related to disaster risk management; e.g. disaster, hazard, vulnerability, capacity, disaster risk, disaster risk assessment, disaster risk reduction.

Key Concepts

- A disaster occurs when a hazard impact upon a vulnerable community and causes damage, casualties and disruption.
- Vulnerability is a set of prevailing or consequential conditions, which adversely affect the community's ability to prevent, mitigate, prepare for and respond to hazardous events.
- Capacities are resources, means and strengths, which exist in households and in the community and which enable them to cope with, withstand, prepared for, prevent, mitigate or quickly recover from a disaster.
- Disaster Risk is the chance of damage and loss as a result of the occurrence of a hazard.
- Disaster risk reduction includes all activities to minimize the loss of life, property or assets by either mitigating the hazard or reducing the vulnerability of the elements at risk.

Reference Materials

Basic Concepts

> 1. Disaster

Disaster is a serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses, which exceed the ability of the affected community or society to cope, using its own resources (UNISDR 2004). A disaster happens when a hazard impacts upon a vulnerable population and causes damage, casualties and disruption. An earthquake in an uninhabited desert cannot be considered a disaster, no matter how strong the intensities produced. An earthquake is only disastrous when it affects people, their property and activities.

2. Hazard

Hazard is an event or occurrence that has the potential to cause injuries to life and damage property and the environment. Examples of natural hazards are typhoons, tsunamis, earthquake and volcanic eruption exclusively. Landslides, floods, drought, fires can be described as socio-natural hazards since their causes are both natural and man-made. The distinction between natural and man-made hazards is becoming harder to define. For example, flooding may be increased through landfill, drainage or groundwater extraction; storm surge hazard may be worsened by the destruction of mangroves.

Human-made hazards are associated with industries or energy generation facilities and include explosions, leakage of toxic waste, pollution, dam failures. War or civil strife is also included in this category. Some hazards can cause secondary hazards; e.g. an earthquake causing landslides, which dams a river and then causes flooding. A community may be exposed to multiple hazards as a result of secondary hazards.

3. Vulnerability

Vulnerability is a set of prevailing or consequential conditions, which adversely affect people's ability to prevent, mitigate, prepare for and respond to hazardous events. These long-term factors affect a household or community's ability to absorb losses after disaster and to recover from the damage. Vulnerabilities precede disasters; contribute to their severity, impede disaster response, and may continue to exist long after a disaster has struck.

Anderson and Woodrow (1990) categorize vulnerabilities into three areas:

- **Physical/Material Vulnerability.** For example, poor people who have few physical and material resources usually suffer more from disasters than rich people. People who are poor often live on marginal lands; they don't have any savings or insurance; they are in poor health. These factors make them more vulnerable to disasters and mean that they have harder time surviving and recovering from a calamity than people who are better off economically.
- **Social/organizational Vulnerability.** People who have been marginalized in social, economic or political terms are vulnerable to suffering from disasters whereas groups, which are well organized and have high commitment to their members, suffer less during disasters. Weakness in social and organizational areas may also cause disasters. For example, deep divisions can lead to conflict and war. Conflict over resources due to poverty can also lead to violence. A second area of vulnerability then, is the social and organizational aspect of a community.

- **Attitudinal/Motivational Vulnerability.** People who have low confidence in their ability to affect change or who have “lost heart” and feel defeated by events they can not control, are harder hit by disasters than those who have a sense of their ability to bring the changes they desire. Thus, the third area of vulnerability is the attitudinal and motivational aspect.

4. Capacity

Capacities are the assets, resources and skills available within a community, society or organization that can be used to reduce the risks or effects of a disaster. Capacity may include physical, institutional, social or economic means as well as skilled personal or collective attributes such as leadership and management. Capacities enable households and communities to cope with, withstand, prepare for, prevent, mitigate, or quickly recover from a disaster. People’s capacity can also be categorized in the same categories as was done with vulnerabilities in the previous section.

Even the weakest in the community has capacities. The people whose houses or crops have been destroyed by a typhoon or flood can recover things from their homes and from their farms that can be recycled. Sometimes they have food in storage or crops that can be recovered from the fields or farm implements for planting again. Some family members have skills, which enable them to find employment if they migrate, either temporarily or permanently.

In most disasters, people suffer their greatest losses in the physical and material realm. However, even when everything physical is destroyed, people still have their skills and knowledge; they have family and community organization. They have leaders and systems for making decisions. They have tribal loyalties or church affiliations. They have capacities in the social and organizational realm.

People also have positive attitudes and strong motivations such as the will to survive, love and concern for each other, bravery and willingness to help each other. These, too, are important capacities and form the basis for development just as much as the physical resources that people have.

5. Disaster Risk

Disaster Risk is the chance of likelihood of suffering harm and loss as a result of a hazardous event. It closely depends upon the exposure of something to a hazard. This can be expressed as:

$$\text{Risk} = \text{Chance (c)} \times \text{Loss (L)}$$

The output of risk analysis is usually an estimation of the risk scenarios

6. Elements at Risk

A societal element is said to be ‘at risk’ when it is exposed to hazards and is likely to be adversely affected by the impact of those hazards when they occur.

People (their lives and health), household and community structures, facilities and services (houses, access roads, bridges, schools, hospitals, etc.) livelihood and economic activities (jobs, equipment, crops, livestock, etc.) are described as “elements at risk”. In many cases, the natural environment is also an element at risk.

7. Disaster Risk Assessment

Disaster risk assessment is a participatory process to assess the hazards, vulnerabilities and capacities of a community. Through hazard assessment, the likelihood of the occurrence, the severity and duration of various hazards is determined.

The vulnerability assessment identifies what elements are at risk and the causes of their vulnerable conditions. The households and groups that are most exposed to a hazard are identified. The assessment takes into account the physical, geographical, economic, social and political factors that make some people vulnerable to the dangers of a given hazard.

In the capacity assessment, the community's resources and coping strategies are identified. The result of the disaster risk assessment is a ranking of the disaster risks of the community as basis of planning for risk reduction.

8. Disaster Risk Reduction

The reduction of disaster risk is the foundation of community-based disaster risk management. Disaster risk reduction includes activities that will minimize disaster-related losses of life, property or assets and environment. Such activities are also described as mitigation measures.

9. Disaster Preparedness

Disaster preparedness covers activities to enhance the ability to predict, respond to and cope with the effect of a disaster. It includes pre-cautionary activities by households, communities and organizations to react appropriately during and following the event.

10. Emergency Response

Emergency response covers measures required in search and rescue of survivors and in meeting basic survival needs for shelter, water, food and health care.

11. Recovery

Recovery is the process to fully restore the community to pre-disaster level of functioning or better than that. This refers to rehabilitation of livelihoods, restoration of social and economic activities and reconstruction of shelter and infrastructure.

12. Climate Change

Climate change is a change in the average weather that a given region experiences. Average weather includes temperatures, wind patterns and precipitation. Today, the climate change is happening at very fast speed. This is enhancing the occurrence of extreme hazard events.

13. Local Authorities/Local Government

The terms local government and local authorities have been used interchangeably throughout this workbook. Local governments are administrative offices of an area smaller than a state. The term is used to contrast with offices at nation-state level, which are referred to as the central government, national government, or (where appropriate) federal government.

In modern nations, local governments usually have less powers than national governments do. They usually have some power to raise taxes, though these may be limited by central legislation. In some countries local government is partly or wholly funded by subventions from central government taxation. The question of Municipal Autonomy - which powers the local government has, or should have, and why - is a key question of public administration and governance.

The institutions of local government vary greatly between countries, and even where similar arrangements exist, the terminology often varies. Common names for local government entities include state, province, region, department, country, prefecture, district, city, township, town, borough, parish, municipality, shire and village. However all these names are often used informally in countries where they do not describe a legal local government entity (Source: http://en.wikipedia.org/wiki/Local_council)

Local Governance: Local governance is governing at the local level viewed broadly to include not only the machinery of government, but also the community at-large and its interaction with local authorities.

References

Anderson M. and P. Woodrow, *Rising from the Ashes: Development Strategies in Times of Disaster*, UNESCO and West view Press, Inc. Colorado, 1990

Kotze, A. Von and A. Holoway, *Reducing Risk: Participatory Learning Activities for Disaster Mitigation in South Africa*, IFRCRC & Department of Adult and Community Education, University of Natal, 1996

UN/ISDR, *Living with Risk-focus on Disaster Risk Reduction*, Vol. 1, United Nations, New York, 2004

New Learning and Reflections

*session 3**community-based disaster risk management:
rationale and process***Learning Objectives**

At the end of this session, the participants should be able to:

- Briefly describe the concept of CBDRM
- Importance of community-based approaches
- Steps in CBDRM process

Key Concepts

- CBDRM is a process in which at-risk communities are actively engaged in decision-making
- CBDRM contributes to addressing the root causes of vulnerabilities and transforming the structures that generate inequality and underdevelopment.
- Role of vulnerable groups and persons is central in disaster risk management, since ultimately it is about their life.
- Nobody can understand local opportunities and constraints better than the local communities themselves.
- There are six basic steps in CBDRM process. The sequence in the application of these steps might differ depending upon the social, economic, political and organizational factors in a given area.

Reference Materials

Community-based Disaster Risk Management: Rationale and Process

